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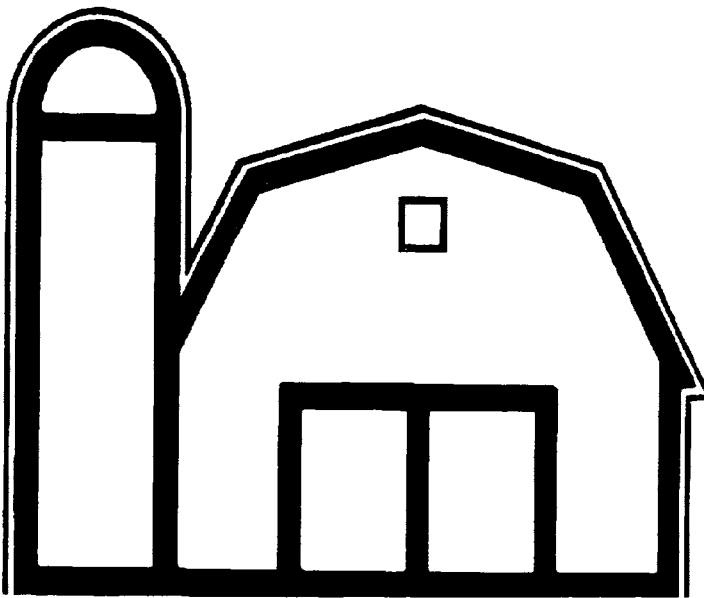
Census of

Agriculture

AC87-S-4

Volume 2
SUBJECT SERIES

Part 4
History



U.S. Department of Commerce
Economics and Statistics Administration
BUREAU OF THE CENSUS

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BACKGROUND INFORMATION

At its founding late in the 18th century, the United States was a nation overwhelmingly agricultural; the vast majority of its citizens lived on and gained their livelihood from the soil. The situation has changed dramatically since that time, but agriculture remains a vital sector of the Nation's economy, and information about agriculture is crucial to the workings of business and government at all levels. The census of agriculture provides a periodic statistical picture of agriculture in the United States. Many of the same kinds of information are collected in periodic or occasional surveys by various Federal, State, or even private agencies, but the census remains the only source of data, for a specified reference period, comparable, county by county and State by State, for the entire Nation. Moreover, only the census presents these data while classifying agricultural operations by size, type, tenure, type of organization, and market value of products sold.

Article I, Section 2, of the United States Constitution requires that a census of population be carried out every 10 years for purposes of apportioning representation of each State in the House of Representatives, but even as the Constitutional Convention discussed the document in 1787, its principal author, James Madison, urged the census be used for more than counting heads. The first attempt to collect other than demographic data came in 1810—2 years after Madison's election as President—when the census requested information on manufacturing establishments, and included a single item asking whether the person enumerated was involved in agriculture (about 80 percent were). The first census of agriculture was attempted in 1840, as part of the decennial census program that also collected data on manufacturing and mining. The agriculture enumeration was not a great success, but the obvious value of information on agriculture led to the inclusion of agricultural censuses in the decennial programs until 1925, when agriculture was added to the mid-decade enumeration covering economic areas.

The timing of the agriculture census has been adjusted periodically since 1925, although it has continued on an approximate 5-year cycle. Through 1940 the agriculture enumeration was conducted concurrently with the other economic censuses, but changes in their schedules, intended to make more efficient use of the Census Bureau's resources and distribute the workload over the periods between the decennial censuses, caused the reference years to diverge. By the early 1970's, the agriculture census was for years ending in "4" and "9" while the economic censuses used as reference years those ending in "2" and "7." Public Law (P.L.) 94-229, in 1976, included a provision shortening the intercensal periods after the 1974 and the following agricultural census to 4 years each, restoring the concurrent census schedule for the agriculture and economic censuses for enumerations conducted for 1982 and later. (For more information on reference and enumeration dates, see Appendix B, Historical Background.)

The 1987 Census of Agriculture covered all agricultural operations in the 50 States, Puerto Rico, Guam, the U.S. Virgin Islands, and in conjunction with the 1990 Census of Population and Housing, American Samoa and the Northern Mariana Islands.

LEGAL AUTHORITY

The agriculture census is carried out by the Bureau of the Census, an agency of the U.S. Department of Commerce. Title 13, United States Code—Census, governing the agency's operations, establishes the censuses to be conducted, the intervals between censuses, and certain administrative procedures, and describes the duties of specified officials.

Chapter 1 (Administration) of title 13 describes basic administrative procedures within the Bureau, including collection and treatment of census and survey data and the qualifications and duties of census supervisors and other employees. Section 5 assigns the Secretary of Commerce responsibility for preparing census report forms and determining the number and type of inquiries included. Section 9 establishes confidentiality requirements for census data and forbids the "use of the information furnished ... for any purpose other than the statistical purposes for which it was supplied" The section also restricts access to census report forms to sworn Department of Commerce or Census employees and forbids publication of any information from a census or survey that could be used to identify a specific person or establishment.

Chapter 5 (Censuses), section 142, describes the type, frequency, and geographic scope of the agriculture, irrigation, and drainage censuses, and section 195 authorizes sampling to be used to carry out the provisions of title 13 (except for determining population to apportion congressional representation).

Chapter 7 (Offenses and Penalties), section 214, describes penalties (a fine of not more than \$5,000, imprisonment for not more than 5 years, or both) for any employee or staff member publishing or otherwise communicating to any person other than a sworn Department of Commerce or Census Bureau employee any data covered by the confidentiality provisions of the law. Sections 221 and 224 require response to the censuses and establish penalties for noncompliance (a fine of \$100 for individuals and \$500 for organizations).

USES OF AGRICULTURE CENSUS DATA

Agriculture is not only a basic industry within the United States but one of the most successful and productive sectors of the Nation's economy. Sales by agricultural operations in 1987 exceeded \$136 billion. Billions of dollars in investment capital, potential sales of other products, and government programs are at least partially dependent on reliable information on agriculture in the United States. The accuracy and completeness of the

census of agriculture are of vital importance, both to individual farmers and to data users who rely on the census statistics for a clear view of an essential component of the American economy.

Some of the major users of agriculture census data are the following:

- The U.S. Department of Agriculture (USDA) uses agriculture census data to (1) establish benchmarks or comparisons for many of its periodic sample estimates and projections; (2) aid in administering marketing orders, tracking marketing patterns, and promoting sales of agricultural products (including foreign sales—over \$26 billion in 1986); (3) provide information for operating and evaluating community and conservation programs; (4) measure distribution and production of plants and animals to aid in pest control; (5) estimate the effectiveness of Commodity Credit Corporation (CCC) loans and production adjustment programs; and (6) identify economic trends in agriculture.
- Other U.S. Government agencies use agriculture census data on production, sales, and size and type of farm as part of such composite measures as the gross national product (GNP), farm income estimates, and productivity and price-level indexes. Census data also are used to aid in evaluating chemicals undergoing regulatory review, determine economic justification and financial feasibility of land reclamation projects, prepare studies and reports on trade and tariff matters, and produce studies or reports made at the request of Congress.
- Administrative and legislative bodies at all levels of government use census data to design farm and rural programs and to analyze the results.
- Farm organizations use census data to develop positions on agriculture policy and proposed legislation.
- Private businesses, farm cooperatives, and commodity and trade associations use census data to aid in locating new plants and service and distribution facilities; allocating research resources; managing transportation and processing of agricultural products; market forecasting; selecting marketing areas; and in activities intended to better service the farm community.
- Farm and agriculture news media use census data to provide technical background for news stories and feature articles, determine market shares, and identify types of agricultural operations they wish to reach.
- Farm owners and operators can compare their own operations or data for their own county or State with data for other areas that have similar products.

FARM DEFINITION

Any attempt to collect data on a specified subject must first define what it is to be measured, and what the source of the data will be. For the censuses of agriculture,

the reporting unit always has been the individual agricultural operation—the farm (for census purposes, the terms “farm” and “ranch” are interchangeable). The word “farm” can be applied to virtually any place on which some sort of animal or vegetable matter grows, however, so a definition of what constitutes a farm for census purposes is necessary.

The farm first was defined for the 1850 agricultural enumeration, when the census used the term for any place with annual sales of agricultural products of \$100 or more. The definition has been changed several times since 1850 (see app. B), with sales or acreage criteria, but always the *land* involved must be used for or connected with agricultural operations, and it must be operated under the day-to-day control of one individual or management (e.g., partnership, corporation). Agricultural operations means producing livestock, poultry, or animal specialties and their products, and/or the production of crops, including fruits, and greenhouse or nursery products. The census and farm counts are made on the basis of the individual “farm,” but the land making up the farm need not be a single contiguous tract; that is, several separate pieces of land may be a single farm when all are operated as a single unit. In cases where the land for a single farm is located in two or more counties, the data usually are tabulated with those for the county in which the most extensive agricultural operations took place.

The farm definition used for the 1987 Census of Agriculture was identical to that employed for 1982: A farm was any place that met the above requirements with respect to “agricultural operations” and individual control, and that had, or normally would have had, \$1,000 or more in total value of sales of agricultural products during the reference year. The farm definition for Puerto Rico and the other outlying areas involved other minimum sales: \$500 or a minimum of 10 *cuerdas*¹ of land and \$100 in sales for Puerto Rico, \$100 for the other outlying areas.

1987 CENSUS OF AGRICULTURE

Legislation Affecting the Census

The scope of the census of agriculture in the 50 States was changed in 1985 with the passage of P.L. 99-544, which amended Title 13, United States Code, section 142, by eliminating the requirement that a census of drainage be carried out as part of the agricultural censuses. The most recent drainage census (part of the 1978 agriculture census program) had collected data only on public drainage projects.

Scope and Reference Dates

General information—The 1987 Census of Agriculture program included the basic enumeration of agricultural operations in the 50 States, Puerto Rico, the U.S. Virgin

¹A *cuerda* is approximately .97 acre.

Islands, Guam, American Samoa, and the Northern Mariana Islands, as well as a followon census and survey program including the 1988 Census of Horticultural Specialties, the 1988 Farm and Ranch Irrigation Survey, and the 1988 Agricultural Economics and Land Ownership Survey. The followon operations all used mail lists and samples derived from the lists of respondents to the 1987 agriculture census.

Scope of the 1987 census—The operating unit—generally the individual farm or ranch—is the basis of the agriculture census. The 1987 enumeration covered all places meeting the census farm definition in the areas enumerated (see above). Data collected from all farms in the 50 States (for the scope of the inquiries elsewhere, see chs. 7 and 8) included:

- Acreage
- Crops
- Fruits and nuts
- Vegetables
- Nursery and greenhouse products
- Value of sales
- Land use
- Irrigated land
- Livestock and poultry
- Type of organization
- Characteristics and occupation of the operator
- Federal farm program participation

An approximate 25-percent sample of all respondents were asked to provide additional data on:

- Production expenses
- Uses of commercial fertilizers or lime
- Uses of insecticides, herbicides, fungicides, nematocides, other pesticides, or other chemicals
- Machinery and equipment
- Current market value of land and buildings
- Income from farm-related sources in 1987

Reference periods and dates—The agriculture census for the 50 States asked for production, sales, expenditures, and income data for calendar year 1987, and for livestock, poultry, and other inventory data as of December 31, 1987. Citrus caretakers were asked to provide data from the bloom of 1987. For Puerto Rico and the other outlying areas, the reference periods and dates were as follows:

Area	Inventory data as of—	Production data as of—
Puerto Rico	July 1, 1988	12 months ending June 30, 1988
Guam	Date of enumeration	Calendar year 1987
U.S. Virgin Islands	Date of enumeration	Calendar year 1987

Area	Inventory data as of—	Production data as of—
American Samoa	Date of enumeration	Calendar year 1989
Northern Mariana Islands	Date of enumeration	Calendar year 1989

An Overview of the Census Operation

Data collection—Until 1969 the agriculture census was carried out by personal interview; a temporary staff of enumerators visited farms and ranches to collect the information. The Census Bureau adopted the mailout/mail-back enumeration method for the 50 States in 1969, and has used it for all succeeding censuses. This method requires compiling a mail list of names and addresses of agricultural operations. The agency assembled a list of over 16 million possible farm addresses for the 1987 census. This list ultimately was reduced to approximately 4.1 million addresses. The census data collection included an initial mailing of questionnaires late in December 1987 to each of the addresses on the census list. A reminder/thank you card and five followup mailings were carried out at 1-month intervals between the middle of January and June 1988. A telephone followup operation was used for selected large nonrespondent operations.

The 1987 census enumerated a total of 2,087,759 farms, with an average size of 462 acres, and average annual sales of \$65,165. By comparison, the 1982 census figures showed 2,240,976 farms, with an average size of 440 acres, and average annual sales of \$58,858.

Data processing and publication—Data from report forms for the 50 States were entered on computer tape at the Bureau's Jeffersonville, IN, facility. The data were edited using interactive minicomputer systems, tabulated on the mainframe computer in Suitland, MD, and published on a State flow basis. (Data from report forms for Puerto Rico and the outlying areas were partially edited at the Puerto Rico field office, using minicomputer facilities there, then transmitted to headquarters.) The first *Advance Reports* for States and counties were released in September 1988, while the first Volume 1, *Geographic Areas Series* report was issued in January 1989. The various publications for the followon surveys and miscellaneous special reports were released on a flow basis after the completion of the data collection and processing for the specific operation involved. The Bureau prepared public-use computer tapes for each State and released them as the printed reports were published. In addition, the agriculture census data were made available on flexible diskette, compact disc-read only memory (CD-ROM), and online.

Expenditures

The total cost of the 1987 Census of Agriculture and its associated followon surveys came to approximately \$67.5 million. Planning for the enumeration began in 1985,

before the completion of the 1982 census program. The addition of the followon surveys, the censuses in American Samoa and the Northern Mariana Islands, and extensive work on reducing the size of the census mail list, led to an increase in the census program's cost for 1987, compared with the 1982 program (for which expenditures came to approximately \$57.4 million). Expenditures by fiscal year for the 1987 census were as follows:

Fiscal year	Expenditures
Total	\$67,472,000
1985	1,004,000
1986	7,406,000
1987	11,317,000
1988	31,243,000
1989	9,834,000
1990	6,668,000

ORGANIZATION OF THE CENSUS BUREAU

For most of the period embracing 1987 census operations, the Bureau of the Census was organized under a director, a deputy director, and five associate directors responsible for specific operational and administrative areas—demographic fields, economic fields, management services, statistical standards and methodology, and field operations. (A sixth associate director, for decennial censuses, was added in June 1988, assuming responsibility for the divisions most immediately concerned with planning and promoting the decennial census of population and housing.) Subordinate to the associate directors were six assistant directors with specific responsibilities for decennial censuses, international programs, economic surveys, economic and agriculture censuses, administration,

and automatic data processing. A seventh assistant directorate, for communications, directly subordinate to the director and deputy director, was abolished in January 1987.

The associate and assistant directors oversaw the various divisions and offices that comprise the Census Bureau. These units were organized in broad functional categories: (1) subject matter (e.g., Agriculture, Population, Housing and Household Economic Statistics, etc.), (2) data collection and processing (Data Preparation, Systems Support), (3) statistical research and services (Statistical Research, Center for Survey Methods Research), (4) administration and services (Budget, Technical Services, Personnel), and communications and public services (Data User Services, Public Information).

The Agriculture Division carried out the 1987 Census of Agriculture under the overall supervision of the Associate Director for Economic Programs and the Assistant Director for Economic and Agricultural Censuses. Other Census Bureau divisions made major contributions to the census, especially the Economic Programming Division, which prepared many of the programs for mail list development and data processing; Field Division, which operated 12 regional offices and trained and supervised the field interview staffs; Data Preparation Division in Jeffersonville, IN, responsible for handling mailing, part of the telephone followup, and most of the precomputer processing of the report forms; and the various automatic data processing and publication services divisions. (A list of the key personnel and divisions for the 1987 Census of Agriculture, as well as Census Bureau organizational charts for the census period, are included in app. C.)

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PLANNING

Considerations

The purpose of the agriculture census is to collect and publish data on agriculture in the United States. In planning and carrying out the census, the Census Bureau must weigh the data needs of the Federal Government and other users against the ability, and willingness, of agricultural operators to supply the information requested. Farmers and ranchers are among the most regulated and surveyed members of the American population; the census report form is not only one more questionnaire they are required by law to complete, but it often requests information similar to that collected by the U.S. Department of Agriculture (USDA) and/or other government agencies.

Costs are a major consideration as well. The Bureau adopted a mailout/mailback enumeration procedure for the 1969 census, partly because it was more economical than hiring a field staff of thousands of people to carry out a door-to-door enumeration. Mailing costs represent a significant portion of the cost of each census and there is continued interest in saving money by reducing the size of the initial mail list—by identifying and deleting “nonfarm” addresses from the list. Good, early, response in the data collection also reduces the costs of followup to nonrespondent addresses.

Once the data are collected, they are processed and tabulated, and the more detailed the tabulations and the more cross tabulations (by such factors as race, age, tenure, etc.), the better for data users; but processing and tabulation take time and cost money as well, and in the census neither time nor money are available in unlimited quantities. The more elaborate and detailed the tabulations and cross tabulations, the longer the period between the collection of the data and its publication, and timeliness in the publication of statistics is very important. Consequently, the volume of detailed tabulation and cross tabulation have to be limited to produce reliable statistics for publication within established time and budget constraints.

All this means the planning for any census must take a variety of factors into consideration—data needs, respondent burden, the ability of respondents to accurately report the data requested, cost, timeliness of publication, and such indirect influences as public attitudes toward government operations at a given time, government objectives (such as “paperwork reduction”) not directly related to the program being planned, and the economic climate of the Nation in general and the farm sector in particular.

Preliminary Planning

The first appropriations specifically for the 1987 Census of Agriculture operations were part of the Bureau’s fiscal 1985 budget, but preliminary planning began well before

that. Agriculture Division staff began studies for the upcoming enumeration almost immediately after the data collection effort for the 1982 census closed in 1983. A variety of changes and modifications of the basic census program were considered in these early stages, along with plans for the censuses of irrigation (this census actually collected data from irrigation *organizations* (see the 1978 Census of Agriculture *Procedural History* for information on the previous census of irrigation organizations)) and horticultural specialties (required by law every 10 years), and for program sample surveys of farm and ranch irrigation and agricultural economics and land ownership.

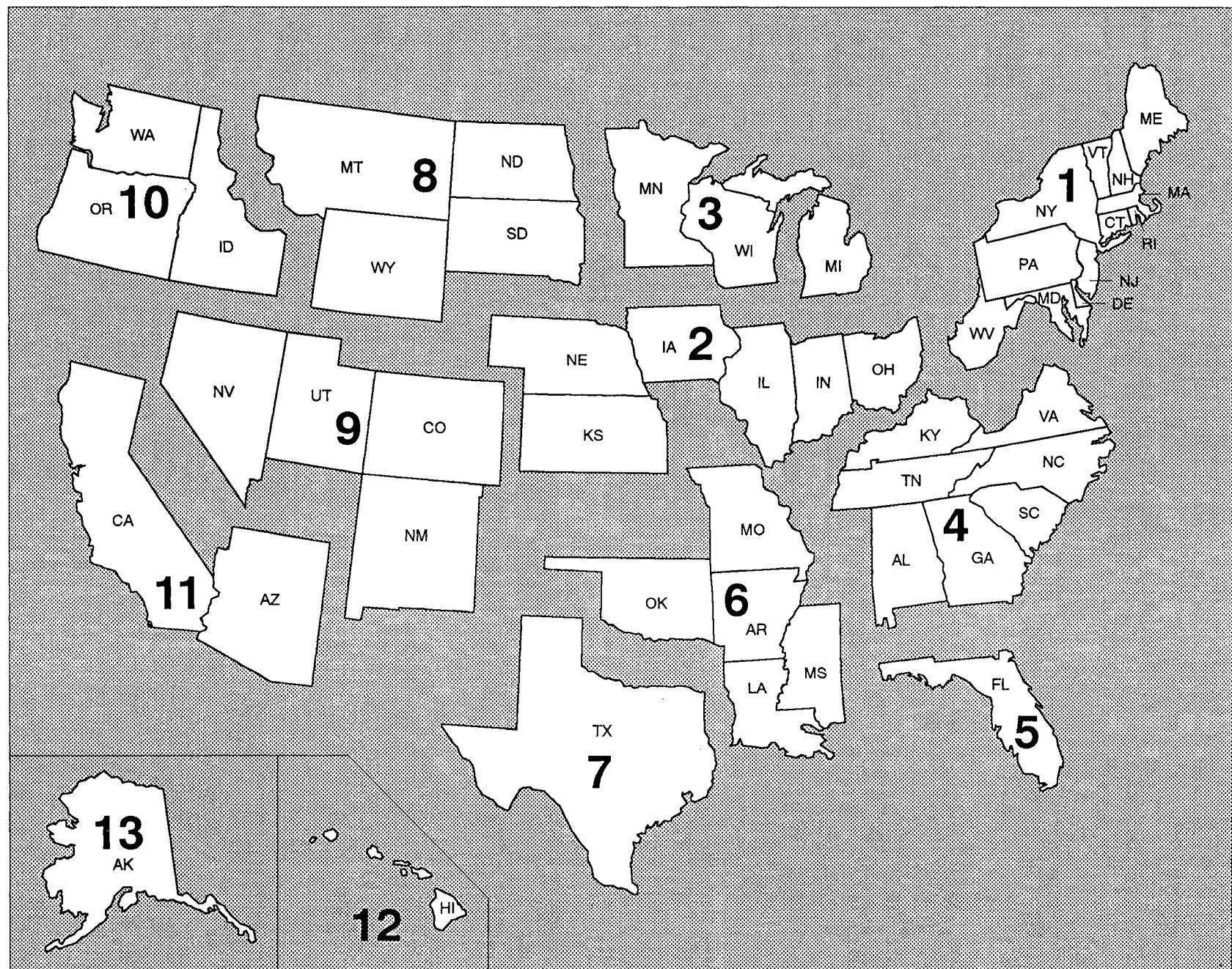
The early plans for the 1987 program included the census of the 50 States, Puerto Rico, and the outlying areas, plus the decennial censuses of irrigation, drainage, and horticultural specialties. Congress abolished the census of drainage (see ch. 1) and the irrigation organizations census was canceled because of lack of funds. The Census Bureau planned to employ mail enumeration for the 50 States, and field interviewing elsewhere. The census of horticultural specialties would be carried out in the year following the census enumeration (with reference year 1988), using mail lists drawn from the census respondent list for the 50 States.

Preliminary plans did not call for major changes in the format or content of the report forms; as for 1982, regionalized data collection forms would be used, with relatively minor changes in the data requested. The report forms would collect basic inventory and sales data from all farms, while an approximate 25-percent sample of farm operators also would be asked to supply additional information on certain subjects, such as production expenditures, machinery and equipment, income from farm-related sources, and value of land and buildings.

The Census Bureau initially planned to carry out a farm and ranch identification survey, similar to the one prior to the 1982 census, to identify and remove nonagricultural operations from the mail list, but cost and response burden constraints prohibited such a preliminary operation. The Office of Management and Budget (OMB) addressed the cost of the mail census by issuing a directive in 1986 restricting the total size of the initial census mailout to 4.2 million addresses, and the number of regular census report forms that could be included to no more than 3.2 million. The OMB wanted the Census Bureau to use a short, screener report form¹ for addresses considered least likely to be farms. The agency adopted this plan, and mailed a two-page report form (the standard agriculture census report forms were four (nonsample) and six pages (sample) long) to approximately 900,000 addresses considered least likely to be farms.

¹Form 87-A0400 was designed as a data collection instrument, but with a “screener” section that enabled respondents that were not associated with agricultural operations to skip to the end of the report form without completing the data information sections.

States by Regions for the 1987 Census of Agriculture



The Bureau planned to expand the automated processing of census returns by introducing the use of minicomputers to carry out many of the clerical processing and preliminary editing tasks at both the Jeffersonville, IN, processing office and in the field office in Puerto Rico, which would also be responsible for preliminary handling of report forms from the other outlying areas. Plans for data publication also emphasized computerized data files; while the standard printed reports and magnetic tapes would be released, there also would be advance data on flexible diskette as well as advance reports accessible to users through various online systems. The Bureau also decided to release the volume 1 (*Geographic Area Series*) agriculture census data in the compact disc read-only memory (CD-ROM) format.

CONSULTATION ON THE CENSUS

General Information

The Census Bureau's mission is to furnish statistical data for use by public and private users. Thus one of its major concerns must be to determine which data are needed. Since the data must be supplied by individuals and/or organizations outside the agency itself, a second concern has to be the ability of respondents to provide the data requested.

The Bureau maintains regular contact with data users and suppliers to obtain suggestions and advice on census content, primarily through the Bureau's standing Census Advisory Committee on Agriculture Statistics. Other contacts include direct consultation with the Governors' offices, the 50 States' departments of agriculture, the land-grant universities, an interagency working group established to advise the Bureau on Federal agency data needs, and the Bureau's own outreach to data users.

Consultation With Governors, State Departments of Agriculture, and Land-Grant Universities

State governments are heavy users of agriculture census data and the Bureau routinely requests their assistance in publicizing the census. The Governors and State agriculture departments have a considerable interest in the content of the census questionnaires as well as in the completeness and accuracy of the enumeration. In January 1985, the Bureau mailed letters to the Governors' offices of each State as well as to their respective departments of agriculture, and land-grant universities, requesting advice and suggestions on data content for the 1987 census. By March 1985, written responses had been received from nearly half the Governors' offices and from over 35 of the State agriculture departments and about 30 land-grant universities, and the Agriculture Division began a telephone followup to those that had not replied. Most of the "nonrespondents" indicated that they had no requests for additional data or significant changes to the report forms.

The Bureau established the proposed final content of the data report forms in August 1985, and in the following October, reports on the final content and planned format and design of the report forms were sent to all the offices and agencies that had requested changes for the 1987 census.

Interagency Working Group

The Federal Government is the principal user of the agriculture census statistics. In January 1985, the Bureau contacted 19 Federal agencies that make significant use of the census, requesting them to appoint representatives to take part in a working group to review their agencies' data needs. The working group met only once, on February 9, 1985, to discuss the 1987 census report forms and make recommendations on content, but Bureau staff met separately with agency representatives to consider detailed questions and to better understand their requests. The following offices participated:

- U.S. Department of Agriculture
- U.S. Department of Commerce
 - Bureau of Economic Analysis
 - Economic Development Administration
- Congressional Budget Office
- Library of Congress
 - Congressional Research Service
- Office of Technology Assessment
- U.S. Department of Energy
 - Energy Information Administration
- Environmental Protection Agency
 - Office of Pesticide Programs
- Farm Credit Administration
- U.S. Department of Health and Human Services
 - National Center for Health Services Research and Health Care Technology Assessment
- U.S. Department of the Interior
 - Bureau of Land Management
 - Geological Survey
- U.S. Department of Labor
 - Bureau of Labor Statistics

The Census Bureau had a separate meeting with representatives of several Department of Agriculture agencies on February 20, 1985, for additional consultation on data content, and the staff met separately with officials of these offices for detailed discussions.

The Census Advisory Committee on Agriculture Statistics

The Census Bureau first established an Advisory Committee on Agriculture Statistics for the 1940 agriculture census. From 1940 through 1959, the Committee remained a temporary organization, assembled before each census and disbanded once the data from that operation were published. (Before 1940, any advice to the Bureau on the

agriculture census or associated programs came from the General Advisory Committee that reviewed all of the agency's programs.) The Bureau obtained a permanent charter for the Committee in 1962, establishing it as one of the agency's five ongoing advisory bodies. As before, agricultural organizations would be selected and invited to participate in the census program in an advisory capacity. Each would send a member to the new Committee, subject to the approval of the Director of the Bureau of the Census and the Secretary of Commerce.

The member organizations and their representatives for the 1987 census period (October 1, 1985, through September 30, 1990) were:

Organization	Representative
Agricultural Publishers Association	James D. Rieck (from 1986) Richard J. Pommrehn (to 1986)
American Agricultural Economics Association	Jerald J. Fletcher (from 1989) Darrel L. Good (to 1989)
American Farm Bureau Federation	Terry L. Francl (from 1987) Ronald J. Herr (to 1987)
American Feed Industry Association	Norman Coats
American Meat Institute	Jens Knutson (from 1986) Dewey Bond (to 1986)
Association of Research Directors, Inc.	Sidney Evans
Conference of Consumer Organizations	William Fasse
Farm and Industrial Equipment Institute	David W. Maaske (from 1987) Stanley Pendlum (to 1987)
Federal Statistics Users Conference	John T. Wilkins
The Irrigation Association	Robert C. Sears (from 1987) H. Gene Koch (to 1987)
National Agri-Marketing Association	Allan J. Hietala (from 1988) Orville M. Thompson (to 1988)
National Agricultural Chemicals Association	Jarrad D. Blank (from 1986) Dudley Clark (to 1986)
National Association of State Departments of Agriculture	Thomas W. Ballow
National Association of State Universities and Land-Grant Colleges	B. F. Stanton

Organization	Representative
National Cattlemen's Association	John Ross
National Council of Farmer Cooperatives	Joseph D. Coffey
National Farmers Organization	Willis Rowell (from 1988) Robert Pangburn (1986-87) Dave Kozishek (to 1986)
National Farmers Union	Ivan W. Wyatt (from 1987) John Stencel (to 1987)
National Food Processors Association	Regina Hildwine
The National Grange	Leroy Watson
Rural Sociological Society	Ronald C. Wimberley
U.S. Department of Agriculture, National Agricultural Statistics Service*	Charles E. Caudill (from 1987) William Kibler (to 1987)

*The Statistical Reporting Service (SRS) until 1987.

Statistics Canada, the Office of Management and Budget, the U.S. Department of Agriculture, and the Bureau of Economic Analysis, as well as other Government agencies, private organizations, and the public, frequently sent observers to the meetings. Outside observers and the public could offer comments and recommendations to the Census Bureau and the Committee during periods of each meeting set aside for public comment. Census staff prepared and published minutes of each meeting, including any Committee recommendations and the Bureau's responses.

During the 1987 agriculture census period the Committee met six times, as follows:

Date	Location
November 19, 1985	Suitland, MD
June 19, 1986	Suitland, MD
May 7, 1987	Suitland, MD
May 18, 1988	Clarksville, IN
May 24, 1989	Fresno, CA
April 18, 1990	Alexandria, VA

The Committee served as the Census Bureau's primary contact with users outside the Federal Government and provided advice and recommendations on data needs, the ability of respondents to supply data requested, data collection methodology, content and format of report forms, and publicity for the census. With regard to program and policy matters affecting the 1987 agriculture census, the members addressed a number of specific concerns, advising the Bureau to—

1. Change the scope and content of the 1987 irrigation census to match that of the 1979 Farm and Ranch Irrigation Survey (FRIS).

2. Retain the farm definition adopted for the 1978 and 1982 censuses (i.e., any place that had, or normally would have had, total annual sales of agricultural products of \$1,000 was considered a farm).
3. Try to publish 1987 agriculture census data at the five-digit ZIP Code level.
4. Include a survey of farm finance in the 1987 census program.
5. Investigate the possibility of developing computer software for use with the new CD-ROM products.
6. Make no attempt to define a "commercial farm" in its statistics, but provide data for an array of sales classes so users could make their own "breaks" as needed.
7. Ensure that the 1987 census mail list be of adequate size to maintain previously attained levels of completeness.

REPORT FORM DESIGN

The Regionalized Report Forms

The Secretary of Commerce has the official responsibility for determining the content of all census report forms, but delegates this task to the Bureau of the Census. The actual design of the 1987 Census of Agriculture report forms was done by the Bureau's Agriculture Division, assisted by the Forms Design Branch of the Administrative and Publications Services Division (APSD).

The Bureau tested the general design of the report forms in the 1986 content test, using the results to refine the design before finalizing the questionnaire content.

As noted earlier, the 1987 census employed the same "regionalized" format for the regular census questionnaires as was used in the 1982 enumeration. Working from a "base" of standard data to be requested from all agricultural operations, the staff developed separate versions of the sample and nonsample report forms for use in each of 13 geographic regions of the United States. All versions had identical formats and layouts, consisting of a core of standardized nonsample and sample inquiries asked of all agricultural operations in all regions (i.e., acreage, total value of sales, location, and so on), and a set of production, inventory, and sales items (e.g., field crops, fruits, nuts, etc.) that applied specifically to agricultural operations in each region. (The regions are shown on the map on p. 9.) Specific form numbers and ink colors identified the region and type of form to help with sorting and processing. The numbering system used was the same as was adopted for the 1982 census; i.e., the prefix "87-A" identified the report form as a 1987 agriculture questionnaire, and was followed by four digits, the first two identifying the report form as a nonsample (01), sample

(02), or "must" (03) form, and the last two, the geographic region covered by that particular form—01 through 13. A composite form, "014," served as an informational document.

The Short Form

The OMB directive regarding the reduction in the size of the mail list and reduced respondent burden (see p. 8) compelled the Bureau to develop a short (two-page) form, 87-A0400, for use in the census as well. This questionnaire was not regionalized; it asked whether agricultural operations of any scale were taking place and, if so, requested some limited information on those operations. The Bureau mailed this form to addresses on the census mail list that were least likely to represent census farm operations. It was intended to collect enough information on very small agricultural operations to enable the Bureau to determine whether they qualified as census farms, and if so, to impute census data not specifically requested on the form.

The short form was tested in December 1986 in a mailout to approximately 3,100 addresses selected from the 1982 census mail list. The responses received were used to modify the form. (See below for details of this test.)

Appendix F describes the changes in the general content of the report forms and displays facsimiles of representative census questionnaires and other forms.

THE 1985 CONTENT TEST

General Information

The Census Bureau routinely carries out precensus tests of report form content and format and general census procedures to refine plans for each enumeration. Plans for the 1987 census originally called for minimum changes in census content and enumerative procedures because of the generally good results obtained by the methods and report form designs used in the previous two agriculture enumerations. Nevertheless, requests for content changes and the continuous attempt to improve coverage and data quality led to proposals for new data items. Adding new items required the deletion of others to maintain the approximate length and response burden of the 1982 census. The Bureau completed preliminary design work on the basic report form in the summer of 1985. Two versions were prepared for testing. Each version included all the items on which the Bureau proposed to request data from a sample of agricultural operations. The test, between December 1985 and the end of March 1986, of the new report forms evaluated the following factors:

- The collectability of new data items requested by users
- Alternative mail followup procedures, particularly the use of a short questionnaire to follow up "hardcore" nonrespondents

- The effect on quality of response of alternative questionnaire formats
- Alternative keying methods

Report Forms

The Bureau tested two proposed formats for the sample questionnaire, forms 85-A1 and 85-A2. The A1 form was virtually identical in size and format to the 1982 sample forms—it was an 11" x 14" six-page folder printed in black ink on white stock with a blue screening shading. Since a major part of the test was to obtain information on the collectability of several new data items, the A1 was used as the principal vehicle and as a control for the A2. Approximately 40,000 addresses (see Sample Selection below) received A1 report forms in the pretest. The A2 form was an 8 1/2" x 11" 12-page booklet, printed in black ink on white stock with yellow shading. The last page of each form contained information on the need for the census and the confidentiality of the data.

The principal content changes to the report forms were as follows:

Section 1. Acreage in 1985	Data on grazing permits issued on a per head basis were requested by the agency issuing each permit.
Section 2. Crops	The wheat item was broken out into separate requests for data on winter wheat, durum wheat, and spring wheat other than durum.
Section 5. Nursery and Greenhouse Crops	Separate items requested data on flowering and foliage plants.
Section 7. Fruit Trees	The list item for cherries was broken out into cherries, sweet, and cherries, tart.
Section 9. Gross Value of Crops Sold	A separate item for barley was added under cash grains.
Section 12. Land Irrigated	Item on source of water used for irrigation was deleted.
Section 16. Animal Specialties	Several items were deleted from the Other Livestock listing.

In addition, all questions on expenditures were combined into a single section (21 on the A1, 24 on the A2) on Production Expenditures, and new items on rent paid, property taxes paid, and other production expenses were added to the section. Two new sections were added to the form:

1. Section 10, Government CCC Payments (Government CCC loan data were collected in the 1982 census in a section combined with customwork).

2. Section 26, Income From Farm-Related Sources in 1985.

A third report form, an optical mark-reader (OMR) form, was developed to use in followup of respondents. It requested certain basic data and asked the respondent to fill in circles on the form with a pencil. An optical scanner read the filled circles and entered the data directly to a computer data file.

Sample Selection

The Bureau selected a national sample of approximately 44,000 farms for the 1985 Content Test. The sample was randomly selected from 1982 census farms with total value of products sold (TVP) less than \$500,000, 1982 farms whose sizes were unknown at mailout (mail size code 13), and 1982 nonrespondents with mail size code 13. The sample was divided into five panels for testing response to various mail enumeration methods. Panels 1-4, including about 40,000 of the sample addresses, received the folder style test forms, while panel 5 (approximately 801 addresses) received a booklet style test form. Panels 1-4 also were used for other test variations; panels 1 and 2 had no pretest contact, while panels 3 and 4 did; all addresses in panels 1 and 4 received a thank you/reminder card after the initial form mailout. All respondents received another report form in the mail 4 weeks after the initial mailout.

A sixth "panel" consisted of about 3,100 addresses from six cluster counties, which would be subjected to personal interviews following the mail test to determine the reasons for respondents' inability or refusal to answer particular items. The specific counties in this cluster sample were selected on the basis of their agricultural characteristics—as reported in the 1982 census—and to provide for some geographic dispersal. The counties were:

Adams County, PA	Fresno County, CA
Brown County, SD	Sampson County, NC
Dawson County, TX	Yakima County, WA

Mailout and Followup

Mailing packages—Four types of mailing packages were used for the pretest:

1. A preview package, sent to some 21,000 addresses before the regular test mailing, consisted of a letter and two statistical brochures to illustrate the kinds of data collected in the census
2. A data collection package containing the appropriate report form, a cover letter, an information sheet, and return envelope, used for the initial mailout and one followup mailing
3. A reminder card used for the first followup mailout only
4. A followup letter/card package

Mailout and mail followup—The data collection program for the pretest consisted of a preview mailing to addresses on panels 3-5, the initial mailout, and three followup mailings. The initial mailout comprised packages for the five panels and the cluster counties, or 43,936 packages. The details of the mailings are shown in Table 2-1.

The content test included a final followup mailing on April 10 to the remaining nonrespondent addresses in panels 1-5. This final mailout was used to close out the mail test for the A2 booklet form, and to test response to a proposed optical mark-recognition (OMR) form compared with the regular report forms. The staff mailed A1 report forms to approximately two-thirds of the nonrespondent addresses in panels 1-4 (9,128 in all), half with promotional flyers and half without. The remaining nonrespondents (4,452 addresses) were sent the OMR form, half with and half without the flyer.

Field interviews—A sample of 100 respondents in each cluster county were reinterviewed with the object of determining their ability to provide the data requested, and the reasons for nonresponse to specific sections of the report form. The Bureau selected addresses for reinterview based on an inconsistency/nonresponse analysis of the first 175 report forms keyed for each county. The Agriculture Division staff identified sections or items containing responses inconsistent with data reported elsewhere on the form, or else left blank. The Agriculture Division organized staff members in teams of interviewers—one team of five or six for each county—and team leaders distributed the report forms for the assigned county to his or her team. The field teams visited assigned addresses to interview the person who originally had completed the report form, even if that person was not actually the farm operator. When personal visits were impossible, respondents were interviewed by telephone.

Telephone interviews—A telephone interview operation tested the ability of the OMR form to accurately classify addresses as agricultural operations. The Bureau selected a sample of 600 addresses that received the OMR form in the last followup for a telephone reinterview. Between May 12 and May 22, 1986, interviewers contacted and completed interviews with 581 respondents. The Agriculture

Division staff compared the results of the interviews to the status assigned from the information on the corresponding OMR form. The interviews showed the OMR form was not a reliable means of collecting data needed to accurately classify farms.

Response rates—Final closeout for the test was May 14; at that time, the mail test had achieved a 74-percent overall response rate, excluding postmaster returns (PMR's). The response rate for the OMR form was 24.6 percent (with no followup after the single mailing of the forms on April 10), considerably higher than originally anticipated since it was used for what might be termed "hardcore" (i.e., multiple refusal) nonrespondent addresses.

Processing

Respondents returned their report forms to the Census Bureau's Data Preparation Division (DPD) office in Jeffersonville, IN, where the forms were checked in and edited. Tallies of receipts were made by selected characteristics, such as panel, type of report form, type of mail followup procedure, and so on, for later analysis.

During processing, an alternative keying method was tested. The goal of this project was to determine whether an alternative keying method could speed up processing. The test compared the regular method employed in previous censuses with a proposed streamlined procedure. Using the regular method, the operator keyed the code for each individual item of data; in the alternate method, the operator keyed only the first keycode for each line of items, e.g., the code for corn, followed by data for acres harvested, quantity harvested, and acres irrigated, without intervening codes.

Analysis and Results

General information—The Bureau designed the content test to consider five major items:

1. Mail followup methods
2. The effect of questionnaire style and content on response

Table 2-1. **Panels**

Item mailed	Date	1	2	3	4	5	Cluster counties
Preview	12/06/85	—	—	10,014	10,010	801	—
Initial mailout	12/31/85	10,017	10,017	10,014	10,010	801	3,077
Reminder card	01/15/86	9,903	—	—	9,842	801	3,054
Report form followup	02/07/86	5,555	6,116	6,087	5,444	422	1,591
Card/letter	03/06/86						
Card		1,898	2,134	2,119	1,885	129	—
Letter		1,900	2,132	2,114	1,888	130	—

3. Use of the OMR questionnaire for “hardcore” non-respondents
4. Reasons for nonresponse
5. Alternative keying methods

Overall response rates were used to study items 1-3, while detailed reinterviews of selected respondents provided information on reasons for nonresponse. The staff also reviewed the keyed data files to analyze data keying procedures.

Mail followup methods—The results of the test indicated that (1) the precensus notice was ineffective in improving response, (2) the thank you/reminder card mailing used as the first followup did improve response rates, (3) a letter was more effective than a card in later followup mailings for most addresses (there was no significant difference in the results achieved for addresses with size code 13), and (4) the fact sheet proved ineffective.

Questionnaire style and content—The content test used addresses on panels 4 and 5 to test response achieved by a folder form compared with a booklet form. There proved to be no significant difference in respondents’ views of the two types of forms, and participants in the reinterviews in the cluster counties thought the two forms were equally easy to complete. In the cluster counties, however, all respondents received the folder type form, then were shown the booklet form. No reverse of this test was done.

The reinterview operation in the cluster counties was the primary source of information for studying response to questionnaire content and reasons for nonresponse. The principal recommendations were that the form include more detailed instructions for reporting land use, that an item on crops grown on contract be added to section 9 (Gross Value of Crops Sold), that a yes/no box be added to sections 9 and 10 (Government CCC Loans) for use in the skip pattern, and that the word “none” above the column of “none” boxes in sections should be in bold letters.

Optical mark-recognition (OMR) questionnaire—While the short form improved response slightly in the first two weeks following the mailing, there was no significant improvement thereafter, and the information on the form sometimes proved inadequate to accurately classify the operation as a farm or nonfarm. The Jeffersonville staff also carried out tests using contractor-supplied optical readers to determine the readability of the OMR forms. The test showed that the equipment could not read about 12 percent of the forms, necessitating clerical review and classification. These factors led the Agriculture Division to reject using the OMR questionnaire in the census.

Nonresponse analysis—The three most frequently cited reasons given by addressees for not completing the report form were that they (1) did not think the form applied to their operation (16 percent), (2) did not want to give information (14 percent), and (3) other reasons (48 percent).

Alternate keying methods—The regular and proposed alternative keying methods were examined in relation to the number of keystrokes required, quality of keying (i.e., accuracy), keying time, and cost. The results indicated a slight reduction in the number of keystrokes required using the alternative method, and a higher error rate for the alternative method for forms from the southeastern and west north central regions (the Bureau was unable to find any specific reason for this). Cost per form for using the regular method proved to be approximately 8 percent higher than the alternative, due, in part, to the much higher verification rate used (over 50 percent of all report forms were verified; in the census, the verification rate was nearer 7 percent). The results of the alternate keying analysis led the Agriculture Division to recommend continued use of the regular method.

1986 SHORT FORM TEST

General Information

In the summer of 1986, the Census Bureau requested clearance from the Office of Management and Budget (OMB) to conduct the 1987 Census of Agriculture. At that time, plans called for an initial mailout of approximately 4.6 million report forms. The OMB requirements (see p. 8 above for details) restricted the census mailout to no more than 3.2 million regular census forms, but would permit using an additional 1 million or so short forms. The 1985 Content Test showed that the OMR form—which requested ranges of values rather than specific ones—did not provide sufficient data to accurately determine the farm status of an addressee, or for detailed imputation of agricultural commodities, so the Agriculture Division developed another short (non-OMR) report form designed to satisfy these requirements. The new short form was tested in December 1986 by mailing it to a national sample of approximately 3,000 addresses.

Report Form

The test form, 86-A04, was a single-sheet, two-page, 10 1/4” x 14” form, printed with black ink and purple shading on white stock. Its 10 sections included a screening question that asked whether the recipient had grown any crops or had any livestock or poultry during 1986. The rest of the form collected basic data on acreage, land use and irrigation, inventory and sales, Government CCC loans and Federal farm program payments, acres set aside or diverted under Federal acreage reduction programs, and characteristics and occupation of the operator. The mail-out packages consisted of the report form, a cover letter explaining the test and requesting a response, an instruction sheet, and a return envelope.

Sample Design

The short form test sample was drawn from 1982 inscope addresses (excluding Alaska and Hawaii) with reported total value of agricultural products sales (TVP’s)

under \$40,000 and addresses that qualified as farms on the basis of acreage or inventory, rather than on actual sales. The survey sample was divided into four strata based on sales, and each stratum was systematically sampled to extract 1,500 addresses from each. The individual stratum samples then were subsampled; all cases with three-digit standard industrial classification (SIC) codes of 016, 017, or 018 (vegetables, fruit, horticulture) were selected, together with 1 in 2 of all other cases. The final sample size was 3,136 addresses.

Mailout and Response

The test forms were mailed from the Suitland, MD, headquarters, on December 5, 1986, with a response due 10 days after receipt. There was no mail followup. The Bureau set January 28, 1987, as the final cutoff date for responses, by which time 1,713 forms had been returned, including 176 postmaster returns (PMR's, cases returned by the Postal Service as undeliverable). The overall response rate—approximately 54.6 percent (excluding PMR's)—was similar to that achieved by the 1982 census prior to the first followup mailing. The Bureau selected 590 of the respondents (based on a combination of SIC codes and a random sample of all other cases) for telephone followup interviews to verify farm status. The telephone staff obtained data from 533 of the 590 cases, while 10 respondents

refused to be interviewed. Failure to contact the remaining 47 cases was due largely to unlisted telephone numbers or no answer to calls.

Results

Subjective analysis of the responses obtained on the short form, and the information from respondents interviewed, showed respondents found certain sections of the short form difficult to understand. The screener question in section 1 incorrectly eliminated some in-scope farms (about 10 percent of operations identified as out of scope because of the response to the screener question were reclassified as in scope after interviews with the respondents) while sections asking the respondent to describe specific kinds of agricultural activity (most particularly section 4, part 9, requesting data on fruit orchards, citrus, vineyards, and nut trees) did not make clear to the respondent what information was needed. The test also appeared to indicate that once respondents started to fill out the report form, they tended to complete the form without regard to “skip” instructions—over 40 percent of the respondents answering “no” to the screener question went on to provide agricultural data on the form.

The Agriculture Division changed the screener question and modified the layout of section 4 (crops) on the basis of the test results. (See app. G for facsimiles of the short form and a representative standard report form.)

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INTRODUCTION

Discussions about refining plans for the 1987 agriculture census continued practically up to the date of the first census mailing, but by early 1986 specific preparations for the enumeration itself began. These preparations included three major activities:

1. Compiling the census mail list
2. Printing and addressing the report forms
3. Promoting the census (for information on the promotion campaign, see ch. 4)

In addition, continuing discussions with the Office of Management and Budget (OMB) about the size and composition of the initial mailout resulted in the design and test of a new "short" screening report form for use in the census mailing.

Preparing the census mail list required the acquisition, compilation, and "linkage" of records from various sources. Linkage involved identifying duplicate records, analyzing source and address codes, and deleting the record with the lower priority (i.e., from sources considered less reliable in providing current and complete mailing addresses) codes after transferring the identification data to the higher priority record, and attempting to classify by size the various addresses believed to represent farms. A linkage operation was carried out as part of each of the two major address list assembly operations in the winter and spring of 1986-87, and the summer and fall of 1987. After each linkage operation, the Bureau applied a classification tree model (see p. 28) to the resulting address lists, grouping addresses according to their likelihood of being a farm. Once the final list was compiled, final preparations included assigning census file numbers and sampling for data collection.

The Bureau finalized the content of the standard report forms in January 1987, and tested a "screening" form in December 1986 and early 1987. The screening form (87-A0400) design was finalized in March 1987. (See app. F for a description of the report forms and for facsimiles of representative forms.) The report forms and other enumeration materials were printed by private contractors who also assembled the bulk of the mailing packages. Once the mailing list for the first mailout was complete, the Bureau's Jeffersonville, IN, facility printed the address labels and affixed them to the mailing packages. Approximately 4.1 million mailing packages were prepared for the first census mailout in December 1987.

ADDRESS LIST DESIGN

Introduction

The Census Bureau introduced the mailout/mailback procedure for the agriculture census in the 1969 enumeration. While more economical in both workforce and funding requirements than the personal interview

enumeration, the mail census requires a complete and accurate list of addresses for operations that meet the census definition of a farm. Moreover, the ideal list should not include duplicate addresses, or addresses that do not meet the census farm definition; every duplicate or non-farm address means additional mailing costs, and added response burden that can undermine the cooperation of respondents and the accuracy of the data collected.

Thus, compiling the mail list is a major part of the census operation. This was particularly true for the 1987 enumeration because of the limit set on the total size of the list, and the number of standard and sample report forms that could be included in the first mailing. The OMB directed the Bureau to restrict the number of packages in the first census mailing to no more than 4.2 million; approximately 3.2 million could be regular and sample report forms, while the remainder were to be screening forms used to determine whether suspect addresses met the census criteria for farms. The 1982 census mailing had been somewhat smaller (3.65 million packages), but had been preceded by a Farm and Ranch Identification Survey mailing to over 3.1 million addresses, and the results of that mailing were used to reduce the total size of the census list.

General Procedures

The Bureau compiled the mail list for the 1987 Census of Agriculture from previous census mail lists and from current or nearly current administrative records from various Federal agencies concerned with agriculture. The list was assembled in a two-phase operation, the first between October 1986 and April 1987, using records from previous censuses and the latest available administrative records, and a second phase, carried out between July and November 1987, with additional addresses drawn from the National Agricultural Statistics Service (NASS) and the Internal Revenue Service (IRS). This enabled the Bureau to (1) include more recent records in the second phase than were available for the earlier operation, (2) refine procedures for greater efficiency, and (3) review the use of the classification tree model employed to identify groups of addresses according to the expected proportion of census farms in each group.

The two processing phases employed similar procedures, and included seven major operations:

1. Uniform record formatting
2. Matching and deleting ("linking") duplicate records based on employer identification number (EIN) or Social Security number (SSN)
3. Geographic coding
4. Matching and deleting duplicate records based on name and address
5. Assigning source and size codes
6. Manually reviewing possible duplicates
7. Identifying groups of records by expected (or estimated) proportion of census farms in each group

Sources

Preliminary list—The Bureau began preparing the 1987 mailing list in October 1986, using the main computer facilities at Suitland, MD to compile and process the preliminary source list records. This first-phase linkage operation involved approximately 10.2 million records, drawn from the following sources:

Source	Records
Total	10,242,159
1982 Census of Agriculture farm list	2,027,123
1982 Census of Agriculture non-respondents	563,848
1982 Census of Agriculture nonfarms	986,360
1982 Farm and Ranch Identification Survey nonfarms	1,258,275
NASS farms	1,759,378
NASS nonfarms	488,457
1985 IRS, SSA records*	3,120,644
Special commodity lists	38,074

*Included IRS records for the following forms:
 1040F Schedule for Farm Income and Expenses (attached form 1040, Individual Tax Return)
 1120 Corporation Income Tax Return (for SIC codes 01, 02, 07)
 1065 Partnership Return of Income (for SIC codes 01, 02, 07)
 941/94 Employers' Annual Tax Returns for Employers (941 coded SIC 01, 02, and 07 (Agriculture) for nonagricultural workers, and 943 for agricultural workers)

Final list—The Bureau completed the first linkage operation in April 1987 and produced a preliminary mail file of 5,921,660 addresses. All of these addresses were included in the final linkage process—begun in July 1987—together with approximately 3.2 million additional records not available for the first-phase processing. Altogether the second phase mail list linkage program included over 9.1 million records, as follows:

Source	Records
Total	9,174,143
Preliminary list records	5,921,660
1982 Census of Agriculture farms	1,385
NASS farm adds	209,161
NASS nonfarm adds	623
1986 IRS, SSA records	2,911,840
Special commodity lists	113,595
USDA June Enumerative Survey (JES)	15,879

The second-phase matching and linkage operation was completed in September 1987, at which time the mail list consisted of 6,043,157 records.

Source priority codes—The Bureau assigned an address source priority code to each source providing records for the agriculture census mail list compilation operation. These codes were assigned based on the probability of a given source file containing a high percentage of complete and current addresses. (The determination itself was based largely on experience in mail list compilation from past

censuses.) The principal sources and their priority codes were as follows:

Source	Priority code
Multiunits and abnormals*	1
IRS 1040F list	2
IRS 1065 list	3
IRS 1120 and 1120S list	4
IRS 941 and 943 list	5
1982 Census of Agriculture inscope list	6
NASS list frame	7
Special lists	8
1982 Census of Agriculture non-respondents list	9
1982 Census of Agriculture out-of-scope list	10
1982 Farm and Ranch Identification Survey out-of-scope list	11
NASS list-frame nonfarms	12

*"Multiunits" were companies or organizations with substantial agricultural operations in more than one location. "Abnormals" were farms operated by institutions, such as State research facilities.

Format and Standardization

General information—The Bureau collected over 12 million separate names and addresses from various sources in the two-phase mail list compilation operation, many of which were duplicates. Before any linkage could identify and delete duplicates, the agency had to establish a computer record format compatible with its processing programs, and standardize the different computerized records assembled from the source lists. This required a series of operations to identify each record's components and to reformat them as necessary, including (1) assigning a source file number (SFN—a unique identification number) to each record; (2) editing each record; (3) determining name control (usually the first four surname letters); (4) inserting a surname locator; (5) identifying each address; (6) assigning size codes; and (7) assigning potential partnership or corporation (PPC) flags.

In addition, the format and standardization program identified agricultural services records and records for ZIP Codes outside the 50 States for deletion from the mail file. The following computer files were established to help computer processing of the mail file:

- Agriculture services records (for deletion)
- Records with ZIP Codes outside the 50 States (for deletion)
- Trace sample (used to evaluate processing efficiency)
- Records without an employer identification number (EIN) or Social Security number (SSN)
- Records with EIN's and/or SSN's
- "Short" records with EIN's with or without SSN's
- "Short" records with SSN's only

“Short” post office name records for records without EIN’s or SSN’s

Tally file (by size and geographic code)

All serialized records (all records from the input files with their source file numbers (SFN’s))

Source file numbers (SFN’s)—The format program assigned a unique identification number to each computerized record to locate and identify that specific record, and the source from which it was drawn. Ranges of eight-digit numbers were reserved for each source used in the mail compilation and the computer program assigned numbers from these ranges to the appropriate records during the initial processing run.

Source record edit—The basic edit program placed all source records (i.e., names and addresses from the various sources) into a common format for computer processing. The common format used consisted of four types of fields:

1. Primary and secondary name
2. Address
3. Place (city, State, and ZIP Code)
4. Processing codes

The edit program assigned an address priority code to each record to identify the specific source list of origin for use in the linkage operation, and thus determine which source record to retain in the case of duplicates. A special program was used to edit source lists with surnames first, switching the order of the names (e.g., changing “Smith, John,” to “John Smith”).

The primary edit program also removed commas, periods, and certain special symbols from the name and address fields, inserted spaces between adjacent numeric and alpha characters, and substituted standard two-digit State abbreviations for State names or old-style abbreviations. For example:

Mr. James M. Doe, Jr.		Mr James M Doe Jr
2429 State #345	became	2429 State 345
Hodag, Wis. 55555		Hodag WI 55555

Name control—The “name control” for a record usually consisted of the first four characters of the surname, and was used to determine possible duplicate status when linking records based on the EIN’s or SSN’s. Many of the source records used for the census list already had name controls, but the various sources used different methods for assigning them; before linkage could proceed, the Bureau had to establish a uniform method to use on all the records. The formatting program read the name field in each record from right to left until it identified a nonnumeric word with three or more characters, and matched that word to a “skip list” dictionary containing a list of words

and abbreviations (such as “Farm,” “Dairy,” “Bros.,” “& Sons,” and so on) that might appear in the name field but were unlikely to be the surname. The first nonnumeric word with three characters or more that was not on the “skip list” was used to determine the name control for that record. The first four characters (from left to right) of this word were inserted in the name control field. If the computer program found no usable word after scanning the entire primary name field, the original name control provided was used. (If none was provided, the field was left blank.)

Surname locator—The formatting program inserted an indicator—the surname locator—in each record to identify the field position of the first character of the name control. If the name control field was blank, the record could not be recoded (for details of the name recode, see below) for name and address linkage.

Address identification—The formatting program organized the source records’ addresses for alphabetic name linkage. Numeric characters were identified and extracted from the address field. The program identified box, rural route, and street address numbers and placed them in two specific data fields, one for rural route numbers, the other for box and street numbers. The program scanned each address from left to right until a numeric “word” (i.e., one or more numeric characters) was identified. If it was the first word in the field, it was stored in the box/street field; otherwise the word preceding the numeric word was matched to a dictionary of acceptable words (e.g., “Box,” “RFD,” “Rte,”—although words such as “No.” or “Number” were ignored). If the word matched one of those in the dictionary, the numeric then was stored in the appropriate field. Words that did not appear in the dictionary program prompted the computer to scan the rest of the field and, if nothing had been extracted for either of the storage fields but one or more numeric words had been identified, to place the first of the numeric words in the box/street field. For example, for an address that included “Rte 3, Box 324,” the computer located the “alpha” words “Rte” and “Box” in the dictionary and inserted “3” in the rural route number field, and “324” in the street/box field. If no numeric words had been found, the storage fields were left blank.

Size coding—The format program assigned a size code to each record based on the size indicators in the records when received from the sources. The code was inserted in a specific data field, depending on the source of the individual record. During record linkage, all the size codes for any record were retained by transferring the code from any record deleted as a duplicate to the appropriate field of the retained record. After linkage and deletion of duplicates, the program had the computer scan the size codes for each record; if multiple codes were present, the particular code retained depended on the size priority code for each source. These sources, and their size indicators were as follows:

Source	Size indicator
IRS forms 1040F, 1065 and 1120	Gross receipts
1982 Census of Agriculture I/S (in scope)	Total value of products sold, from 1982 census report
IRS form 941	Cash wages
IRS form 943	Payroll
1982 Census of Agriculture non-respondents	1982 mail size code
Multiunits	All size code 15
Abnormals	All size code 16
Special lists	Varied by list (usually based on commodity inventory)
NASS list	USDA Farm Cost and Return Survey (FCRS) farm value
NASS nonfarms	All size code 17
1982 Census of Agriculture out-of-scope and 1982 Farm and Ranch Identification Survey out-of-scope	All size code 17

If no size indicator could be determined from any source, the computer assigned size code 17 ("unknown").

Possible partnership or corporation (PPC) flags—The computer program identified and "flagged" certain records as possible partnership or corporation (PPC) cases to prevent computer deletion of partnership or corporation records that had been matched with individual records. For example, John Doe might operate an individual farm as a sole proprietorship, while also having a partnership operation with Joseph Smith. In this case, the computer could match the partnership record to Doe's individual record on the basis of his name and employer identification number (EIN) and delete one or the other record as a duplicate. A PPC flag on the Doe/Smith record would change the match status to a "possible duplicate" and the clerical review would determine the final disposition.

EIN/SSN Record Linkage

General information—Employer identification numbers (EIN's) and Social Security numbers (SSN's) provided the easiest way of linking duplicate records from the various source lists. Roughly 9 out of 10 records from the different lists collected for the census mail list included an EIN, an SSN, or both. Computer programs matched these numbers on each record to other records in the files to identify (1) unique records, (2) possible duplicates, and (3) positive duplicates. When possible duplicate records were identified, they were "displayed" (i.e., printed out) for clerical

review. Positive duplicates—those with matching EIN's or SSN's, matched name controls, and without possible partnership or corporation (PPC) flags—were subject to a computerized source priority code review, and the record with the higher numeric priority code was deleted from the file. (Source priority codes were assigned in reverse numerical order; i.e., a priority code of "5" meant the record had a lower priority than a record with a code of "1.")

The programs linked records based on matching EIN's to EIN's and SSN's to SSN's; records with both went through two separate linking cycles. While the EIN and SSN linking processes were carried out separately, review of possible duplicates from both was part of the general clerical review after each phase of the linkage operation in the winter of 1986-1987 and the fall of 1987.

EIN linkage—All records with an EIN were subject to the EIN linkage process. The computer program had the computer sort these records by EIN, and by PPC flag, name control, and address priority code, and then send them into the matching cycle in code priority order. That is, the record that would be deleted always entered the cycle after the record that served as the original, called the "deleting" record. The matching cycle moved the records from the sorted input file to temporary storage for the linkage operation. The computer then "wrote" the processed records to one or the other of two output files, one for records with EIN's only, and all records for deletion, and the other for records with both EIN's and SSN's (the latter would be subject to another linkage operation using the SSN's).

When the EIN's matched, the computer compared the name controls and checked for a PPC flag; if the name control matched and there was no PPC flag, the records were identified as a positive match. The sorting done prior to the linkage operation ensured that Record 2 had a lower source address priority code than Record 1, so Record 2 was flagged for deletion. The computer transferred all of the deleted record's source, size, and geographic codes to Record 1, and then read it into the appropriate output file, while a new record moved into the Record 2 location.

When EIN's matched but the name controls did not, or when one or both records contained a PPC flag, the records were declared possible duplicates. No codes were transferred, but a "possible duplicate pair" number was inserted in both records, linking them so they could be displayed together for clerical review. If Record 1 already had a pair number, the same number was inserted into Record 2; Record 1 then was written into the output file and Record 2 moved into the Record 1 location. This cycle continued until the input file was exhausted, all duplicates had been flagged, and all possible duplicates assigned pair numbers.

SSN linkage—The Bureau merged the "EIN with SSN" output file from the EIN linkage operation with the "SSN only" file to create the input file for the SSN linkage operation. The input file was sorted by SSN, PPC flag,

name control, and address priority in the same fashion as the EIN linkage input file, and the same basic linkage procedures were employed, except for the use of “dummy” file records and assignment of pair numbers.

The SSN linkage operation used “dummy” records (duplicates of the master records except that a second SSN was substituted for the original, allowing linkage of the two records) because some records drawn from the IRS 1040F file contained two Social Security numbers (usually those of spouses) and the records had to be linked to both SSN’s. The computer linked only one data field for each record, hence dummy records were created for 1040F records with two SSN’s. After linkage, the operation matched the dummy records to the master records for each, transferred any codes picked up during processing to the master, and deleted the dummy records.

Pair number assignment in the SSN linkage operation differed from the procedures used in the EIN operation in that there were cases in which two records were possible duplicates, but each had a different pair number assigned during EIN linkage. During the SSN linkage phase, such suspected duplicate cases retained their original pair numbers, and a secondary “collision” pair number was inserted into each record to tie suspected duplicates to the SSN-linked record.

Geographic Coding

General information—The name and address linkage operation was carried out within five-digit ZIP Code number or ZIP group number (for cities with multiple ZIP Codes), but the records in the mail file had to be geographically coded before any linkage could be done. Every record entering the name and address linkage process had standardized and edited agriculture census geographic codes, i.e., State and county numeric codes, county “alpha” (alphabetic) codes, and ZIP Codes.

Master geographic reference file—The Bureau’s master geographic reference file provided the geographic codes needed to standardize and update the geographic information in the address lists. The reference file was created by combining computerized information from the ZIP Code reference file and the 1982 inscope files. The ZIP Code file listed all the post office names and ZIP Codes in the United States; each post office name entry included the standard full spelling and any known variations, as well as a fully recoded spelling, together with the State and county numeric and alpha codes, ZIP Code, and telephone area code. Matching the ZIP Code reference file to the 1982 inscope file produced a master list of unique ZIP Codes with proper and common variant spellings of most post office names, and the most likely county location for each ZIP Code—the latter based on reported primary location of the majority of farm records with that ZIP Code from the 1982 inscope file. (The computerized record for each address included two State/county geographic code fields, one for the mailed State/county geographic code, drawn

from the ZIP Code reference file, and one for the reported State/county geographic code. The reported code was used to establish the census file number (CFN) for each record.) The county location was not used to code all records, since about 25 percent of the post offices listed served more than one county. ZIP Codes not matched to the 1982 inscope file retained their original county code.

Mail-file processing—Once the master geographic reference file was ready, the Bureau used it to edit the census mail file records in a series of computer operations that (1) checked the validity of the ZIP Code/post office name match on each record; (2) inserted ZIP Codes, post office names, and county and State alpha codes into records missing these items; (3) standardized spellings of post office names; and (4) assigned (mailed and reported) county and State numeric codes.

After geographic coding, the mail file was ready for name and address linkage.

Name and Address Linkage

General information—After EIN/SSN linkage and deletion, the records remaining in the mail file underwent a third matching operation using names and addresses. The name and address linkage process recoded name parts using a modified SOUNDEX system¹ similar to that used in the three previous agriculture censuses to compare names and addresses on records in the file. (The 1987 plans incorporated the 1982 improvements to the system to include the use of first and middle initials, and of numeric characters in the address.) The linkage program (1) identified name parts, (2) recoded the name in each record for linkage purposes, and (3) linked names and addresses and deleted positively identified duplicate records from the file.

Identification of name parts—The name parts in the first and second name fields in each record had to be identified before the names could be recoded. To do this, the computer compared all the words in each name field to the “skip list” (see above); words matched to words on the skip list were ignored. The computer then scanned the name fields and classified all the remaining characters and/or “character strings” (i.e., groups of two or more characters) as a surname, single letter, conjunction (e.g., “&,” “and,” and so on), or “other.” The surname was identified using the surname locator assigned in the initial format program (see above); conjunctions were identified

¹An indexing system that keeps together surnames of the same or similar sounds but of variant spellings. This system compensates for errors or changes in spellings over generations. The agriculture census used a modified Soundex system, that gave more weight to the specific spelling of the name, and truncated the surname for easier and more rapid access of computerized records. In this system, records bearing the names “Broom,” “Bruem,” and “Brume,” for example, would be indexed together to check variant spellings of the name, and would be indexed under “BRM-.” Other like-sounding variants, however, such as “Brougham,” or “Bruham,” would be indexed under “BRGH” and “BRHM,” respectively.

by comparing each word to another computerized dictionary, and classifying the individual words accordingly. Each word was identified with a numeric designator (e.g., surname = "3," conjunction = "4," single letter = "2," other = "1").

After classifying each character and character string in each field, the operation retained the assigned codes, in sequence, as the name pattern. This pattern for each record then was used to identify each word or letter in the field. The computer compared the name pattern to a file of acceptable name patterns which sequentially identified each word as a first name, first initial (single letter), middle initial (single letter), or last name.

Name pattern matching rejected records primarily because the surname locator code had been set at zero, or because a particular pattern did not match one of the acceptable patterns. The latter situation occurred most frequently with multiple name strings, such as "Joseph A John B and Peter C Doe."

Name recode—With the parts of each name identified, the computer recoded the last name on each record; the first letter of each name was retained, and the second of all double characters deleted, together with all vowels (including "y"). The recoded name then was left-justified (i.e., moved to the left margin of the record) and transferred to a four-character storage cell; any excess characters, reading from left to right, were dropped from the recode, and if any recode had fewer than four characters, the last space(s) was left blank. For example:

HAMILTON became first H-M-LT-N, then H-M-LT, and finally, HMLT
SATTERFIELD became first S-T—RF—LD, then S-T—RF, then STRF
TUTTLE became first T-T-L-, then was left-justified to TTL-.

First names were recoded in the same manner (e.g., JOSEPH became J-S-PH, then JSPH; BENJAMIN, B-NJ-M-N, then BNJM; and so on), while first initials were identified and used alone. Middle names were not recoded, but middle initials were identified and used as a match key. Once the first name was identified, it was checked against a "nickname dictionary" (a list of common nicknames, such as "Bob," "Tom," "Beth," and so on); if the name was found in the dictionary, it was recoded using the proper name ("Robert," "Thomas," "Elizabeth"). Nicknames that could represent several proper names ("Ed," "Hal," "Milly") were recoded using the most frequently encountered proper name (e.g., "Edward" for "Ed"). Abbreviated names ("Geo," "Chas," "Robt") were converted and their proper names recoded.

When the computer identified a record with a multiple name pattern, it created dummy records for each possible name. Each dummy record carried all the identification codes of the original ("master") record so that it could be

matched back to the master after linkage. Dummy records also were created for spouse names (except those from the IRS 1040F lists), names in the second name field, and partnership names.

For example, for a record containing in the name field "John Jones & William Smith," the recode operation identified the name pattern as "11413", which was matched to the acceptable name pattern file. The name was recoded with three possible combinations of names, "John Jones," "John Jones Smith," and "William Smith." If only single names were in the name field—e.g., "Jones, Smith, & Green"—each would be recoded with a separate dummy record to enable the linkage operation to identify partnerships that might change name order in different source file records.

Record linkage—After recoding all the master and dummy records, the computer sorted the file successively by name and address recodes within each ZIP Code group as follows: Last name, first initial, PPC flag, dummy flag, box number, rural route number, first name, and source priority code. Once sorted, the file was ready for linkage.

The name and address linkage had the same objectives as the other linking operations, to classify each record as duplicate (for deletion), possible duplicate, or nonduplicate. Six items were used to classify the records—

1. Last name
2. First initial
3. Middle initial
4. Box/street
5. Rural route
6. First name

The operation required the last name and first initial of any two records to match before making any further comparisons (records with matching last names—but no first initials or given names—were processed through the entire linkage cycle). If the last name and first initial did match, the computer compared records on each of the other key items in succession and in all combinations, and classified them based on the extent of agreement among the various matching items. The matching system classified the records, based on the following requirements:

Duplicates/computer deletes. Records matched on first and last names and on address information.

Possible duplicates. Records matched on first and last name recodes, but address information did not match or was absent. Records that matched last name and first initial, that also matched on address information, were classified as possible duplicates.

Nonduplicates. Records matched on last name recode only, or on last name recode but with different first initials. (Records matching on name and first initial recode, but with different middle initials, were classified as possible duplicates.)

When the computer identified a duplicate record during the linkage operation, it transferred the identification codes from the record with the lower source-priority code to the one with the higher priority, and flagged the low-priority record for deletion. Possible duplicates were displayed (i.e., printed out) for clerical resolution.

Clerical Resolution of Possible Duplicates

After the EIN/SSN and name and address linkage operation was completed, possible duplicates from both linkage processes were sorted by pair number and seven computer listings of possible duplicates were prepared:

1. EIN/SSN non-PPC
2. Name and address PPC cases
3. Name and address non-PPC possible duplicates
4. Combined EIN/SSN and name/address PPC cases
5. Combined EIN/SSN and name/address non-PPC
6. "Other" special sets—i.e., "collision" pairs, multiunits and abnormals, etc.

Printouts of each listing showed "sets" of possible duplicate records (two or more linked records comprised a "set") separated by lines of asterisks, each record numbered sequentially within each set with a "label position number" (LPN). Clerks reviewed the records and used written instructions to determine whether the records within each set were duplicates and designated them for deletion by circling the pair number and LPN and entering the "deleting record's LPN" (the DLPN) in the record for deletion so that the computer would transfer its identification codes to the deleting record. The clerical staff determined which was the "deleting record" by comparing the address source priority codes on each; the lower priority code record was retained. When two or more duplicate records had the same priority codes, the clerks retained the one with the most complete address information. Problem cases could be referred to analysts for resolution.

The pair number/LPN/DLPN data were keyed for all clerical deletes and the computer program processed the results of the clerical review by matching them against the possible-duplicate file.

Controls

General information—The Bureau establishes a system of checks and controls on the address list compilation operation in every census to keep track of the actual processing of the source records and to have materials available to test each phase of the operation. For the 1987 census, these controls and checks included a ZIP Code sample, a trace sample for quality control review of the overall operation, and control counts of records in the file at each processing step.

ZIP Code sample—The Bureau selected the ZIP Code sample from initial mail list input files before computer production runs began. The sample consisted of all the records in specified three- and five-digit ZIP groups within various States, and the agency planned to use it for testing each phase of the computerized formatting, linkage, and deletion processes. The plans originally were to process the samples in test runs to identify and correct any problems in the processing programs, but time constraints became so severe that only the "first cut" of the computer run (i.e., the first group of records edited by the computer in the processing cycle— between 100,000 and 200,000) could be checked.

Although Agriculture Division did not use the ZIP Code samples in the mail list preparation, as intended, the samples were also designed for potential mail list linkage research prior to the 1992 census, and were retained for that purpose.

Trace sample—The trace sample was a sample of records used to check the effect of processing on the records themselves. For the 1987 census mail list, the Bureau used the mail list compilation computer program to flag the first record and every 1,000th record thereafter in the file *prior to* input to the format and standardization operation (a total of approximately 12,000 records). When selected for the sample, and again after each step in the mail file processing operation, each record was "displayed" (i.e., printed out) and reviewed by statistical analysts. This produced a file for each sample record showing it as it entered the compilation and the changes made to it at each point in the processing. The agency's staff used the sample as a quality-control tool, and for research projects concerned with the address file processing.

Control counts—The computer used matching programs to generate control counts at each stage of the processing cycle of the number of records (1) in the input file, (2) in the output file, and (3) deleted from the file (and the stage of the cycle at which those records were deleted). The counts served as checkpoints at each phase of the mail list preparation. For example, the second phase record-linkage control counts included the following:

Count	Records
Total source records	9,174,143
EIN/SSN linkage computer deletes	2,738,335
Name and address computer linkage deletes	133,129
Clerical deletes	132,441
Other deletions	118,515
Multiunit deletions	8,566
Automatic drops (primarily nonfarm records—out-of-scope census or NASS nonfarms—that did not match another source record)	1,769,630
Model drops	174,834
Output file (i.e., final mail list)	4,098,693

Statistical Modeling

General information—The objective of the classification tree model program was to classify 1987 mail list records into groups according to their expected farm status. This was achieved by classifying 1982 census mail file records into groups based on responses to 12 questions about each record. Using 1982 Census of Agriculture information, the Agriculture Division determined the proportion of records in each group that represented farms, then applied the same procedure to the 1987 preliminary mail file records (only the dates involved changed (see below)) and created the same groups, with associated farm proportions. The division used a classification tree methodology in this program, employing information (i.e., geography, record source, and expected total value of agricultural products sold—the only common variables for all records in both the 1982 and 1987 mail lists) to predict the proportion of in-scope (farm) records for specified groups from the 1987 mail list records. The modeling program resulted in dropping 175,000 addresses from the 1987 census mail file as unlikely to represent census farms.

Classification tree methodology—The classification tree methodology involved a multivariate technique to separate mail list addresses into groups according to specified classification variables, and so to predict their likely status as a census farm or nonfarm. The Bureau divided the 1982 mail list file into 29 subfiles (each including addresses for one or more States), then split each subfile in half. The classification tree procedure then was used to partition the records in the first half of each subfile into model groups according to each record's "response" to 12 questions. The queries applied to each record were "Is this record(s)—

1. A 1978 census nonfarm?
2. On a 1982 IRS list?
3. A 1978 census farm?
4. A 1978 census nonrespondent?
5. A 1978 Farm and Ranch Survey nonfarm?
6. On any 1982 special list?
7. On a 1982 USDA list?
8. 1982 expected total value of agricultural products sold (TVP) unknown?
9. 1982 expected TVP less than \$2,500 or unknown?
10. 1982 expected TVP less than \$5,000 or unknown?
11. 1982 expected TVP less than \$60,000 or unknown?
12. A multiunit or abnormal, or has a 1982 expected TVP of \$60,000 or more?"

The Bureau used the second half of each subfile to refine the classification tree based on rules for optimal classification. The refinement procedure determined which questions best divided the records by farm/nonfarm status and, in the process, obtained the minimum classification error rate. The resulting classification trees created 2,184 model groups.

The staff used information from the 1982 census to determine the proportion of addresses classified as farms in each model group. The model groups then were ranked according to *descending* expected farm proportion, numbered from 101 (numbers 0 through 100 were reserved for processing purposes) to 2,284, with model group 101 having the highest expected farm proportion.

Mail list preparation—The Bureau assumed that model groups with low farm proportion in the 1982 census would have low proportion in the 1987 census as well. The 12 questions applied to each record were modified to reflect 1987 census cycle characteristics—i.e., in all questions, references to 1978 and 1982 were changed to 1982 and 1987, respectively. The modified questions were used to place 1987 census preliminary "final" mail file records into model groups 101 to 2284. The final mail list excluded the 175,000 records in model groups with the lowest expected proportion of farms.

Source-list record linkage—The first source-list record linkage operation produced a preliminary mail list of approximately 5.9 million records, of which 1.75 million were from nonfarm sources only. These nonfarm records were retained from the second phase of linkage. The approximately 4.17 million records remaining came from the following sources:

Source	Records
Total	4,167,027
Census farms, NASS farms, IRS, and other source records	2,864,676
1982 Census of Agriculture nonrespondents and other source records	247,660
1982 Census of Agriculture nonrespondents only	272,468
1982 Census of Agriculture nonfarms and other sources	648,769
NASS nonfarms and other sources	133,454

The second linkage operation began in July 1987, matching the 5.9 million records in the preliminary mail file to approximately 3.2 million records from new source lists. After linkage, source and size codes needed for modeling and sample selection were assigned to the individual records and a file containing 6,043,157 mail list addresses was created. A total of 1,769,630 addresses from the following (largely nonfarm) sources were automatically dropped from the file:

Source	Records
Total records deleted	1,769,630
1982 census and 1982 Farm and Ranch Identification Survey nonfarms only	1,313,794
NASS nonfarms only	153,907
Census and NASS nonfarms	124,136
1982 census nonrespondents (unmatched or matched only to NASS nonfarms) with size indicator of less than \$2,500 TVP	177,793

The linkage operation and automatic deletions left a preliminary "final" mail file of 4,273,527 for model application. Using the model program, the computer assigned each record to a "model group" based on source and size codes (see "Classification Tree Methodology" above), tallied the records by model group, and then split the file into three subfiles based on those tallies—"drop," "short-form eligible," and "regular census files."²

The Agriculture Division staff reviewed records in each file, and decided to retain 127,961 records (in the "drop" file)—those that had (1) an NASS source, (2) a 1982 census farm source (records with expected sales of less than \$40,000 were eligible to receive the "short form", (the form 87A0400)); (3) a special list source, or (4) an expected total value of products (TVP) sold of \$100,000 or more from any source. The remaining records in the drop file and all addresses in the "short form eligible" file that were "1982 census nonrespondents only" (or matched to NASS nonfarm only) with an expected TVP of \$20,000 or less were deleted from the final mail list. Records in the "short-form eligible" file, with expected TVP's of \$20,000 or more, were moved to the "regular census" list.

After these changes, a total of 174,834 records were dropped from the final mail list, leaving 4,098,693 addresses: 2,702,889 in the "regular census" file, and 1,395,804 in the "short-form eligible" file.

FINAL MAIL LIST

General Information

The final mail list preparation involved (1) assigning census file numbers (CFN's) and other processing codes to each record, (2) identifying "must" and "certainty" cases (see below), (3) selecting records to receive the sample report form, and (4) identifying cases to receive the short form.

²The "drop" file contained the 263,743 records in the model groups with the lowest expected proportion of farms—i.e., the calculated proportion of farms in this group was 11.7 percent or less; the "short-form eligible file" had the 1,189,265 records with the next lowest proportion of farms (11.7 to 43.22 percent); while the remaining 2.82 million or so records (addresses in groups with a minimum expected proportion of farms of 43.22 percent) were placed in the regular census file.

Census File Numbers (CFN's)

Processing the census report forms and data required a unique identification for each data record—the census file number (CFN). The Bureau assigned a CFN to each address on the final mail list. Each CFN consisted of 11 digits arranged in three groups: The first five digits were the State and county codes for the expected location of the farm, the second five a serial number identifying the specific operation within its county, and the 11th was a check digit. The check digit provided a mathematical check for quality control during data processing.

Must Cases

"Must" cases were those agricultural operations (1) so large that failure to include their data in the census tabulations would significantly distort the census data, or (2) that required special handling, such as multiunits. "Certainty" cases were expected large farm operations (based on TVP or acreage) that did not qualify as "must" cases in terms of size or type of farm, but were considered sufficiently important to justify intense followup, including telephone followup.

"Must" cases were selected by computer after record linkage was completed for the final mail list. The selection program employed size codes and lists of multiunits from the 1982 census in scope list, and other size indicators from the mail files, and identified records for (1) farms so large that some data had to be collected, rather than imputed, in cases of nonresponse; (2) operations for which an explanation was needed of why the addressee was not engaged in agricultural production; and (3) those addresses for which there were indications that the census return would need a special analyst's review. These general categories included the following types of addresses:

Multiunits. Multiunits were companies or organizations with substantial agricultural operations at more than one location. In general, a multiunit required a separate report form for each agricultural establishment, each of which was considered a separate farm for census purposes. Separate mail files were maintained for each master (i.e., company or organization) record and each associated establishment. Multiunits identified prior to the census mailout were assigned multiunit identification numbers in the alpha/plant field³ of the address label indicating whether the report form was for the master or an associated establishment.

³Identified the company with a six-digit number in the alpha field of each record. The "plant" code was a four-digit establishment identifier. The master record for a multiunit would have the company identifier in the alpha field and four zeros in the plant field, while each associated establishment had the company identifier in the alpha field and a unique establishment identifier in the plant field. Each report form for a master or associated establishment was assigned a specific serial number; the associated establishments received numbers in sequence following the master.

Abnormal farms. Abnormal farms were those operated by institutions, such as State agricultural research facilities, prison farms, Indian reservations, and so on.

Other farms. The “other farms” category included addresses believed to represent large individual agricultural establishments. The size criterion (expected total value of agricultural products (TVP) sold or total acreage) used to determine “must” status varied from State to State. In Texas, for example, the minimum requirement for identification as a “must” case was a TVP of \$500,000, or a total of 2,000 acres or more. In West Virginia, a “must” case required only \$100,000 in sales or 1,000 acres.

Other large cases were selected for telephone followup on the basis of acreage and TVP. The minimum acreage requirement generally was the same as for the “must” category—i.e., 1,000 to 10,000 acres, depending on the specific State, while minimum TVP varied from \$40,000 to \$100,000. Both the “must” and “large—telephone followup” categories received intensive telephone followup during census processing. In situations in which addresses could not be contacted by telephone, or operators refused to respond, secondary sources, such as the USDA’s Extension Service (ES) and/or Agricultural Stabilization and Conservation Service (ASCS) offices were asked to provide information as to whether nonrespondent addresses had agricultural operations. Data from previous census records, in conjunction with other information, were used to impute responses for nonrespondent addresses.

Mail List Sampling

The Census Bureau introduced sampling for data collection in the 1945 agriculture census, but did not use it again, except for selected post census and research surveys, until the 1978 enumeration. The 1978, 1982, and 1987 censuses sampled to collect specified additional data from selected agricultural operations; all farms were asked for basic data, with an approximate 25-percent sample of the mail list sent a “sample” form that requested additional information on such items as production expenses, use of fertilizers and insecticides, value of machinery and equipment, and so on. To further reduce overall response burden, in the 1987 census the Bureau also employed a “short” form (one sheet, front and back) with abbreviated versions of the standard data items. Addresses less likely to meet the census farm definition received the short form.

The sampling technique used in the 1987 census was virtually identical to that of 1982: During mail list compilation, addresses were classified as “certainty” or “noncertainty” based on expected value of sales of agricultural products and acreage (these varied by State), and including all multiunits and abnormal operations. After linkage and unduplication, and statistical modeling of the final mail list, the “regular census” and “short-form eligible” files were merged and sorted by CFN for sample selection. The

sample included all certainty addresses, all addresses in Alaska and Hawaii, all addresses in counties with fewer than 100 farms in the 1982 census, and a stratified sample, by county, from the remainder of the mail list. The sampling rate for each county was determined by the total number of farms in the county in the 1982 agriculture census—counties with 100 to 199 farms were sampled at a 1-in-2 rate, and counties with 200 or more farms at a 1-in-6 rate.

After sample selection, the “short-form eligible” file (excluding cases selected for the sample) was sorted by model group according to descending farm proportion, and the first 906,406 records were selected in sequence to receive the short form. The final mail file was as follows:

Report form type	Records
Total	4,098,693
Sample/certainty	1,107,452
Nonsample	2,084,835
Short	906,406

PRINTING AND ADDRESSING REPORT FORMS

General Information

Private contractors printed the report forms and various mailing materials and prepared the mailing packages for the 1987 agriculture census.⁴ The contractors printed all the materials and assembled the mailing packages to agency specifications, under quality-control supervision by Census Bureau personnel, and then forwarded the packages to the Jeffersonville, IN, facility for final preparation (primarily address labeling) and mailout.

Address Labels

The Bureau prepared the address labels for the 1987 agriculture census mailout “in house.” The census mail address list was generated at the main computer facility in Suitland, MD, then transmitted to Jeffersonville, IN, by telephone datalink and copied onto computer tape. The Data Preparation Division (DPD) staff in Jeffersonville used the address list tapes to print the census address labels on high-speed printers.

Printing, Assembling, and Addressing

General information—The seven private contractors employed in printing most of the report forms and other mailout materials also assembled the mailing packages according to Census Bureau specifications. Each contractor printed all of the materials for a specified package (e.g., sample,

⁴Report forms and mailing package materials were printed by seven contractors while eight produced the mailing envelopes and supplied them to the report form contractors for packing. Most of the major contractors were located within 300 miles of the Jeffersonville, IN, office; this facilitated easy delivery of the mailing packages to the Data Preparation Division for labeling and mailout.

certainty, nonsample, or “must” case for a specific geographic region), assembled the packages in envelopes supplied from the envelope contractor, and delivered them to the Jeffersonville office. The contractors supplied complete mailing packages for (1) the initial mailout, (2) the followup mailings, (3) additional sample, nonsample, and “must” packages for mailing to postmaster return (PMR) cases and “adds,” and (4) all types of report forms as general reference materials and for mailing to correspondents or respondents on request.

The staff at the Jeffersonville office inspected the mailing packages as part of the quality control program, added any special instructions needed for specific packages (e.g., for such operations as bee and honey producers, contract poultry operations, and so on), and applied address labels for the mailout.

Quantities—The total number of standard report forms printed for the 1987 agriculture census was as follows:

Region	A0400 (Short)	A01 (Non- sample)	A02 (Sample)	A03 (Must)
Total	2,250,000*	6,333,000	2,398,500	620,500
01		399,000	207,000	56,000
02		1,327,000	416,000	100,000
03		577,000	216,000	57,000
04		1,284,000	456,000	90,000
05		134,000	52,000	18,500
06		896,000	324,000	76,000
07		533,000	158,000	56,000
08		278,000	137,000	43,000
09		178,000	83,000	33,000
10		267,000	85,000	41,000
11		310,000	121,000	50,000
12		—	33,000	—
13		—	10,500	—
14		150,000	100,000	100,000

*The 87-A0400 was a standardized form; no regionalized versions were produced.

A facsimile of a representative report form is included in appendix F.

Other printed materials ordered for the data collection mailings included the following information sheets, form letters, and envelopes:

Form number	Description	Quantity
<i>Information Sheets and Form Letters</i>		
87-A01(I)	Information sheet	9,391,000
87-A02(I)	Information sheet (Hawaii)	29,000
87-A04(I)	Information sheet (for A0400 “short” form)	2,250,000
87-A01(L1)	Transmittal letter (initial mailout)	4,939,000

Form number	Description	Quantity
87-A01(L1A)	Transmittal letter (PMR’s)	140,000
87-A01(L2)	Reminder card	8,800,000
87-A01(L3)	Followup letter	3,079,000
87-A01(L4)	Followup letter	1,950,000
87-A01(L5)	Followup letter	1,652,500
87-A01(L6)	Followup letter	1,300,000
87-A01(L7)	Followup letter	1,186,000

Special Instruction Sheets

87-A31(A)	Grazing associations	1,100
87-A31(B)	Institutional organizations	5,000
87-A31(C)	Indian reservations	350
87-A31(D)	Farm with multiple farm and ranch operations	6,000
87-A31(E)	Contract poultry producers	45,000
87-A31(F)	Bee and honey production	150
87-A31(G)	Feedlot operations	13,000
87-A31(H)	Fish and other aquaculture	3,300
87-A31(I)	Laboratory animal producers	450
87-A31(J)	Nursery and greenhouse crops	63,000
87-A31(L)	Citrus caretakers	9,000

Envelopes

87-A7A	Outgoing envelope (initial mailout)	5,000,000
87-A7B	Outgoing envelope (followup)	6,560,000
87-A7C	Outgoing envelope (general)	700,000
87-A7D	Outgoing envelope (initial mailing, Hawaii, Alaska, and multiunits)	30,000
87-A7E	Outgoing envelope (followup, Hawaii, Alaska, and multiunits)	60,000
87-A8	Return envelope	12,350,000

Facsimiles of the general information sheet, transmittal letter, reminder card, and principal followup letters are included in appendix G.

The contents of the initial mailing packages for nonsample, sample, and “must” cases were as follows:

Type	Report form	Information sheet	Return envelope	Cover letter
Nonsample	87-A0101 through -A0111*	87-A01(I)	87-A8	87-A01(L1)
Sample	87-A0201 through -A0213*	87-A01(I) or 87-87-A02(I)	87-A8	87-A01(L1)
Must	87-A0301 through -A0311*	87-A01(I)	87-A8	87-A01(L1)

*As appropriate.

Quality control—Teams of two or three DPD quality control (QC) personnel inspected daily each of the private contractors' printed materials and assembled packages. Report forms and envelopes were subject to a "press inspection" (a visual review to make certain the printing was of acceptable quality, the proper colors and shading were used, and so on), while the QC staff checked a random sample of assembled mailing packages to ensure that the packages were complete and the materials inserted in the right order.

Each contractor boxed each day's production of assembled mailing packages for QC review. The QC staff inspected packages from each day's production, picking three packages at random from each box selected. If the production lot consisted of 9 or fewer boxes of packages, all the boxes were sampled; for lots of 10 to 150 boxes, 5 boxes—selected at random—were sampled, while for lots of 151 to 1,200 boxes, 20 were sampled. In any lots of over 1,200 boxes, 32 were sampled. When the staff identified an error in the packaging, the rest of the packages in the affected box were inspected and, if the problem was found in other packages, the surrounding boxes were checked as well.

The most frequently encountered problems in the package assembly operation were (1) insertion of the mail package contents in the wrong order, (2) failure to seal the outgoing envelope, and (3) use of the wrong report form for a specific package.

All detected errors were corrected before the packages were shipped to Jeffersonville for labeling and mailout.

Multiunits and abnormals—During the agriculture census mail list compilation operations, the Agriculture Division identified multiunits (i.e., companies or other organizations with two or more independent farm operations) and abnormals (institutional farms) and established a separate mail file for them. In November 1987, the multiunit and abnormal computerized address file was transmitted to Jeffersonville and labels were printed. The agriculture census unit in the Jeffersonville office manually assembled and labeled the mailing packages. Treating multiunits and abnormal farms as "must" cases, it assembled the mailing packages with the appropriate regional "must" report forms for approximately 9,000 multiunit and abnormal addresses.

Enumeration packages for abnormal cases were mailed and followed up as part of the general census mailing; packages for multiunit cases were part of the initial mailout, but were followed up separately.

Labeling—Labels for the mailing packages were printed by form number in ZIP Code sequence. Four labeling machines at the Jeffersonville, IN, office addressed the packages by applying the adhesive labels through the open window on the front of the form 87-A7A outgoing envelope. The machines applied the labels at the rate of up to 10,000 per hour between the last week of October and the first week of December 1987. The Bureau released all of the over 4 million mailing packages for the census mailout to the Postal Service between December 16 and December 21, 1987.

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INTRODUCTION

General Information

The pre-enumeration awareness program for the 1987 Census of Agriculture had three major goals:

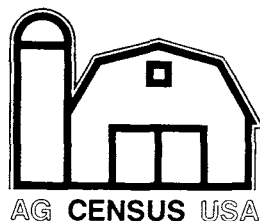
1. Make the agriculture community (farmers, ranchers, and agribusiness data users) aware of the census
2. Encourage everyone to respond (to increase the overall response rate)
3. Speed response during the early days of the census

The Agriculture Division formed a census awareness working group to prepare an agriculture census data products promotion and marketing plan, and, in cooperation with the agency's Public Information Office, Data User Services Division, and Congressional Affairs Office, developed a multimedia publicity program for the 1987 census. This included premailout activities to inform respondents and data users about the census, an inhand effort to reach respondents and encourage early and complete response while the census questionnaires were arriving in their mail, and a post-mailing effort to provide news about the census operation and the data collected. Bureau staff briefed Members of Congress, farm organization representatives, agriculture magazine and newspaper editors, and farm broadcasters, and distributed informational materials to schools, businesses, private organizations, and individuals throughout the country. Before the census mailout in December 1987, and throughout much of the data collection period, the publicity concentrated on raising general awareness of the census and encouraging response. Once the bulk of the data had been collected, the objectives switched to informing the public (particularly potential data users) about data content, format, media, and availability.

The Bureau added a new facet to the 1987 awareness program when, for the first time, it entered into a formal contract with the Advertising ("Ad") Council to develop selected materials for publicizing the agriculture census. The advertising firm of Ogilvy & Mather contributed staff time and expertise in producing television, radio, and print public service announcements (PSA's) for the agriculture census.

Theme and Logo

The Bureau revised the logo for the 1987 agriculture census, depicting a barn and silo with "AG CENSUS USA" below it.



The theme for the promotion campaign was "America Counts on Agriculture," and this slogan was reproduced on the posters and overprinted on press releases and other publicity materials. Public service announcements (PSA's) produced for use by the broadcast media generated a second theme of "Raise the Flag"—a reference to raising the flag on mail boxes as respondents returned their report forms by mail.

CENSUS PUBLICITY CAMPAIGN

Radio and Television

Agriculture Division staff met with representatives of the National Association of Farm Broadcasters (NAFB) in July 1986 to begin planning the 1987 agriculture census broadcast campaign and to hear recommendations and suggestions from NAFB members, particularly on using radio for the publicity campaign. In August, members of the Agriculture Division, Public Information Office, and other Bureau personnel attended a 2-day seminar sponsored by the Ad Council to brief its members on current and post-census publicity plans, and to discuss the most productive use of advertising agency services.

The broadcast publicity developed for the 1987 agriculture census employed radio, building on the experience gained in the previous two censuses, and television, which had not been part of the 1978 promotion effort and had been used very little for 1982. In November 1987, the Census Bureau began sending news releases, publicity materials, and PSA's on agriculture census activities to some 6,350 radio stations, 1,000 broadcast television stations, and about 560 cable television stations. The press releases were short items concerning specific phases of the census operation, starting with an announcement that the 1987 census soon would begin and continuing with notes on the actual beginning of data collection, return date, and so on. The primary radio broadcast publicity vehicles were two awareness program tapes. The first contained a set of three PSA's (10-, 30-, and 60-second spots prepared by the Ad Council). The second had statements of support from agribusiness leaders and government officials, and interviews with prominent agriculture and agribusiness personalities, such as the national secretary of the National Farmers Organization, the director of economics and planning for Southern States Cooperative, Inc., and the market research manager for the National Rural Electric Cooperatives. The Bureau distributed copies of the PSA's to all radio stations on the media outlet lists maintained by the Ad Council, the Public Information Office, and NAFB-member stations. The Ad Council also prepared a set of three (20, 30, and 60 seconds long) television PSA's. The Bureau distributed copies to some 1,500 broadcast and cable stations, and to NAFB member stations, and the 12 Census Bureau regional offices, which helped promote the agriculture census in their respective regions.

Audiovisual Program

The Bureau employed a private contractor to develop a 12-minute agriculture census promotional program of 75 color slides and a cassette-recorded narration for use by the USDA's Extension Service (ES) and Agricultural Stabilization and Conservation Service (ASCS), the Census regional offices, and other interested parties. Approximately 6,200 copies of the slide show were distributed to ES and ASCS county offices throughout the country, and several hundred more to land grant colleges and universities, State departments of agriculture, the Census Bureau's own regional offices, and the National Agricultural Statistics Service's (NASS's) State offices. On request, county agencies (such as local planning boards, schools, libraries, and so on) could also get the slide show on video cassette.

Printed Materials

General—Despite the inroads made by the electronic media, printed materials—newspapers, magazines, posters, brochures, and the like—remained an important source of information for the public. The 1987 census public awareness campaign made extensive use of these materials, distributing posters, tentcards, and brochures to offices and organizations all over the country for display; providing articles, informational releases, and drop-in advertisements to magazines and newspapers; and producing standardized speeches, agriculture census guides and lesson plans, and a series of census related stories tailored to each State for release to the general news media.

Posters—The Census Bureau printed over 65,000 copies each of the 18" x 24", 10 1/2" x 14", and 8 1/2" x 11" 1987 agriculture census posters, in red, green, and blue ink on heavy white stock. Approximately 38,000 copies of each went to vocational agricultural teachers and programs, together with a cover letter requesting teachers to ask their students to place the posters in the windows of local businesses. Some 3,500 copies of each were delivered to the USDA for use by its various agencies; and 16,800 of the 8 1/2" x 11" version were mailed to U.S. Postal Service rural post offices (these were identified as any responsible for rural delivery routes). The Bureau also sent copies to farm organizations and trade associations.

Brochures and standardized speeches and statements—The Bureau prepared pre- and post-mailout promotional brochures for the awareness campaign. The pre-mailout brochure, *Preview of the 1987 Census of Agriculture*, was an eight-page folder that outlined the history, legal authorization, and scope of the enumeration, and explained the need for the census, uses of the data, and when operators could expect to receive the report forms. The post-mailout items included the nine-page brochure, *1987 Census of Agriculture*. This included much of the background material in the *Preview*, but also provided basic descriptions of the

data release program and told how to obtain the data or more information on the census and Bureau programs. A second post-mailout item, *Characteristics of Agriculture in the United States*, was a 12-panel, 4-color folder of graphics and maps prepared from 1987 Census of Agriculture data. The Agriculture Division staff distributed these materials at conventions and shows and sent copies of the brochures to USDA's ES and ASCS field offices.

A Bureau staff member also wrote a 5- to 6-minute standardized speech primarily for use by USDA's ES and ASCS staff in their local meetings and presentations. Seven thousand copies were printed and distributed: 3,300 copies to the ES county offices, and 3,200 more to the ASCS's county offices, plus copies to the land grant colleges and universities; various agricultural, trade, and public service (e.g., Junior Chamber of Commerce (Jaycees), and Rotary) associations; and State departments of agriculture.

Newspapers and magazines—The Bureau began distributing printed promotional materials in November 1987, when 2,000 information kits, each containing a copy of the report form, a telephone contact sheet, the data release program, the brochures *A Preview of the 1987 Census of Agriculture* and *Questions Most Frequently Asked About the Census of Agriculture*, and an 8 1/2" x 11" copy of the poster, were sent to congressional offices. In December, 3,200 more of the kits went out to newspaper and magazine news editors (some also were sent to radio news directors).

In February 1987, the Bureau contacted the editors of some 200 agriculture news magazines and requested that they devote one of their editions' covers to an agriculture census story. The Bureau hired professional photographers to produce appropriate pictures from all over the Nation for possible use on magazine covers and offered copies of these photographs to magazines that agreed to use the census material. A significant problem for the magazines was that they were being asked to allocate portions of their holiday and New Year's issues—the most valuable and productive issues for the publishers in most cases—to the census, as well as the cover. Nevertheless, several magazines agreed to use the census photographs for their cover stories, and a number of others included noncover census stories in their December-January issues.

The Bureau also prepared 5 precensus feature stories on the agriculture census and sent copies to approximately 1,700 print news outlets beginning in December 1987. These were followed by a series of 21 feature stories, providing summaries of the census results for leading agricultural States, and for States that had a low response rate in the 1982 census. Copies of the State stories were sent to the State bureaus of the major wire news services, as well as to 1,700 or so magazines and newspapers that had received the precensus material.

Agriculture census guide—The Agriculture Division prepared Form 87-A10, *Report Form Guide*, as a reference

manual for county agents, vocational agriculture teachers, USDA agencies (National Agricultural Statistics Service (NASS), Farmers Home Administration (FmHA), Agricultural Stabilization and Conservation Service (ASCS), etc.), and others to use in helping farmers, ranchers, and other respondents complete their report forms. The A10 was 42 pages long and contained explanations and detailed instructions for completing each item on both the sample ("long"—including "must" and "certainty") and nonsample report forms. Perhaps as importantly, the A10 had information on what respondents should not include in their response. For example, the instructions for section 1, item 3 on the report forms ("Land rented or leased to others") described what land should be included, and instructed the respondent not to list (1) pastured cropland or pastureland used or rented by others from the addressee on a per-head basis, or (2) land from which another person bought a crop that was ready for harvesting.

Copies of the guide, together with cover letters and/or additional materials (such as the precensus lesson plan), were distributed as follows:

Organization or agency	Copies
Agricultural Stabilization and Conservation Service (ASCS)	*3,200
Farmers Home Administration (FmHA)	3,000
Extension Service (ES)	*3,300
National Agricultural Statistical Service (NASS)	
State offices (5 each)	250
High school vocational agriculture teachers	8,500
Land grant college and university agriculture departments (2 each)	74
State data centers (SDC's), lead agencies (2 each)	100
Census Bureau regional offices (10 each)	120

*The copies provided to the ES and ASCS (these were sent to the field offices) were part of a census information kit that included the *Guide*, the census poster, copies of standardized speeches, the *Preview of the 1987 Census of Agriculture* brochure, a pamphlet on questions most frequently asked about the census, and a prepared news story.

Agriculture census lesson plans—The Census Bureau employed private contractors to develop precensus and postcensus agriculture census lesson plans for use by vocational agriculture classes. The precensus publication, Form 87-A16, *Lesson Plans: The Census of Agriculture*, provided background information on the census and four specific lesson plans covering production agriculture, agribusiness uses for census data, relating census data to community development, and the purpose of the agriculture census together with its use by public and private agencies. The postcensus *Lesson Plans: The Census of Agriculture* (no form number was assigned) covered data products available and uses of the census data in more detail.

The Census Bureau distributed approximately 8,000 copies of the plans to high school vocational agriculture programs and 4,000 more to participants in the USDA's "Agriculture in the Classroom" program. About 3,000

copies also were distributed to land grant universities, teacher education programs, community colleges that had agriculture programs, and to farm and trade organizations.

Special Materials

During the 1982 agriculture census program, the Bureau purchased a supply of baseball-style hats bearing the census logo for distribution by NAFB members. As the hats proved very popular and provided additional publicity for the enumeration, the Bureau decided to use them again for 1987, again asking the NAFB to help promote the enumeration by using the hats in contests and publicity activities at their member broadcast stations. The Bureau ordered about 4,000 hats bearing the census logo. One hundred eighteen NAFB member stations agreed to help; the agency sent each station 20 of the hats. The rest were given away at conferences and meetings, and on request. The promotional materials included 10,000 circular press-on stickers and 10,000 buttons, half of each bearing the census logo, the other half the motto "America Counts on Agriculture." These were given away at conferences and meetings.

As part of the postcensus promotion campaign, the Bureau ordered 6,000 order form display boards; 3,300 of these were distributed to ES county offices, while others went to ASCS State and county offices, Census regional offices, and State data centers. The boards listed various kinds of data publications available, and included a pocket for publication order forms. The Bureau began distributing supplies of the order forms in January 1989; the publication program was not complete by that time, but the order forms contained the necessary directions as well as the estimated publication schedule for those products not then available.

Agribusiness and Agricultural Organizations

The largest user of agriculture census data, after the Federal Government, is the agribusiness sector of the economy. The Census Bureau and agribusiness have a mutual interest in achieving a complete and accurate census and the Bureau has always tried to enlist the help of agribusiness in publicizing the enumeration and encouraging operators to respond. The Bureau also has made the promotional materials (posters, brochures, guides, "dropin" advertisements, and so on, distributed to the news media, county agents, teachers, and others) available to agribusinesses and agribusiness associations.

In May 1987, the Bureau began a program to work with major farmer and commodity associations to promote the census. In July and August 1987, the director of the Census Bureau sent letters to the State offices of the Farm Bureau Federation, the National Grange, the National Cattlemen's Association, and other agriculture organizations and commodity associations explaining the importance of the census and asking for the support of their organizations in publicizing the census and encouraging

early and complete response. The Bureau supplied copies of news releases and feature articles to farm organizations' publications, and provided staff and materials for information booths at conventions held by various agriculture oriented associations.

The groups represented on the Census Advisory Committee on Agriculture Statistics (see ch. 2 for member organizations and their representatives) cooperated with the publicity campaign, including publicizing the census through their own advertising and promotional facilities, and having their representatives on the Committee record and/or film interviews or supporting statements.

POSTCENSUS PUBLICITY AND ASSISTANCE TO DATA USERS

News Releases and Stories

News releases—After the census, there was a publicity campaign to inform potential data users of the kind of data being published and their availability. The Agriculture Division prepared a series of news releases based on the 1987 census results; beginning in August 1988, 50 stories using the advance data—one for each State—were mailed to the national wire services, national and local newspapers, and agriculture-oriented magazines. Each two-page article contained selected basic data from the 1987 census, together with comparative data from 1982, including information on number of farms, acres in farms, total value of sales, and so on, and graphic displays of selected items. Copies of these news releases also were made available on the Bureau's online information system—CENDATA™—and through an electronic connection, on AgriData Network's online system.

Summary story—The State stories were followed in October 1989 by another, on the Summary of the United States report of the Volume 1, *Geographic Area Series*. The story highlighted the statistics in that publication, concentrating on the increases in the value of agriculture products sold and the number of small farms measured in the census. A detailed analysis of U.S. data also was prepared for release to agriculture finance and marketing media.

Feature stories—During 1990, the Agriculture Division staff wrote and distributed a series of feature articles on 1987 census data for a variety of subjects of special interest, such as farm characteristics, age of operator, aquaculture, and machinery and equipment.

Professional Meetings

Census Bureau representatives attended a variety of trade shows, professional association conferences, agricultural news media conferences, and trade and commodity association meetings to help publicize the census. The

Agriculture Division and other Bureau staff made particular efforts to attend meetings of such organizations as the American Agricultural Editors' Association, the National Association of Agricultural Journalists, the National Association of Farm Broadcasters, and the Agricultural Relations Council, to enlist the support of the associations and their members in promoting cooperation with the census. Attendance at such meetings provided opportunities not only to promote census activities and explain census programs, but enabled Bureau representatives to hear suggestions for improving their efforts. Agriculture Division personnel staffed booths, made presentations or speeches, or participated in discussions and workshops at an average of four or five association meetings each month for much of the 1987 census period, including participation at successive meetings for the entire period for a number of prominent organizations.

State Farmer Meetings

The Bureau representatives also attended annual meetings of State-level farm organizations—such as the American Farm Bureau, National Farmers Union, and the National Cattlemen's Association—staffing booths, making presentations, and setting up exhibits, to promote the census to the leaders and members of the State organizations. The agency tried to target meetings in important agricultural States, and in States with a history of low response to the agriculture enumeration.

Guide to the 1987 Census of Agriculture and Related Statistics

In 1988, the Census Bureau's Data User Services Division (DUSD), in cooperation with the Agriculture Division, prepared a 38-page publication—*Guide to the 1987 Census of Agriculture and Related Statistics*. This publication outlined the background and procedures of the agriculture census, and provided details about the agriculture census data series and the publication media used for each, together with descriptions of other Census Bureau data sets that included agriculture related information, or that might be useful to agriculture census data users. The guide included the publication plans for both the 1987 economic and agriculture censuses and lists of reference sources. The Bureau distributed copies of the guide to its regional offices and professional advisory committee members, State data centers, clearinghouses for Census data services, and as part of its census curriculum support project. The guide was available on request at the Bureau's exhibit booths or presentations at conferences and conventions around the country, and from both Agriculture Division and DUSD.

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INTRODUCTION

The Census Bureau’s Data Preparation Division (DPD) in Jeffersonville, IN, carried out most data collection activities for the 1987 Census of Agriculture in the 50 States (Puerto Rico, Guam, and the U.S. Virgin Islands were separately enumerated; see chs. 7 and 8 for details) with close supervision and assistance from the Agriculture Division. Mail enumeration was the primary data collection method, carrying out the initial mailing to approximately 4.1 million addresses in December 1987, with one reminder postcard and five followup mailings sent out between mid-January and June 1988. The census also included a telephone followup, beginning in March 1988, of selected nonrespondent cases (those with large estimated annual total value of sales (TVP) of agricultural products, generally \$100,000 or more) and in counties with unacceptably low response (less than 75 percent). The low-response county telephone followup began in May 1988).

In addition to the mail and telephone enumeration of farms and ranches, there was a supplemental census of citrus producers¹ (contacting citrus caretakers for data) in the summer and early fall of 1987.

CENSUS MAIL OPERATIONS

General Information

In the 1982 census, addressees were asked to respond to the initial census mailing by February 15, and the first followup mailing involved sending reminder cards to non-respondent addresses after that date. For the 1987 enumeration, the Bureau hoped to improve early response by moving up the requested response date to February 1, mailing reminder/thank you cards to all addresses on the mail list before the requested response-due date, and by advancing the schedule for the remaining mail followup operations. The agency mailed the reminder/thank you cards in mid-January 1988; there were five additional mailings to nonrespondents beginning in the first week of February 1988 and at approximately 4-week intervals thereafter. The initial census mailout, and three of the nonrespondent followups, involved complete packages of report forms, instruction sheets, cover letter, and so on, while the others used letters asking for response.

The mail list was organized by State, in eight geographic segments, to more evenly distribute the workload in preparing the followup list, addressing followup letters and packages, and mailing. The States in each segment were as follows:

¹Citrus producers enumerated in the caretaker operation also received census forms by mail so they could report their other agricultural activities.

Segment	States
1	Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Utah, Washington
2	Montana, North Dakota, South Dakota, Texas, Wyoming
3	Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia
4	Alabama, Georgia, Kentucky, Tennessee, South Carolina
5	Minnesota, Michigan, Wisconsin, Florida
6	Arkansas, Louisiana, Mississippi, Missouri, Oklahoma
7	Alaska, Hawaii, Iowa, Nebraska, Kansas
8	Illinois, Indiana, Ohio

These geographic segments did not correspond to the “regions” established for the design and use of the agriculture census report forms (see ch. 3), or to the standard census geographic “regions” and “divisions” sometimes used in publishing data.² They were, instead, primarily administrative and operational conveniences, with staggered response closeout and mailing dates.

Initial Mailout

General—The Bureau mailed the agriculture census packages between December 16 and 21, 1987. This mailing included approximately 4.1 million addresses throughout the 50 States. The Data Preparation Division (DPD) in Jeffersonville, IN, handled the bulk of the mailings, except for packages for “abnormal” farms (i.e., farms operated by institutions, such as prison farms, research facilities, etc.), which were mailed directly from the Suitland headquarters. The DPD staff labeled the packages mechanically on a flow basis as labels were delivered, and held the packages until all could be mailed simultaneously. The census used third-class bulk rate postage for most of the census packages, employing first-class postage only for mailings

²The nine census geographic divisions each consisted of several States, as follows: *Division 1*: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; *division 2*: New Jersey, New York, Pennsylvania; *division 3*: Illinois, Indiana, Michigan, Ohio, Wisconsin; *division 4*: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota; *division 5*: Delaware, Georgia, Florida, Maryland, North Carolina, South Carolina, Virginia, West Virginia; *division 6*: Alabama, Kentucky, Mississippi, Tennessee; *division 7*: Arkansas, Louisiana, Oklahoma, Texas; *division 8*: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming; and *division 9*: Alaska, California, Hawaii, Oregon, and Washington.

Divisions 1 and 2 made up the *Northeast* region; *divisions 5, 6, and 7*, the *South* region; *divisions 3 and 4*, the *Midwest* region; and *divisions 8 and 9*, the *West* region. The agriculture census data were published at the national, State, and county geographic levels (for 1987, selected data also were published by five-digit ZIP Code), but for other censuses the Census Bureau frequently used regions and geographic divisions, among several other levels of geography, for tabulating and publishing statistics.

to multiunits (i.e., companies or organizations with substantial agricultural operations at more than one location; see ch. 3), abnormals, “births” (i.e., newly identified agricultural operations), postmaster returns (see below), Alaska and Hawaii, and for the reminder/thank you cards. (First class postage was always used on the return envelope included in each report form package.) The quantities mailed, by type, were as follows:

Type	Quantity mailed
Total*	4,095,060
Nonsample (forms 87-A0101 to -A0111)	2,080,183
Sample (excluding abnormals and multiunits)	1,101,747
General sample (forms 87-A0201 to -A0213)	974,253
Must cases (forms 87-A0301 to -A0311)	127,494
Multiunits (forms 87-A0301 to -A0311)	4,895
Abnormals (forms 87-A0301 to -A0311)	1,842
Short form (form 87-A0400)	906,393

*Includes approximately 3,500 “births”—i.e., agricultural operations identified *after* the finalization of the mail list, and mailed census report forms on a flow basis as they were identified.

The initial mailing packages each contained the form 87-A01(L1) cover letter requesting response, the appropriate report form, the form 87-A01(I) information sheet (form 87-A02(I) for Hawaii), and the form 87-A8 return envelope, and any special instructions sheets (used for known feedlots, nurseries, specified animal specialties, and so on).

Multiunits—Report forms for the 4,895 identified multiunit establishments were part of the initial mailout to over 4 million addresses on the initial agriculture census mail list. A special multiunit processing group in the DPD conducted mail and/or telephone followups of multiunit cases.

Followup Mailings

General information—Private contractors assembled the mailing packages for the followup mailings and delivered them to the Jeffersonville, IN, facility for labeling and mailout on a flow basis. The Bureau employed the same methods used for addressing the packages for the initial mailout to prepare each followup mailing and applied identical quality control procedures for the label printing operation. (See ch. 3 for details of the label printing and package assembly operations.)

The following table summarizes followup mailings for the 1987 census:

Type	Reminder/ thank you card	First (report form)	Second (letter only)	Third (report form)	Fourth (letter only)	Fifth (report form)
Total	4,089,721	1,765,246	1,231,493	957,048	751,075	658,168
Nonsample	(X)	866,035	(X)	469,414	(X)	333,676
General sample	(X)	448,606	(X)	253,504	(X)	171,647
Must	(X)	67,752	(X)	39,588	(X)	23,928
Short	(X)	382,853	(X)	194,542	(X)	128,917

(X) Not applicable.

Reminder/thank you cards—The DPD mailed form 87-A01(L2) reminder/thank you cards to all the addresses (except abnormals) on the initial census mail list. Addresses were imprinted on the cards as equipment and staff became available after the initial addressing and mailing operation was completed, and the cards were held until all were ready for the mailout. The requested due date for response to the census mailing was February 1; the Jeffersonville office mailed 4,089,721 reminder/thank you cards on January 19, 1988.

First followup—By the first week of February, response to the mail census approached 55 percent, and the nonresponse followup process began. The first mail followup involved mailing complete census packages to addresses on the mail list still nonrespondent by a specified closeout date (which varied by segment from February 5 for segment 1 through February 17 for segment 8). After the closeout dates for this and succeeding followups, the staff identified nonrespondent list addresses from the mail list and printed address labels. The 1,765,246 mailing packages each contained the appropriate report form and instruction sheet, the form 87-A01(L3) (the form 87-A02(L3) through -A02(L7A) letters were used in the respective followups for Alaska and Hawaii) followup letter, and a return envelope. The Jeffersonville staff labeled and mailed the followup packages on a flow basis from February 16 through February 23.

Second followup—The second followup used the form 87-A01(L4) letter to request addressees to respond to the census. Closeout dates, by segment, for response to the second followup ranged from March 7 through March 16 and address labels were printed and the letters mailed on a flow basis from March 16 through March 22. The followup mailings totalled 1,231,493 packages.

Third followup—The Census Bureau used complete report form packages in the third followup mailing, each package comprised the appropriate report form, instruction sheet, and return envelope, and the form 87-A01(L5) cover letter requesting prompt response and including excerpts from Title 13, United States Code, on the legal requirement for

response and the confidentiality of the data. Closeout dates for the geographic segments ran from April 4 through April 13, and the DPD mailed the 957,048 followup packages beginning on April 11 and finishing April 21.

Fourth followup—The fourth followup was the second “letter” followup. Form 87-A01(L6) letters asked for response and reminded the addressees that response was required by law. The closeout dates by segment extended from May 9 through May 12 (two segments were closed out each day), and the mailing (May 16-19) consisted of 751,075 letters.

Fifth followup—By the first week of June, the census had achieved an overall mail response rate of slightly over 83 percent. The fifth and final mail followup was carried out during the second week of June. The response closeout dates for the geographic segments ran from June 6 through June 9 (two segments were closed out per day). The mailing package for this followup included the appropriate report, instruction sheet, return envelope, and the form 87-A01(L7) letter that reminded addressees of the legal requirement for response, and listed a toll free telephone number (except for the -A02(L7A) letters for Alaska and Hawaii) for use by respondents who needed assistance. A total of 658,168 packages were mailed (June 14-21) to addresses still considered nonrespondent.

Postmaster Returns

Postmaster returns (PMR's) are mailing packages returned by the Postal Service as undeliverable as addressed. The DPD processing staff in Jeffersonville identified PMR's during the receipt and check-in phase of the processing operation (see ch. 6 for details) and prepared mailing packages for remailing. These packages contained the appropriate report form, instruction sheet, and return envelope as in the initial mailing package, but a form 87-A01(L1A) cover letter replaced the original form 87-A01(L1) letter, and the form 87-A7C (First Class) outgoing envelope was used.

The census plans called for remailing only “first-time” PMR's, and originally scheduled only two closeout dates—January 25 and February 24; however, a third closeout (March 10) was added to allow remailing PMR's for which name and address corrections had not been applied to the address list in time for the second closeout. A total of 202,366 PMR packages was mailed. (See table 5-8 for details.)

Table 5-1. 1987 Census of Agriculture Mailout: December 16-21, 1988

Type	Quantity
Total	4,095,060
Nonsample (forms 87-A0101 to -A0111)	2,080,183
Sample (excluding abnormals and multiunits)	1,101,747
General sample (forms 87-A0201 to -A0213)	974,253
Must cases (forms 87-A0301 to -A0311)	127,494
Multiunits (forms 87-A0301 to -A0311)	4,895
Abnormals (forms 87-A0301 to -A0311)	1,842
Short form (form 87-A0400)	906,393

Table 5-2. Reminder/Thank You Card
(form 87-A01(L2))

Date	Quantity
January 19, 1988	4,089,721

Table 5-3. First Followup: February 16-23, 1988
(report form)

Segment	Check-in closeout	Total	Non-sample (forms 87-A0101 to -A0111)	General sample (forms 87-A0201 to -A0213)	Must (forms 87-A0301 to -A0311)	Short (forms 87-A0400)
Total	-	1,765,246	866,035	448,606	67,752	382,853
1	02/05/88	246,773	103,148	56,793	14,200	72,632
2	02/08/88	271,110	160,488	71,251	11,146	28,225
3	02/09/88	229,114	99,369	60,382	9,337	60,026
4	02/10/88	251,839	103,128	64,656	7,950	76,105
5	02/11/88	201,293	98,535	58,268	7,914	36,576
6	02/12/88	247,439	132,948	57,820	7,636	49,035
7	02/16/88	163,367	91,973	43,719	5,439	22,236
8	02/17/88	154,311	76,446	35,717	4,130	38,018

Table 5-4. Second Followup: March 16-22, 1988
(letter)

Segment	Closeout date	Quantity mailed
Total	-	1,231,493
1	03/07/88	155,086
2	03/08/88	187,760
3	03/09/88	161,106
4	03/10/88	181,565
5	03/11/88	145,203
6	03/14/88	179,233
7	03/15/88	113,877
8	03/16/88	107,663

Table 5-5. **Third Followup: April 11-21, 1988**
(report form)

Segment	Check-in closeout	Total	Non- sample (forms 87-A0101 to -A0111)	General sample (forms 87-A0201 to -A0213)	Must (forms 87-A0301 to -A0311)	Short (form 87-A0400)
Total		957,048	469,414	253,504	39,588	194,542
1	04/04/88	118,416	49,113	28,286	7,279	33,738
2	04/05/88	151,745	88,790	41,588	6,855	14,512
3	04/06/88	120,626	52,080	33,031	5,089	30,426
4	04/07/88	139,921	56,434	37,692	5,074	40,721
5	04/08/88	111,914	55,489	33,145	4,537	18,743
6	04/11/88	140,499	74,053	34,459	4,868	27,119
7	04/12/88	91,672	51,947	25,326	3,444	10,955
8	04/13/88	82,255	41,508	19,977	2,442	18,328

Table 5-6. **Fourth Followup: May 16-19, 1988**
(letter)

Segment	Closeout date	Quantity mailed
Total	-	751,075
1,2	05/09/88	210,485
3,4	05/10/88	201,334
5,6	05/11/88	203,438
7,8	05/12/88	135,818

Table 5-7. **Fifth Followup: June 14-21, 1988**
(report form)

Segment	Check-in closeout	Total	Non- sample (forms 87-A0101 to -A0111)	General sample (forms 87-A0201 to -A0213)	Must (forms 87-A0301 to -A0311)	Short (form 87-A0400)
Total		658,168	333,676	171,647	23,928	128,917
1,2	06/06/88	182,717	94,957	48,059	9,225	30,476
3,4	06/07/88	175,264	76,020	45,636	5,521	48,087
5,6	06/08/88	181,128	93,710	49,431	6,689	31,298
7,8	06/09/88	119,059	68,989	28,521	2,493	19,056

Table 5-8. **Postmaster Return (PMR) Mailings**

Mailings	Closeout date	Mailout date	Quantity mailed
Total	-	-	202,366
First	01/25/88	02/03/88	142,171
Second	02/24/88	02/28/88	45,327
Third	03/10/88	03/15/88	14,868

TELEPHONE FOLLOWUP

Introduction

General information—The telephone staff was part of the DPD at the Jeffersonville, IN, facility. Agriculture census telephone operations began in January 1988, as soon as respondents began to receive report forms, and continued until completion of telephone followup of nonrespondent or incomplete cases in September 1988.

The cases referred to the telephone staff for resolution included (1) data referrals from the technical review staff in the processing office, (2) large nonrespondent cases (those with estimated value of annual agricultural product

sales of \$100,000 or more, or with 1,000 acres or more [depending on the State]), and (3) a sample of the general nonrespondent list (used for the Nonresponse Survey); and, after May 1988, nonrespondent addresses in certain low-response counties. Initial planning projected a total telephone followup workload of about 132,000 cases; in actual operations, the telephone unit received approximately 154,000 cases for followup, including 71,000 large nonrespondents, and handled some 73,000 inquiries from respondents.

Telephone report form—The telephone enumeration staff used the Form 87-A0314, Telephone Enumeration Report, to record data collected from nonrespondents contacted in the telephone followup. Items appeared as questions to be read to the respondent, with skip instructions that told the interviewer when to skip over nonapplicable items. The form also had space for recording the telephone number called, number of calls attempted, and the name of the interviewer who completed it.

The Census Bureau based the telephone report form on the sample report form used for the mail enumeration, although the telephone form reverted to generalized crop and livestock listings in place of the regionalized lists on the sample forms. The form 87-A0314 was a 10-page, 10 1/2" x 14" booklet, with pages 8 and 9 on a half-page fold, and was used for telephone cases in 48 States (Alaska and Hawaii were excluded from the telephone followup).

Telephone Staff

The Data Preparation Division (DPD) office at Jeffersonville, IN, included a staff and facilities for carrying out telephone enumerations and surveys. DPD and Agriculture Division activated the telephones for the 1987 Census of Agriculture during the first week of January, first to handle incoming calls for assistance from respondents, and referrals; then, from March through September 1988, to carry out telephone followup to selected large nonrespondent census cases, and to nonrespondent cases from census-related surveys.

While a small staff was trained and began handling incoming calls in early January 1988, the bulk of the interviewers did not join the unit until March, when telephone followup of large nonrespondents began. By the end of March, there were 91 people in the telephone unit, including supervisors and lead clerks, and it reached a maximum strength of 194 persons in July. Agriculture Division statisticians trained the telephone enumeration staff on a continuing schedule, onsite at Jeffersonville, beginning the first week of March. Each group of interviewers received 6 hours of classroom training covering telephone interviewing techniques, agricultural terms, and completing the agriculture census telephone enumeration report form, followed by 2 hours of instruction on the written procedures—the latter given in the work area by the shift supervisor.

The staff was organized in four shifts; the shifts and typical staffing levels during the most active period of the telephone followup were as follows:

Shift	Times	Inter-viewers	Lead clerks	Super-visors
Total		152	10	3
Day	7:00 a.m.-3:30 p.m.	75	4	1
Middle	12:30 p.m.-9:00 p.m.	5	1	1
Night	3:30 p.m.-12:00 p.m.	59	5	1
Part time	5:00 p.m.-9:00 p.m.	13	-	-

Members of the Agriculture Division provided expert assistance, as needed. Calls were made between 7:00 a.m. and 9:00 p.m. local time (i.e., in the nonrespondent's time zone).

Telephone Operations

Work assignments—The telephone unit (1) resolved “problem referrals” (i.e., cases with inconsistent, incomplete, or obviously incorrect information) from the correspondence and technical review staffs, and (2) followed up large nonrespondent cases³ and other nonrespondent cases as assigned. The first problem referral cases arrived at the telephone unit immediately after operations began, while large nonrespondent cases initially selected for telephone followup arrived in March, after the first mail followup. In May, the processing staff referred 1,862 delinquent cases, in 63 “low response” counties (i.e., with response rates below 75 percent), to the telephone unit for followup.

The telephone staff used the regular central telephone exchange system serving the Jeffersonville office. Up to 122 telephone instruments were assigned to the telephone operation—89 for outgoing, 33 for incoming, calls. (Letters mailed with the census report forms included an “800” telephone number for respondents to call for assistance.) The telephone exchange system normally used the Federal Telecommunications System (FTS) lines available at Jeffersonville for outgoing calls; otherwise, the system automatically switched the outgoing call to one of the Wide Area Telecommunications System (WATS) lines reserved for the agriculture census followup.

Procedures for telephone followup—The Agriculture census staff compiled the initial telephone followup file for three States—Delaware, Maryland, and Wisconsin—on

³A “large” nonrespondent case was defined based on the estimated total value of agricultural products sold, or on total acreage, with the requirements varying by State. For most States, either a total value of products (TVP) sold of \$100,000 and/or 1,000 acres qualified an operation as “large.” In some States, particularly in the Midwest, the requirements were raised to either a TVP of \$150,000 or a minimum acreage of 2,000. In three States—Illinois, Iowa, and Nebraska—the minimum TVP required for telephone followup was \$200,000 while in five other States—Kansas, Montana, North Dakota, South Dakota, and Texas—the minimum was 3,000 acres if the case did not meet the minimum TVP requirement.

March 1, 1988, after the first mail followup, and transmitted the label information to DPD's computer for printing a set of address labels. The agriculture census staff continued to compile files of delinquent large-farm cases, by groups of States, periodically during the followup operations, and transmitted them to the DPD office on a flow basis. The labeling staff affixed labels to each Form 87-A0314, Telephone Enumeration Report, by machine and delivered the cases to the telephone staff. The first labeled forms for Delaware, Maryland, and Wisconsin were delivered on March 9, 1988, and followup calling began. Referral cases arrived at the telephone unit from the agriculture analysts in the correspondence and problem-solving units. Cover sheets attached to each referral case described any problem with the case and specified questions to be asked of the respondent if and when contacted by the telephone staff. Most nonrespondent and problem referral cases had telephone numbers, and any that did not were left in the work units until the telephone followup staff was able to call directory assistance to obtain numbers.

The nonrespondent cases were kept in State sequence, and the telephone staff periodically reviewed the check-in status of each case by using interactive computer terminals. Any case with a check-in status indicating mail received was removed from the followup operation. The nonrespondent cases were then batched into work units (of approximately 15 each), which were distributed to the telephone interview staff, one or two work units per interviewer per shift, depending on the rate of case completion.

Each interviewer called the nonrespondents in his/her assigned work unit and attempted to complete the cases. Only three call outcomes were considered completed reports:

1. In scope, with data (I/S)
2. Out of scope—i.e., the nonrespondent operation did not qualify as a farm (O/S)
3. The respondent claims to have completed and returned a report form (“claims filed”—C/F)

Any other results, such as refusals to provide the data, “will file’s,” requests for another report form, no answer at the number called, no telephone number available, awaiting response from respondent, and so on, remained in the telephone unit to be tried again. The interviewer noted the date and time of each call to each nonrespondent case and the nature of the conversation—if any—on the corresponding report form. Interviewers attempted to complete a report form for each nonrespondent called. When the subject indicated a willingness to cooperate but asked the interviewer to call back, the interviewer marked the date and time of the first call, and the best time to call back, in the reserved space on the report form and set the case aside for a later call. If no response could be obtained (two attempts were made for refusals, four for “no answer when called” cases), the interview staff referred the case for secondary-source followup.

The purpose of the secondary-source operation was to obtain information required to determine the farm status of all cases that were not completed by respondent contact, including refusal and "no telephone number listed" nonresponse cases, as well as "no answer," "will file," "unavailable," and so on. The telephone control unit sorted referred cases into State and county groups, using the CFN, and assigned each county group to a telephone interviewer, who contacted the appropriate county Agricultural Stabilization and Conservation Service (ASCS) office of the U.S. Department of Agriculture to try to obtain necessary data. Prior to contacting the ASCS office, telephone interviewers reviewed the (still blank) labeled reports and sorted them into two groups—those for addresses that had been inscope in the 1982 census and for which data had not been imputed from historical data in 1982, and all others (i.e., cases that were identified as inscope in 1982 and were imputed from previous census data, or cases without previous census history). For the 1982 inscope cases, telephone interviewers asked the ASCS offices only those questions needed to determine whether the cases were in or out of scope; inscope cases were given a census use code and the computer was used to replicate selected data from the 1982 data file. For all other cases, interviewers tried to collect the basic information needed from ASCS or other secondary sources.

Secondary-source reports coded for computer replication of 1982 data were sent directly to the batching unit to be batched for data keying. Reports with 1987 data *collected* went to the agricultural coverage unit for prekey review before being forwarded to the batching unit. Telephone control clerks updated the check-in status for cases identified as out of scope using the interactive computer processing system in the telephone control unit, then sent the report forms for those cases to central files.

The telephone staff also conducted followup calls to approximately 12,000 nonrespondent cases from the Nonresponse Survey and 3,500 more for the Classification Error Study, beginning in the first week of May and continuing through September 1988. The telephone staff used the standard Form 87-A46, Nonrespondent Sample Survey, and Form A90, Classification Error Study, questionnaires. Control clerks affixed a Form 87-A82, Telephone Record Label, to each questionnaire to provide space for recording telephone call information. The A46 and A90 report forms were referred to the evaluation unit for processing.

Problem referral cases that were resolved by the telephone staff were returned to the originating unit to continue processing. Referral cases not resolved were returned to analysts for further review.

The control clerks on each shift batched completed inscope telephone followup cases and routed them to the check-in unit, which entered the check-in status, then forwarded the cases to the agriculture coverage unit for prekeying review.

Results—Altogether, the telephone staff completed approximately 154,000 cases by interview, and handled over 73,000 incoming calls from respondents. The totals for each type of telephone case were as follows:

Completed Telephone Cases by Type		Incoming Telephone Calls	
Type	Total	Purpose	Total
Total	153,860	Total	73,307
Referrals	7,157	Request for assistance	3,067
Large farms	71,252	Request for time extension	1,937
Nonresponse Sample Survey	11,898	Request for materials	11,762
Low-response counties	1,884	Claims filed	32,755
Multiunits	336	Out of scope	16,912
Secondary sources	36,836	Other	6,874
Classification Error Study cases (form A90)	3,497		
Advertising and Response Behavior Survey (ARBS)	*21,000		

*Estimated ARBS cases added to the regular telephone followup workload. See ch. 10 for further information on the ARBS.

CITRUS CARETAKERS

Background Information

While general agriculture censuses had been carried out by mail since 1969, the Census Bureau continued to collect data by direct field enumeration for selected citrus caretakers in several States. This methodology avoided the difficulty of identifying and enumerating absentee grove owners, who frequently employed caretakers for their groves (a citrus caretaker is an organization or individual caring for, supervising, or managing citrus groves for owners), and usually did not have the information available to complete the report form.

A special field operation was introduced to collect data on citrus caretakers in the 1964 agriculture census, when those in Florida received special attention in an effort to improve overall coverage of the citrus groves. Field interviewers completed a report form for each caretaker, asking for a list of grove owners' names and addresses and the acres owned by each. The staff matched the owners' names and addresses to the respondent file to eliminate duplicate reports. Direct canvassing of caretakers continued in the following censuses, with coverage extended to include Texas in the 1974 and later enumerations, and Arizona from 1978.

For the 1987 census, the agency used the field enumeration for citrus caretakers in Arizona, Florida, and Texas, where their employment was widespread, and they generally were the most reliable sources of data. Individual caretakers' activities varied considerably in scope; some were responsible for the entire care and management of the groves while others performed only selected grove work, and many did not do the harvesting.

1987 Enumeration

For the citrus enumeration, there was a special version of the standard report form—87-A0215, Citrus Caretakers—that dropped the standard crop and livestock

sections and substituted a section for reporting acres in citrus groves and other orchards. It asked for data on the specific type of citrus, number of trees or vines of bearing or nonbearing age, acreage in citrus, and quantity harvested. The report form had write-in sections for other crops or livestock raised, as well as the sections included in the "sample" forms used in the regular census.

The Agriculture Division compiled a list of citrus caretakers from various administrative records and mailed the census report forms, along with a cover letter, instruction sheet, and return envelope, to identified citrus caretaker operations in Texas in May 1987, to Florida caretakers early in September, and to those in Arizona later in September. Caretakers were asked to look over the report form, complete it if possible, and hold it until a member of the field staff visited to either pick up the completed form, or complete it by interview. This mailing schedule meant that followup visits by field enumeration staff—planned for about 2 weeks after completing the mailout to each State—occurred when the caretakers' workload was lightest and information from the 1986-87 harvest season was available.

The field interviewers assigned each caretaker a "caretaker number" after completing each interview and filling out the report forms, and asked the caretaker to inform his or her grove owners that they should (1) mark "citrus reported by caretaker #" on any regular census report form they might receive, and (2) be certain to supply any data requested for any other agricultural operations they might have. The Bureau matched the list of grove owners' names obtained from each caretaker to the "status report list" of the regular census, and where duplicate reports were identified, the owners' citrus data were deleted from the file. During the census processing, report forms containing remarks about a citrus caretaker were referred for matching to the list of caretakers to delete the grove owner's citrus data from the report.

The number of citrus caretakers, approximate number of grove owners they served, and approximate citrus acreage included in their operations, by State, were:

State	Caretakers	Grove owners	Citrus acreage
Total	92	3,975	196,500
Arizona	7	175	12,000
Florida	65	3,000	170,000
Texas	20	800	14,500

Those citrus operations not associated with caretakers in these selected areas and in other States (e.g., California) were included in the regular census data-collection effort that began in December 1987.

NONRESPONSE SURVEY

General Information

The Bureau surveyed a sample of census nonrespondents to "inflate" the data from respondent farms to represent "all farms," including farms that did not respond to the

census. Farms with acreage and/or TVP exceeding the limits set in their particular State were subject to 100-percent telephone followup (see Vol. 1, *Geographic Area Series*, app. C, for details of the statistical estimation methodology and the reliability and coverage estimates for each State), and were excluded from the sample, together with all must, abnormal, and Alaska addresses. The specific limits varied from State to State; the TVP from \$100,000 to \$200,000, and the acreage from 1,000 to 3,000 acres.

The Bureau selected the Nonresponse Survey sample from the 1987 agriculture census check-in file, and stratified the eligible file based on expected value of sales, information from previous censuses, and form type. The stratum codes assigned were:

Stratum	Description
1	Nonrespondent short form cases.
2	Nonrespondent, nonshort form cases with 1987 estimated TVP less than \$2,500.
3	All nonrespondent, nonshort form cases with 1987 estimated TVP of \$2,500-\$9,999.
4	All nonrespondent, nonshort form cases with a 1982 census inscope source combination code and 1987 estimated TVP of \$10,000 or more.*
5	All nonrespondent, nonshort form cases with no 1982 census inscope source combination code and 1987 estimated TVP of \$10,000 or more.*

*Since TVP cutoff levels for telephone followup varied by State, the mail size codes included in these strata also varied.

The staff used a single stage systematic sample of the eligible records in each State to select a total of 27,109 addresses for the survey. The sample was selected from the nonrespondent list for each State, with sampling intervals calculated to produce a sample large enough to make reliable State estimates. Sample selection was completed for groups of States at five points during the processing, depending on the census data collection close-out dates for the States involved. The States in each group were as follows:

Group	States
1	Delaware, Maryland, and Wisconsin
2	Connecticut, Illinois, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont
3	Colorado, Indiana, Iowa, Missouri, Michigan, New Jersey, New York, Ohio, Oregon, Pennsylvania, Virginia, Washington, West Virginia, and Wyoming
4	Alabama, Arizona, Arkansas, California, Idaho, Kansas, Kentucky, Minnesota, Montana, Nebraska, Nevada, New Mexico, Tennessee, Texas, and Utah

Group	States
5	Florida, Georgia, Hawaii, Louisiana, Mississippi, North Carolina, North Dakota, Oklahoma, South Carolina, and South Dakota

Report Forms

The survey employed two versions of the report form; the form 87A46(A) was a four-page folder that included a cover letter explaining the need for the survey and requesting the addressees' cooperation as its first page, followed by a series of items requesting basic production and inventory information (this basic format had been used in previous nonresponse surveys). The form 87-A46(B), also a four-page form, asked for the same data as the (A) version, but used a separate cover letter. The staff used the two versions to determine if one or the other obtained better response from farmers, sending (A) versions to half of each stratum and (B) versions to the other half. There appeared to be no difference in the response levels obtained by the two versions of the form, but no statistical tests were carried out to substantiate this conclusion.

Mailout

The DPD staff prepared, labeled, and mailed survey packages for each group of States as sample selection was completed for that group. The mailing dates and total report forms mailed, by State group, were:

Mailout date	Group	Quantity mailed
Total	–	27,109
04/05/88	1	983
04/13/88	2	2,134
05/04/88	3	2,827
06/08/88	4	3,106
07/13/88	5	18,059

Respondents to the survey mailed their forms to the Jeffersonville, IN, office, where they were checked in and processed.

Response

Mail response was not overwhelming; the Bureau received 3,820 completed report forms (1,941 A46(A) and 1,879 A46(B) versions), together with 31 PMR's. Approximately 12,000 delinquent Nonresponse Survey cases were referred to the telephone staff for followup, while about 8,500 more were telephoned by the AGR staff from Suitland. Telephone followup obtained 20,415 responses, for total receipts of 24,266. While slightly less than half of the receipts represented inscope agricultural operations, all were used to develop the imputation estimates. (For more information on imputation for nonresponse, see ch. 6.)

MODEL DROP SURVEY

In April 1988, the Census Bureau carried out the Model Drop Survey—a sample survey of addresses deleted from the 1987 agriculture census mail list—to evaluate the efficiency of the classification-tree methodology used in its statistical modeling of the 1987 census mail list. (See ch. 10 for more information on this evaluation.) The national sample frame consisted of five strata (A through E), defined by specified source combinations and estimated size. Each stratum consisted of addresses believed to represent similar kinds of records, based on expected sizes and on the sources from which the addresses had been drawn. Strata A through D were records removed from the mail list due to statistical modeling used to identify probable nonfarms. (See ch. 3 for more information on the statistical modeling used in preparing the census mail list.) Stratum E records were those that the modeling suggested should be included, but that Agriculture Division staff deleted for "subjective" reasons (e.g., expectation that particular types of operation would qualify as farms). The Suitland office staff drew systematic samples of approximately 1,000 addresses from each of the five strata, and mailed survey packages (each consisting of a Form 87-A90, Census of Agriculture Classification Error Survey, a cover letter explaining the survey and requesting response, and a return envelope) to a total sample of 5,339 cases on May 18, 1988. Two mail followups, each using complete survey mailing packages, were carried out to 3,216 and 2,400 nonrespondents during the first and last weeks of June, respectively. The Agriculture Division staff contacted approximately 900 of the remaining nonrespondent cases in a telephone followup conducted between August 4 and August 19, 1988.

A total of 2,643 responses (49.5 percent) were obtained, but only 2,471 of these could be classified as farm or nonfarm. The remaining 172 were postmaster returns.

RESULTS

The 1987 Census of Agriculture achieved an overall response rate of 86.2 percent (excluding PMR's), obtaining responses from approximately 3,404,000 addresses, out of a total mailing of some 4,095,000. Postmaster returns accounted for an additional 148,000 cases. Telephone followup accounted for over 110,000 completed cases—73,472 from interviews with respondents and 36,836 from secondary sources.

The census published data for 2,087,759 agricultural operations that met the census definition of a farm. These operations represented over 964 million acres of land in farms; a value in land, buildings, and equipment of almost \$690 billion; and \$136 billion in total value of sales of agricultural products.

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INTRODUCTION

The Census Bureau carried out the 1987 economic and agriculture censuses concurrently, and processed the report forms from the data collection phase, except those for Puerto Rico and the outlying areas (see chs. 7 and 8), in Jeffersonville, IN, at its Data Preparation Division (DPD) facility. While many of the processing activities for the censuses were integrated (e.g., receipt and check-in, and correspondence), separate staffs keyed the data, and each of the various censuses used specialized computerized edit and tabulations programs.

The staff processed the agriculture census data in three main phases:

1. A precomputer operation at Jeffersonville
2. The computer edit and tabulation operation using the Census Bureau's mainframe computer system at the Suitland, MD headquarters
3. A failed edit correction operation, carried out at Jeffersonville concurrently with the computer edit

The Jeffersonville staff also conducted a post-tabulation data review of the census data tables.

The various operations used interactive systems and linked Suitland electronically with work stations and the processing staff in Jeffersonville. The Jeffersonville staff used approximately 70 terminals, each with a keyboard, screen, and access to one of several minicomputers located at the Suitland facility. These minicomputers had substantial data storage and processing capacity; they dispensed with many of the paper printouts previously used by displaying the data on the Jeffersonville terminals' cathode ray tube (CRT) screens.

The main computer facility at Suitland carried out the computer edit and tabulation of the census data, using the mainframe computer to format, edit, and tabulate the data received from Jeffersonville. Census records failing the computer edit were electronically referred back to Jeffersonville and displayed on terminal screens there. The processing staff reviewed the problems and entered corrections to the data file through the terminals. This eliminated the need to write corrections on paper batch edit listings and send them to the data keyers, as had been done for the 1982 census.

PRECOMPUTER PROCESSING

General Information

The DPD mailed approximately 4.1 million 1987 Census of Agriculture report forms in December 1987, and carried out a series of mail and telephone followups over the succeeding 7 months. Census responses began arriving at the DPD office in January 1988, with receipts totaling over 1.43 million by the end of that month. The DPD staff required for the agriculture and economic census data

processing activities varied during the processing cycle. Prekeying staff (i.e., for receipt, check-in, sorting, correspondence, and so on) peaked at over 300 employees in February 1988, while the keying staff reached its highest level in April, with approximately 203 employees. The precomputer processing phase involved—

- Receiving and checking in the report forms
- Sorting report forms and removing contents from envelopes
- Evaluating and responding to census-related correspondence
- Reviewing special cases (mostly nonagricultural), "2+" cases, and multiunits¹
- Keying the data from the report forms to computer disk

The DPD staff was organized into sections and units based on the specific tasks each was to perform. Some units, such as mail receipts and check-in, and the correspondence, processed both agriculture and economic census reports, while other units were dedicated to either the agriculture or economic census processing operation.

Receipt and Check-In

Receipt and initial sort—After identifying incoming mail by the different ZIP Codes assigned to the economic and agriculture censuses, the Postal Service presorted these materials for the DPD office into four categories:

1. Agriculture census receipts
2. Agriculture census postmaster returns (PMR's)
3. Economic census mail
4. Other mail

The clerical staff sorted the agricultural receipts by type, and removed those without visible barcodes. Packages without visible barcodes went to the remove-contents and sort unit; packages with visible barcodes went to the batching unit for check-in; and multiunit PMR's were sent to the multiunit processing unit.

Batch and check-in—The batching unit received mail receipts from the initial sorting operation, the opening operation, and the barcode equipment operations areas. Clerks collected receipts and grouped them into batches, by type (i.e., agriculture, economic, and so on); mail receipts still in envelopes were collected in batches of 300-400 pieces each and placed in mail trays, while correspondence receipts and single-unit report forms out

¹"2+" cases were those for which two or more report forms were received in one envelope. "Multiunits" were generally companies or partnerships that had significant agricultural activities at more than one location, functioning as separate economic entities.

of their envelopes were grouped into batches of approximately 100 each and placed in plastic bags. The staff completed two documents for each batch before sending it along for check-in:

1. A Form EC-14, Batch Cover Sheet, with the batch number, date prepared, check-in status, estimated number of forms and destination after check-in
2. A Form BC-1476, Batch Log, for Check-in Control, for maintaining a record of each batch number.

The check-in unit clerks performed the bulk of the check-in operations using two laser barcode-reading machines, each with a six-pocket mechanical sorter. The barcode-reader terminal operator keyed the batch number and status codes from the form EC-14 for each batch to the laser machine's microprocessor. The computer program checked the codes, and if they were unacceptable, the terminal operator determined the correct codes, and entered those codes for the batch before submitting the materials for check-in.

Once a batch was accepted, the terminal operator placed the materials in the loading tray so that the barcodes faced the laser. The laser equipment "read" the barcodes on the address labels—which included a trade-area code identifying the type of activity (e.g., "agriculture"), and the census file number (CFN—an identification number assigned to each address in the census mail file) for the address—checking in each receipt to update the census control file. The laser machines checked in and sorted up to 400 receipts per minute each (real average production was 100-150 receipts per minute), using the six-pocket sorter to group them into unreadable barcodes (pocket 1), agriculture receipts (pockets 2 and 4), PMR's (pocket 3), all other trade area codes (pocket 5—nonagriculture census receipts inadvertently included in the agriculture census batches), and unable to sort (pocket 6). Initially, the operator resubmitted "unreadables" and "un-sortables" to the laser check-in three times; those still unread after three tries went back to the receipts unit for opening and rebatching. PMR unreadables went to wand/keyboard check-in. As processing progressed, this practice was changed to improve efficiency: In the revised procedure, the operator allowed pocket 1 and 6 materials to accumulate until all of each day's receipts had been run through the machine, then rebatched and reran the rejected receipts. If the sorter still was unable to "read" the barcode, the receipt was opened, batched, and checked in at the wand/keyboard station.

Materials the laser barcode-reading machines could not check in were referred to laser wand/keyboard check-in. These included—

- Unreadable barcode receipts (including those with barcodes not visible through the envelope window)
- Report forms out of their envelopes

- Multiunit report forms when several forms were returned in a single envelope
- Respondent originated correspondence (ROC) and Census Bureau originated correspondence (BOC)
- Out-of-scope recycles

Clerks using laser wand equipment ran the wands over visible barcodes. When the laser wand equipment failed to read a barcode, or when no barcode was present (e.g., with letter correspondence), the clerks used conventional keyboard stations to key the trade-area code and CFN. The staff referred materials without CFN's to the research unit.

As the materials were checked in, clerks entered the check-in data from the laser barcode-reader machines, the laser wand stations, and the keyboard stations, on "pooler" tapes. When each tape reached capacity, or at the end of the daily check-in run, the clerks completed a Form DP-133, Pooler Lot Batch Number Control Record, with the processing project number (a four-digit identification number) and date, project title (i.e., 1987 Economic and Agriculture Censuses), phase (check-in barcode reader), and the pooler lot number. The check-in data were transmitted to the Suitland computer facility daily. The staff sent the paper documents to the pooler lot hold area, to await verification of successful check-in transmission and database update.

Mechanical sort—After check-in, the DPD staff used two laser barcode reading machines, each with 24-pocket mechanical sorters to sort report forms still in their envelopes. This required two sorting passes, the first by type of case (i.e., "must," sample, nonsample, and "short" form) and census geographic division (for a description of the census geographic divisions, see ch. 5), and the second by State. In the first pass the laser reader scanned the barcode on each address label and the sorter mechanically sorted the receipts into groups of forms as follows:

Pocket	Type	Geographic division
1	Machine rejects (unable to read barcode)	(X)
2	Must	1, 2, 3, and 6
3, 5, 7	Nonsample	1, 2, 3, and 6
4	Must	4 and 5
6	Must	7, 8, and 9
8, 10	Sample nonmust	1, 2, 3, 6
9, 11	Nonsample	4 and 5
12, 14	Sample nonmust	4 and 5
13, 15	Nonsample	7, 8, and 9
16	Sample nonmust	7, 8, and 9
17	Short form	1, 2, 3, and 6
18	Coverage evaluation	All divisions
19	Short form	4, 5
20	Abnormal farms	All divisions
21	Short form	7, 8, and 9

Pocket	Type	Geographic division
22	Multiunits	All divisions
23	Non-agriculture receipts	(X)
24	Machine failures (unable to sort)	(X)

(X) Not applicable.

The coverage evaluation (pocket 18), abnormal farms (20), and multiunits (22) receipts were not subject to the State sorting operation but were sent directly to the remove-contents and sort unit.

All other receipts already sorted by type of form (i.e., must, sample, nonsample, and short) went through a State sort in three waves by geographic division. Materials in divisions 1, 2, 3, and 6 were in the first wave; cases from divisions 4 and 5 in the second; and those from divisions 7, 8, and 9 in the third. The sorter automatically opened the envelopes during the second sort and grouped receipts, still in their envelopes, by State. Pockets 1 and 24 of the sorter were reserved for rejected materials and machine failures, which were submitted for resorting three times. If they remained unreadable, the staff referred them to the remove-contents and sort unit. As the sorting progressed, clerks collected the sorted materials, by State, and also referred them to that unit.

Manual sort—The remove-contents and sort unit received the bulk of materials for processing from the mechanical sorting equipment, on a flow basis, in State batches. The staff removed the contents of envelopes, maintaining the State groups, and sorted the receipts into groups of “2+” reports, agriculture special case reports,² and all others. For the “short” form 87-A0400, additional review was performed to identify obvious out-of-scope (O/S) cases. These were short forms with both “no” boxes checked in section 1 and no remarks, correspondence, or data entries anywhere on the form.

Coverage evaluation cases received additional processing; the staff photocopied each coverage evaluation report form, as well as any attached correspondence, and sent photocopies to the evaluation unit. The original report forms then were sorted into groups of “2+” cases, special cases, and all others. The “all others” group was sorted again by type of form (i.e., must, sample, nonsample, and short) and by State.

The remove-contents and sort unit referred the sorted receipts, in State batches, as follows:

Form type	Destination
Coverage evaluation (photocopies)	Agriculture evaluation unit
“2+” cases	Batch for check-in

²This occurred when (1) correspondence was received with the report form, (2) the front page of the report form was blank or no positive data were entered, (3) the respondent entered remarks on the front or back page of the form, or (4) acres were entered in section 1 of the report form, but no data appeared in the crops or livestock sections.

Form type	Destination
Special cases	Agriculture special case processing
Multiunit (non-“2+”)	Multiunit processing
Short form O/S recycles	Batch for check-in
All others	Batch for Data Systems Branch

Correspondence

General information—The correspondence unit at Jeffersonville handled the bulk of the census-related correspondence receipts and documented requests referred from incoming telephone calls. The unit consisted of several subunits responsible for (1) reading and classifying correspondence and telephone referrals, (2) keying correspondence category codes to the computer file to take actions assigned by the readers, (3) interactive research (primarily to identify missing CFN’s and duplicate names) in the mail file, (4) mailing standard letters and report forms in response to correspondence or telephone requests, (5) adding addresses to the mail list by assigning CFN’s to newly identified operations, (6) updating the data base and mailing out related blank report forms and instruction sheets to newly identified agricultural operations, (7) handling Census Bureau-originated correspondence (BOC) that required a reply from the respondent and maintaining the suspense file for such cases, and (8) quality control.

Reading subunit—The reading subunit staff read and sorted incoming correspondence. The subunit referred BOC materials to the suspense file, sent documents without CFN’s to the research unit, and routed requests that seemed to require a tailored letter in reply to analysts. The readers evaluated all other respondent-originated correspondence (ROC), using a list of problem descriptions and recommended responses for the closest match to the correspondence subject to determine the appropriate corrective action. After reading and evaluating a case, readers annotated the correspondence with a two-digit unit code, a three-digit correspondence category (CORCAT) code, and a time extension date, if required. The unit code designated the processing unit to which the reader referred the case (e.g., “45” = correspondence analysts, “50” = mailout, and “C-” = correspondence category keying), while the CORCAT code identified the general type of problem or subject of correspondence (e.g., “118” = Title 13 quote request, “730” = quit farming, sold farm). The time-extension code showed the date after which the case, if still delinquent, would be included in further followup.

The readers also prepared Form A301, Mail File Update Document, for cases with name and address corrections and sent the A301’s to name and address keying.

Mailout subunit—This subunit prepared and typed special request letters and address labels. It also prepared and affixed computer generated or typed address labels for

mailing packages based on CORCAT codes or special instructions. (The computer generated labels were printed in the analysts' office daily, derived from data keyed the previous day.) The unit also received BOC cases, matched them to the suspense file, and referred them to the appropriate analyst for resolution.

Correspondence analysts—Analysts received unresolved cases (e.g., agriculture census cases, economic census cases, multiunits, and so on) and cases requiring a tailored reply for evaluation and resolution. Usually, this involved routing the case to the appropriate processing unit or preparing a letter responding to ROC cases. The Jeffersonville staff referred all congressional correspondence to Suitland for response, while Agriculture Division analysts at Jeffersonville handled all other ROC cases. The Agriculture Division staff prepared “standard paragraphs” addressing frequent questions or objections concerning the census and analysts used these to “assemble” letters, modifying the specific wording of the paragraphs to respond to specific points, or drafted entire letters for particular cases.

Interactive processing subunit (keyers)—The interactive processing subunit used computer terminals and the interactive processing system to update the computerized census mail list. For the majority of cases, the keyers began by entering the date, then the 11-digit CFN for each case, the CORCAT code, and the time extension code. Up to 30 CFN's and their associated codes could be keyed at a time, after which the data were subjected to quality control checks. A keyer (usually the lead clerk) then was able to write the data directly to the file by pressing two keys on the terminal keyboard. For name and address corrections, clerks had prepared a Form A301, Mail File Update Document, and sent it to the data keying unit, while holding the source document until the computer added the corrections to the file so that corrected address labels would be generated for mail followup. (In some cases, because of particular time constraints, address labels were typed and the letters prepared and mailed directly by the mailout subunit.)

Quality control—Quality control (QC) of the correspondence reading operation involved clerical review of materials from each batch submitted to the correspondence reading and keying subunits. The QC clerks verified batches of 60 or fewer pieces on a 100-percent basis, and larger batches on a sample basis varying from 1 in 3 pieces to 1 in 25 (from a random start) with a minimum sample size of 15 items.³ Clerks reviewed each piece selected for verification and corrected any error identified; batches verified 100 percent were accepted if the error rate was 3 percent or less, while sample-verified batches were

accepted if the number of errors was less than a specific number—ranging from 2 to 5—depending on the size of the sample (e.g., a sample of 15-27 pieces with 2 errors was acceptable).

The QC clerks reviewed each piece of correspondence selected for verification to confirm that (1) it had been processed according to established procedures; (2) the date processed was stamped on the case; (3) each case was correctly annotated with the unit number, category code, and check-in status codes; and (4) all information to be keyed was clearly marked. The clerks corrected any errors, and listed errors identified on the Form DP-697, Clerical Quality Control Record. All batches verified 100 percent were released for further processing, together with acceptable sample verified batches. The sample-verified batches rejected because of too many errors were referred for recycling through the correspondence unit and the QC verification procedures.

Suspense file—The suspense file held all ROC cases requiring a reply, regardless of the unit of origin, as well as all BOC cases. Cases remained in the suspense file for a maximum of 35 days; if at the end of that time no additional responses had been received, the cases were referred directly to an analyst who determined what additional action, if any, should be taken.

Special Case, “2+,” and Multiunit Processing

Special cases—Reports with attached correspondence, remarks entered on the front or back page, blank front page with no positive data, or acres reported in section 1 but no crops or livestock on the report, were designated “special cases” by the remove-contents and sort unit, and were referred to the special case unit. The unit staff (1) determined whether referred cases represented agricultural operations meeting the census farm definition and assigned inscope or out-of-scope codes as required, (2) identified possible “2+” cases, (3) assigned CORCAT codes to cases requiring written replies or more data on the report form, and (4) referred cases to other units or analysts as required. Most special cases proved to be out of scope (i.e., not farms) and were sorted by reason for being out of scope and then sent to the check-in unit for updating the census data base. Once the status had been updated, the check-in unit sent the forms to central files. Report forms determined to be in scope and without other referral problems were sent for data keying. The staff referred the remaining cases as follows:

Type	Referred to—
“2+”	“2+” processing
Problem cases	Agriculture analysts
Form letter assigned	Correspondence category keying
Claims filed	Interactive search

³The actual rates of verification by batch size were as follows: 61-99 pieces, 1 in 3; 100-150, 1 in 5; 151-199, 1 in 6; 200-600, 1 in 10; and 601-1,000, 1 in 25. The typical batch contained between 75 and 150 pieces of correspondence.

Type	Referred to—
Report forms, requiring correspondence other than a form letter	Correspondence analysts

Quality control procedures in the special case unit subjected the cases completed by each clerk to sample verification before the work was released from the unit.

“2+” cases—Most “2+” cases were the result of mailing two or more report forms to (1) an individual, who may or may not have operated more than one farm; (2) different individuals involved in the same operation (e.g., husband and wife, two or more partners, several heirs to an estate, and so on); or (3) an accountant or trust manager of a bank who returned the report forms for several operations in a single envelope. The “2+” case folders, each containing all the reports forms connected with each case, were routed from check-in to the “2+” unit on a flow basis.

Clerks in the “2+” unit reviewed all referred cases to determine (1) whether the report forms represented one or more separate operations that met the census farm definition, (2) the scope of any operations reported, and (3) whether the report forms needed to be linked for reference during further processing. Clerks linked report forms by CFN if different CFN's were being used for the same operation, or the respondent owned or operated more than one agricultural operation. The reviewing clerk linked operations by first determining which CFN was to be assigned the one-digit primary code, and then assigning a one-digit secondary code to the other reports or CFN's. The linkage codes of the primary CFN characterized the scope of the primary case (e.g., in scope [“1”] or out of scope [“2”]). The linkage codes of the secondary CFN's characterized the status each individual secondary report form/CFN related to the primary CFN (e.g., “5” indicated an out-of-scope CFN linked to an in scope CFN). If three or fewer reports had to be linked, and one was in scope, the clerk involved listed the CFN's and linkage codes on the inscope report for keying as part of the data entry operation. If more than three report forms had to be linked, the clerk involved completed a Form 87-A306, Linkage Document, for the situation. The clerk entered the CFN's and linkage codes for all the report forms on the A306 and added this document to the case folder. Identical linked CFN cases—i.e., the secondary or other duplicate, linked report forms—were annotated “void duplicates” and sent for disposal. The quality control staff verified the “2+” unit's work using procedures similar to those employed for the reading and other precomputer processing units. After verification, the disposition of cases for further processing was as follows:

Type	Disposition
A306 documents and inscope reports	Batch for data keying
Abnormals, Hawaii, Alaska	Agriculture analysts (Suitland)
Multinuits	Multinuit processing unit

Type	Disposition
Referrals	Agriculture coverage analyst
Correspondence cases	Correspondence unit
Out of scope (except linked secondaries)	Batch for check-in
Out of scope (linked secondaries)	Central files
Void duplicates	Burn box

Multinuits—The Agriculture Division established multinuit company folders for agriculture multinuits identified prior to the 1987 census, and mailed the report forms for these cases as part of the regular census mailout. Analysts accumulated report forms from a multinuit in its company folder until they were able to account for all of its identified agricultural operations, then reviewed the contents of the folder before forwarding them for data keying. The analysts checked the report forms of each company for completeness; reviewed and edited data entries; compared data between sections of the report forms to ensure consistency; and carried out historical data comparisons for land in farms, value of sales, and major commodities for specified operations.⁴ The staff made telephone calls to problem cases and respondents who had returned incomplete report forms and held the company folder involved out of the processing cycle until followup was completed. All report forms for a given company were reviewed and corrected before they were released for data keying. Analysts determined what action should be taken to correct the most frequently encountered problems (e.g., bracketed entries (see p. 55), reporting in units other than specified fractional entries, and so on), decided whether specific report forms should be referred to Suitland for resolution of special problems, and completed Mail File Update Documents (Forms A301 and A301A) when needed. After reviewing and correcting any problems, and verifying suspect data, the analysts sent in scope report forms and correction documents for data keying. Jeffersonville analysts annotated out-of-scope (O/S) report forms, made O/S check-in action updates, returned the forms to the company folder, and refiled the folders.⁵ The A301 and A301A documents went to the batching unit for name and address keying to update the mail file.

Interactive Research Unit

General information—The research unit resolved coverage problems for selected cases, usually by searching the 1987 census mail file to match names and addresses for the following kinds of cases:

⁴Analysts made historical data comparisons for a particular operation if (1) the reported acreage was 1,000 acres or more, or if the change in acreage from 1982-87 was 1,000-5,000 acres or more; (2) the reported total value of products sold (TVP) was \$500,000 or more; or (3) if a multinuit showed a significant difference in operation from 1982.

⁵The multinuit folders remained on file for possible referral to the economic census processing operation; operations out of scope for the agriculture census could represent other economic operations of a company that were in scope for another of the economic censuses.

- *Successors.* Successors were the current operators of farms listed in the census file under different operators' names. Successors' names for must cases not matched to the census mail list became "adds" to the census file. (Only must cases were subject to successor search.)
- *Partners.* Partners cases were those in which a respondent supplied the name or names of other persons who had filed or would file a report form for the same operation.
- *Claims filed.* There were three types of "claims filed" cases:
 - a. A respondent provided another name but no additional census file number (CFN).
 - b. A respondent did not indicate any other name or CFN under which he or she might have reported.
 - c. A respondent claimed to have reported under another CFN.

Approximately 96,000 cases were sent to the research unit during the processing of the 1987 agriculture census report forms.

Research clerks used interactive routines on computer terminals to search the census data base to try to match cases to report forms already checked in. Analysts in the various processing subunits annotated report forms or correspondence referred to the research unit identified in the upper margins of the first page of the form by symbols indicating the type of referral: "S" for successor, "CF" for claims filed, or "P" for partner.

Name and address searching—Research clerks entered into the search routine the last name and ZIP Code, if known, for each case being researched. If the respondent did not provide an address, the clerk entered the original label ZIP Code. The computerized search routine used the SOUNDEX principle (see ch. 3 for information on SOUNDEX) to search the census data base using the reported last name of the operator involved and the ZIP Code of the farm in question.⁶ The search program carried out searches at three successive geographic levels—five-digit ZIP Code, three-digit ZIP Code, and State. The system displayed possible matches for the clerks, who then annotated the report forms with identifying CFN's and check-in status codes, and with match codes "M" (matched), "PM" (possible match), "NM" (nonmatch), or "NA" (nonacceptable name (i.e., illegible, obviously fictitious, or government agency)). The clerks referred annotated report forms for further processing, and routed matched ("M") and possible match ("PM") successor cases to agriculture analysts.

⁶When no ZIP Code was provided by the respondent, the research unit used the outgoing address label ZIP Code. When the one from the respondent differed from the label code, the case was referred for ZIP Code research for confirmation of the reported address's correct code.

CFN searching—The census file number (CFN) was the primary numerical identifier for each report form or case received and/or processed, and report forms or correspondence received with incomplete or missing CFN's were submitted to the correspondence research unit for searching along with other cases. These cases were matched to the mail file to try to determine the original CFN. When successfully matched, the CFN from the mail list was assigned to the receipt and the case was checked in and routed for further processing. Unsearchable cases were sent to central files, while other problem cases were referred to analysts for resolution.

Data Entry

General information—Data entry (or keying) required transcribing data responses from the census report forms to a machine-readable data file. The DPD staff used a key-to-disk system with interactive edit programs that selected the next program based on a question asked on the previous program, performed preliminary edits, and displayed questions to identify various situations in each record as the data were keyed. The questions helped lead the keyer through the interactive routine.

The data entry staff used key stations, each consisting of a keyboard with a cathode ray tube (CRT) viewing screen, which allowed the operator to monitor and edit keyed data as well as receive messages or questions displayed by the input program. Quality control procedures included reviewing samples of each keyer's work and, when necessary, correcting keying errors.

After data were keyed and verified, a lead operator transferred the data from the disks to magnetic "pooler" tapes for transmission to the Suitland computer complex by telephone datalink. The keying unit received work units (WU's) of census questionnaires batched by State, so each of these "pooler" tapes contained data for only one State. Once the Economic Programming Division (EPD) programmer "ran" the data from a given pooler tape, verifying that the data had been received at Suitland and was acceptable, the DPD unit erased the tape for reuse.

Data keying operations—The batching and control subunit weighed report forms using electronic scales (instead of hand counting into batches), batched the report forms by type (must, sample, nonsample, and short), placed each batch of forms in a plastic envelope, and attached a Form 87A405, Batch Cover Sheet, with a WU number assigned by the computerized data entry production control system. The batched reports then were placed in a rolling bin and sent to the data keying staff. The data keying staff in DPD's Data Systems Branch received report forms, linkage documents, and mail file update documents in WU's of 50-100 documents each. Supervisors assigned these materials to the keying staff according to State priorities, or closeout schedules. Agriculture Division requested that Data Systems Branch key and transmit 5,000-10,000 cases per State closeout.

Data entry combined clerical screening and data entry into a single operation. Keyers identified problems on the report forms and made decisions as to whether a given problem should be keyed, flagged, ignored, or handled in some other manner. Keyers opened the plastic envelopes containing the report forms/documents, wrote his/her "keyer ID" on the form 87-A405 cover sheet, and checked the report forms for problems as data were entered. Report forms were pulled from the batch and rejected at data entry for the following reasons:

- *Report form was not keyable.* The majority of data values and their location could not be determined.
- *Linkage code missing.* The linkage code for the extra CFN (i.e., a different CFN than the one in the label area) was missing.
- *Remark requiring reply.* There were remarks on the form, or attached, requiring a reply.
- *Blank report.* No data were reported in sections 1-29. (For telephone followup report forms, no data were reported in sections 1-29 and "Census Use Only" box 037 was not equal to "9"—i.e., the computer replicated selected 1982 data from the census data base.)
- *Maximum values were exceeded.* Data field(s) exceeded the maximum value allowed.
- *Geographic area code (GAC) validation.* The State reported for the principal county location of agriculture operations did not match the State reported in item 5 on the Form 87-A405, Batch Cover Sheet.
- *Check digit failure.* The input edit program rejected the CFN, extra CFN, or "Census Use Only" box 036 check digit after three attempts to key the field.

The keyers pulled rejected report forms from the batch, circling check digit rejects, maximum value failures, and extra CFN's with missing linkage codes in red ink; and wrote other reasons for rejecting the report in the label area (also in red ink). They held rejects aside from the rest of the batch until all report forms in the batch had been keyed, then counted and posted the number of rejects to the A405 Batch Cover Sheet. The keying staff referred rejects to supervisors, who sent them daily to the batching and control subunit for rerouting to the appropriate processing subunit (e.g., correspondence, agriculture evaluation).

Keyers employed a series of input programs to key data from the Batch Cover Sheet and report forms, usually in the following order:

Batch header. Assigned to key batch header information from the Batch Cover Sheet.

Identification. Key the CFN, extra CFN's, and "Census Use Only" boxes 035-042 from the report forms.

Name/address correction. Key corrections made to the name and/or address by the respondent.

Geographic area code validation 1. Key answers to questions about the principal county located in section 1, item 8 (Location of Agricultural Activity for "This Place").

Geographic area code validation 2. A continuation of GAC validation 1, this program checked county/State location.

Reported data (29 programs in all). Assigned to key section identifiers and keycodes with reported data.

Telephone number. Key the area code and telephone number located in section 29 on regular report forms, or above section 1 of the telephone enumeration report forms.

Rejects. Key the number of rejected report forms.

Help. Display the last 15 records keyed for reference.

The header and identification programs identified the batch number, State, number of report forms, CFN, and other relevant information about the batch/report forms. The name/address correction and GAC validation 1 and 2 programs were "interactive," that is, the routines guided the keyers as they keyed the information required. The first of these programs enabled the keyers to make name and address corrections, if necessary; the second was used to confirm county location; and the third to confirm State location if the county reported by the respondent did not match the four-letter county code on the address label, and the State reported did not match the State listed on the Batch Cover Sheet. In each case, the interactive program displayed questions identifying conditions that required action by the keyer, and provided guidance for keying corrections to the names, addresses, and geographic locations.

To enter reported data from sections 1-28 and the telephone number (if any) from section 29, the keyer first keyed the three-digit section identifier for each section containing data,⁷ followed by the yes/no response to the question for data. The keyer next entered a three-digit main keycode for each cell containing data (including write-in cells) or a three-digit subkeycode (001-005) for certain data cells with coded crops or animal specialties, followed by the reported data within the data cell (up to nine digits). The section-identifier code also "called" the input program for that section (e.g., the input program for

⁷The keyers did not key section identifiers for blank sections except for sections 1 (acreage in 1987), 11 (land irrigated in 1987), 24 (fertilizers, phosphates, and lime used in 1987), 25 (insecticides, herbicides, fungicides, nematocides, and other pesticides, or other chemicals used in 1987), and 29 (person completing this report and the date) on must and sample report forms; and sections 1, 11, and 29 on nonsample report forms.

section 7 was activated by keying “-07” on the previous program). For example, in section 7 (other crops), a respondent might report that 75,000 pounds of shelled popcorn was produced on 5 acres of land on “this place” in 1987. The keyer entered

1. The section code “-07” (“-” was used for “S” as a section code digit), indicating the section,
2. “1,” indicating the yes box was marked (keyed for data)
3. Keycode “662” to identify the crop as popcorn (pounds, shelled),

4. “5,” reporting acres for data,
5. “001,” the subkeycode for quantity harvested,
6. “75000”—the quantity harvested for data.

Keyers proceeded through the report form, entering the various codes as needed. They were expected to decide whether to ignore, key, or flag data for any problem item, as shown in table 6-1.

Table 6-1. **Keyer Problem Instructions**

Problem	Description	Keyer action
Alpha entries	Respondent used an alphabetic equivalent for a numeric value (i.e., “ten” acres, instead of “10” acres).	Keyer interpreted the value and keyed it in numerics.
Dollars/cents	Respondent reported dollars and cents instead of dollar value only.	Keyer entered only dollar value.
Altered stub (The “stub” was the list of items or descriptions usually running down the left side of a section.)	An altered stub involved a change or addition to the preprinted items.	Keyer flagged this problem by keying a “+” for the data item; no data were keyed.
Bracketed entries	A single entry reported for multiple data cells.	Keyer keyed the reported data followed by a “-” flag.
Data field exceeded nine digits	-	Keyer rejected report form after circling the data cell.
Data reported outside of a data cell	Data were reported but were written outside corresponding data cell.	Keyer keyed the data for the nearest data cell or handled the item as a bracketed entry if the response appeared to be bracketed.
Double entries	More than one entry in a single data cell.	Keyer repeatedly keyed the key code and data until all data values were keyed.
Fractions and decimals	Fractions and/or decimals reported when not requested, or fractions and/or decimals reported when “tenths” requested (i.e., “1/2,” “1/3”).	Keyer decided how to handle based on rules given in the keying instructions.
Range entries	Data reported with an upper and lower limit instead of a specific number.	Keyer keyed upper limit only.
Reference to other data	Symbols such as arrows, ditto marks (“), or remarks (“all”), used to indicate “the same as” reference to other data.	Keyer decided to key or flag, based on instructions and examples in the keying instructions.
Wrong units	Units used in reporting data were inconsistent with those listed in a data cell or preprinted to the right of crop names below write-in sections.	Keyer compared the reported units to the preprinted units and keyed the data if the units were the same, or flagged the data by keying the reported data followed by a “+” if the units differed.
Negative entries	Negative values reported for acres or dollars.	Keyer keyed a “-” flag for the section.

Table 6-1. **Keyer Problem Instructions**—Con.

Problem	Description	Keyer action
Remarks	Comments or reporting errors that (1) required a change to reported data, (2) contained data, (3) related to the manner in which data were reported, or (4) required a reply. Other categories of remarks were (a) illegible entries (not interpreted by supervisor), (b) nonkeyable sections, (c) sections that were full and data were reported below, (d) the section was not distinguishable or there was a question as to how the data were to be keyed.	Keyer keyed the section identifier and the yes/no response, followed by a "+" for data.

Quality control—There were quality control (QC) procedures for the data keying operation to ensure that the information on the report forms was accurately recorded for editing and tabulation. For the 1987 census, verifiers checked keyers' work to identify any errors made by the keyers. All errors identified during the verifiers' review of keyed work were corrected and reverified before the data were transmitted to Suitland for computer processing. The procedures defined errors as either keyer errors—essentially miskeying that resulted in such problems as miskeyed fields, field or document omission or duplication, field keyed unnecessarily, and so on—or nonkeyer errors, which included mechanical or supervisor errors, verifier corrections, etc.

Data keyers progressed through four stages of verification of their work. These began with 100-percent review or verification of two batches, followed by sample verification, and then qualification for the final stage of post-proficiency status. After initial training, including instruction on the specific agriculture data entry procedures, keyers entered "stage 1" of the verification program.

In stage 1, which was part of the keyer training program, all keyers' work was verified on a 100-percent basis with all detected errors corrected. Two complete WU's (a WU consisted of approximately 50 sample or nonsample, or approximately 100 short (A400) forms) had to be keyed before the keyers could proceed to stage 2.

In stage 2, keyers' work was sample verified⁸ and the quality control reviewers used decision tables that established the acceptable number of errors (again, all errors, keyer and nonkeyer, were counted with respect to acceptability) within specified numbers of data fields verified from the sample questionnaires. For example, a WU with 1,057 to 1,116 data fields verified was acceptable if the total number of defective fields was less than 22, or about

2 percent. (Rejected WU's were sent through a rectification process, which involved 100-percent verification and correction.) Keyers remained on stage 2 until completion of the proficiency training period, at which time they progressed to stage 3.

In stage 3, keyers tried to qualify for the final stage. WU's were sample verified at the same rates as in stage 2, but the allowable error rate was reduced (in a WU with 1,108-1,187 fields, more than 17 defective fields, or less than 1.5 percent, required rejection of the unit). Only keyer errors were counted to determine qualification. If a keyer received 5 consecutive "accept" work unit decisions in a sequence of 10 or fewer decisions, the keyer advanced to stage 4. Each decision represented one keyed batch. (Keyers failing to qualify were further instructed and then allowed to reenter stage 3.)

In stage 4, each keyers' work was sample verified (except for small WU's) and all errors, keyer and nonkeyer, were counted in accepting a keyed WU. Overall error rates for keyers at stage 4 were not to exceed 1.2 percent. Once qualified for stage 4 verification, keyers remained at that stage for the duration of the census processing.

After data keying and verification, the processing staff moved the batches of keyed report forms to a holding area, keeping them there until disposition listings were received showing which records had failed and which had passed the computer edit. The processing staff pulled the report forms for cases that failed the computer edit from the keyed batches and regrouped them into edit review WU's for the interactive edit review and correction process. Thereafter, the forms went to central files for sorting, boxing, and storage.⁹

⁸The WU's were sampled using a sliding scale: small WU's (i.e., 9 or fewer sample or nonsample forms, or 19 or fewer short forms) were verified 100 percent; the sampling rates for larger units varied from 20 percent for those with fewer than 19 questionnaires (39 short forms), to 5 percent for units with 40 (80 short forms) or more.

⁹The 1987 agriculture census report forms remained at Jeffersonville until Sept. 1989, when the DPD staff pulled the report forms for 270,000 "large" farms (the definition of a large farm varied from State to State) and retained these for the Agriculture Division's large farm reference file (used in compiling the 1992 census farm list). The staff sent the remainder to the Federal Records Center, Dayton, OH, where they were to be stored for 11 years after the date of the census. After that, the individual report forms were, by law, to be burned. (Unlike the decennial census of population and housing procedure, the Bureau did not microfilm the agriculture returns.)

COMPUTER PROCESSING

General Information

The data, once clerically processed and keyed to computer tape (as described above), were transmitted to the mainframe computer facilities at Suitland, MD, which carried out the bulk of the data formatting, sorting, editing (validating, cross-checking, and refining the data file), and tabulation, while the Jeffersonville staff did most of the data review and correction, using the interactive minicomputer system.

This computer work cycle began as soon as the first data from report forms were keyed and transmitted to Suitland in mid-January 1988, and continued until the final tabulations were completed in March 1989. Approximately 2.4 million individual census records were edited, of which some 2.088 million met the agriculture census's farm definition and were included in the agriculture census file. The computer processing cycle consisted of three major operations:

- Formatting and simple editing
- Complex editing and edit correction
- Data tabulation

Format and Simple Edit

The format and simple edit operation (1) converted individual data records into binary records that could be manipulated by using the data processing programs, (2) carried the informational flags set during keying operations to the computerized record, (3) added historical individual-cell data to the file for comparison purposes, and (4) "flagged" problems identified during the formatting process.

The data records created for each census report form during data entry contained "fixed" record layouts that, for computerized editing and tabulation, had to be converted to "variable" output records with binary coding for numeric values. The data entry format program converted the data records into a series of fixed and variable portions; the fixed ones contained each record's identification information—State and county codes, CFN, SIC code, and so on—while the variable portions included a field for each data item reported, imputed, or changed, but nothing for items left blank in the original record. The computer recognized the individual data items from keycodes at the beginning of each segment, and ignored blank segments.

The format and simple edit program carried the flags set during the data entry to the computer records, but also established new flags for problems identified during the formatting cycle, such as (1) illegal geographic or report-form codes, (2) cases with no reported sales or livestock inventory, and (3) cases with individual items flagged (i.e., illegal keycodes, invalid crop codes, etc.).

The computer also added historical data for individual items to the file at this time. Later, the computer program checked the information in the record against these historical data for completeness and reasonableness. Cells or records identified through a comparison program as incomplete, or that exceeded established limits, were flagged and displayed for analyst's review.

Complex Edit

The format and simple edit program converted the raw data records into binary codes and flagged selected problem cases. The edit programs used were capable of carrying out several thousand individual operations in all, although usually only a fraction of this number were required for editing any particular record. Agriculture subject matter specialists wrote and transmitted the computer edit specifications to the computer programmers using "decision logic tables (DLT's)." Each DLT was a tabular display of the elements comprising a specific edit operation from its inception to the solution.

The computer processing staff carried out the complex edit by State, in batches consisting of formatted records sorted within State, by county, and CFN. The edit checked each record in the data file and

1. Determined whether it represented an agricultural operation meeting the agriculture census farm definition and deleted out-of-scope operations from the data file.
2. Supplied missing entries based on similar farms within the same county.
3. Assigned farm classification codes needed for tabulating the data, including acreage, tenure of operator, value of agricultural products sold, type of organization, and standard industrial classification (SIC) code (by type of farm).
4. Reconciled acres reported for individual items with the total acreage reported.
5. Checked consistency between and within sections of each record.
6. Checked values for products sold, using average prices in each State for each production item, and substituted calculated values if the report values exceeded acceptable limits.
7. Identified nonsample records representing farms that met the "certainty" criteria established for each State, and converted these records to sample records. (Certainty criteria varied by State from minimum acreages of 1,000 to 10,000, or minimum sales of \$40,000 to \$100,000. Institutional and other special cases were included in the certainty classification—even if they failed to meet the other criteria, as were

all farms in counties that had fewer than 100 farms in the 1982 census.)¹⁰

8. Identified and "flagged" cases with substantial computer generated data changes for clerical review and verification.

The edit also identified and retained in the data file records for agricultural operations that *normally* would be expected to have sufficient agricultural sales to qualify as farms, but failed to do so, for whatever reason, during the census reference year. The edit tested the records for such places against criteria developed to identify agricultural operations that normally would meet the farm definition.

Failed Edit Correction and Data Merge

Failed edit correction—The Jeffersonville processing staff used the interactive edit referral/data correction system to carry corrections to the data file. The mainframe computer at the Suitland, MD, facility began editing agriculture census records in January 1988, reviewing each data record, comparing recorded data item responses to established specifications, and identifying any problems. The edit established a failed edit file, and listed there each record that failed the edit, together with the particular item(s) that had failed. By mid-February, the Agriculture Division had begun reviewing and correcting these cases.

The Economic Programming Division (EPD) staff in Suitland moved data for records that failed the edit to the minicomputer system, using a software system that electronically linked the mainframe and minicomputer systems at the Suitland facility. Two data files were established in the system, one for interactive processing, and a second external to the interactive programs. The EPD staff programmed the mainframe computer to organize new WU's of failed edit cases, which then were moved to the minicomputer system. The maximum edit review WU size was 99 cases and the WU's were established as follows:

1. Cases reporting \$1 million or more in value of sales of agricultural products and/or 30,000 acres or more in place.¹¹
2. Must cases (both preidentified, i.e., with estimated sales qualifying them as must cases in the initial mailout, and nonmust cases with reported sales qualifying them for inclusion in the must category).
3. Sample and nonsample cases.
4. Short form cases.

The EPD staff printed out disposition listings of the CFN's and other identifying information for all cases in each WU. The Jeffersonville clerical staff located and removed the report forms for the failed records from the original keying work unit, placing all the report forms for each WU in a single batch so that the questionnaires involved would be available to the edit review processing clerks.

To begin the review and correction of the unacceptable records, processing clerks in Jeffersonville retrieved assigned WU's from the failed-edit file using interactive terminals linked to a minicomputer in Suitland, and called up the first record in each for display on their terminal screens for review, comparison with the original report form when necessary, and correction. The clerks worked through each record, making any corrections identified on the screen display and reviewing each record after correction before proceeding to the next.

After all the records in a WU had been reviewed and any necessary corrections had been made, the clerk released the WU for quality control review. Each edit correction clerk's work was subjected to quality control review. During the first 2 weeks of activity, quality control staff reviewed a sample of each clerk's work. There were no quality control requirements during this period, as the clerk was considered to be undergoing training. After 2 weeks, quality control staff began sample verification of each clerk's work for production. During the decision period, samples from 10 consecutive WU's were checked, and 8 had to be of acceptable quality (samples checked depended on the size of the particular WU, varying from 1-in-6 for WU's of maximum size (99 cases) down to 1-in-3 for units of 27-53 cases; WU's with 26 or fewer cases were verified 100 percent). After quality control procedures were completed, the WU was released for further processing by EPD.

Each day, EPD staff transferred the corrected files from the interactive file to the mainframe's failed edit file. The corrected records were matched to the original failed records and the latter were deleted from the data file. The "new" records then were reedited. This cycle of editing and correction continued until each record passed the computer edit and could be incorporated into the data file. The failed-edit correction program began in mid-February 1988, and continued for over 8 months, until the end of October 1988. During that period approximately 738,500 individual census records, including 45,000 "repeat edit failures," failed the computer edit and were referred for correction. No record was added to the passed-data file until all corrections had been incorporated and the computer edit record accepted.

Data merge—After editing and failed-edit correction, the data files for each State were merged into a single file, in sequential order by State, county, and identification number. Using a "merge" program, the computer tallied agricultural operations by size (i.e., acreage, head of livestock, etc.), value of products sold, and type (used to aid in adding data for nonrespondent cases), and identified and

¹⁰The Census Bureau obtained the data required for these conversions by correspondence with the addressees involved, or by imputation based on responses from farms of similar size in the same geographical area.

¹¹At the beginning of the edit correction work, Agriculture Division staff in Suitland reviewed and corrected these "\$1 million" cases, but once the interactive systems staff had begun working on the corrections, they were referred to Jeffersonville for processing with other failed-edit cases.

displayed problem cases for review and correction before tabulation. The processing staff unduplicated the computerized main data file, using a census file number (CFN) matching program to identify and display duplicate records for review. Usually the first of any duplicate records identified was retained, while the rest were deleted from the record.

Statistical Estimates

General information—About 13.8 percent of the addressees on the 1987 agriculture census mailing list never responded, and selected data were collected from only a sample of all farms on the list. Nevertheless, the data published from the 1987 census represent all farms in the United States because the Census Bureau used statistical estimation procedures to inflate the respondent data to compensate for nonresponse and the use of sampling.

Nonresponse estimation—The Bureau carried out the nonresponse weighting operation editing the data files. Addresses on the census mail list were classified as representing “large” (i.e., with \$100,000 or more in expected annual sales or with 1,000 or more acres (the acreage requirement) varied by State) or “other” agricultural operations. There was an intense followup of nonrespondent large farms, including a telephone followup beginning in February 1988. In April 1988, the agency began selecting a sample of approximately 27,000 of the “small” nonrespondent addresses for inclusion in the Nonresponse Survey, carried out in the following 3 months. The survey data were used to compute stratified State-level estimates of the number of nonrespondent cases that actually represented farms. (The telephone followup and Nonresponse Survey are covered in ch. 5.)

The strata were defined by form type, expected value of sales, and previous census status. The estimated survey proportion of farms was multiplied by the number of census nonrespondents to estimate the number of census farms among the census nonrespondents within each stratum. The number of nonrespondent farms was proportionately distributed to each county within each stratum; and a systematic sample of respondent farms was selected to represent the nonrespondents. This was done by assigning a “nonresponse weight” of “2” to the selected records (i.e., the data responses for each selected record were doubled). The “large” nonresponse cases and records not selected were assigned nonresponse weights of “1.” This procedure assumed that the respondent and nonrespondent farms had similar characteristics, such as value of sales, acreage, and so on.

Sample estimation—The 1987 agriculture census collected selected data (items 23-28 on the sample report forms) only from an approximate 20-percent sample of the agriculture census mail universe. The following types of addresses received the sample form:

1. All addresses in Alaska and Hawaii.
2. All “must” cases.
3. All addresses expected to represent “large” farms (the definition of a large farm varied by State, from a minimum of 1,000 acres or \$40,000 in sales in New England, to as high as 10,000 acres or \$200,000 in sales in some Western States).
4. All farms in counties with less than 100 farms identified in the 1982 census.
5. A systematic sample of 1-in-2 addresses for counties that contained 100 to 199 farms in the 1982 census.
6. A systematic sample of 1-in-6 addresses of counties that contained over 200 farms in the 1982 census.

The sample data estimates were designed to estimate the totals that would have resulted had all census respondents been asked for the data requested in items 23-28 of the report forms. The staff used a ratio-estimation procedure to assign a sample weight to each record. This inflated the sample data to represent all farms in the subject population.

The sample records were classified into “certainty” farms (i.e., mostly large) and “noncertainty” (mostly small) farms. The certainty farms were defined as the first four types of addresses listed above, and were assigned a sample weight equal to “1.” To calculate estimates for the noncertainty sample addresses in the fifth and sixth listings above, the addresses were partitioned into 32 mutually exclusive strata, formed by 8 sales groups, in turn divided by 2 standard industrial classification (SIC) code groups, then by 2 acreage classifications, as follows:

Value of sales	SIC	Acres
\$1 to \$999	01 all crops	0 to 69
\$1,000 to \$2,499	02 all livestock	70 or more
\$2,500 to \$4,999		
\$5,000 to \$9,999		
\$10,000 to \$24,999		
\$25,000 to \$49,999		
\$50,000 to \$99,999		
\$100,000 or more		

Each farm record was assigned an initial weight equal to the ratio of the total farm count to the sample farm count for the stratum containing the sample farm. Where necessary, the procedures combined strata to increase the reliability of the final estimates. (The staff used a specific “collapsing” pattern to combine strata that (1) contained less than 10 sample farms, or (2) had a ratio of total farms to sample farms that was more than twice the mail sample rate—1 in 2 or 1 in 6.) The resulting total and sample farm counts were used to compute the sample weights to assign to the record.

The final weight assigned to a sample record was the product of the nonresponse weight and the sample weight. The totals for the sample data were calculated by multiplying the reported sample data values by the final weight.

Tabulation and Data Review

General information—After editing, correction, and data merge, the data records were ready for tabulation. The computer tabulation programs produced a series of detailed data matrices, each consisting of several thousand different items, that would provide the basic material for most of the data tables drawn from the census file. The staff used the data matrices to extract analytical data for analysis and correction in a detailed county-level format.

Once the analytical tabulations had been reviewed and any problem records corrected, a listing was produced showing any change expected. Once the change listings were reviewed, the data matrices were retabulated to serve as the data source for the *Advance Reports* and the Volume 1, *Geographic Area Series*, reports.

Analytical review and data correction—The Agriculture Division staff at the Suitland headquarters used county-level analytical tabulations to interactively review the aggregated data on the minicomputer system. All the data items reported on individual report forms were tabulated for each county and State, for all farms and for farms with \$10,000 or more in reported value of agricultural product sales. The analysts used historical data from the 1982 agriculture census to review the 1987 data for reasonableness and accuracy. They employed analytical tables developed for review purposes as their basic review reference documents, but also used related data, drawn mostly from USDA estimates. The analysts used the interactive system on the minicomputers to electronically search the data file for records containing the questionable data and recommended corrective action.

Representatives of the USDA's National Agricultural Statistics Service (NASS) reviewed the analytical tables produced during the review, as well as the analysts' criticisms and recommendations. The NASS reviewers identified any additional problems they found in the tabulations, and suggested additional corrections or alternative solutions to problems previously noted.

The Jeffersonville staff carried corrections to the data records and all deletions from the data file using the interactive minicomputer systems. Agriculture Division staff reviewed all corrections for accuracy and to ensure that the data criticisms cited for changes were satisfied. The data then were released for tabulation.

Tabulations for counties, States, divisions, regions, and the United States—The Bureau drew the county and State tables directly from the data matrices, and State cross tabulations from the detailed data file itself. Using the tabulating programs, it summed the State totals to produce data for census geographic divisions, regions, and the United States. The published tables included historical data from the 1982 and 1978 censuses. The tabulation program for the 1987 census had "advance" tabulations of selected data from each State and county file for the *Advance Reports*, followed by the general tabulations for the Volume 1, *Geographic Area Series*.

Disclosure analysis—Title 13, United States Code—Census, prohibits the publication by the Census Bureau of data that could be used to identify any individual respondent to any of its censuses. The agency used a procedure called "disclosure analysis" to maintain the confidentiality of the data by reviewing all the data tables before releasing them for publication. This procedure identified and suppressed data items, the publication of which (1) would result in the direct disclosure of data reported by a particular respondent individual or company, or (2) would reveal information about an individual by derivation—that is, by the user adding or subtracting a published subtotal from a published total to reveal individual data. However, the number of farms associated with a particular data item was not considered a disclosure of confidential information in itself; only the associated data values were. While most of the disclosure analysis was carried out by computer, the automated equipment and programs could not perform the entire analytical function. Agriculture Division staff had to check many tabulations and cross tabulations manually before the data tables could be sent for publication.

As a general rule, the Bureau did not publish any agriculture census data for counties with 10 or fewer farms in the census reference year. The disclosure procedures set minimum numerical limits for publishing data values for farms reporting a particular item. Since the tables included identical information arranged under several different classifications, the identification and suppression of a figure in one table required reviewing all related tables and the suppression of the relevant datum in each of them.

Disclosure analysis and suppression for the 1987 agriculture census tabulations for the 50 States, and the 3,079 counties or county equivalents, was completed in July 1989, and for the U.S. summary volume in November 1989.

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INTRODUCTION

Historical Background

The Census Bureau first included Puerto Rico in the agriculture census program in the 1910 decennial enumeration, and continued to carry out agriculture censuses of the Commonwealth every 10 years, in conjunction with the decennial population censuses, through 1950. Congress authorized quinquennial censuses of agriculture for the United States in 1915, although the first was not actually conducted until 1925, but neither Puerto Rico nor the other outlying areas (see ch. 8) were included in this program until 1964. (The only nondecennial agricultural enumeration for the Commonwealth in the intervening years was conducted by the Puerto Rico Reconstruction Administration in 1935.) Congress altered the dates of the agriculture censuses in 1952, requiring that they be carried out every 5 years in years ending in "4" and "9." While Puerto Rico still was not part of the regular quinquennial agricultural program, the 1960 enumeration collected data for the 1959-1960 crop year—approximately the same production period as in the census for the United States proper. The Commonwealth was included in the quinquennial census of agriculture for the first time in the 1964 enumeration.

Following legislation passed in 1972 requiring that the agriculture and economic censuses use the same reference years, the Bureau shortened the periods between the two subsequent agricultural enumerations by 1 year each. This enabled the agriculture census to be brought into conjunction with the economic enumerations (carried out for years ending in "2" and "7") for the 1982 and following censuses. The censuses in Puerto Rico had converged somewhat earlier, when, for the 1978 agricultural enumeration, the Bureau retained the offices and office staff organized for the 1977 Economic Censuses, and advanced the schedule for the agricultural enumeration by a full year. The agency made similar arrangements for the 1982 census, but because of the alteration in the general agriculture census schedule, the Puerto Rico enumeration began (as it had prior to the 1978 census) just as the census of the 50 States was being completed.

For the 1987 censuses, the Bureau's Agriculture Division (AGR) assumed responsibility not only for the agricultural enumeration in Puerto Rico, but also for all the economic censuses there. This combining of all agricultural and economic activities in a single staff and organization made possible certain economies of scale, and simplified the total operation. In addition, the planners decided that for the 1987 agricultural enumeration, as much as possible of the edit work on the report forms should be done in Puerto Rico, including computer editing using a minicomputer system and staff in the San Juan office. (The Puerto Rico office also keyed report forms for Guam and the U.S. Virgin Islands, all of which were routed through the San Juan facility before being sent on to Bureau headquarters for editing and tabulation.)

Legal Authority and Special Agreement

Title 13, United States Code, sections 142(a) and 191 provide for a census of agriculture in Puerto Rico every 5 years for years ending in "2" and "7." The conduct of the census is governed by the provisions of Title 13 and relevant acts of the legislature of the Commonwealth of Puerto Rico, to the extent the provisions of such acts are not in conflict with Federal law. The Director of the Bureau of the Census and representatives of the Commonwealth Government signed a special agreement in September 1986 establishing the respective functions and responsibilities of the Bureau and the Commonwealth in the conduct of the agriculture census. (This agreement also covered the conduct of the 1987 Economic Censuses in Puerto Rico.) The Commonwealth Government agreed to

1. Provide office space for testing and training enumeration personnel
2. Cooperate in publicizing the census
3. Identify possible candidates for filling required positions
4. Assist the Census Bureau in collecting maps and boundary information

The Bureau had final responsibility for planning and carrying out the census, including appointing the census supervisor, assigning Bureau staff as census advisors, recruiting and training the census staff, and maintaining confidentiality of the census data. It retained final authority to determine report form content and design, enumeration procedures, tabulations to be made, and data to be published, but agreed to consult advisory committees and interested agencies of the Government of Puerto Rico on these matters. The Bureau bore the entire cost of the basic census program, but agreed to make available to the Puerto Rico Planning Board or other Commonwealth Government agencies, on a reimbursable basis, special statistical tabulations and tapes not included in the publication program.

Farm Definition

For the 1987 Census of Agriculture in Puerto Rico, a farm was any place that had, or normally would have had, sales of \$500 or more of agricultural products during the 12 months between July 1, 1987 and June 30, 1988, or that had 10 cuerdas¹ of land or more from which \$100 or more in agricultural products were sold, or normally would have been sold, during the same 12-month period. This was the same definition introduced in the 1982 census, and brought the Puerto Rico farm definition closer to that used in the 50 States, where farm status depended on value of agricultural products sold.

¹.97 of an acre.



Planning

Preliminary planning—The Bureau started planning the 1987 Census of Agriculture in Puerto Rico in mid-1984, when the Agriculture Division staff began drafting preliminary table outlines: Detailed planning of the enumeration and publication programs started in the first week of December 1986, with the first of several meetings between Agriculture Division personnel and representatives of the Puerto Rico Planning Board. Planning became more complicated in June 1986 when the responsibility for conducting the 1987 Economic Censuses in Puerto Rico was transferred to the Agriculture Division. (For more information on these censuses, see the *History of the 1987 Economic Censuses*.) During the summer and early fall of 1986, the Bureau and the Commonwealth Government drew up the special agreement covering the two parties' responsibilities in the enumeration (see above for details of the agreement), and began preparations for the census.

General plan of the census—The agriculture census in Puerto Rico remained primarily a field canvass operation, but, as for the 1982 census, the Bureau compiled a list of "special" farms. ("Special" farms were "large" operations—i.e., those identified in the 1982 census as having had minimum annual sales of agricultural products of \$10,000 or more, or that had 49 cuerdas or more in land.) The census plans called for these farms to be mailed agriculture census report forms, together with an information booklet and a cover letter asking the recipient to complete the questionnaire and hold it until a field enumerator picked it up during the canvassing operation. (If an enumerator did not visit a "special" farm, the respondent was asked to mail the report form to the census field office in San Juan.)

All farm operators were asked to report basic production and inventory data, while information on such things as expenses, use of agricultural chemicals, and machinery and equipment, were collected from a representative sample. The Bureau then used statistical methods to "weight" the sample data and produce estimates at the municipio level for the sample items. Sampling allowed reduced respondent burden on sensitive questions.

The 1982 microcomputer operations at the Puerto Rico field office had been successful, and in 1987, a minicomputer was installed to expand the processing capability. Functions such as check-in, data keying, edit processing, and coverage analysis were handled in Puerto Rico by the minicomputer system. Data analysis and detailed tabulations were carried out at Bureau headquarters in Suitland, MD, using comparable computer resources.

Census schedule—Preparations for the 1987 Census of Agriculture in Puerto Rico began in November 1985, and the census operations in the Commonwealth closed in October 1988. The census office was opened in January 1988, although agriculture census operations did not actually begin until July (the economic censuses were carried

out before the agriculture operation). For a complete schedule, see Appendix E, Chronology of Major Census Activities.

PREPARATORY OPERATIONS

Report Forms

There was a single report form for the agriculture census in Puerto Rico, 87-A1(PR)SP. The questionnaire was a single 22" x 14" sheet of white stock, folded to 11" x 14", with printing and shading in brown ink, with four numbered pages. The standard version employed the Spanish language (hence the "SP" suffix); an English-language version also was produced with printing and shading in black ink on green paper.

All farm operators were asked to complete items 1-20, which requested data on the following:

- Cuerdas owned, rented, or leased
- Location of the operation
- Sugarcane
- Coffee, tobacco, or pineapple
- Grains and farinaceous crops
- Fruits
- Vegetables
- Cultivated and/or improved pasture
- Ornamental and flowering plants, cut flowers, and lawn grass
- Other crops
- Land use
- Irrigation
- Hogs
- Cattle
- Other livestock
- Poultry
- Farm organization
- Sales by selected products (listed)
- Other farm-related income
- Farm operator characteristics

A sample of all farms—consisting of all "large" farm (i.e., farms with 1982 sales of \$10,000 or more, or with 49 cuerdas or more in 1982), all farms in municipios the

had 250 or fewer farms in 1982, and a 1-in-5 sample of farms in municipios that had more than 250 farms in 1982—were asked to complete items 21-25, requesting data on:

Products for home consumption

Insecticides, herbicides, fungicides, pesticides, lime, and other chemicals used

Expenses

Machinery, equipment, buildings, and other facilities

Hired workers, *agregados*², and sharecroppers

Section 26 requested identification information on the person completing the report form. (A facsimile of the form 87-A1(PR) is reproduced in app. C.)

Inventory data, information on machinery, equipment, and facilities, and on *agregados* or sharecroppers on the place, were collected as of July 1, 1988. Sales and harvest data were requested for “the last 12 months” prior to enumeration.

The Bureau printed 60,000 copies of the 87-A1(PR)SP (Spanish language) questionnaire, together with 700 form 87-A1(PR) English language versions. The field staff used the Spanish-language version of the report form with the Form 87-A5(PR), Record Books, 1,200 of which were printed for use in the enumeration. For the mailout to special farms, the Bureau printed 8,100 copies each of the form 87-A1(PR)SP-L1 cover letter and the Form 87-A1(PR)SP(I), Instruction Booklet.

Field Organization and Training

General organization—The Bureau established a local office in San Juan for the agricultural census in the Commonwealth. This office and a field enumeration staff carried out the data-collection portion of the census—a combined mail/field enumeration, while the agency’s headquarters staff provided supervision and technical assistance. The Bureau’s Field Division had primary operational responsibility for the field enumeration, although the Agriculture Division’s Outlying Areas Branch developed plans for the census, compiled the list of special farms, and also provided technical advice and assistance. The Data Preparation Division (DPD) assisted in the assembly of data-collection materials and mailed out report forms. The Bureau assigned members of its professional staff as census manager and as subject-matter analysts during the enumeration, but the remainder of the office and field staffs were recruited locally. The Puerto Rico field office

staff included a census manager, an office operations supervisor, a field supervisor, 6 assistant field supervisors, and a clerical staff of approximately 30.

The Puerto Rico office opened in the first week of January 1988, in the San Juan suburb of Hato Rey. The Field Division leased approximately 3,000 square feet of office space and rented or borrowed furniture and other standard office fixtures from local Federal offices. The minicomputer facility installed in the office employed 16 terminals for entering data, and 2 printers. Satellite communications made it possible for programmers and analysts at Suitland to communicate with the computer system in Hato Rey. An electronic security system was provided by the owner of the building and the Bureau established the usual security systems for the computer facility. (The Hato Rey office and its staff conducted not only the 1987 Census of Agriculture in Puerto Rico, but also the 1987 Economic Censuses, and also carried out preliminary processing and data entry for report forms from all of the outlying areas.)

Recruiting and training—The agriculture census in Puerto Rico began as the 1987 Economic Censuses sample data collection operation closed down, so that many of the office staff and enumerators from the economic censuses were carried over to the agriculture census staff. However, the agriculture enumeration required a considerably larger field staff than had the economic censuses. The agriculture operation employed 68 crew leaders, 50 quality control (QC) enumerators, and 610 enumerators. Recruiting the field enumeration staff began in April 1988 and continued into July, with hiring based on the results of written tests. Field operations assistants began administering the tests in mid-April and by the beginning of July over 5,000 applicants had been tested. The enumeration staff was selected from the qualified applicants with the highest test scores. The census office and field enumeration staffs were salaried temporary employees of the Bureau and were paid on standard U.S. Government general schedule (GS) pay scales for the appropriate grades.

Crew leaders, who would be the immediate supervisors of the enumerators, had been chosen by the second week of June, and the field operations assistants carried out the 3-day crew leader training course during the period June 20-July 1. The crew leaders then trained the enumerators for their own crew leader districts (CLD’s) July 1-8. By July 8, the main recruiting and training effort had been completed and the enumeration began.

Training and reference materials—The Agriculture and Field Divisions prepared training and reference guides for use in the agriculture census in Puerto Rico. The principal administrative reference used in the field office was the *Office Procedures Manual* (Form A46(PR)SP), which covered basic administrative operations of the field office, and procedures for field office processing of the census report forms. The six assistant field supervisors had primary responsibility for training the crew leaders, and used

²A member of a family living on a farm not operated by any member of the family. An *agregado* may or may not be an employee of the farm operator and may or may not produce any agricultural products. An *agregado* might own, rent, or use rent-free, the house he/she lives in. The land operated by, livestock belonging to, and the products marketed by an *agregado* are included in the totals for the farm operator in charge of the place on which the *agregado* lives.

the *Guide for Training Crew Leaders* (Form A53(PR)SP) as their primary training manual. Each crew leader received a copy of the *Crew Leader's Manual* (Form A7(PR)SP) as the primary reference for that position, and used the *Guide for Training Enumerators* (Form A52(PR)SP) for training the enumeration staff. Each enumerator received a copy of the *Enumerator's Manual* (Form A10(PR)SP) as the primary reference source for the field enumeration. The crew leaders also used the *Guide for Training Quality Control Enumerators* (Form A54(PR)SP) for training their quality control (QC) enumerators, and QC enumerators were given the *Quality Control Enumerator's Guide* (Form A51(PR)SP) and the *Quality Control Enumerator's Handbook* (Form A54.1(PR)SP) as their principal training and reference materials.

The Suitland staff initially prepared all of these reference and training materials in English, then translated them into Spanish for printing and distribution. The materials distributed in Puerto Rico generally were in Spanish, although English versions were available for reference if needed.

Maps

The census office and field enumeration staff needed detailed maps to carry out a complete enumeration. Three basic kinds of maps were required:

1. Master maps for the census office to use in planning and supervising the census
2. Crew leaders' maps covering each crew leader's area of responsibility
3. Enumeration district (ED) maps for every ED in Puerto Rico

The 1987 agriculture census ED's corresponded generally to those of the 1980 decennial census—i.e., they were drawn within the recognized barrio boundaries—although some boundaries were altered in urbanized areas to allow for changes in land use. The ED maps were inserted in the A5 Record Book for each ED for use in the field enumeration.

The Census Bureau used the new Topologically Integrated Geographic Encoding and Referencing (TIGER) system to produce the census maps for Puerto Rico by computer. The Bureau developed the TIGER system in a cooperative project with the U.S. Geological Survey (USGS), using the 1980 census geographic data base, with additional information from USGS's geographic data files. In Puerto Rico, the new system's ability to produce detailed maps of rural areas represented a continuing effort to improve mapping resources.

Publicity

The publicity program for the census of agriculture in Puerto Rico had two major objectives, to

1. Recruit census staff

2. Encourage cooperation and response by farmers

The Bureau's Agriculture Division (AGR) and Public Information Office (PIO) cooperated in developing publicity for the 1987 census.

For the 1987 effort, the Bureau produced the form 87-A70(PR)SP(P) poster, announcing the census and census staff job openings. In April 1988, the Bureau shipped 2,500 copies of the poster, each with a supply of job application/reply cards, to Puerto Rico for distribution through local government offices. The Agriculture Division included copies of the poster in information kits prepared for the Bureau's participation in the Agro-Expo Fair in Puerto Rico in May 1988. (The kits each contained the poster, a list of questions frequently asked about the census, a pamphlet outlining census activities, copies of the report forms, and a list of telephone contacts.) The Bureau also developed the form 87A70(PR)SP(F) flyer, announcing the census, briefly describing the kinds of information that would be requested, and urging cooperation. The agency shipped 40,000 copies of this flyer to Puerto Rico also in May, for distribution through the field offices of the Puerto Rican Departments of Agriculture and Labor, and to the Postmaster General for distribution to local post offices.

The Bureau prepared a set of four 20-second, one 30-second, and one 60-second radio spots, and distributed copies to radio stations throughout the Commonwealth for broadcast as public service announcements. In addition, beginning early in April, Bureau officials participated in a series of radio and television interviews about census activities.

For the agriculture census, the Census Bureau asked the Governor of Puerto Rico to proclaim July 1987 "Agriculture Census Month." The Governor's representative and Bureau officials met at a public ceremony on June 29, 1988, to formally announce the proclamation to the media and public.

FIELD ENUMERATION

Taking the Census

Enumeration portfolios—Each field enumerator had an enumeration portfolio containing the report forms, listing sheets, and other materials required for the census. Each portfolio contained a map of the enumeration district (ED) assigned to that enumerator, a supply of report form 87-A1(PR)SP, the Form A10, *Enumerator's Manual*, and the Form A5, Record Book. The ED map showed the boundaries of the ED outlined in heavy orange lines, as well as the principal surface features and roads within the ED. (Usually, the individual ED boundaries corresponded to local barrio boundaries, but in some cases portions of more than one barrio were included in a single ED.) The enumerator was to complete a report form for each farm in the ED. The Form A5, Record Book, included Form

A3(PR), Listing Sheets, and a supply of Form 87-A4(PR), Nonresident Operator/Closeout Data Cards. The A3 sheets served as a record of the canvass of the ED and contained (1) prelistings of any special farms in the ED, (2) a series of screening questions for use in identifying households operating farms, and (3) space for listing each household canvassed. Enumerators used the A4 cards to obtain basic information about nonresident operators or households they were unable to contact.

The cover of the A5 Record Book served also as the enumerators' progress report. At the end of each week of canvassing, the enumerator completed a column in part 1 of the cover with the date, the number of (1) households canvassed and either enumerated or identified as out of scope, (2) A1 report forms completed, (3) A4 cards filled out, and (4) hours worked.

Field enumeration procedures—The census staff used two canvassing procedures in the field enumeration, procedure "A" in predominantly rural ED's, and procedure "B" in urbanized ED's. Procedure A was a door-to-door canvass of every household in an ED, except in built-up residential areas identified as "clusters." A cluster was any group of 25 or more houses, buildings, or other structures, each on half a cuerda or less of land. Known clusters were shown on the enumerators' ED maps, but enumerators were instructed to identify "new" clusters and to outline them on their maps, assigning a code letter ("A," "B," and so on, in sequence). In clusters, enumerators spot-checked households to find out which ones operated farms, and then visited and completed report forms for those households only.

The field staff employed procedure B in urbanized ED's or in ED's with 10 or fewer farms listed in the 1982 census. For procedure B, ED's, the names and addresses, or name alone, of farm operators located in the ED were prelisted on the listing sheets of the Record Book for the ED, and enumerators canvassed each prelisted address. The interviewers completed a report form for each place qualifying as a farm, and also asked respondents whether anyone else in the area operated a farm. The enumerators visited any places mentioned that were not already prelisted, checked possible farm status, and filled out a report form for any newly identified farms.

Enumerators began interviews in both procedures by asking for the name of the head of the household, and a series of screening questions to identify farm operations. These questions asked whether

1. The respondent, in the last 12 months had raised, produced, or sold any crops, vegetables for sale, ornamental or flowering plants, or had 1 or more cattle, 1 or more pigs, or 15 or more poultry.
2. The operator had sales of agricultural products in the last 12 months or expected sales this year of \$400 or more.
3. This place had 10 or more cuerdas and sales of agricultural products in the last 12 months, or expected sales this year of \$100 or more.

Enumerators assigned a farm serial number³ and completed a report form for each place that qualified as a farm under the census definition. The enumerators tried, whenever possible, to interview the head of the household of each agricultural operation to complete the screening questions; in cases where the head of the household was not available, some other responsible adult member of the household could be asked to provide the necessary information.

Enumerators completed Form 87-A4(PR)SP, Nonresident Farm Operator/Closeout Data Cards, and assigned an A4 serial number for any place that qualified as a farm but (1) contained no housing unit, or (2) had no operator(s) living there, or (3) for which no responsible and knowledgeable person could be located to provide the required information after repeated callbacks. A4 cases were identified as "nonresident operators" or "closeout cases," and the A4 card listed the name and address of the nonresident or absent operator and whatever basic information (i.e., cuerdas, kinds of livestock, major identifiable types of crops, and so on) could be obtained from neighbors or other sources. The enumerators gave copies of the A4 cards completed each week to their crew leaders, who referred the nonresident cases either to the appropriate enumerator in their own area of responsibility, or to other crew leaders responsible for canvassing the ED in which the absentee operator lived.

As they canvassed their own ED's, the enumerators plotted on their ED maps each farm, nonfarm operator, cluster, and so on, so that they and their crew leaders could monitor each ED's coverage.

Callbacks—Callbacks were additional contacts with a household after an enumerator's initial visit, and were necessary when the farm operator was not available to provide the required agricultural data for completing the report form. When the operator was not available, enumerators asked for the best time to attempt to contact the operator and made a note of the suggested time in the "callback" column of the A3(PR) Listing Sheet for that farm's line. Enumerators tried to schedule and complete all callbacks as quickly as possible, including scheduled callbacks in each day's regular work so that they did not accumulate. Except in special cases, the enumerators attempted no more than two callbacks for any specific household. If after two callbacks the enumerator still was unable to interview the farm operator, another responsible adult in the household familiar with the farm operation or a foreman or hired manager who supervised the farm operation could be asked to provide the data needed to complete the report form for the farm.

³Enumerators assigned farm serial numbers beginning in each ED with 001 and continuing sequentially 002, 003, and so on. At the same time, a census file number (CFN) was assigned; the CFN was an 11-digit number consisting of the municipio and barrio numbers, the farm serial number, and a check digit (the latter assigned to each CFN during subsequent processing).

Special Farms

Compilation of the special farms list and mailout—A “special farm” in Puerto Rico was any place with 49 or more cuerdas of land, or with expected annual sales of agricultural products of \$10,000 or more. Coverage of these comparatively large operations was particularly important if the census was to obtain accurate data on agriculture in Puerto Rico. For the 1982 census, the Census Bureau had compiled a special farms list from the results of the 1978 census, and mailed enumeration packages to some 4,200 addresses, with a request that the recipient hold the report form until an enumerator stopped to pick it up. This methodology proved reasonably successful, and the agency adopted a similar plan for the 1987 census. The special farms list was extracted from the 1982 Puerto Rico agricultural census in-scope file, resulting in a mail list of approximately 5,000 addresses. The Bureau’s Data Preparation Division (DPD) office in Jeffersonville, IN, assembled mailing packages, each consisting of a report form 87-A1(PR)SP, a form 87-A1(PR)SP(I) information and instruction booklet, and a form 87-A1(SP)PR(L1) cover letter requesting the respondent to complete and hold the report form until an enumerator visited the operation. In the first week of June 1988, the DPD staff at Jeffersonville shipped the mailing packages to the central San Juan post office, which then mailed them to the addressees.

Field followup—Enumerators visited the special farms in the course of their regular canvassing and collected the completed questionnaires, or, when necessary, conducted personal interviews with farm operators to obtain census information. The listing sheets attached to each enumerator’s A5 Record Book identified special farms in each ED, and enumerators were directed to visit and make certain a report form was completed for each.

Field Review and Quality Control

The quality control plan for the 1987 agriculture census in Puerto Rico involved (1) an observation period for selected enumerators, (2) field review of each enumerator’s work, and (3) a coverage check that matched enumerators’ farm lists to prelisted addresses for each ED.

Crew leaders supervised the field quality control effort. Each crew leader selected the four enumerators he or she considered most likely to have difficulties completing the assigned work satisfactorily and spent approximately half a workday with each during canvassing. The crew leaders noted any procedures that caused the enumerators difficulties and then scheduled and carried out any retraining needed. No enumerators selected for observation began canvassing without crew leader supervision until they demonstrated to their supervisors the ability to adequately perform the assigned job.

Crew leaders also formally reviewed each enumerator’s completed work at weekly meetings, and again at the completion of canvassing for each ED. The formal review involved five major steps:

1. Matching records on the listing sheets with plotted line numbers on the ED map to ensure the interviewer was canvassing the ED properly and thoroughly.
2. Checking the A3(PR) Listing Sheets and A4(PR) Nonresident Operator’s Cards to ensure that both were completed legibly, completely, and correctly.
3. Matching completed report forms to the listing sheets in the record book.
4. Checking the content of the completed report for legibility, completeness, and accuracy.
5. Checking that Procedure B listing areas and special farms were being adequately covered.

The reviewing crew leader discussed any problems discovered with the enumerator concerned and observed the field work of enumerators who were having difficulties to make certain they were canvassing correctly.

Crew leaders also checked the coverage of their crew leader districts (CDL’s) at their weekly meetings with their enumerators. The coverage check of each enumerator’s farm list involved recanvassing selected dwellings in each ED to determine whether the enumerator had adequately canvassed the ED. Prior to the enumeration, quality control (QC) enumerators visited each ED. The QC enumerators carried ED maps with four “starting points” marked with an identifying letter (A, B, C, or D) and a directional arrow. The QC enumerator began canvassing at each starting point in succession, traveling in the direction indicated by the arrow at that point, and listed the first five houses visited. When the QC enumerator encountered a second starting point before listing 5 houses, he or she continued listing houses after the second point until 10 were listed for the 2 points together. The QC enumerator visited each place and carried out a short interview to determine whether a report form should be completed for it, and entered the information obtained on A3 Listing Sheets. The crew leaders used these sheets to check coverage obtained by the regular enumerator for each ED. The QC enumerator joined the crew leaders and the regular enumerators for each ED at their weekly meetings until the regular enumerator had covered the entire ED concerned. The enumerator’s A3 Listing Sheets were checked against the prelisted addresses for the part of each ED enumerated; then the prelisted addresses were checked to see whether a report form should have been completed for each. In cases where a matched address was identified as a farm operation in the prelisting operation, but not by the regular enumerator, the QC enumerator revisited the address to resolve the question. The crew leaders visited and completed a report form for any prelisted farms missed by one of their field enumerators.

Results

The agriculture census for Puerto Rico enumerated 20,245 farms, with a total land in farms of 886,846

cuerdas, and a total value of agricultural products sold in 1987 of approximately \$415 million.

DATA PROCESSING

General Information

The 1987 census used a minicomputer system in the Hato Rey office to check in reports, key data, edit, and research data base records. After the processing office closed in October, the report forms were shipped to Bureau headquarters in Suitland, MD, for further processing. Upon completion of the final computer edit, all data were tabulated and reviewed before publication.

Field Office Processing

Check-in—The receipt and check-in staff of the Hato Rey office sorted incoming ED portfolios and stored them in municipio and ED order until processing. The portfolios were opened and the contents sorted; the A5 Record Books, ED maps, and completed A4 Nonresident Operator/Closeout Data Cards went to storage to await shipment to Bureau headquarters after the Hato Rey office closed; and completed A1 report forms were sorted into special and nonspecial farms, batched into work. The work units then went to check-in, where the census file number from each form was keyed to the check-in file—the CFN's for special farms were keyed to a separate special farms mail file. Each work unit, or batch, had a Check-in Batch Cover Sheet attached. (The Hato Rey minicomputer system also processed the report forms from Guam and the U.S. Virgin Islands, so as each work unit entered processing, the keyer concerned had to first select the appropriate geographic area.) The keyers entered the batch number for each batch, then the CFN for each report form. The computer program automatically checked each CFN to determine whether it was legitimate—i.e., that the municipio and ED codes within the CFN were acceptable.

Clerical operations—The clerical unit carried out a screening routine for report forms received from the special farms and portfolio check-in units. Screening clerks checked each report form and (1) changed all spelled-out numbers to numeric entries, (2) deleted bracketed entries, (3) converted fractional and decimal parts of “cuerda” entries to centesimos, and (4) checked section 15 (Other Livestock) for correct item coding. After screening, all report forms were referred to the data keying unit for keying.

The clerical unit also received computer printouts of report forms that failed the computer edit. The clerical staff pulled any report forms that failed, in the order they appeared on the printout, and referred them to agriculture analysts for review and correction. The analysts used an online computer system to correct failed records. All corrections were resubmitted for edit processing and acceptance. Upon completion of keying and editing, the report forms were returned to the clerical staff for filing.

Data keying—The data keying unit received work units of completed report forms after check-in and clerical review. Data keyers entered the batch number for each work unit, then the CFN for the first case. The computer program matched the CFN to the check-in file and, if the CFN had been checked in, accepted the record for data keying. The keyer then keyed the data on the report form; skipping blank items and items with a response of “zero,” “none,” “NA” (not applicable), and so on. The keying program performed a series of tests on the data as they were entered, checking for nonnumeric entries, illegal values, and for entries either too long or too short for a particular data cell. After keying any report form, the keyer could review the entire record for that form and correct any problems. All keyed data were subjected to verification, and all discrepancies were resolved before releasing the data for each batch.

Local tallies—As the data were keyed, the computer system program produced weekly tallies of total number of farms and selected items by municipio and for Puerto Rico. These tallies provided the census manager with information needed to detect potential coverage problems, and enabled corrective action to be taken while the field enumeration was still underway.

Office closeout—The Census Bureau closed the Puerto Rico census office in mid-October 1988. The staff packed the questionnaires and review materials for use by Agriculture Division analysts and shipped them to Suitland for further processing.

Computer Processing

General information—The minicomputer system in the Puerto Rico census office performed complex edits of the individual census data records. Additional editing, as well as statistical estimation for sample weighting, and tabulating the data, were carried out using the mainframe computer facilities at Suitland.

Editing—The edit program comprised an item-by-item check of each data record that (1) checked consistency between reported data totals and the sum of reported data detail; (2) flagged questionable items; (3) imputed data for missing or obviously incorrect entries, or printed a code indicating the type and location of any problems; and (4) coded each record for size by cuerdas, economic class, type of farm, and age and tenure of operator.

The edit stored all flagged records for analysts' review and correction. Any given flagged case might undergo several edits, since changing a specific entry might cause the edit program to detect inconsistencies elsewhere in the record. No record was added to the data file until it had passed the edit program. Once all the data records had been edited and corrected, the data file was ready for tabulation.

Sampling and Statistical Estimation

To reduce overall respondent burden, the agriculture census report form requested detailed data in sections 21-25 only of a sample of farms in the Commonwealth. This sample included “certainty” farms—i.e., those with expected agricultural sales greater than \$10,000, or more than 49 cuerdas—plus all farms in municipios that had fewer than 250 farms in the 1982 census, and a 1-in-5 sample of all farms in municipios that had 250 farms or more in 1982.

During processing, the “noncertainty” sample farms in each municipio were stratified into 32 strata based on total value of agricultural products sold (TVP), type of farm, and size of farm. The variable groups used for this stratification were as follows:

TVP	Type	Size
\$0 to \$499	Crop	0 to 9 cuerdas
\$500 to \$999	Livestock	10 cuerdas or more
\$1,000 to \$1,199		
\$1,200 to \$1,999		
\$2,000 to \$2,499		
\$2,500 to \$4,999		
\$5,000 to \$7,499		
\$7,500 or more		

For each municipio, the estimation program assigned each sample farm record an initial weight equal to the ratio of the total farm count to the sample farm count for the stratum containing the sample farm. Any stratum with fewer than 10 farms, or that had a ratio of total farms to sample farms of more than twice the sampling rate, was combined with another stratum within the same variable group. When all strata satisfied the criteria, the ratio adjustment procedure was used to readjust weights for the sample farms to ensure agreement between the expanded sample counts and the census counts. Fractional weights were randomly rounded to whole numbers (e.g., if the farms in a sample group had a final weight of 5.2, then one-fifth were randomly assigned a weight of 6, and the remaining four-fifths were assigned a weight of 5). The tabulation program estimated municipio total values for sample data items by multiplying the data items for each sample farm by the corresponding sample weight and summing overall sample records in the municipio.

Appendixes to the Volume 1 data report for Puerto Rico provided estimates (with associated reliability) for sample data items for all farms and for farms with sales of \$2,500 or more, for all farms in each municipio, and for the Commonwealth.

Tabulation

Between November 1986 and October 1987, Agriculture Division subject matter specialists prepared table outlines and specifications for tabulating the Puerto Rico

census data. The Bureau's Economic Programming Division (EPD) developed table programs, and the Administrative and Publications Services Division (APSD) used its table image processing system II (TIPS II—for a description of TIPS II, see ch. 11) software packages, with a combination of the mainframe computers and minicomputers at Suitland, to prepare three sets of tabulations for publication—15 tables for all farms in Puerto Rico, 56 for farms by agricultural region (as defined by the Commonwealth Government) and municipio, and 6 tables of more detailed data for farms in Puerto Rico with sales of \$2,500 or more. Subject-matter specialists reviewed the tables for accuracy and consistency as they were produced early in March 1989. Corrections were keyed by support staff at headquarters and corrected tables were produced for review. Only when all the tables had been corrected and approved was the file released for publication.

COMPARABILITY OF THE DATA

The Bureau used much the same combination of mail and field enumeration for collecting data for the 1987 agriculture census as it had employed in the 1982 enumeration. Once again, the census collected sample data on home consumption, chemicals used, expenses, machinery and equipment, and hired labor. These items comprised sections 21-25 of the A1 report form (see above for details on the sampling procedure). The detail and volume of data published for the 1987 census was virtually the same as that released for the 1982 enumeration. The 1987 data in the published tables were accompanied by 1982 historical data.

PUBLICATION PROGRAM

The Census Bureau did not issue an advance report for Puerto Rico, but published the final census data in July 1989 in Volume 1, *Geographic Area Series*, Part 52, *Puerto Rico*, that included data for all farms for the Commonwealth as a whole, for 5 agricultural regions, and for 75 individual municipios. Tables 1-15 provided data on agricultural operations for the Commonwealth; tables 16-71 contained more detailed tabulations for major data items (i.e., specific crops, livestock operations, and so on) for the Commonwealth, the agricultural regions, and individual municipios; and tables 72-77 presented detailed data for farms with sales of \$2,500 or more. The basic data shown for all farms included:

Number of farms

Land use

Operator characteristics by main occupation

Hired farm labor

Machinery, equipment, buildings, and facilities on the place

Agricultural chemicals used
Irrigation
Selected production expenses
Market value of agricultural products sold
Farm-related income
Livestock, poultry, and their products—inventories and sales
Crops harvested and sales of selected crops
Ornamental and flowering plants, cut flowers, and lawn grass
Products for home consumption

The tables showed the 1987 data, with 1982 census data for comparison.

For farms with sales of \$2,500 or more, summary statistics on tenure of operator, type of organization, main occupation and age of operator, size of farm, market value of agricultural products sold, and type of farm—all for 1987—were presented.

The Bureau provided users with data highlights from the printed report through the CENDATA™ “online” system. No other electronically readable files or unpublished data were made available for the 1987 agricultural enumeration in the Commonwealth.

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INTRODUCTION

General Information

Historical background—The United States carried out its first agricultural census of Guam in 1920 along with the decennial population census of that year, and the agriculture enumeration continued as part of the decennial effort through 1960. The United States purchased the Virgin Islands from Denmark in 1917, and conducted a special census that included agriculture that same year. The second census of agriculture in the islands was carried out in 1930, when the Federal Government incorporated the islands into the general decennial census program. In 1964, Title 13, United States Code, section 191(a) was changed to include both Guam and the U.S. Virgin Islands in the quinquennial censuses of agriculture. The 1987 census was the 11th such in these areas.

The Census Bureau's first agriculture enumeration in American Samoa was part of the 1920 Decennial Census program, and agricultural censuses have been carried out every 10 years since, in conjunction with the population and housing censuses. Farms in the Northern Mariana Islands were first enumerated for agricultural purposes as part of the 1970 Census of Population and Housing, but the agricultural data were published as part of the 1969 agriculture census publication program. As in the case of American Samoa, the agriculture census in the Northern Mariana Islands continued with the decennial population and housing census program, rather than as an integrated part of the quinquennial agriculture census. Title 13 was not changed to require all outlying areas to be included in the quinquennial censuses until 1986, so American Samoa and the Commonwealth of the Northern Marianas were omitted from the 1974 and 1982 agricultural censuses.

Scope and legal authority—Title 13, United States Code—Census, authorized the collection of agriculture data in the outlying areas. Section 142(a) directed that there be censuses of agriculture in 1979, 1983, and every fifth year thereafter; section 191(a) authorized the inclusion in the census of the U.S. Virgin Islands, Guam, the Commonwealth of the Northern Marianas, and other possessions and areas over which the United States exercises jurisdiction, control, or sovereignty. Section 191(b) stated that the Secretary of Commerce could use data collected by the Governors or other Federal officials (provided the data were collected in accordance with plans prescribed or approved by the Secretary) for censuses in any of these places.

GUAM AND THE U.S. VIRGIN ISLANDS

General Information

Special arrangements—In April 1987, the Director of Commerce for Guam, and in December 1987, the Commissioner of Agriculture for the U.S. Virgin Islands, signed

agreements with the Census Bureau for the censuses of agriculture in their respective jurisdictions. The Bureau agreed to provide special training as census project managers for representatives of each of the governments involved, and to provide report forms, training materials, and instructions for the census staffs. The territorial governments accepted responsibility for recruiting and training local field and office staffs, supervising appointments and payrolls, and local administrative matters.

The 1987 agriculture census on Guam was carried out in late February and March 1988, immediately before the 1987 Economic Censuses for the island, and in the Virgin Islands in July 1988, immediately after closing the economic enumeration there. (See App. E, Chronology of Major Census Activities.) The Agriculture Division conducted both the economic and agriculture censuses in the outlying areas, so that office space was used for both enumerations; in Guam, the Bureau established a census office in Tamuning, while in the Virgin Islands, the census office was in space lent by the Department of Economic Development and Agriculture in Charlotte Amalie, St. Thomas.

The Bureau began preparation for the 1987 censuses in the outlying areas early in 1985, when, in cooperation with the territorial governments, it developed a farm definition and started planning the censuses.

Farm definition and reporting periods—The 1987 censuses on Guam and in the U.S. Virgin Islands defined a farm as any place from which \$100 or more of agricultural products were sold, or normally would have been sold, during the census year. This differed from the 1982 definitions for both areas; for 1982, a farm on Guam was any place from which any crop, vegetable, or fruit was harvested or gathered, or on which there were livestock or a specified number of poultry on Census Day. The definition for the 1982 census in the Virgin Islands also required products harvested or gathered, as well as a minimum acreage, and specified numbers of (1) fruit trees, nut trees, or plants, or (2) livestock or poultry.

Reporting periods differed between the two areas. On Guam, the census collected inventory data as of the day of enumeration, while crop and livestock production, sales, and expense data were requested for the calendar year 1987. In the Virgin Islands, inventory data were asked as of the day of enumeration as well, but crop and livestock sales and production and expense data were for the 12-month period between July 1, 1987, and June 30, 1988.

Preparations

Report forms—The Census Bureau designed the 1987 agriculture census report forms for Guam and the U.S. Virgin Islands in cooperation with the respective governments. The report forms—the form 87-A1(G) and form 87-A1(VI)—were similar in format, consisting of 21" x 14" white stock, folded to 10 1/2" x 14". The A1(G) had

printing in green ink, while the A1(VI) was printed and shaded in blue ink. Each requested data on the following topics:

- Land in agriculture
- Crops harvested during reference period
- Land use
- Livestock and poultry (inventory and number sold in reference period)
- Selected expenditures
- Equipment and facilities
- Operator characteristics

The A1(G) included an additional section requesting the pounds of fish caught, pounds sold, and total value of sales during 1987.

All the report forms were printed in English and included a section that served as the enumerator's record of the census interview, which the enumerator completed with information on the person who furnished the data in the form, any remarks, the address of the place, and the enumerator's signature and the date of enumeration.

Maps—The Bureau's Data Preparation Division (DPD) in Jeffersonville, IN, prepared a series of maps used by the outlying areas' census offices and staffs, using 1980 Census of Population and Housing maps for reference. Each census office received a set of maps that included a central office map of each area, crew leader maps, and enumeration district maps; all showed enumeration districts (ED's) and ED numbers, with the ED boundaries marked in heavy orange lines. Crew leaders checked each map for their area of responsibility and (1) familiarized themselves with the ED's, (2) checked the accuracy of his/her maps and the individual ED maps, (3) made any notations on the maps that might be needed to help the enumerators complete their assignments, (4) checked the size of each ED to make certain none was too large for a single enumerator to cover, and (5) identified places with special enumeration problems (such as farms split between two ED's).

Farm lists—The Bureau prepared lists of "special farms"—i.e., agricultural operations considered to be large farms in the local context—before the censuses on Guam and in the Virgin Islands. The agency assembled these lists using 1982 Census of Agriculture data and information from the local Departments of Agriculture to identify probable special farms. Special farms were any that had, or were believed to have had, 20 acres or more of land, or annual sales of agricultural products of \$500 or more. The special farms in each enumeration district (ED) were listed on the A2 Listing Sheet included in the A5 Record Book for that ED.

Training and reference materials—The Form 87-A25(G) and (VI) *Procedures Manual* and the Form 87-A20(G) and (VI) *Supervisor's Reference Manual* for Guam and the

Virgin Islands, respectively, served as the principal reference guides for organizing the census staffs and carrying out the enumeration. The A25 described the duties of the various members of the census staff and the operations of the census office, while the A20 explained the specific responsibilities of the census supervisors and the procedures for the field enumeration. The Bureau provided copies of the A20 guide to each supervisor and crew leader, together with the A15 *Enumerator's Training Manual* for use in training the enumeration staff. The enumerators themselves received the Form A10(G) or (VI) *Enumerator's Reference Manual*, which detailed the duties of an enumerator and gave specific instructions for conducting interviews and completing the required documents.

Staffing and training—The census staffs in the outlying areas were organized into a small field office staff, and the field enumeration staff. The census manager functioned as both the general supervisor for the census and the head of the census office. Staff composition in the respective areas was as follows:

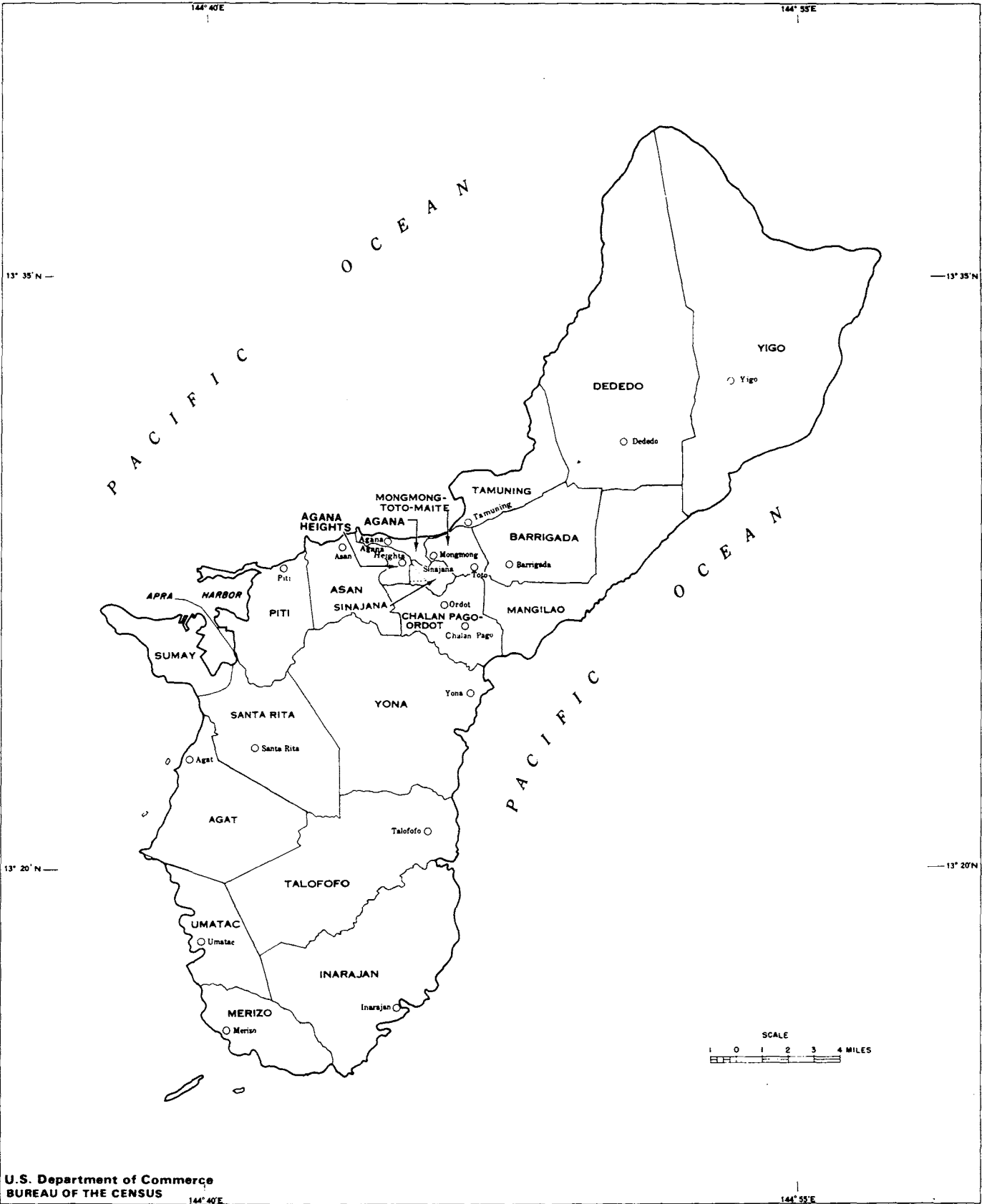
Staff	Guam	Virgin Islands
Total	24	10
Project manager	1	1
Crew leaders	2	2
Office clerks	3	1
Enumerators	18	6

The census staffs received salaries as temporary employees of the local governments, paid on the standard U.S. Government general schedule (GS) pay scale for the appropriate grades.

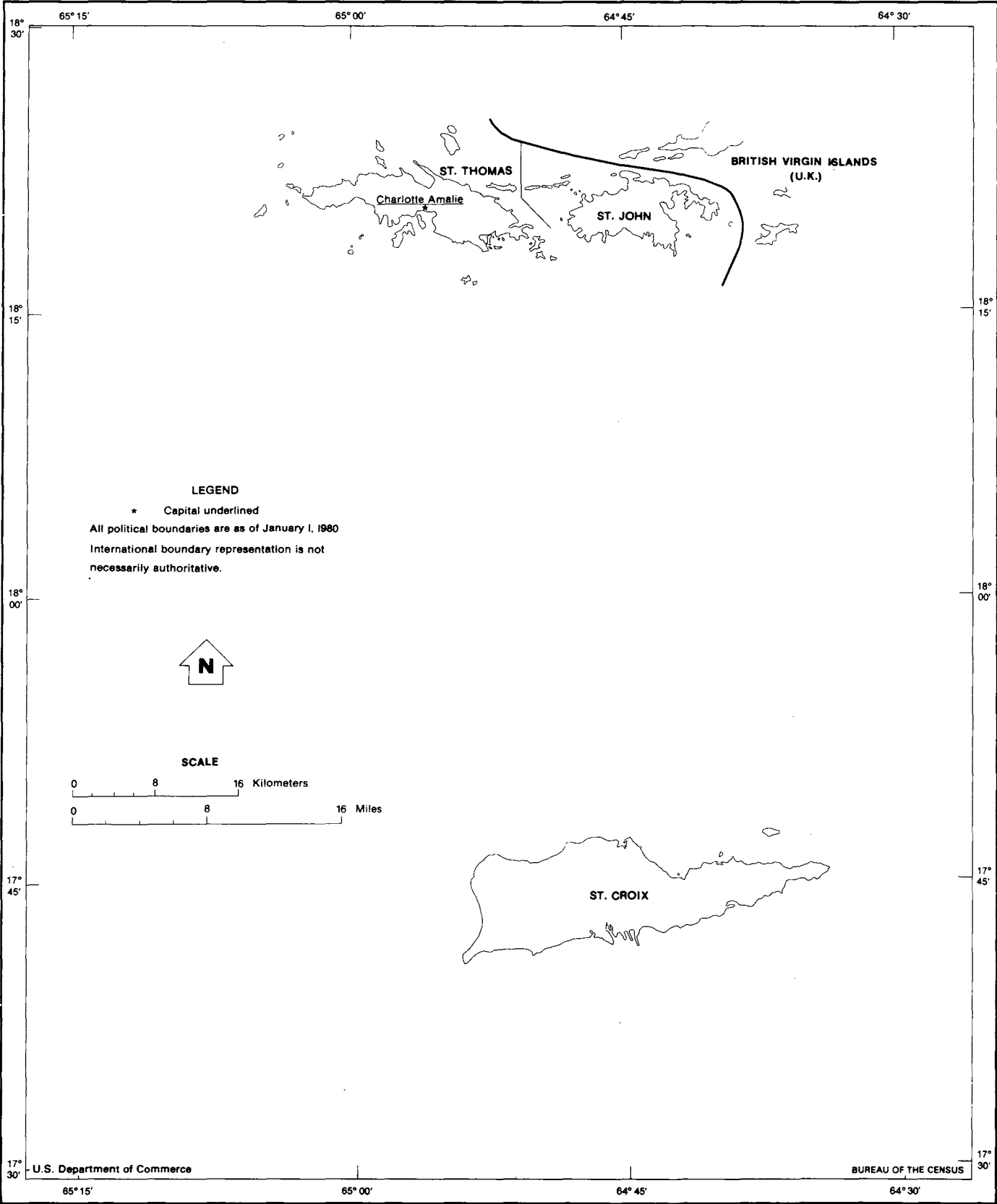
The project managers were appointed by the territorial governments and were responsible to the Director of the Census Bureau for the conduct of the enumeration in their areas. Their broad responsibilities included precensus preparatory activities—such as securing office space and equipment; recruiting, testing, and selecting personnel; training crew leaders and enumerators; and publicizing the census—as well as the enumeration and the clerical operations of the local office. They also kept Bureau headquarters informed of the progress of the census through periodic reports. The crew leaders functioned as assistants to the managers and directly supervised the field enumeration, as well as reviewed enumerators' work, made periodic progress reports to the manager, and carried out any related duties assigned by the manager. The enumerators actually carried out the enumeration, interviewing agriculture operators in their assigned districts in a door-to-door canvass.

Census Bureau staff personnel went to the Virgin Islands in January, and Guam in February 1988, to train the census managers (appointed by the local governments) and their crew leaders. The agriculture census managers in the

GUAM ELECTION DISTRICTS AND PLACES



THE VIRGIN ISLANDS OF THE UNITED STATES



outlying areas also were responsible for the 1987 Economic Censuses in those areas. While the agriculture census in Guam began in February, the economic enumeration in the Virgin Islands was first, with the agriculture census getting underway in July (the agriculture census in the Virgin Islands was timed to begin at the end of the local crop year, which ran from July 1 to the following June 30). Recruiting for the respective census enumeration staffs began in January and June 1988, and the census managers carried out the 2-day enumerators' training during the second week of February 1988 on Guam, and during the last week of June in the Virgin Islands.

Taking the Census

Enumeration materials—Each enumerator received an enumeration portfolio containing the forms and records needed for the field canvass: 100 copies of the report form (87-A1(G) or 87-A1(VI)), and a Form 87-A5 Record Book. The A5 Record Book included three forms the enumerator used daily: the Form A2, Listing Sheet; the Form A3, Enumerator's Daily Report; and the Form A4, Daily Record of Progress. The A2 Listing Sheets served as the record of the canvass of each ED and contained a series of screening questions used by the enumerators to determine whether a place qualified as a farm. The A2 had prelisted names and addresses of large agricultural operations in each ED. (See p. 76.) The crew leaders for each area also familiarized themselves with their respective districts, and added the addresses of locations they believed required special enumeration procedures to the A2 Listing Sheets before issuing them to the enumerators. After canvassing each day, each enumerator filled out an A3 Enumerator's Daily Report—a postcard listing the island's or ED's name, ED number, date, miles traveled, hours worked, number of report forms completed each day and to date, and number of cases pending—and turned it over to the responsible crew leader by the next morning. The A4 Daily Record of Progress contained similar information, but was kept in the Record Book for reference by the enumerator.

Each enumerator canvassed a specific geographic area, called an enumeration district (ED), and was responsible for its complete enumeration. Guam was divided into 19 ED's, corresponding generally to the island's political election districts, while the Virgin Islands were divided into 6 ED's—4 on St. Croix and 1 each on St. Thomas and St. John.

Methods of enumeration—The agriculture census required the enumerators to interview each head of household in an assigned ED, asking a series of screening questions to determine whether anyone in the household was involved in agricultural operations that met the census farm definition. If no one was at home, enumerators tried to obtain information from neighbors or other persons, such as hired workers, to decide whether a report form needed to be completed for that place. If so, the enumerator made a

"callback" later to complete the enumeration of the operation. Enumerators identified as the operator the person who had the day-to-day management of the farm operation. For partnerships, the partner in charge of the actual farm operations, or the senior partner, was identified as the operator. In the cases of corporations and institutions owning land used for agricultural purposes, the institution owning the land was identified as the operator, and the name of the person in charge was entered as "manager" in the "Remarks" section of the report form.

Places with two or more tracts of agricultural land, or with land in two or more ED's, required special handling. For multiple-tract places, enumerators used the same report form for all the land operated by one person, regardless of where that land was located—although the location of each tract of land was identified to prevent duplication of the data. The land and agriculture operations for an operator with land in more than one ED were enumerated in the ED where the operator resided.

The specific procedures used in the enumeration differed slightly between Guam and the Virgin Islands, although in each area every agricultural operation in each ED was to be enumerated. On Guam, a procedure code—"A," "B," or "C"—based on density of population was assigned to each ED to indicate how it was to be enumerated. The area descriptions and general instructions were as follows:

Code A: Rural areas—Enumerators visited every occupied dwelling, completed A1 forms as needed, and entered an A2 Listing Sheet line number and dwelling symbol on their assignment maps for each dwelling.

Code B: Built-up areas (known built-up areas were outlined in green on the assignment maps)—Enumerators followed Code A procedures except for localities with 25 or more dwellings, each on 1 acre or less of land. For such areas, only households associated with agricultural operations were listed.

Code C: ED's that had 10 or fewer farms listed in the 1982 census—Farm operations were prelisted for these areas and enumerators visited each address. They also checked with respondents, local merchants, and so forth to obtain information about any other place in the ED that might qualify as a farm. Enumerators visited any nonlisted places that might qualify as a farm and completed an A1 form, if needed.

Enumerators also visited every household not listed for their assigned ED, but which appeared to have agricultural operations.

Callbacks—When an enumerator was unable to complete a report form on a first visit to a household because the operator was not at home, available records were incomplete, or for some reason other than the operator's refusal

to cooperate, the enumerator made arrangements for a return visit—a “callback”—to complete the enumeration. Whenever possible, callbacks were made by appointment, at the respondent’s convenience and within 3 days of the first visit. The enumerator could complete the canvass by telephone if it was possible to do so.

Refusals—In cases of refusal, enumerators tried to persuade the respondent to provide the data requested by explaining the legal requirement to do so, emphasizing that the data reported would be kept confidential, and describing the importance of the census information. If the respondent continued to refuse to answer, the enumerator identified the case as a refusal and reported it to the responsible crew leader, who determined whether further followup should be attempted. If a respondent answered some, but not all, of the census questions, the case was identified as a partial refusal, with the items refused noted, and was referred to the responsible crew leader. The crew leader determined whether sufficient information had been collected to make a further visit unnecessary. If not, the crew leader visited the operator to try to complete the enumeration. If the respondent remained uncooperative, the crew leader referred the case to the field supervisor for resolution.

Controls and reports—At the end of each working day, each enumerator completed a Form A3, Enumerator’s Daily Report, with (1) hours worked “today” and hours worked to date, (2) A1 forms completed today and to date, (3) total A2 Listing Sheet lines filled out to date, and (4) callbacks to be made. The enumerators submitted the A3’s to their respective crew leaders, who, in turn, summarized the information from the field staff to complete their Form A6, Weekly Progress Report of Enumeration. The A6 provided the census manager with summary information on the number of (1) A2 lines filled, (2) questionnaires completed, and (3) callbacks pending. Crew leaders sent A6 reports to the census manager every Monday on Guam, and every Wednesday in the Virgin Islands. The managers then cabled this information to Census Bureau headquarters as a weekly progress report.

Field review—The census managers had overall responsibility for the conduct of the census, but the day-to-day supervision of the data-collection effort was the immediate task of the crew leaders in each area. Crew leaders supervised and reviewed the work of their enumerators, checked enumerators’ reporting programs as needed, reviewed each enumerator’s canvassing plan to ensure the most efficient enumeration, and carried out two systematic evaluations of each enumerator’s work—an initial check 3 or 4 days into the census, and a final review after the enumerator completed canvassing his or her assigned ED. In the first field review, the crew leader checked to make certain each enumerator (1) used proper procedures in covering the assigned area, (2) entered all information correctly on the appropriate listing pages and maps,

(3) properly completed required A1 forms, and (4) made callbacks in a timely manner. The reviewing crew leader identified any errors and ensured that the enumerator involved corrected those problems.

As each enumerator completed his or her assignment, the responsible crew leader carried out a final review, examining all of the enumerator’s materials, checking points covered in the initial review, and also looked at a sample of completed A1 report forms. On Guam, every fifth, and in the Virgin Islands every third, report form was checked, unless there were fewer than 10 report forms in the assignment, in which case all were checked. If the crew leader found two or more forms associated with an assignment incomplete or incorrectly filled out, all the report forms for that assignment were reviewed. Unless there was a satisfactory explanation for the omitted data, the crew leader returned the incomplete or unacceptable forms to the enumerators concerned for callback visits. Satisfactory explanations included (1) the enumerator was unable to locate any member of the household or the farm operator after two visits; (2) the housing unit concerned was vacant; or (3) the respondent refused to provide the data requested.

Results—The agriculture census on Guam enumerated 351 farms, with a total of 13,134 acres, and sales of agricultural products in 1987 of approximately \$2.63 million. In the Virgin Islands, the census counted 267 farms, with 17,785 acres, and \$2.69 million in sales.

Data Processing

Introduction—Data processing for the report forms for Guam and the Virgin Islands involved check-in and screening at the local census offices in the respective territories and all Suitland headquarters. After this, the forms were sent to the Puerto Rico census office in Hato Rey, PR, where the data were keyed to computer files using the minicomputer facilities and staff there. The information was stored in a relational database, accessed in Puerto Rico and at the Suitland headquarters via a satellite communications link. Edits were processed on the minicomputer system using the same satellite link, and edit corrections then were completed in Puerto Rico, using the interactive system. The Suitland headquarters computer facility completed the data tabulations as the data file was edited and corrected. Once all keying operations were completed, the computerized data file was loaded onto magnetic tape reels and shipped to the Suitland office for archiving.

Check-in and screening—As enumerators completed canvassing their assigned ED’s, they sent the census materials to the central offices in Tamuning and Charlotte Amalie, where the office staffs checked each portfolio to make certain the record books and assignment maps were returned with the report forms. They also reviewed the listing sheets to determine if there was a completed report

form for every place that required one. The ED number and the number of A1's received for each ED were entered on the Form A17, Check-In Record.

Each incoming report form was screened to determine acceptability; i.e., clerks checked to make certain each form included:

1. A farm serial number
2. ED number
3. Name and address of operator
4. At least one entry in section 2, "Land in Agriculture"
5. At least one entry in section 3, "Crops Harvested in the Last 12 Months"
6. At least one entry in section 4, "Land Use"

All report forms were returned to their respective portfolios after check-in and screening. When an unacceptable report form was identified, the clerk entered the necessary identifying information (i.e., name of island, ED number, clerk, date, farm serial number, reason for referral, etc.) on a Form A16, Problem Referral Sheet, attached the A16 to the report form, and placed them in the original portfolio.

Preliminary clerical review—While the final edit and tabulation of the 1987 agriculture census data for Guam and the Virgin Islands occurred at the Bureau's Suitland headquarters, the field offices carried out a preliminary review and coverage edit before closing out their operation.

Clerks in the field offices checked entries in each A5 Record Book to make certain a report form was completed for each respondent qualifying as an agriculture operator. The office staff examined the report forms to ensure that duplicate forms had not been completed (e.g., partners filling out separate forms for the same operation, or forms completed by both an operator and the land owner), and reviewed the forms for indications from notes or other remarks that information should be included on another report form—such as a landlord incorrectly including a tenant's operation on his or her own report form. While the local census office clerks did not carry out a section-by-section review of the report forms, they did check them to assure the legibility of entries. All problems, errors, and/or inconsistencies identified in the preliminary clerical review were referred to the census manager for resolution or additional action.

The Guam and Virgin Islands offices shipped their census materials to Suitland for clerical processing in April and August 1988, respectively.

Precomputer edit and data entry—Agriculture Division staff at Suitland reviewed each report form from Guam and the Virgin Islands, checking responses for consistency and completeness, correcting errors in calculation and units of measure, substituting numeric for alphabetic entries where

necessary, and adjusting misplaced entries based on the data available from the same report or from nearby operations of the same type. Once all the questionnaires for an area had been edited and corrected, they were sent to the census office in Puerto Rico, where the data keying unit keyed the data from each report form. The keying program included several tests as the data were entered, checking for nonnumeric entries, illegal values, and entries too long or too short for a particular data cell. Each keyer checked each record as the keying progressed. A different keyer verified all the keyed data, and corrected all errors before releasing the record to the data file.

Computer edit and tabulation—Using the minicomputer system, a detailed edit of each record for the respective outlying areas checked for consistency; imputed missing or obviously incorrect entries; coded each record for size, economic class, type of farm, and age and tenure of the operator; and flagged questionable items. Once all corrections had been made, and any flagged cases satisfactorily resolved, the data were prepared for tabulations by accessing the data base. After table verification and review by Agriculture Division staff, the data underwent disclosure analysis¹ and then were released for printing in February 1989.

AMERICAN SAMOA AND THE COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

General Information

Special arrangements—The agriculture census in American Samoa and the Northern Mariana Islands was an adjunct to the 1990 Census of Population and Housing in those areas. In December 1989, the Governors of American Samoa and the Commonwealth of the Northern Mariana Islands signed memorandums of agreement with the Census Bureau for the 1990 censuses, including agricultural enumerations, in their respective areas. The Bureau agreed to provide special training as census project managers for representatives of each of the governments involved; appoint a census advisor to provide technical advice when needed; and produce report forms, training materials, and instructions for the census staffs. The local governments conducted the census, and were responsible for recruiting and training local field and office staffs, supervising appointments and payrolls, publicizing the census, and all other local administrative matters.

The 1990 enumeration began in April, and was completed late in August 1990. (For a complete chronology of principal operations in these areas, see App. E, Chronology of Major Census Activities.) The Bureau's Decennial

¹A systematic cross-checking of each data item to determine whether the item risked disclosure of information that could be used to identify an individual respondent of operation. No data were published that disclosed the operations of an individual farm. However, the number of farms in a given size category or other classification was not considered a disclosure, so this information was included even though other data were withheld.

Planning Division (DPLD) had primary supervisory responsibility for the census, while the Agriculture Division's Outlying Areas Statistics Branch designed the agriculture questionnaire to be used, wrote agriculture enumeration procedures, and processed and tabulated the completed forms at Suitland headquarters once the data were collected. DPLD's Puerto Rico and Outlying Areas Branch served as the primary planning and coordinating office for the censuses of population and housing, and of agriculture in American Samoa and the Northern Mariana Islands. The census in American Samoa was directed from the district office in Pago Pago, on Tutuila Island, while the central office for the enumeration in the Northern Mariana Islands was established in Capitol Hill, Saipan.

Farm definition and reporting periods—In both American Samoa and the Northern Mariana Islands, a farm, for census purposes, was any place that had, or normally would have had, \$100 in total annual sales of agricultural products. (The 1980 census employed a definition based on inventories of poultry and livestock, vegetables or crops harvested, and number of selected plants or trees.) The agriculture census requested inventory information as of the time of the enumeration, while production and sales information were requested for calendar 1989.

Preparations

Report forms—The 1990 Census of Agriculture report forms for American Samoa, the form 90-A1(AS), and the Northern Mariana Islands, the form 90-A1(NM), were 17" x 14" sheets of white stock, folded to 8 1/2" x 14", with printing and shading in red ink for American Samoa, and blue ink for the Northern Mariana Islands. The A1(AS) included special instructions on reporting use of communal lands.² Each report form requested data on the following topics:

- Land in agriculture
- Field crops, melons, and vegetables
- Fruits and nuts
- Land use
- Livestock and poultry
- Selected equipment and specified facilities
- Operator characteristics

The American Samoa and Northern Mariana forms were printed in English, and, as on the forms used on Guam and in the Virgin Islands, included a section that served as the enumerator's record of the census interview. Here the

²In American Samoa, any land used in owner-like possession for the benefit of an extended family. Land used for the sole benefit of the operator, rather than the extended family, had to be reported on a separate report form, while any land held by the extended family, but used by a nonmember, was to be reported as land rented to others.

enumerator included information on who furnished the data on the form, the address of the operation enumerated, any remarks, and the enumerator's signature and the date of enumeration.

Maps—The Census Bureau's Geography Division prepared master maps, showing each address register area (ARA), as well as central office, crew leader, and enumerator (these were copies of the ARA maps) maps, and an office atlas (containing a locator map sheet index, listing of map sheets by ARA, listing of ARA's by map sheet, county locator maps, a street index, and the maps in ARA numerical order), and shipped these materials to the respective areas by April 1990. Each census office received the office atlas; crew leaders, the county locator maps and the corresponding locator map index; and enumerators, the ARA maps covering the areas for which they were responsible. The ARA maps showed the boundaries of the areas, all important terrain features (such as rivers, hills or mountains, and roads), as well as built-up areas and known land subdivisions (such as military bases).

Training and reference materials—The Bureau developed administrative and training guides for all phases of the census operations for use by the office and enumeration staffs in the outlying areas. The materials most frequently needed for the agriculture canvass included the standard office administrative guide was the Form D-513(OA), *Office Operations Clerical Manual*. The Form D-655(OA), *Guide for Training Crew Leaders*, provided detailed instructions for training the crew leaders in each area, who also had the Form D-555(OA), *Crew Leader's Manual*, which contained instructions and guidance. The crew leaders, in turn, trained their enumerators, using the Form D-649(OA), *Training Manual for Enumerators*. Enumerators received their own reference guides, the Form D-549(OA), *Enumerator's Manual*, which covered their duties in detail, and the Form D-90-A10(AS) and (NM), *Questionnaire Reference Book for the Agriculture Census*. The A10's contained detailed instructions for the enumerators with regard specifically to the agriculture census in their respective areas, and included item-by-item information for the report forms.

Staffing—The staffs for the censuses in American Samoa and the Northern Mariana Islands were similarly organized. The composition of the 1990 census staffs in these areas was as follows:

Staff	American Samoa	Northern Mariana Islands
Total	124	61
Project manager	1	1
Census advisor	1	1
Office operations supervisor	1	1
Field operations supervisors	2	1
Office clerks	9	5
Crew leaders	18	7
Enumerators	92	45

The census project managers, appointed by the Governors of the respective areas, had overall responsibility for

the conduct of the censuses in their respective areas. The census advisor, however, was a Census Bureau employee specifically responsible to the Director of the Bureau for adhering to agency procedures and requirements, and maintaining acceptable statistical standards.

Recruiting for the census began in January 1990. All candidates for census jobs were given written tests by the census manager or one of the operations supervisors; applicants with passing grades were interviewed by senior census staff before final selection for hiring. The operation in both areas required crew leaders and enumerators with fluency in the local languages, since many of the inhabitants spoke little English. Every candidate was required to take an oath to protect the confidentiality of census information upon being hired.

During the first week of March 1990, the field operations supervisors trained their crew leaders in 3-day sessions that covered precensus operations (including training the enumeration staff), the enumeration, field followup, and field review duties. The crew leaders, in turn, conducted 3-day training sessions for their enumerators during the last week of March.

Taking the Census

General information—Each enumerator in American Samoa and the Northern Mariana Islands received a kit that included a map of the address register area (ARA) to be canvassed, a supply of population and housing and agriculture census report forms; a supply of Form D-308OA, Daily Pay and Work Record; a Form D-104A, Address Register, for the ARA to be covered; a Form D-549, *Enumerator's Manual*; and a copy of the appropriate *Questionnaire Reference Book for the Agriculture Census*. The ARA map showed the boundaries of the area the enumerator was to canvass, as well as roads, built-up areas, and natural features. Each enumerator filled out a form D-308OA daily, with the hours worked, miles driven, telephone expenses, and the like, and periodically submitted these to his or her crew leader to keep the supervisors informed of special expenses. The address register contained listing pages for recording the names and addresses of households visited and enumerated and included check-off boxes showing which households qualified for inclusion in the agriculture census.

Enumeration methodology—The decennial censuses in American Samoa and the Northern Marianas employed house-to-house canvassing to enumerate each ARA. Enumerators visited every household in their respective areas and filled out (1) a 1990 Decennial Census questionnaire; and (2) an entry on the address listing page of their Address Register, with the name and address of the household, the date the questionnaire was completed, the number of persons in the household, and whether an agriculture census questionnaire had been completed for

that household. The last page of the decennial questionnaire included a section containing five screening questions to determine whether any individual in the household operated a farm, as follows:

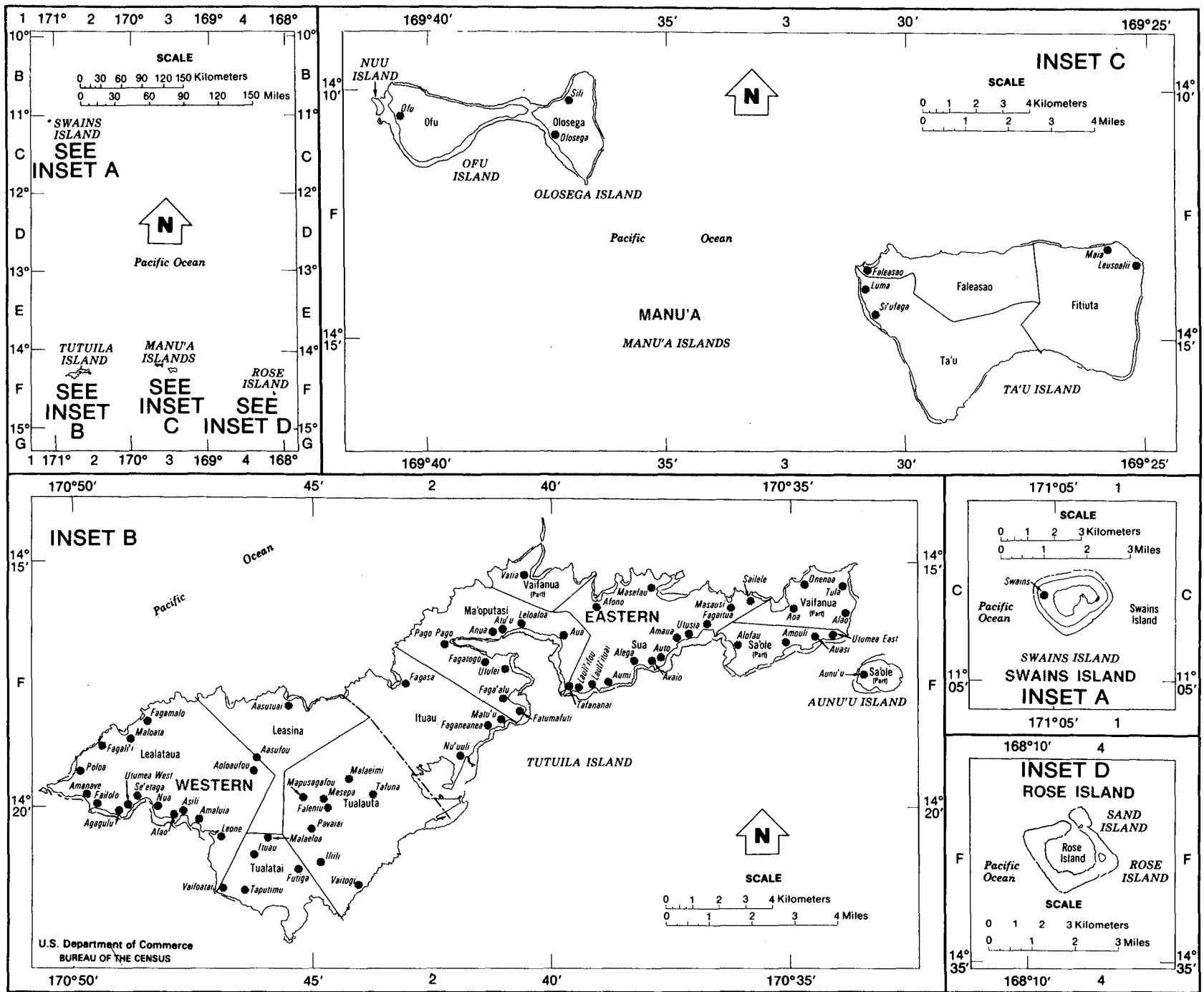
1. Does anyone living in this household operate a farm?
2. Does this place have 15 or more poultry (chickens, ducks, etc.)?
3. Does this place have 5 or more livestock (cattle, hogs, etc.)?
4. Does this place have any crops (include nursery plants) or vegetables harvested for sale?
5. Does this place have any fruit, nut or tree crops harvested for sale?

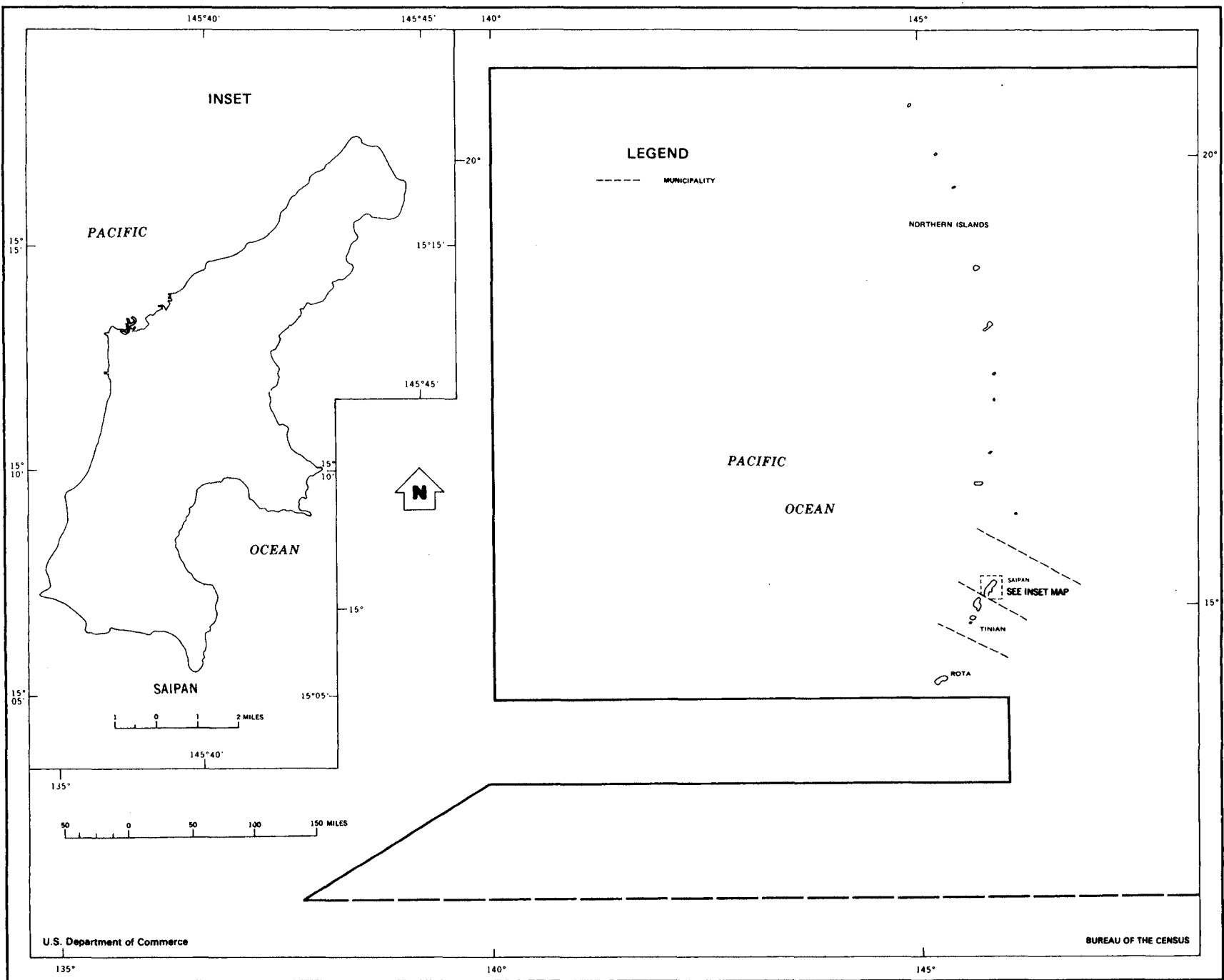
Enumerators completed a form 90-A1 for any household that gave an affirmative answer to any of these questions, regardless of where the agricultural land involved was located within the ARA. For persons operating farmland or other agricultural activities outside the ARA of residence, the enumerator included the data on those operations on the report form as well. In cases in which the respondent reported that an A1 report form already had been completed in another ARA, the enumerator filled out the identification sections of the A1 (Part A, Questionnaire Identification and Part B, Operator's Name and Physical Location), and items 1-4 of section 1 (showing acreage), noting in the remarks section of the form that a completed questionnaire had been obtained by the enumerator in the other ARA concerned. The enumerators tried to obtain names and addresses of operators for agricultural operations controlled or managed by someone living outside the ARA in which the agricultural activity was located, and noted in the remarks section that the enumerator in the appropriate ARA of residence should complete an A1 for the operation concerned.

Enumerators made up to two callbacks to places for which no report form could be completed on the first visit. If the operator still was not available, or if he or she refused to respond, the enumerator noted that in the margin of the questionnaire for that place.

Field review and quality control—Crew leaders were responsible for the quality of coverage and data collection within their respective areas, and spent a good deal of their time reviewing their enumerators' work. Each crew leader conducted two formal reviews of each enumerator's work; the first of these was carried out as soon after the enumeration began as possible. The crew leader reviewed the work done up to the time of the first review, comparing what the enumerator had done with the procedures established in the *Enumerator's Manual*, checking to make certain that

1. The enumerator's canvassing plan would cover the entire ARA involved.





2. At least one agriculture census questionnaire had been obtained for each farm operator identified on the enumerator's address listing pages (form D-104A).
3. Identification data were properly shown on the front of the report form and that these data agreed with the population and housing census records.
4. Entries were properly made in each section of the report form, and no sections had been skipped.
5. The enumerator's callbacks were not accumulating.

The crew leader identified errors, discussed any mistakes made with the enumerators involved, and made certain corrective action was taken as needed.

The second review of each enumerator's work was carried out when the canvass was finished and the enumeration materials were turned in, and involved checking a sample of 1 in every 5 of the agricultural questionnaires completed, unless there were fewer than 10 questionnaires involved, in which case all were checked. The crew leaders checked the returned materials for the same items covered in the first review. If the reviewing crew leader found two or more report forms from a given enumerator to be incomplete, all of that enumerator's questionnaires were reviewed. The crew leader returned any incomplete or otherwise unacceptable report forms to the enumerator involved for additional visits to the respondents, unless the enumerator could provide a satisfactory explanation why information was missing. "Satisfactory explanations" for missing data included the following: (1) the enumerator was unable to find members of the household at home after two callbacks; (2) the enumerator could not, after repeated efforts, locate the farm operator; (3) the enumerator was unable, after a second visit to a farm, to find anyone able to answer a particular question; (4) the respondent refused to provide the information; and (5) the housing unit was vacant and no one in the vicinity could supply the information.

The crew leaders also conducted a coverage check of their districts, using advance listings prepared prior to the start of the enumeration. The listings showed six consecutive living quarters in each of two selected blocks in each ARA within their crew leader areas. The crew leaders matched these against the listing pages completed by their enumerators to determine whether these households had been covered. This check was principally concerned with the population and housing census.

Enumerators turned in to their crew leaders all the enumeration materials for their ARA's as they completed canvassing. After crew leader review and any recanvassing or other corrective work, the crew leaders placed the completed report forms in a transmittal envelope identified with the enumerator's name, identification number, and the ARA assignment number, and referred the questionnaires, together with the corresponding address register pages and maps, to the field operations supervisor.

Results—The agriculture census in American Samoa enumerated 384 farms, with 5,805 acres, and \$1.1 million in total sales of agricultural products. In the Northern Mariana Islands, the census found a total of 119 farms, with 14,421 acres, and \$1.1 in agricultural sales for 1989.

Data Processing

Field office operations—The census offices in American Samoa and the Northern Mariana Islands were responsible for checking in the agriculture census report forms and conducting a preliminary clerical edit. Upon receipt of census forms at the office, the clerks serialized the questionnaires by ARA, block number, and map spot number, and checked each decennial census report form to make certain any agriculture report forms required were present. The office operations clerks reviewed each returned questionnaire for completeness and accuracy and counted the number of each type of form received. Tallies of number and type of each completed report form checked in were kept and periodically reported to Census headquarters. When the local area census offices were closed down, the staff packed the agriculture report forms (both completed and blank) and shipped them to the Agriculture Division at Bureau headquarters in Suitland, MD, for further processing and tabulation.

Precomputer edit and data entry—Agriculture Division staff edited report forms, scanning each questionnaire for consistency and reasonableness of reported data, changing alphabetic entries to numeric where necessary, and checking for completeness. After reviewing and correcting all the report forms for each area, the Agriculture Division staff keyed the data from the questionnaires on minicomputer work stations, using the keying program to test the data as they were entered for nonnumeric entries and illegal values. Keyers checked each record as they completed its keying. All the keyed data were verified by a different keyer and all errors were corrected before the record was released to the data file.

Computer processing—The computer system at Suitland carried out a detailed edit of each record in the data files, checking for consistency; imputing missing or obviously incorrect entries; coding each record for size, economic class, type of farm, and age and tenure of the operator; and flagging questionable items. Corrections were carried to each failed record and immediately reedited; the Economic Programming Division (EPD) tabulated the data from the data base, and then produced final publications using the Census Bureau's table image processing system II (TIPS II). After table verification and review by Agriculture Division staff, the data underwent disclosure analysis and then were released for printing in December 1990.

PUBLICATION PROGRAM

The Census Bureau published the data from the 1987 Census of Agriculture for Guam and the U.S. Virgin Islands in March and May 1989 respectively, in Volume 1, *Geographic Area Series*, Part 53, *Guam*, and Part 54, *Virgin*

Islands of the United States. The agriculture data for American Samoa and the Northern Mariana Islands were released in Volume 1, *Geographic Area Series*, Part 55, *American Samoa*, and Part 56, *Northern Mariana Islands*, in February 1991 and December 1990, respectively. The Bureau did not publish advance agriculture data reports for any of the outlying areas. The volume 1 reports included

data on farms and farm characteristics; land in farms and land use; operator characteristics; selected farm expenses; acres planted, amount harvested, and sales value of fruits and nuts, vegetables and field crops; selected machinery and equipment; and inventory and sales of livestock and poultry and their products. No electronically readable data files were released for the outlying areas.

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INTRODUCTION

General Information

One of the byproducts of the census of agriculture is the list of names and addresses of agricultural operations enumerated, classified by type of activity. This list provides a sampling frame for use in other, more specialized agriculture related surveys or censuses, and has been used for this purpose after most modern agriculture censuses. The 1987 Census of Agriculture program included three major followon data collection operations—a census of horticultural specialties, taken in cooperation with the U.S. Department of Agriculture's (USDA's) National Agricultural Statistics Service's (NASS's) Commercial Horticulture Survey, and sample surveys of farm and ranch irrigation practices and of agricultural economics and land ownership. All three activities were carried out by mail enumeration, with addresses of sampled operations drawn from the 1987 agriculture census in scope respondent list.

Legal Authority

Title 13, United States Code—Census, section 193, authorized the Secretary of Commerce to "...make surveys and collect such preliminary and supplementary statistics related to the main topic of the census as are necessary to the initiation, taking, or completion thereof." Section 195 empowered the Secretary to use sampling, if feasible, for collecting data for purposes other than the determination of apportionment of Representatives in Congress.

Part of the data published as part of the horticultural census program were collected by NASS. Under title 13, addresses and individual records acquired by the Census Bureau could not be made available to any other agency or individual outside the Bureau, including NASS, but the confidentiality regulations in USDA, supplemented by the authority given the Secretary of Commerce in section 6 of title 13, permitted the Bureau to incorporate data from outside agencies into census files. Paragraph (a) of section 6 authorized the Secretary of Commerce to "... call upon any other department, agency, or establishment of the Federal Government, ... for information pertinent to the work provided for in this title."

Estimation

For both the 1988 Farm and Ranch Irrigation Survey (FRIS) and the 1988 Agricultural Economics and Land Ownership Survey (AELOS), the Census Bureau collected data from a sample of farm operations drawn from the 1987 Census of Agriculture respondent universe, using the information obtained to produce estimates for various geographic levels. The surveys used two statistical estimation procedures to account for (1) selection for the survey samples, and (2) nonresponse to the questionnaires. The

survey estimates were computed by weighting each respondent operator's information by an expansion factor, which was the product of the sample weights and the whole-farm operator nonresponse weight.

The Census Bureau used whole farm nonresponse weight for nonrespondent operators to expand the survey data to account for operators who did not respond to the survey for whatever reason, and for the surveys' postmaster returns. The Bureau staff calculated a noninteger nonresponse weight for each stratum (for the AELOS) or State (for the FRIS), and assigned it to each respondent record. The sample weight expanded the survey data to estimate totals as if they resulted from a complete census. (Details of the specific estimation procedures employed were published in the printed reports, *1987 Census of Agriculture*, Volume 3, *Related Surveys*, Part 1, *Farm and Ranch Irrigation Survey (1988)* for the FRIS, and Part 2, *Agricultural Economics and Land Ownership Survey (1988)*, for the AELOS.)

1988 CENSUS OF HORTICULTURAL SPECIALTIES

Introduction

Background information—Horticultural specialty operations represent a significant and rapidly expanding segment of the overall agricultural economy. The 1987 agriculture census indicated that total sales of horticultural specialty crops were over \$5.7 billion, an increase of nearly \$2 billion and over 50 percent since the previous census. The rapid growth of this part of agriculture in recent years prompted demands from data users for more and more detailed information, in order to make accurate projections of growth, maintain the quality and quantity of production, and promote efficient product distribution, as well as for use in considering public policies in such areas as environmental quality.

Basic data on production and sales of flowers, bulbs, nursery products, and seeds had been collected in the general agriculture census since the middle of the 19th century, but the 1890 agriculture census was the first to include a special survey of nurseries, floricultural establishments, seed farms, and the like. The agricultural census program for 1930 expanded the horticultural survey into a special census to be conducted every 10 years. When the schedule of the agricultural censuses was altered in the 1950's, the horticultural specialties operation continued to be conducted every 10 years, as part of the 1959 and 1969 enumerations. The Census Bureau's decision to conduct the agricultural and economic censuses simultaneously led to the 1979 horticultural specialties census, followed by the 1988 enumeration.

The overall plan for the 1988 Census of Horticultural Specialties called for a two-phase data-collection effort, one based on a list of horticultural specialty operations identified in the 1987 Census of Agriculture, and the

second derived from NASS's 1989 Commercial Horticulture Survey. The two agencies used similar report forms, although both agencies' names appeared on the form used by NASS, while the census report form carried only its own name. The Bureau originally planned to conduct the horticultural census as a mandatory response data collection activity, under authority given in chapter 7, section 221, of Title 13 United States Code—Census, but the Office of Management and Budget (OMB) denied authority to collect data under mandatory regulations; consequently, the Bureau agreed to voluntary response. The NASS collected data in its survey under its own "voluntary" authority.

Scope and reference year—The 1988 Census of Horticultural Specialties covered all 50 States and requested data from respondents primarily engaged in the production of ornamental plants and other nursery products—e.g., bulbs, florists' greens, potted and/or cut flowers, bedding/garden, foliage plants, unfinished plant material, shrubbery, woody plants (including fruit trees and environmental), flower and vegetable seeds, and sod—as well as those producing mushrooms or vegetables under cover. The questionnaires asked for data for the calendar year 1988.

Preparations

Pretest—The proposed horticultural specialties report form content and format were tested in the summer and fall of 1987. There were three versions of the proposed report form: An 11" x 17" folder (the form A19.01) with instructions to the respondent to complete the form section by section, an 8" x 11" booklet (the A19.02) with the same content, and an 8" x 11" booklet (the A19.03) with special "skip" instructions (e.g., "If your business is involved in growing 'X', go to section 'Y'").

The staff selected a sample of approximately 1,500 names and addresses identified as horticultural specialty operations in the 1987 census and split the file into three groups of 500, each group to receive one of the test versions of the report form. On July 27, 1987, the DPD mailed the pretest packages, each consisting of the appropriate report form, a cover letter explaining the test, an instruction sheet, and a return envelope. The cover letter included an "800" telephone number for respondents to call if they needed assistance or additional information. There were two mail followups: The first, on August 25, consisted of a reminder letter and the appropriate report form, sent to the approximately 800 nonrespondent addresses. The second followup used a reminder letter only, and was mailed to the remaining 500 or so nonrespondents on September 15. The pretest was closed on October 9, 1987; at that time 1,134 pretest sample operators had completed and returned their forms (an overall response rate of 75.6 percent).

All pretest report forms, as well as all telephone questions by respondents, were returned to Suitland for processing by the Agriculture Division staff. Incoming report forms

were examined and tallied for frequency of common reporting problems, overall response, and supplied data. Analysis identified several general problem areas, including (1) the inability of nursery establishments to report requested data (with all three test forms, over 20 percent of the respondents failed to complete all of the items applying to their operations); (2) respondents reporting more than one type of sales unit in each column; and (3) incomplete data in several sections, notably payroll breakdowns and value-of-sales totals. Overall, the form A19.01—

the large folder format—obtained the best overall response rate, and was adopted for the census. To address the specific response problems identified, the staff redesigned the report form to clarify where data were to be reported, and expanded the instructions that would accompany the census report form.

Report forms—The Census Bureau and NASS cooperated in the final design of two report forms used to collect the horticultural specialties data. The report forms had identical formats and nearly identical data content. The census report Form 88-A19.1, 1988 Census of Horticultural Specialties, was a 10 1/2" x 17", 12-page booklet, folded to 10 1/2" x 8 1/2" for mailing, on white stock with printing in black ink and shading in a salmon wash. The form had 18 sections, and requested data on type, number of units or containers sold, total value of sales, and value of wholesale sales of—

- Potted flowering plants by type of container (i.e., flats, pots of specified sizes, or hanging baskets)
- Bedding/garden plants
- Cut flowers
- Cut cultivated florist greens
- Nursery plants
- Foliage plants and by type of container (pots or hanging baskets of specified sizes)
- Unfinished plant materials (e.g., cuttings, liners, plug seedlings, tissue-cultured plantlets, prefinished plants)

The report form asked for acres harvested, total and wholesale value of sales for sod, dried bulbs, corms, rhizomes, or tubers; pounds produced and bed area (in square feet) and value of sales of cultivated mushrooms; square feet under glass or other production, acres used, and value of sales of greenhouse vegetables, vegetable transplants, and seeds; and acres grown, production in pounds, and value of sales for flower seeds. Additional sections requested data on—

- Land, structures, irrigation, and equipment
- Gross sales
- Selected production expenses for all horticultural operations

- Hired labor (number of employees and gross wages paid)
- Business organization (i.e., individual, partnership, corporation, or other)
- Location of growing operations in 1988

The NASS report Form 88-A19.2, Commercial Horticulture Survey 1989, was virtually identical to the A19.1 in format and content, except that it had a purple wash for shading, and sections 1 (potted flowering plants), 2 (bedding/garden plants), 3 (cut flowers), 4 (cut cultivated florist greens), and 6 (foliage plants) requested area in production in 1988 and intentions for production in 1989 for specified kinds of plants and/or by type of container (e.g., flats or pots for bedding/garden plants).

The content and design of the A19.1 and A19.2 report forms were finalized in the fall of 1988; the NASS form A19.2 went to print in November and was distributed in the following month to the 28 NASS State offices involved in their survey. The census form A19.1 went for printing in the first week of January 1989.

Mailing lists—Growers were selected for inclusion in the 1988 Census of Horticultural Specialties if they had reported a minimum of \$2,000 or more in sales of horticultural products in the 1987 Census of Agriculture. Approximately 32,000 respondents to the 1987 census qualified and were included in the horticultural specialties mail list. The NASS list covered 28 States and consisted of growers expected to have annual sales of \$10,000 or more in floricultural products. The census and NASS lists were clerically matched by the Bureau's Data Preparation Division (DPD) staff at the Jeffersonville facility, and about 8,000 duplicate addresses were deleted from the Bureau's file. The remaining 24,000 cases became the mailing list for the horticultural specialties census.

Data Collection

General information—The printed materials for the Bureau mailings—report forms, instruction sheets, cover letters, and so on—arrived at the Jeffersonville, IN, office during the first week of February 1989. DPD clerks assembled the mailing packages there in late February.

The DPD staff also was involved in the final preparation of the census mail list, matching the Census/NASS horticultural operations lists (see above). The census mail list, which covered all 50 States but excluded horticultural operations with annual sales of \$10,000 or more in the 28 States covered by the NASS survey, was ready by the end of February. The adhesive address labels were printed at the Jeffersonville office and the DPD staff applied them to the mailing packages during the first week of March.

Mailout and mail followup—The DPD carried out the initial horticultural census mailing to 24,338 horticultural operations in all 50 States on March 10-14, 1989. A thank

you/reminder card was mailed to all addresses on the horticultural mailing list approximately 2 weeks after the census mailout, and there were four followup mailings at about 3-week intervals from mid-April to the end of June. The first and third followup packages consisted of a report form, information sheet, return envelope, and cover letter, while the second followup involved only a letter reminding the addressee that his or her report form had not yet been received. The fourth followup consisted once again of the report form package, but was sent certified mail, as a means of emphasizing the importance of response. Toward the end of July, the Bureau identified some 500 additional horticultural specialty operations from the 1987 agriculture census returns, and added these addresses to the horticultural census file. At the same time, about 200 addresses already in the mail file were identified as out of scope, and were deleted from the mail list. The Bureau carried out a special mailing of horticultural census report forms to these "adds," but because of time constraints, only one followup mailing was done. The characteristics of the census and followup mailings were as follows:

Mailout	Type	Date	Mailed
Initial mailing	Report form	03/10-14/89	24,338
Thank you/reminder	Card	03/29/89	24,338
First followup	Report form	04/14-17/89	15,680
Second followup	Letter	05/05/89	12,292
Third followup	Report form	05/25-26/89	10,693
Fourth followup (certified mail)	Report form	06/23/89	8,940
Census "adds"	Report form	07/31/89	500
Followup for "adds"	Report form	08/18/89	402

The Bureau planned to include a telephone followup of large nonrespondents to the horticultural census, but in an effort to improve overall response, decided to mail the fourth followup, using certified delivery to all cases still nonrespondent after mid-June.

Results—The 1988 Census of Horticultural Specialties was on a voluntary response basis, and in the early stages of the enumeration nearly 20 percent of addressees explicitly refused to respond. By the time data collection was closed in August 1989, overall voluntary response was 75.3 percent, compared with 94.4 percent for the 1979 horticultural census (collected under mandatory authority).

The NASS data collection effort—The NASS's 1989 Commercial Horticulture Survey involved a sample consisting of over 15,000 operations in 28 States. The USDA field

staff enumerated the NASS sample by field interview during February, March, and April 1989. A total of 14,940 horticultural operations were identified and enumerated and, after NASS extracted the data required for its evaluation and analysis, it sent the completed report forms to the Census Bureau's Jeffersonville, IN, office for processing and incorporation into the horticultural census data file.

Data Processing

Receipt and check-in—Check-in of the first horticultural census report forms began in Jeffersonville in late March. Return envelopes for the horticultural census had "Horticulture" overprinted on the left front side, and as these packages arrived, the DPD staff referred them, together with postmaster returns (PMR's), to the batching unit for check-in. Batching clerks grouped incoming report forms by type into batches of report forms and PMR's (a batch comprised the contents of a filled mail tray—about 300 receipts), prepared a Form EC-14, Check-In Batch Cover Sheet, and a batch log (form BC-1476) control form for each, with the batch number assigned and date prepared, and document type (i.e., whether report forms, PMR's, correspondence, etc.), and sent each batch for barcode laser check-in. The check-in unit used the laser reader equipment and the six-pocket mechanical sorter to check-in and sort the horticultural receipts. The equipment sorted the documents into rejects (unable to read the barcode on the address label—pocket 1), horticultural receipts (pockets 2 and 4), PMR's (pocket 3), other trade areas (pocket 5), and machine failures (unable to sort—pocket 6). The staff resubmitted rejects and machine failures three times; if the documents remained unreadable by the equipment, the materials were returned to the opening and sorting unit and were checked in at wand/keyboard stations. This subunit used hand-held laser wand equipment to try to read visible barcodes, and, when this failed, checked in the specific receipts by keying the census file number (CFN) from the rejected case's address label directly to the check-in file.

After check-in, the horticultural receipts went to the open-and-sort unit, which referred all report forms with attached congressional correspondence to the Agriculture Division in Suitland for processing. Materials sent to the attention of a specific analyst (i.e., the analyst's name appears on the envelope, report form, or letter received with the form) were forwarded to that analyst; all other checked-in materials went to the agriculture processing unit for precomputer clerical editing.

Precomputer edit—The clerical edit staff received work units of report forms from the open-and-sort unit on a flow basis, in batches by type (i.e., either Form 88-A19.1, 1988 Census of Horticultural Specialties, or Form 88-A19.2, Commercial Horticulture Survey 1989). Clerks reviewed each report form, item by item, annotating the form as needed. During this edit, the clerks transcribed any entries

outside the prescribed location; annotated any line entry that was obscured or illegible; lined through such entries as "same," "all," or "ditto" when they referred to previous numeric entries; converted spelled-out entries to numeric (e.g., "five" to "5"); lined through any remarks they had processed; and wrote in any referral codes needed.

The clerks batched edited report forms without referral codes or attached correspondence by form type and State, prepared a Form A405 Batch Cover Sheet with the new batch number, date, State code, and CFN count, and sent the batches to the data keying unit for keying. Report forms with attached correspondence went to the correspondence unit; blank forms and forms with problem-referral codes were forwarded to agricultural analysts for resolution.

Data entry—The DPD staff used the interactive minicomputer systems and procedures similar to those employed for the general agriculture census to key the horticultural census data to the computer files. The data keying unit received the horticultural specialties census report forms and the NASS survey forms (batched separately), linkage documents, and other materials in work units by State and type of form. Keyers opened each plastic envelope and checked the Form A405, Batch Cover Sheet, and type of report forms before keying the batch. The keyers pulled any forms with problems that required correction during data entry, and held the rejected report forms aside until the entire batch was keyed, then referred them (as rejects) to their supervisors.

As with the regular census report forms, the staff used a series of input programs to key the data from the batch cover sheet and report forms, except that no geographic area code input programs were needed, and the smaller number of data sections on the horticultural forms required only 17 reported-data input programs. The horticultural census data-keying operation was subjected to the same quality control measures as the agriculture census operation, with each keyer's work sampled or 100-percent verified and with all identified errors corrected before the keyed data were entered into the data file. (For details of the census keying and quality control operations, see ch. 6.)

Once each batch had been keyed to disk and any identified errors had been corrected, the lead operator moved the data from the disk to magnetic "pooler" tapes—separate pooler tapes were used for the 1988 Census of Horticultural Specialties data and the NASS survey data—for transmission to the Suitland computer facility by telephone datalink. After Suitland verified receipt of the data from a given pooler tape transmission, the Jeffersonville staff erased the tape for reuse.

Interactive computer edit—The Bureau used the interactive minicomputer systems at Suitland for a detailed, item-by-item edit of the file, checking the consistency and reasonableness of the data, correcting obviously incorrect or inconsistent items, and imputing missing data based on

the records of similar operations in the same geographic area. The computer “flagged” any particularly large individual data entries, as well as any data items changed significantly by the edit, and the Agriculture Division analysts reviewed these items. The interactive edit allowed analysts to resolve all flagged items’ problems and reedit the report in one operation. After the interactive edit, the records were ready for tabulation.

Tabulation—The Bureau tabulated the horticultural specialties census data using its table image processing system (TIPS II) software package, producing estimates for the United States and States in data tables. Agriculture Division analysts reviewed the tabulations as they were generated to check consistency and reasonableness compared with the 1987 census data. Any corrections needed were made to the data file before running the final tabulations.

Publication

The data from the horticultural specialties census were released in August 1991, in the *1987 Census of Agriculture, Volume 4, Census of Horticultural Specialties (1988)*. The horticultural report presented tabulations for calendar year 1988 for the United States and States, on number of establishments, value of sales of horticultural products, type of horticultural products, and kind of business, as well as measures of the response of establishments to the census. The data also were available on compact disc-read only memory (CD-ROM) and on flexible diskettes, and highlights of the report were released online through the Bureau’s CENDATA™ service.

1988 FARM AND RANCH IRRIGATION SURVEY

Introduction

Background information—The 1987 agriculture census showed that while some 14 percent of all farms in the United States were irrigated, those farms accounted for approximately 33 percent of the value of all agricultural products sold, and 51 percent of the value of all crops sold. Hence, information on agricultural irrigation was crucial to legislators and policymakers, economists and farmers, and planners and hydrologists concerned about the Nation’s future supplies of both food and fresh water.

Scope and reference year—The 1988 Farm and Ranch Irrigation Survey (FRIS) supplemented the basic irrigation data collected from all farm and ranch operators in the 1987 agriculture census. The survey requested information about on-farm irrigation practices from a sample of 1987 agricultural operators who reported using irrigation on their land during the census year. The survey collected relatively detailed data, but limited the overall response burden for operators. The sample was drawn from farms and

ranches—excluding operators in Alaska, Hawaii, abnormal and horticultural specialty operations—reporting irrigation in the 48 conterminous States. The survey sample was designed to provide reliable estimates of irrigation practices for the 18 water resources areas (WRA’s) of the 48 conterminous States, as well as for the 27 leading irrigating States.¹

The survey asked respondents to supply data on land use, irrigation and maintenance expenditures, and other inventory items for calendar year 1988, while irrigated and nonirrigated crops data were requested for the 1988 growing season.

Preparations

Sample design and selection—The 1988 FRIS sample was designed to provide reliable estimates for the United States, each of the 18 WRA’s, the 27 leading irrigating States, and the 21 remaining, combined, conterminous States. It included with certainty all farms in a State with a minimum number of irrigated acres, as follows:

Minimum acres irrigated	States
5,000	Nevada
3,000	Arizona, California
2,500	Florida, Kansas, Mississippi
2,000	Arkansas, Colorado, Georgia, Idaho, Michigan, Texas
1,500	Missouri, Montana, Nebraska, Oklahoma, Oregon, Washington
1,000	All other States

In addition to these “certainty” farms, the staff selected a sample of all other eligible irrigated farms in the 48 conterminous States. The total eligible farms were stratified based on specific State, WRA, and number of irrigated acres. (The stratum assignment based on irrigated acreage differed from State to State.) Within each stratum, the farms were systematically sampled, with a higher sampling rate for larger irrigated farms. The “certainty” sample yielded 2,013 farms, while a total of 17,311 farms were selected from all other irrigation operations.

Report form—The Form 88-A62, 1988 Farm and Ranch Irrigation Survey, report form was a 17” x 21” sheet of white stock, folded to 17” x 10 1/2” to form four pages,

¹The WRA’s for which data were collected, tabulated, and published corresponded essentially to the water resources regions (WRR’s) defined in the past by the U.S. Water Resources Council. The areas differed somewhat from the WRR’s because the WRA boundaries were drawn along county boundaries, while the WRR’s were defined by topographic drainage characteristics. The 27 leading irrigating States were Arizona, Arkansas, California, Colorado, Florida, Georgia, Idaho, Illinois, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, Wisconsin, and Wyoming. The reported acreages irrigated in these States ranged from over 7.6 million in California to 162,000 in North Dakota.

with printing in black ink and shaded with a green wash. The report form consisted of 16 sections, the first of which asked whether any land on the farm or ranch operated by the respondent had been irrigated in 1988, while section 16 asked for the name and telephone number of the person completing the form. The remaining 14 sections requested detailed data on the following:

Acreage in 1988

Land use and acres irrigated by category of land use

Acres and yields of irrigated and nonirrigated crops

Method of water distribution and acres irrigated by type of water distribution system

Irrigation frequency, and application of commercial fertilizers and pesticides in irrigation water

Acres irrigated and quantity of water used by source

Number of irrigation wells and pumps

Expenditures in 1988 for maintenance and repair of irrigation equipment and facilities

Investment in irrigation equipment, facilities, and land improvement

Purchase of energy for on-farm pumping of irrigation water²

Costs of water received from off-farm water suppliers

Irrigation practices in 1988

Other uses of irrigation water

Water management practices for operators using gravity irrigation

Data Collection

General information—The 1988 FRIS was a mail enumeration, supplemented by telephone followup to selected nonrespondents. Report forms were mailed out in January 1989 to the sample of 19,862 addresses chosen from agricultural operations reporting irrigated acreage in the 1987 census. Four mail followups were carried out between the second week of February and the first week of May; the first and third mailings used letters requesting response, while the second and fourth consisted of report forms. In followup, clerks telephoned nonrespondents with large irrigated acreages (as reported in the 1987 census; these operations were the “certainty” cases included in the survey (see below)). The data collection effort was completed in June, after achieving a 77-percent response.

Mailout and mail followup—The printer shipped the irrigation survey report forms, followup letters, and other mail enumeration materials to Jeffersonville, IN, during

October and November 1988. The DPD staff printed the address labels using the computerized address file compiled by the headquarters office; then the clerical staff at the Jeffersonville office assembled the mailing packages there. The initial mailout consisted of the 88-A62 report form, an instruction sheet, a cover letter requesting prompt response, return envelope, and a brochure explaining the need for the irrigation data. The first and third followup mailings involved letters requesting response, while the second and fourth included the report forms and instruction sheets as well.

The Census Bureau prepared a computerized survey mail list after each mail response cutoff (usually about 5 days before the next mailout), and used this to produce adhesive address labels. The clerical staff at Jeffersonville attached the address labels to the mailing packages during the 3-to-5-day intervals between the followup response cutoff dates for each mailing, and the next mailout. The initial survey mailing and the four followup mailings were as follows:

Mailout	Type	Date	Mailed
Initial mailing	Report form	01/13/89	19,862
First followup	Letter	02/16/89	11,901
Second followup	Report form	03/14/89	9,264
Third followup	Letter	04/05/89	6,760
Fourth followup	Report form	05/01/89	6,005

Telephone followup—Prior to the final followup mailing, the Agriculture Division listed all irrigation survey nonrespondent certainty cases—707 in all—for a special telephone followup operation. Clerks at Jeffersonville, IN, researched telephone numbers for the selected cases, and on May 11, began calling those operators still nonrespondent and continued until the end of June, by which time responses had been obtained from all referred cases. Since the certainty operations were all large-scale irrigators, failure to obtain information on their operations could have significantly biased the irrigation estimates.

Results—The 1988 FRIS obtained an overall response rate of approximately 77 percent (including approximately 1,000 PMR’s and unprocessable (i.e., blank, illegible, refusals, and so on) cases), with 13,850 report forms completed (including reports from 444 farms that discontinued irrigation between the 1987 census and the 1988 irrigation survey). Operators reported over 11 million acres irrigated. Statistical expansion of these numbers produced national estimates of some 238,710 irrigators in the conterminous United States, with over 46 million acres of irrigated land.

Data Processing

Receipt and check-in—Report forms and PMR’s were checked in at the wand/keyboard stations instead of the

²Water may be applied to crops to prevent freeze damage (as is frequently done with citrus), crop cooling to prevent early budding or blooming, for leaching to remove salts, etc.

six-pocket mechanical sorter, due to the absence of windows in the return envelopes used for the survey. The return envelopes were slit open and the report forms removed for check-in. Report forms with attached congressional correspondence were sent to Agriculture Division in Suitland for processing; materials sent to the attention of a specific analyst (i.e., the analyst's name appeared on the envelope, report form, or letter received with the form) were forwarded to that analyst; all other checked-in materials went to the agriculture processing unit for precomputer clerical editing.

Precomputer edit—The clerical edit staff received work units of FRIS report forms from the open-and-sort unit on a flow basis, in batches of 50-100. Clerks reviewed each one, item by item, annotating as needed, and forwarded the edited forms to the next processing unit. Edited forms without referral codes or attached correspondence were batched by form type and State and sent to the data keying unit for keying. Forms with attached correspondence went to the correspondence unit; blank forms and those with problem referral codes were forwarded to agricultural analysts for resolution.

Data entry—The DPD staff used interactive minicomputer systems and procedures similar to those employed for the horticultural census to key the FRIS data to the computer files. The data keying unit received the report forms batched by State, linkage documents, and other materials and used a series of input programs to key the data from the batch cover sheet and report forms (see ch. 6 for details of data keying operations), including (for the FRIS) geographic area code input programs. The FRIS data keying operation was subjected to the same quality control measures as the agriculture census operation, with each keyer's work subject to sample or 100-percent verification. All errors were corrected before the keyed data were entered into the data file, edited and corrected again, and moved from the disk to magnetic "pooler" tapes for transmission to the Suitland computer facility by telephone datalink.

Computer edit—The data from each report form were processed through a detailed computer edit at the Suitland facility. The edit imputed missing data and made adjustments to totals based on similar-size farms in the same geographic area. The edit "flagged" large entries, as well as any item changed significantly by the edit itself, for review by Agriculture Division statisticians. After review and approval of any such changes, the record was reedited prior to being merged with the final data file. Every record had to pass the computer edit, with any changes or adjustments made by analysts or by the edit itself, before it could be added to the irrigation survey data file.

Tabulation—The Bureau tabulated the FRIS data using the TIPS II software package. The tabulation program produced detailed estimates for the United States of

irrigation data from farm operators who reported irrigated land in the 1987 census and in the 1988 survey. Agriculture Division analysts reviewed the tabulations as they were produced to check consistency and reasonableness compared with the 1987 census data. Any corrections needed were made to the data file before running the final tabulations.

Publication

The data appeared in May 1990 in the *1987 Census of Agriculture, Volume 3, Related Surveys, Part 1, Farm and Ranch Irrigation Survey (1988)*. The printed report presented summary irrigation data for all States, with detailed tabulations for the 27 leading irrigation States and for the 18 water resources areas. The tables showed data for calendar 1988 on acreage irrigated, crops, method of water distribution used in 1988, source of water used, energy use, and irrigation practices. The data also were released on CD-ROM and flexible diskette, and highlights of the report were released online through the Bureau's CENDATA™ service.

1988 AGRICULTURAL ECONOMICS AND LAND OWNERSHIP SURVEY

Introduction

General information—The 1988 Agricultural Economics and Land Ownership Survey (AELOS) was an integrated survey of farm economics and land ownership. The agriculture censuses have collected information on certain types of farm financial practices since the first agriculture census in 1840, but the principal data requested in most censuses was the value of farm land and of sales of agricultural products. The 1880 census asked for and published data on land ownership characteristics and farm tenure, and in the 1890 enumeration, data were collected on farm mortgage debt.

The 1959 Census of Agriculture included the first of a series of special followon surveys that used samples drawn from the agriculture census lists to collect selected data on farm finances. The 1969 agriculture census program included the 1970 Survey of Agricultural Finance, which expanded the kinds of data requested to include land in farms, value of land and buildings, rents, capital and operating expenditures, credit used for purchasing specified items for farm use, outstanding debt by kind and source, value of agricultural products sold, construction of farm buildings and structures, and off-farm income. A decade later the 1979 Farm Finance Survey expanded inquiries further, to include questions on production contracts, farm-related income and expenses, land acquired and date of purchase, the operator's educational and household characteristics, and so on. The survey requested all these data from farm operators, and additional data from landlords on land ownership, sales of agricultural land, participation in management decisions, and type of ownership.

Scope and reference year—The 1988 AELOS covered all 50 States and requested data from farm operators and landlords on agricultural land ownership, income and expenses from farm-related sources, assets, value of land and buildings, sales of land, participation in management decisions (by landlords), and type of ownership. The data were collected in 1989 for calendar year 1988.

Preparations

Sample design and selection—The 1988 AELOS was designed to collect data on land ownership and the economic characteristics of farm operations from landowners and farm operators. The survey used a sample of farm operators and landlords, excluding horticultural specialty operations and abnormal farms. (These excluded operations represented 2 percent of the over 2 million farm operators who responded to the 1987 census.) The AELOS report forms included most of the financial items requested in the earlier farm finance surveys, as well as additional items on land ownership, how land was purchased, type of ownership, acreage acquired or sold for specified years, and on landlords who operated farms as well as landlords who did not. For Census Bureau purposes, a “landlord” was an individual, partnership, or entity that controlled land rented, leased, or used rent-free by a farm operating unit. The number of landlords was not a measure of landholders, but a count of the number of leases or rental arrangements made by farm operating units. “Owners,” on the other hand, were individuals, partnerships, corporations, or other entities that owned land used for agricultural purposes (excluding Federal and State agencies, railroad companies, Indian reservations, and abnormal farms). Owners were classified either as owner-operators or nonoperator-owners, based on whether they operated any of the land they owned.

The survey employed a sample of approximately 48,000 names and addresses of farm operators selected from the 1987 agriculture census for all 50 States, excluding horticultural specialty operations and abnormal farms. The survey was designed to provide reliable State-level estimates (i.e., with an average relative error of 15 percent or less) of land ownership and various economic characteristics of farm operations. The sample included approximately 500 certainty cases, and a sample of all other farms. Certainty status depended on value of sales of agricultural products during the census year and varied from State to State, as follows:

Total value of sales	State
\$500,000 or more	Alaska
\$1,000,000 or more	New Hampshire, Rhode Island, Vermont
\$10,000,000 or more	Hawaii, Idaho, Indiana, Massachusetts, New Mexico, North Carolina, Oklahoma, Oregon, Washington

Total value of sales	State
\$20,000,000 or more	Arizona, California, Colorado, Florida, Kansas, Nebraska
\$30,000,000 or more	Texas
\$5,000,000 or more	All other States

The agency stratified the list of all other farms by State, tenure of the operator, and value of agricultural sales, then systematically sampled farm operators from each stratum. Part owners and tenant operators, and farms with larger volumes of sales received a higher probability of selection. The mail list for landlords comprised names and addresses reported as landlords by responding farm operators, except for public landlords (i.e., Federal or State governmental units, railroad companies, and Indian reservations). The Bureau mailed report forms to more than 47,000 landlords identified by AELOS operator respondents.

Pretest—Time and cost constraints prevented carrying out a full scale content pretest of the proposed operator and landlord report forms, so the Agriculture Division staff conducted a series of studies of the report forms with farmers in Pennsylvania, Kentucky, Iowa, Wyoming, and California. (These five States were selected because they represented a fairly wide range of kinds of farming, and relative geographic dispersion.) Three to five meetings were held in each State, each with 10 to 15 farm operators and landlords. During the meetings, participants completed the report forms, then filled out an evaluation report for each section of the survey form, together with their impressions of the level of difficulty of the forms, e.g., whether respondents could provide the data requested through estimates and/or records, and any other comments or suggestions they might have. This was followed by a question-and-answer session with the Agriculture Division staff.³

After each meeting, the Agriculture Division analysts in attendance met to discuss and evaluate the results. The group participants found the general content and wording of the report forms acceptable, although they suggested minor rewording of some of the instructions, and modifications to the sequence in which some questions were asked.

Report forms—The AELOS used two report forms, the Form 88-A9A, Operator’s Report, and the Form 88-A9B, Landlord’s Report.

The form 88-A9A was a sheet of white stock 14” x 27” folded to 14” x 10 1/2”, with six numbered pages (pages 4 and 5 were “half-page” size, measuring 14” x 5 1/2”).

³The National Young Farmers, part of the Farm Bureau Federation, helped in making the necessary arrangements for the focus group meetings and contacting farm operators and others to participate in the activities.

Printing was in black ink, with a pink wash used for shading. The form had 14 numbered sections, with sections 3 (expenditures and expenses) and 10 (assets) divided into parts "A" and "B." (Subsections 3A and 3B requested data on purchases and expenditures during 1988 for the agricultural operation, and agricultural operating expenditures and other purchases during 1988, respectively, while sections 10A and 10B asked for household and business assets, respectively.) The operator's report served not only to collect specified data on the farm operation and economic situation of the particular operation, but also to identify any landlord for separate contact and enumeration.

The form 88-A9B used white stock, 14" x 21", folded to 14" x 10 1/2", with four numbered pages, and with printing in black ink and shading in a blue wash. The landlord's form had 12 numbered sections, with sections 2 (expenditures) and 10 (characteristics of the landlord) divided into parts "A" and "B" as well. (Subsections 2A and 2B asked for data on purchases and expenditures during 1988 and operating expenses and other purchases, respectively; while 10A and 10B requested information on characteristics and occupation of the landlord, and corporate landlords.)

Each of these report forms requested basic data on the identification and characteristics of the operator or landlord, acreage and current market value of the land and buildings owned or operated by the respondent, purchases and expenditures for agricultural operations and other expenses during the reference year, debt as of the end of 1988, and the real estate taxes paid on, and assessed value of, the land owned or operated by the respondent. In addition, each report form requested specific data from the respective types of respondents, as follows:

88-A9A Operator's Report

- Agricultural land ownership and mailing address of any landlords
- Market value of agricultural products sold in 1988
- Income and expenses from other farm-related sources
- Net cash farm income of partner ships
- Business and household assets
- Off-farm income and household size
- Off-farm work and education (of operator and spouse)

88-A9B Landlord's Report

- Assets owned by landlord
- Participation in management (i.e., landlord only, tenant only, or joint) for farm land report
- Net cash income
- Type of ownership (i.e., sole, husband/ wife, family partnership, etc.)
- Corporation landlords (including whether involved in other agriculture-related activities)

Total business receipts (farm related, and proportion of total receipts from all sources from sales of agricultural products and/or rental income from all agricultural lands owned and/or operated

Data Collection

General information—The 1988 AELOS was carried out by mail. The first mailout was in January 1989, to farm operators selected from the 1987 census respondent files. Each mailing package consisted of a report form, an instruction sheet, a cover letter explaining the objective of the survey and requesting prompt response, and a return envelope. The Bureau mailed a thank you/reminder card to all addresses on the initial survey list on January 27, 1989, plus four mail followups to nonrespondents at approximately 4-week intervals. The mailouts used third-class postage, except for the fourth and final followup, which employed certified delivery. (Using certified mail increased response by approximately 10 percent.)

The Bureau began compiling the landlords' mailing list as soon as responses began to arrive from operator respondents; time constraints did not allow the agency to wait until it completed the farm operator data collection before it began collecting data from landlords. Consequently, the landlords' mail list was compiled in four "waves," each "wave" consisting of the landlords identified by operators responding before a specified cutoff date. All landlord mailouts used third-class postage.

Mailout and mail followup—The details of the mailings to operators were as follows:

Mailout	Type	Date	Mailed
Initial mailout	Report form	01/05–06/89	45,006
Thank you/reminder card	Card	01/27/89	45,006
First followup	Report form	02/14/89	34,448
Second followup	Report form	03/13/89	20,245
Third followup	Report form	04/10/89	16,758
Fourth followup (certified mail)	Report form	05/08–09/89	15,055

The first two "waves" of landlords received an initial mailing consisting of a report form, cover letter, instruction sheet, and return envelope, followed by a thank you/reminder card mailing, and three followup mailings to nonrespondents, each including a report form. Wave 3 got the initial mailing, a thank you/reminder card mailing, and two mail followups. Landlords in the fourth "wave," because of time constraints, received only the initial mailing and a

single report form followup. The details of the landlord mailings were as follows:

Mailout	Type	Date	Mailed
<i>WAVE 1</i>			
Initial mailout	Report form	03/21/89	10,207
Thank you/ reminder card	Card	04/04/89	10,207
First followup	Report form	04/26/89	4,129
Second followup	Report form	05/24/89	2,814
Third followup	Report form	06/16/89	2,202
<i>WAVE 2</i>			
Initial mailout	Report form	04/20–24/89	19,366
Thank you/ reminder card	Card	05/12/89	19,366
First followup	Report form	05/26/89	10,044
Second followup	Report form	06/22/89	6,688
Third followup	Report form	07/24/89	4,891
<i>WAVE 3</i>			
Initial mailout	Report form	06/12/89	7,453
Thank you/ reminder card	Card	06/28/89	7,453
First followup	Report form	07/15/89	3,933
Second followup	Report form	08/09/89	2,598
<i>WAVE 4</i>			
Initial mailout	Report form	07/11/89	7,483
First followup	Report form	08/04/89	4,868

The fifth “wave” of 1,281 landlord cases was compiled, but again, time constraints prevented additional mail or telephone data collection, and the Agriculture Division staff imputed data for these cases based on information from landlords in the same geographic area.

Results—The AELOS achieved a final operator response rate of approximately 82 percent, with 35,684 report forms completed (including 3,148 operators who were no longer farming in 1988). Farm operators reported over 47,000 landlords, but only 44,038 were mailed report forms (the remaining landlords were identified as “public” landlords (e.g., Federal or State agencies), railroad companies,

Indian reservations, and hence excluded from the survey). The actual response rate for landlords achieved was 78 percent.

Data Processing

Receipt and check-in—The AELOS report forms were checked in using procedures similar to those employed for the FRIS—i.e., the return envelopes had to be opened and the report forms checked in at the wand/keyboard stations. After check-in, report forms with attached congressional correspondence were referred to the Agriculture Division in Suitland for processing; materials sent to the attention of a specific analyst (i.e., the analyst’s name appears on the envelope, report form, or letter received with the form) were forwarded to that analyst; and all other checked-in materials went to the agriculture processing unit for precomputer clerical editing.

Precomputer edit—Clerks at the Jeffersonville office reviewed each AELOS report form before sending it for data keying. Forms from “large” operations, i.e., those operations with reported value of sales of agricultural products meeting or exceeding specified limits (\$500,000 in most States, but higher in some Western States), as well as any forms with pertinent remarks that could not be readily coded, were referred to agricultural analysts for review and resolution. The clerks checked each form to ensure the legibility and completeness of entries, corrected obvious errors, changed alphabetic responses to numeric (e.g., changed “five” to “5”), coded the forms for respondents who refused to answer the debt inquiries (this enabled the computer edit program to impute responses for these items), and identified any respondents reporting off-farm work. The DPD staff coded the report forms for respondents reporting off-farm work, using the Bureau’s 1980 census industrial and occupational classification system.

Clerks reviewed the return from each landlord reporting as operating a farm or ranch in 1988 and compared the name and address to the 1987 agriculture census mail file. The entry for any landlord not found in the 1987 file, or found to have been identified as a “nonoperator” in the census file, was deleted from the AELOS data file.

After each report form had been reviewed, and all changes and required codes made, the clerks referred them to the batching unit for grouping into batches of about 50 cases each, by State and type of form, before data keying. The batching unit clerks checked each report form to determine whether it was for an operator or landlord. They batched any landlord forms first, and referred them to the Data Systems Branch for updating the landlord mail file. After being returned to the batching unit, the batches, with a Form 87-A405, Batch Header Sheet attached, were referred for data keying.

Data entry—The DPD staff used interactive minicomputer systems and procedures similar to those employed for entering the AELOS data to the computer files. The data

keying unit received the AELOS report forms batched separately by State and type (i.e., whether operator or landlord), linkage documents, and other materials. The keyers used a series of input programs to key the data from the batch cover sheet and report forms (see ch. 6 for details of data keying operations). The AELOS data keying operation was subjected to the same quality control measures as the agriculture census operation, with each keyer's work subject to sample or 100-percent verification, and with all errors corrected before the keyed data were entered into the data file.

Once each batch had been keyed to disk and all errors corrected, the keyer moved the records from the disk to magnetic "pooler" tapes for transmission to the Suitland computer facility by telephone data link. After Suitland verified the receipt of the data from a given pooler tape transmission, the Jeffersonville staff erased the tape for reuse.

Computer edit—At Suitland, the staff used the mainframe computer for a detailed, item-by-item edit of the file, checking the consistency and reasonableness of the data, correcting obviously incorrect or inconsistent items, and imputing missing data based on the records of similar operations in the same geographic area. The computer compared key items from the AELOS records with the 1987 agriculture census to confirm accuracy and reasonableness. The computer edit also reconciled data reported by operators and their landlord(s). The reconciliation checks covered only the data items common to both—i.e., acres rented, assigned value of land and buildings, assets, and expenses.

The computer edit also included a matching operation to identify for manual coding duplicate landlord data (since landlords who rented land to more than one operator could

be counted more than once in the data on land ownership) and grouped the records for all landlords with similar name codes with the same five-digit ZIP Code area. Any landlord found more than once on the landlord list for each area was identified as a multiple report. The data from multiple landlords were tabulated only once for land ownership.

Tabulation—The AELOS data were tabulated using the TIPS II software package. The tabulation program produced estimates for the United States, regions, divisions, and States in 113 data tables. Agriculture Division analysts reviewed the tabulations as they were produced to check consistency and reasonableness compared with the 1987 census data. Any corrections needed were made to the data file before running the final tabulations.

The estimates produced were not absolute totals for calendar 1988, but were based on the 1987 census universe, less the horticultural specialty and abnormal farm operations.

Publication

AELOS data were released in August 1990, in the *1987 Census of Agriculture, Volume 3, Related Surveys, Part 2, Agricultural Economics and Land Ownership Survey (1988)*. The printed report presented economic and land ownership data for the United States and States on farmland owned and leased, land use, amount and source of debt, production contracts, taxes, assets, off-farm income, and, for landlords, type of ownership and ownership characteristics, as well as measures of the statistical reliability of the data. The data also were released on computer tape and online.

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1987 COVERAGE EVALUATION

Introduction

Background and objectives—The Census Bureau first carried out a coverage evaluation of the agriculture census in 1945, and first released the results of such a study as part of the 1950 census publication program. Since then, the Bureau has routinely evaluated each agriculture census for the accuracy and completeness of the published farm count, and for coverage of selected data items, such as land in farms, total value of agricultural products sold, and so on. The basic methodology used has remained largely unchanged—an area and list sample survey—although methods and sample designs have been refined and improved with each census.

The primary objectives of the 1987 Census of Agriculture coverage evaluation program were to provide—

- State estimates of the number of farms not on the mail list
- Regional estimates of the number of farm operators incorrectly classified and duplicate farms
- Divisional estimates of selected agricultural characteristics of undercounted farms

The 1987 coverage evaluation program estimated that 242,853 farms were not on the census mail list; 54,080 farms were omitted from the census tabulations due to incorrect classification as nonfarms; 72,310 nonfarms were counted as farms; and 63,290 farms returned more than one census report form.

General procedures—The 1987 coverage evaluation program used U.S. Department of Agriculture's (USDA's) National Agricultural Statistics Service's (NASS's) 1987 June Enumerative Survey (JES) and the 1987 Classification Error Survey (CES—part of the 1987 agriculture census program) for developing its coverage estimates. The JES is an annual national area sample survey designed to measure planted acreage of crops and numbers of livestock by State. NASS conducted the JES, and the Census Bureau used the 1987 JES data to estimate the number and characteristics of farms not on the census mail list. The 1987 CES data were used to estimate the number of misclassified farms (i.e., farms incorrectly classified as nonfarms, and nonfarms as farms) and duplicate farms in the census.

The JES was a field canvass of selected area segments, and the area segment records then were matched to the census mail list. Matched and nonmatched addresses were mailed census report forms, the matched ones as part of the regular census and the nonmatched cases as additional census mailings. The resulting data were used to compute the "not on the mail list" estimates. The 1987 CES used mail enumeration, with followup by telephone to

nonrespondents. The survey farm status (i.e., farm or nonfarm) was compared to the census farm status to determine whether a given sample farm had been correctly classified in the census. The results of the survey operations were processed, tabulated, analyzed, and published.

Sample Survey Designs and Methodologies

1987 June Enumerative Survey (JES)—The USDA's National Agriculture Statistics Service (NASS) conducted the June Enumerative Survey (JES) annually to measure planted acreage of crops and numbers of livestock. The NASS area sample frame consisted of land parcels of predetermined size, with easily identifiable boundaries. All land in each State was stratified based on land use, such as intense cultivation, urban areas, range land, and so on. Cultivated land was divided into several strata based on the degree of cultivation throughout the State. Primary sampling units (PSU's) were land parcels selected within each land use stratum. Each PSU was divided into several ultimate sampling units, or segments. PSU size varied, but typically included six to eight segments, each with an average of three farms.

The JES used a two-stage probability area sample of farm operations. In the first stage, the survey selected PSU's with probability of selection proportional to the number of segments within each PSU of each land-use stratum. In the second phase of the JES, a segment was selected with equal probability from each PSU for enumeration. Each distinct farm operation within a segment was defined as a tract. Any land area within a segment that contained one or more occupied dwellings was designated a residential tract. To increase the reliability of the estimates of farms not on the census mail list, the NASS retained in the sample for the 1987 JES the 20 percent of the agricultural-urban segments that normally would have rotated off the sample in 1987. At the Census Bureau's request, NASS also instituted more stringent screening procedures for residential tracts, requiring its field interview staff to list all houses in each segment and to inquire whether any household members or neighbors were involved in agricultural operations.

1987 Classification Error Study (CES)—The 1987 CES was designed to measure the number of farms on the census mail list that were incorrectly classified or were erroneously duplicated. The Bureau staff drew a systematic sample, stratified by geographic region, from the initial census mail list (4.1 million addresses), excluding addresses (1) in Alaska and Hawaii, (2) with \$500,000 or more expected annual total value of sales of agricultural products, (3) representing abnormal or multiunit operations, and (4) representing JES nonmatch records. The CES sampling rate varied by census geographic region (see ch. 5 for a description of the census divisions and regions), as follows:

Region	Sample rate
Northeast	1 in 71
Midwest	1 in 500
South	1 in 176
West	1 in 227

Approximately 18,500 names and addresses were selected, with sufficient numbers in each region to provide acceptable regional-level error estimates. At specified cutoff dates, the Bureau obtained the report form check-in status for the CES sample addresses, using the CES evaluation code set in the census data base at the time of the initial sample selection.

Data collection—NASS collected the data for the 1987 JES by field canvass of each segment in June 1987. The Census Bureau received the JES data files containing names, addresses, and agricultural data on all area-segment residents involved in any agricultural activity. It matched this file to the census mail list development file. All JES records not on the census mail list were assigned a special processing code for identification and were added to the census mail file.

The 1987 CES was a mail and telephone enumeration. Form 87-A90, Evaluation of the 1987 Census of Agriculture, report forms was mailed to CES sample addresses in two waves (according to the date of response), the first in March, and the second in July 1988. The mailouts went to 15,331 sample survey cases that had responded to the census, with a reminder card followup 14 days after the initial mailout, and a second report form 14 days after the card. Six weeks after the first CES mailing for each wave, the Bureau referred nonrespondent cases (approximately 4,200) to the Data Preparation Division's (DPD's) telephone unit in Jeffersonville, IN, which carried out a telephone followup between the second week of June and the end of September 1988.

Processing

JES file processing—Processing clerks identified and reviewed area segment survey records using both census and JES data, such as the type of crops, livestock, total value of sales of agricultural products, and land use, to determine whether a JES case that did not respond to the census qualified as a farm under the census definition, and to resolve cases in which JES and census farm status differed. The clerks added a coverage classification code to each record to specify the farm status (i.e., farm or nonfarm) and the final match status of the survey record to the census mail list (match or nonmatch). Both the match and nonmatch records were retained in the sample for deriving estimates of farms not on the mail list.

The Jeffersonville staff keyed the JES data to a computer file, which then was edited using the interactive minicomputer system, and reviewed for consistency and accuracy prior to tabulation. The Bureau used the JES

nonmatch records to estimate the total number and selected characteristics of farms not on the census mail list for States, divisions, regions, and the United States.

CES processing—The Jeffersonville clerical staff edited the CES sample forms for consistency and accuracy, then carried out a separate technical review to classify agricultural operations as farms or nonfarms. The processing clerks compared the CES data and farm status to the census data and farm status, and assigned coverage classification codes that identified farm operations and match/nonmatch status between each record's CES farm status and census farm status. The data then were keyed to tape and transmitted to the Suitland facility for computer editing and tabulation.

Estimation Procedures

The Bureau used the final data file from the CES in conjunction with JES data to produce regional and U.S. net coverage-error and classification-error estimates for the census itself. The estimated true total number of farms in the United States is the census published farm count minus the number of overcounted farms plus the number of undercounted farms. The coverage evaluation provided estimates of (1) undercounted farms (farms not on the mail list and farms incorrectly classified as nonfarms); and (2) overcounted farms (nonfarms incorrectly classified as farms, and duplicates). In these estimates, the Bureau used a model that consolidated estimates from two enumerations—in this case, NASS's 1987 JES and the 1988 CES—to estimate a true total. The model assumed that (1) both the census and the JES attempted to enumerate accurately the complete universe of farms, and that farms reported on either source list were true farms; (2) the event of being included in the census was independent of the event of being included in the survey; (3) the probability of being missed by either the census or the survey was the same for all farms within a given size category; and (4) every farm in the complete universe of farms had, independently of every other farm, the same chance of being listed in the census and, independently again, of being listed in the JES. (For details of the estimation methodology, see the *1987 Census of Agriculture, Volume 2, Subject Series, Part 2, Coverage Evaluation*.)

The statistical model and the data from the JES and CES then were used to estimate the undercount and the overcount. The coverage evaluation produced State-level estimates of the number and characteristics of farms not on the mail list, and region-level classification-error estimates for the number of incorrectly classified and duplicate farms.

Results and Publication

The 1987 coverage evaluation program estimated the net farm coverage undercount (including classification error) to be 7.2 percent (plus or minus 0.5 percent), with a

resulting census coverage of 92.8 percent. Estimated total undercount was 13.2 percent, with an overcount of 6.0 percent (both plus or minus 0.5 percent). The undercount and the overcount both were highest for small farms—the estimated undercount was 32.3 percent for farms with annual sales of \$2,500 or less, and 27.9 percent for farms with less than 50 acres—while livestock specialty operations tended to have a higher undercount than other farms, and general crops operations a slightly higher overcount than other operations.

The State-level estimates of the number and characteristics of farms not on the mail list appeared in the Volume 1, *Geographic Area Series* report for each State. The State-level estimates for farms not on the mail list, as well as the classification error estimates, were released in a printed report, the *1987 Census of Agriculture, Volume 2, Subject Series, Part 2, Coverage Evaluation*. The publication included text describing the coverage evaluation program; charts and tables showing estimates for the United States and regions of census farm coverage; farms by selected characteristics and components of coverage; selected items for undercounted farms; and both land in farms and value of agricultural products sold, by sales group and components of coverage.

1987 ADVERTISING AWARENESS AND RESPONSE BEHAVIOR STUDY

Introduction

Scope and objectives—The success or failure of the agriculture, or any other, census, depends entirely on the degree of cooperation and response from the individual operators. Consequently, the Census Bureau was interested in identifying the factors that affect census response. It planned and carried out the 1987 Census of Agriculture Advertising Awareness and Response Behavior Survey (ARBS) to help identify the various events, opinions, knowledge, or other factors, that influenced census response.

The 1987 ARBS was a telephone survey of a sample of agricultural operations drawn from the 1987 Census of Agriculture mail list. Staff contacted operators in the sample by telephone and interviewed them about their awareness of the census, exposure to the agriculture public information campaign, opinions on Federal and local government use of census data, ability to complete the census form, intentions to respond, and so on.

The Bureau used the results of the survey and analysis for internal planning purposes and did not publish a formal report.

Sample design and selection—The ARBS sample consisted of a control and four sample panels, selected during the final stage of mail list development. The sample design excluded all addresses of operations with expected annual sales of agricultural products of \$500,000 or more, multiunits, specialty operations (i.e., known horticultural or

other specialty operations), abnormal, and all addresses in Alaska and Hawaii. These places were excluded because the Bureau employed different data collection procedures for them. The Agriculture Division staff selected national samples of approximately 1,900 addresses each for panels 1, 3, and 4, and 7,600 addresses for a regionally stratified panel 2. The sample size was determined by the requirement that the research staff be able to compare respondents and nonrespondents within each panel, between panels, and between regions for panel 2. Each panel was designed to examine the effectiveness of different publicity campaigns and followup procedures by different data collection activities throughout the census.

Questionnaire content—The ARBS report forms were designed to be completed in a 10-minute telephone interview. Each form contained three parts; parts A and C were essentially identical, while part B differed slightly for each panel, to collect specific information to assess the respondent's awareness of the census at four specific points in the data collection process.

Part A requested information to (1) confirm the identity of the respondent and that he or she operated a farm, (2) assess the interviewee's awareness of the agriculture census from various media, and (3) determine whether the interviewee knew census response was mandatory. Part B asked for information on (1) the respondent's knowledge of when the next census would be conducted (all panels) and of the due date for census response (panels 2, 3, and 4); (2) whether the respondent had received the initial and subsequent mailings (panels 2, 3, and 4); (3) the interviewee's response to the mailings (i.e., whether he or she opened the envelope, read the letter, used the information sheet, filled out or started to fill out the report form, and so on) (panels 2, 3, and 4); and (4) the respondent's impression of the length of the census form and the time required to fill it out. Part C of each form was designed to obtain the respondent's views and beliefs about the agriculture census program and the uses of the census data, and to determine his or her level of education and age range.

Telephone Operations

The Bureau initially used its computer assisted telephone interviewing (CATI) facility in Hagerstown, MD, for panel-1 calls. The much larger sample size of panel 2, combined with other commitments for the CATI operation, led the agency to shift the telephone operation to the telephone unit at the DPD office in Jeffersonville, IN.

After sample selection, the names and addresses for each panel were referred to telephone number research units (first at Hagerstown, for panel 1, and at Jeffersonville for the other three panels). The CATI staff telephoned panel-1 cases during the first 3 weeks of December 1987, before the mailout for the agriculture census. Panel-2 telephone calls were made by Jeffersonville staff through January 1988, after the initial census mailing but before the reminder/thank you card was received; panel-3 cases

were called in March, after the reminder/thank you card and first followup packages had been mailed. The telephone interviewers contacted panel-4 cases in the last week of May, by which time the Bureau had mailed the initial census report forms, the reminder/thank you card, and five nonrespondent followups.

Results

The Agriculture Division's Research and Methods Branch designed the ARBS to measure the effectiveness of the public awareness campaign and followup procedures, and to enable analysts to make comparisons between the samples and between census respondents and nonrespondents. After completing the telephone interview operation in May 1988, Agriculture Division tabulated and analyzed the data from respondents.

Individuals most frequently reported that the source of media exposure that informed them of the census were agricultural organization meetings and other sources, such as previous censuses, posters in stores or post offices, flyers received in the mail, co-workers, colleagues, and so on. The exposure to the census campaign also appeared to have an effect on the survey respondents' knowledge, attitude, and opinions. Higher knowledge, attitude, and opinion scores were consistently observed from sample respondents who had been exposed to the publicity materials, than from those who had not received any information about the census. This was true also in comparing census respondents and nonrespondents; respondents had better knowledge of the census, and more favorable attitudes and opinions toward the census, than did nonrespondents.

The study also showed that the later sample (panel 4) and the nonrespondent sample appeared to (1) need more time to complete the form, (2) feel that the census report form was too long, and (3) not know the census response due date.

The ARBS data suggested that the public awareness campaign and followup activities—when considered as one continuing activity throughout the census period—appeared to have a positive effect on improving the public's knowledge and opinion about the agriculture census. Evaluation of the ARBS data also indicated certain aspects of the publicity and followup procedures that needed to be improved for future censuses.

CLASSIFICATION TREE METHODOLOGY EVALUATION

General Information

The Census Bureau used a binary classification tree procedure (see ch. 3) for statistical modeling to group 1987 preliminary mail list addresses according to their likelihood of being farms. The addresses identified as less likely to be

farms were excluded from the 1987 mailout. The Agriculture Division staff evaluated the technique's effectiveness. Data for the evaluation were drawn from three sources: (1) results from the use of the methodology (i.e., the proportion of farms in the model group), (2) observed responses to the 1987 census, and (3) observed responses to an independent survey of addresses removed from the census mail list.

The Evaluation Methodology

General procedures—The classification tree methodology evaluation, carried out following census data collection and processing, consisted of comparing *expected* farm proportions and frequencies computed during the application of the methodology with the *observed* farm proportions and frequencies for both agriculture census records and the specific records excluded from the census mail list by the application. The evaluation was done in three phases, using (1) measures of statistical association, (2) expected and observed farm frequencies, and (3) an evaluation of data obtained from the survey of addresses removed from the mail list.

Measures of association—The first phase of the evaluation involved partitioning the data file by ranges of expected farm proportions and by observed farm/nonfarm status, and the creation of two row-and-column contingency tables for use in analyzing the accuracy of the classification tree procedure. For both tables, the Bureau used observed farm status in the 1987 census to create row classes, while the column categories were based on the expected proportion of farms. The measures of association enabled the Bureau to determine if the observed census farm status was correlated with the expected farm proportion. The agency used the likelihood of an address being mailed one of the form types (short or regular) to establish categories—one for groups of addresses considered to have more than 11.7 percent, but less than 43.22 percent farms, and the second for the group of addresses considered likely to have over 43.22 percent farms. During the statistical modeling used in the compilation of the census mail list, groups of addresses considered to include 11.7 percent or fewer farms were deleted from the list. Groups of addresses believed to include more than 11.7 percent, but less than 43.22 percent, farms were added to the mail list for the short form, while groups believed to include more than 43.22 percent farms were included in the regular census report form mailings.

Evaluation by farm frequencies—In the second phase, the data used for the evaluation were the expected and observed farm frequency counts from 1,839 of the 2,184 statistical model groups created by the classification tree methodology in its application to the census mail file. (There were no observed farms for 345 of the classification tree model groups, so those groups had to be dropped from the evaluation.) To be able to compare the frequency

counts, the expected frequency counts were calculated by multiplying the observed number of 1987 respondents in a model group by the group's expected farm proportion. By comparing the expected and observed farm frequencies for the model groups, the evaluation staff could assess any differences or similarities in expected and observed farm frequency distribution, which would indicate if the expected and observed farm proportions differed.

Survey data—The third phase of the program employed data obtained from the Model Drop Survey, conducted in dropped the summer of 1988. Approximately 5,300 addresses that had been deleted (dropped) from the census mail list as a result of the classification tree methodology were canvassed by mail to determine their farm status. The records selected for the survey, and responses obtained, were assigned to five strata based on

1. Source list (strata A-C)
2. Cases identified by the classification tree methodology but not included in strata A-C (stratum D)
3. Those subjectively excluded from the mail list by Agriculture Division personnel because they believed these records were unlikely to represent farms (stratum E).

For evaluation purposes, the records in each stratum also were assigned to three categories based on expected proportion of farms assigned to them by the classification tree methodology. While the survey obtained responses from only about half of the addresses mailed questionnaires, the staff had sufficient data collected to analyze response and inflate the results statistically for use in the evaluation. The objective was to determine whether a comparison of the observed survey-wide farm proportion to the minimum census inclusion proportion (0.117) dictated that the survey cases (and the universe they represented), or certain categories of the survey cases (and their universe(s)), should have been included in the 1987 census. These comparisons established a reference point from which to conduct further analyses, if needed.

Evaluation Results

The general conclusion of the evaluation was that the classification tree methodology was successful in selecting which addresses should be included in the final 1987 agriculture mail list, but that the accuracy of the procedure could be further improved. The results of the various measures of association indicated that the classification

methodology performed fairly well and accurately determined the proportion of farms in each of the model groups, while the Model Drop Survey results showed that expected farm proportions were significantly lower than the observed proportions for five of the eight strata and model group categories. The Agriculture Division staff also determined that the number of cases composing the final model groups were sometimes too small to estimate farm proportions, and recommended further research in that area.

DISCLOSURE AVOIDANCE RESEARCH STUDY

General Information

The Bureau published agricultural census data in tables, some relatively simple, and others made up of detailed cross tabulations (see ch. 5). The confidentiality rules of the census law required that no data be published that could be used to identify a specific respondent or operation, hence the tabulations had to be reviewed and items that would disclose identities were suppressed (i.e., not shown in the detailed tables), although the data were tabulated for total counts.

The 1987 disclosure procedures involved applying initial suppressions to any value that failed a predefined disclosure rule, and then examining data items involved in the initial suppression for complementary suppression. Initial suppressions were data suppressions required by the disclosure avoidance rules. Complementary suppressions ensured that none of the initially suppressed values, or previously applied complementary suppressions, could be derived by the addition or subtraction of published data. Published farm counts were not considered a disclosure and, thus, were not subject to suppression.

Research

In 1989, the Bureau's Agriculture and Statistical Research Divisions began a research program to study the complementary suppression methodology used in the 1987 census. Researchers examined the possibility of employing a new system of applying complementary suppression that would increase data utility by providing (1) a lesser number of complementary suppressions, (2) a smaller sum of all data values suppressed as complements, (3) a consistent level of protection, and (4) an improved reconciliation program between different cross tabulations and between the master matrix and the cross tabulations. This research was directed at improving the Bureau's suppression methodology, and continued in subsequent years.

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INTRODUCTION

General Information

The goal of the census publication program is to make the census data available to users as quickly as possible after the collection, while maintaining the highest possible standards of statistical quality, reliability, and comparability. The overall plan for the 1987 publication program provided that the data be published in multiple formats—printed reports, computer tapes, flexible diskettes for microcomputers, and compact disc-read only memory (CD-ROM). The Census Bureau issued individual State and county advance reports with summary statistics, and included the detailed county- and State-level tabulations in Volume 1, *Geographic Area Series* reports—one for each State, Puerto Rico, Guam, the U.S. Virgin Islands, American Samoa, the Northern Mariana Islands, and a United States summary. The advance and final reports provided data on all agricultural operations that met the census farm definition (e.g., in the 50 States, any place from which \$1,000 or more of agricultural products were produced and sold or normally would have been sold during the census year) as well as data for farms with annual sales of \$10,000 or more.

The Composition Systems

The vast majority of material published for the agriculture census is in the form of statistical tables. For the 1987 reports, the Bureau's Publication Services Division (PSD—later the Administrative and Publication Services Division (APSD)), used its Census Electronic Publication System (CEPS) and a commercially available electronic graphics system (EGS) in conjunction with the Table Image Processing System (TIPS) II. These systems provided state-of-the-art computer composition capacity for materials that had been manually prepared in previous census publications. The new equipment and methodology required extensive retraining of the APSD editorial, composition, and printing staffs. The division conducted on- and off-site technical training and reorganized functions within its own branches. A major change within APSD involved the creation of two computer programming staffs to automate the entire production process.

The CEPS enabled the publication staff to develop automatic page layout for text, tables, and graphics; code text and table files directly on the publication sponsor's electronic file; scan graphics images for merging with text; and translate files from a variety of microcomputer and word processing systems. The EGS enabled the electronic production of graphics. Systems Software Division (SSD) and APSD designed the original TIPS to be used to produce large numbers of statistical tables in census printed reports. The system actually was a computer program controlling the computer-output-to-microform video composition system (COMp80) or the Government Printing Office's (GPO's) VideoCOMp systems. The updated TIPS

II version used the table-layout instructions, stub, and data file for a given report to compose a single "instance" of a table, and produced a laser printer proof copy of the table for review. The system automatically applied any correction made to the data file to the tables and generated corrected input files for table composition. After the tables were reviewed and approved, the tape files were sent to the GPO, to produce photographic negatives of the publication pages. The negatives and tapes then were returned to APSD. Once each page had been reviewed and approved, they were assembled and sent for publication.

Photo-offset reproduction was used for the published reports in the standard 8 1/2" x 11" page size.

Quantity of 1987 Statistics Published

The Census Bureau reduced the total quantity of data published for the 1987 census by eliminating the preliminary report series, replacing it with the advance reports for each county and State. The advance reports contained a total of approximately 6,200 pages of text and final summary statistics, compared to approximately 12,400 pages of text and preliminary data in the 1982 series. The 56-part Volume 1, *Geographic Area Series, State and County Data* set included final State and county (or equivalent) detailed data for the 50 States, Puerto Rico, Guam, the U.S. Virgin Islands, American Samoa, and the Northern Mariana Islands, as well as a summary of the United States, and contained approximately 21,000 pages of text and tabular data, compared with some 19,300 in the 1982 volume 1 reports. The Volume 2, *Subject Series*, for 1987 comprised six reports: the *Agricultural Atlas of the United States*, with 199 pages of maps and charts illustrating national agricultural statistics; the *Coverage Evaluation*, with 18 pages of tables on coverage estimates; the *Ranking of States and Counties*, with 99 pages of tables showing the comparative rankings of States and counties for selected subjects; the *Government Payments and Market Value of Agricultural Products Sold*, with 449 pages of national and selected State statistics; the *ZIP Code Tabulations of Selected Items*, with 629 pages of basic data items by five-digit code; and the *History*. Volume 3, *Related Surveys*, consisted of two reports: the *Farm and Ranch Irrigation Survey (1988)*, with 114 pages of irrigation data for the United States, States, and 18 water resources areas; and the *Agricultural Economics and Land Ownership Survey (1988)*, with 296 pages of economic and agricultural land ownership data for the United States and the 50 States. Volume 4, *Census of Horticultural Specialties (1988)*, contained 180 pages of statistics on horticultural specialty operations for the United States and States.

PUBLICATION MEDIA

General Information

The Bureau publishes data in a variety of media: Printed reports, "flexible" diskettes, computer tape, and CD-ROM.

The GPO sold the printed reports, while the agency was the only primary source for its own data on electronic media.

Printed Reports

Advance Reports—The Bureau issued 2-page advance reports for each county (or county equivalent) in the United States with 10 farms or more, for each State, and for the United States. The reports were grouped by State, and presented highlights for all farms and farms with sales of \$10,000 or more. Selected data items included the number of farms, land in farms, size of farms, land use practices, farm operator characteristics, selected production expenses, livestock and poultry inventory and sales, and major crops harvested. (No advance reports were issued for Puerto Rico, Guam, the U.S. Virgin Islands, American Samoa, or the Northern Mariana Islands.)

The Census Bureau issued the first *Advance Reports* (the set for Delaware) in September 1988, and the last, for the United States, in May 1989.

Volume 1, Geographic Areas Series, Series AC87-A-1 to 56—Volume 1 comprised a United States summary with data for States, and separate reports for each of the 50 States, Puerto Rico, Guam, the U.S. Virgin Islands, American Samoa, and the Northern Mariana Islands. Each State or area report consisted of an introductory text and two chapters of detailed statistical tables, one for the State or area, and the second for counties or their equivalents. (In the summary report of the United States, chapter 1 showed national-level data, while chapter 2 showed State-level statistics.)

The State tables covered all the items collected in the census for each State: Farms, land in farms, land use, and irrigated land; crop production and value of sales; livestock and poultry inventories and sales; selected characteristics of farms operated by females, and by persons of Hispanic origin and specified racial groups (i.e., White, Black, Asian and Pacific Islander, and American Indian); tenure and operator characteristics; value of machinery and equipment; agricultural chemicals used, including fertilizer; total production expenses; fuel expenses; Commodity Credit Corporation (CCC) loans; Government payments and other farm-related income and characteristics of farms by standard industrial classification (SIC) codes. Tables also showed selected 1987 summary State data cross-tabulated by various farm classifications, such as size of farm, tenure of operator, type of organization, market value of agricultural products sold, various operator characteristics (e.g., age and principal occupation), and SIC code.

Chapter 2 presented selected data for all counties for most of the subjects tabulated at the State level. Specific tables displayed data for counties with three or more farms reporting a particular item, such as various animal specialties (e.g., goats, mink, bees, fish), grains, field seeds, nursery and greenhouse crops, tenure, farms operated by persons of selected racial groups or of Hispanic origin,

CCC loans by commodity group, and so on. The reports combined data for counties with fewer than three farms reporting a given item into an “all other counties” category for the State.

The first volume 1 report (Delaware) appeared in January 1989, and the last (American Samoa) in February 1991.

Volume 2, Subject Series, Series AC87-S-1 through -6—Volume 2 consisted of six parts:

- *Agricultural Atlas of the United States* (AC87-S-1) presented a profile of the Nation’s agriculture in a series of dot and multicolor pattern U.S. maps. (Issued June 1990.)
- *Coverage Evaluation* (AC87-S-2) provided national and regional level estimates on the completeness of the census, in both the number of farms missed and selected characteristics of those farms. (Issued July 1990.)
- *Ranking of States and Counties* (AC87-S-3) showed the leading States and counties in the order of importance of selected items for 1987. Most tables included comparative data from the 1982 census and showed cumulative total percent of products or other items for the topmost States and counties. (Issued September 1990.)
- *History* (AC87-S-4) is a concise description of the major census operations together with facsimiles of selected data report forms. It describes the history of the agriculture census, farm definition, data collection and processing, and dissemination of census data. (Issued 1992.)
- *Government Payments and Market Value of Agricultural Products Sold* (AC87-S-5) reflected detailed data for farms, cross-tabulated by combined market value of agricultural products sold and Government payments received, including detailed national data and selected State data. (Issued September 1990.)
- *ZIP Code Tabulations of Selected Items* (AC87-S-6) offered tabulations by ZIP Code for items such as number of farms, land in farms, land in farms by size, market value of agricultural products sold, and market value of agricultural products sold by size, livestock inventory, and selected crops. (Issued July 1990.)

Volume 3, Related Surveys, Series AC87-RS-1 and -2—This series consisted of two reports:

- *Farm and Ranch Irrigation Survey (1988)* (AC87-RS-1) provided statistics collected from a sample of irrigators drawn from the 1987 Census of Agriculture respondent list. The data supplemented the basic irrigation data collected from all farms in the census. The publication included information on acreage irrigated, crops, method of water distribution used in 1987, source of water used, energy use, and irrigation practices. (Issued May 1990.)

- *Agricultural Economics and Land Ownership Survey (1988)* (AC87-RS-2) presented economic and land ownership data on farmland owned and leased, land use, amount and source of debt, production contracts, taxes, assets, off-farm income and, for landlords, type of ownership and owner characteristics. (Issued July 1990.)

Volume 4, *Census of Horticultural Specialties (1988)*, AC87-HOR-1—The horticultural specialties report presented data for calendar year 1988 for the United States and States on number of establishments, value of sales of horticultural products, type of horticultural products, and kind of horticultural business. (Issued August 1991.)

Other Publishing Media

Public-use computer tape—The Bureau first made computer tapes of agriculture census data available to users in 1965, when tapes from the 1964 census preliminary county reports were issued and sold. Only selected final county tabulations were released on tape for the 1969 and 1974 censuses, but for 1978, computer tape files of both preliminary and final county-level data were issued. (The Agriculture Division produced and sold the 1978 final data tapes as a special tabulation.)

For the 1982 census, there were three computer tape data files, one each for the preliminary and final county data files, and the third containing the final State data and cross tabulations. The Bureau used the same format for the 1987 census data tapes, issuing three files—one for the advance data reports, one for the final county data, and one for the final State data and cross tabulations. The advance data file contained all the data from the State and county advance reports, while the final county data tapes contained the tabulations in the 36 tables contained in chapter 2 of the Volume 1, *Geographic Area Series* reports. The advance data were made available to users on a single standard sized 6,250-bpi (bytes per inch) reel of tape. The final county-level data were released on five 1,600- or two 6,250-bpi reels. The final State data tape contained the State-level data and cross tabulations in the 53 tables of chapter 1, Volume 1, *Geographic Area Series*. The file was made available on two reels at 1,600 bpi, or one reel at 6,250 bpi.

The specifications for the computer tape reels for the 1987 data were:

Tape width	1/2 inch
Reel size	10 1/2-inch, 2,400 feet maximum length
Logical record size:	
Advance county file	4 segments, each of 3,800 characters
Final county file	5 segments, each of 9,600 characters
Final State file	101 segments, each of 9,600 characters

Field size	Fixed, 12 characters
Recording density	1,600 or 6,250 bytes per inch 9-channel tape
Language	Optional, either American Scientific Code for Information Interchange (ASCII), or Extended Binary Coded Decimal Interchange Code (EBCDIC)
Block spacing	.60 inch

The price for the data tapes covered production, documentation, handling, and postage costs. Users could purchase the complete files, or tapes containing only the data for a specific State or combination of States.

Compact disc-read only memory (CD-ROM)—The rigid compact disc (CD) used for the 1987 census can hold about 600 million characters (600 megabytes) of data—the equivalent of 1,500 flexible diskettes, or 4 high-density computer tape reels. The Bureau first released agriculture census data on CD-ROM in 1985, when the complete final 1982 census data file was issued as part of the data content of two CD's produced for test purposes. For the 1987 agriculture census, the Bureau issued one CD-ROM with the State aggregate data and the county-level data for the 1978, 1982, and 1987 censuses. A second CD-ROM was issued for selected data from the volume 2, 3, and 4 reports.

Online access—CENDATA™, the Census Bureau's online information service, operated through two information vendors—CompuServe and DIALOG. As part of the 1987 agriculture census publication program, CENDATA gave users access to the 1987 national and State *Advance Reports*, and highlights from the Volume 2, *Subject Series*, and Volume 4, *Census of Horticultural Specialties (1988)* reports. The county *Advance Reports*, as well as agriculture census press releases, were made available online through a third vendor—AgriData Network.

PUBLICATION PROCESS

General Information

The Bureau began editorial and composition work on the agriculture census publications during the latter part of 1986, to finish as much of the preparation and associated work as possible before the completion of the census. The Agriculture Division developed the basic table layouts and wrote the text for the 1987 census data volumes, and APSD had the primary responsibility of preparing these materials for publication.

Preliminary Preparation

Text and graphics components—The APSD produced the text components on the CEPS and used the EGS for the graphics materials.

Agriculture Division analysts wrote standard text for the census publications and sent it to APSD on flexible diskettes. Once the text was finalized, the APSD staff prepared (i.e., coded) these files for processing through the CEPS (for the text itself) or the EGS, which produced laser proofs (paper facsimiles of the final product) for review and approval by Agriculture Division staff. The APSD staff processed all changes and recycled the laser proofs until all were approved for final preparation, then copied the final text computer files to the mainframe computer for a later merge with other publication components.

APSD staff prepared variable text (i.e., text containing segments dependent on the results of the data collected in the census) "shells" in advance, following the same procedures used for the standard text, and held them on the CEPS for final production processing.

Graphics for the agriculture census publications fell into three major categories—artwork, charts, and maps. The divisions' staffs initially prepared the artwork for the covers and title pages on the EGS and, when the artwork had been finalized, transferred it to the CEPS for merging with other publications components to produce covers and title pages. Agriculture Division analysts also used the EGS to prepare the basic chart "shells" (without the plot points and other variables), while Geography Division provided APSD with negatives for the various maps required. These materials also were held for inclusion in the final assembly operation before each publication was sent to the printer.

Statistical tables—APSD produced the base table images (or table "shells" minus variable geography and data) for the statistical tables from electronic files supplied by Agriculture Division. The APSD staff followed the same general procedures used for the standard text, except that the statistical table files were prepared for production using the Table Image Processing System II (TIPS II) on the mainframe computer. The staff edited the table manuscript, prepared the base table image computer files, processed them through TIPS II, and referred the resulting tables to Agriculture Division for review and approval. After all this had been done, the final base table image computer lines were held in the mainframe computer for merging with the data and other publication materials during the final processing.

Final Production Processing

During final production processing, Agriculture Division provided any additional information needed for the variable text components and charts to APSD, which copied these variable files to the mainframe computer's memory. Agriculture Division then supervised Economic Programming Division (EPD) staff in executing various APSD programs to merge data with base table images, link the appropriate publication components, and generate electronic files. APSD then transmitted these to the GPO for production of printing negatives. On receipt, Agriculture Division and the APSD staffs reviewed these negatives for conformity to Census publishing and printing standards. The APSD

completed the necessary printing documents and sent the publication packages to the designated printer. All publications were printed under contracts through the GPO.

The APSD and Agriculture Division staffs inspected all printed materials received from the private contractors to ensure that the reports were complete and met print quality standards. Packages of advance reports were randomly checked to make certain that all the individual county reports were included. Inspectors selected four copies from each package of volume 1 reports for checking by APSD publication specialists, and two copies from each package were randomly chosen and inspected by Agriculture Division personnel. The quality-control operation discovered no significant problems requiring reprinting or other correction in the printed data reports.

Electronic Media Products

In addition to disseminating selected results online on CENDATA™, the Data User Services Division (DUSD) reproduced electronic media products (computer tapes, CD-ROM, and flexible diskettes) from master data tapes supplied by Agriculture Division. The Agriculture Division and DUSD staffs wrote the technical documentation (TD) for each tape file. The TD included an abstract of the files, detailed technical descriptions of the data file (i.e., geographic coverage, identification numbering system, coding, etc.), file indexes, and a data dictionary.¹ Availability of 1987 Census of Agriculture publications on electronic media is shown in table 11-1.

Table 11-1. **Availability of 1987 Census of Agriculture Publications on Electronic Media**

Publications	Com- puter tape	Flexible diskette	Online	CD- ROM
<i>Advance Reports</i>	Yes	Yes	Yes	No
Volume 1, <i>Geographic Area Series</i>	Yes	No	No	Yes
Volume 2, <i>Subject Series</i> :				
Part 5, <i>Government Payments and Market Value of Agricultural Products Sold</i>	No	Yes	Yes*	Yes
Part 6, <i>ZIP Code Tabulations of Selected Items</i>	No	Yes	Yes*	Yes
Volume 3, <i>Related Surveys</i> :				
Part 1, <i>Farm and Ranch Irrigation Survey (1988)</i>	No	Yes	Yes*	Yes
Part 2, <i>Agricultural Economics and Land Ownership Survey (1988)</i>	No	Yes	Yes*	Yes
Volume 4, <i>Census of Horticultural Specialties (1988)</i>	No	Yes	Yes*	Yes

*Highlights only.

¹A data dictionary described the contents and record layout of the computer tape file. The first line of each data item description gave the data name, size of the data field, and the "begin" position of that particular field.

Pricing and Distributing Reports

While the Bureau of the Census collected and tabulated the census and survey data, prepared the text and tables, and did all the other preparatory work for each of its publications, the Superintendent of Documents at the GPO was responsible for pricing and selling the agriculture census printed reports. The Bureau paid all production costs, as well as for printing copies for its own use. The prices for individual publications sold through GPO were based on a price schedule established by that agency, but the only costs passed on by GPO to customers were for the actual reproduction, postage, and handling of the reports purchased.

The Superintendent of Documents also distributed copies of Census Bureau publications to some 1,500 Government and Census depository libraries,² including about 150 of the former—usually those at very large educational institutions—that received all, or nearly all, Bureau publications. The remaining libraries indicated which reports they wished to receive. (All the depositories were sent the annual *Statistical Abstract of the United States*, which contained summary data from the most recent censuses.) The Bureau supplied copies of its printed publications to its own 12 regional offices, to the International Trade Administration's (ITA's) district offices in 59 cities throughout the Nation; and to approximately 300 State data centers (SDC's) and business and industrial data centers (BIDC's) and their affiliates (over 1,000 in all) located in all 50 States, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands. (The Bureau sent the SDC's and BIDC's its publications for their States or areas, while the affiliates indicated which reports they wished to receive.)

The Bureau maintained a supply of its various publications for its own use at its Jeffersonville, IN, facility, but the primary responsibility for storage and sales of census reports was in the hands of the Superintendent of Documents.

Copies of the computer data tapes for all files were supplied to the SDC's. CD-ROM discs were distributed to

some 150 Federal depository libraries and to any SDC's or BIDC's requesting them. The U.S. Department of Agriculture's Extension Service received 200 copies of the agriculture census CD-ROM discs for a pilot project using the new product. The DUSD also sold census tapes, CD-ROM discs, and flexible diskettes to the public.

The Bureau publicized the availability of its print and electronic publications through the GPO, the ITA and its district offices, and other organizations; issued press releases about new publications; and distributed order forms, publication schedules, a *Monthly Product Announcement*, and an annual *Census Catalog and Guide*. Most of the publicity materials and catalogs included brief descriptions of the reports, as well as the actual or estimated publication dates, and purchase price. The DUSD issued a monthly newsletter, *Census and You*, with articles on agency activities, including the agriculture census. The DUSD and Agriculture Division staffs jointly produced the *Guide to the 1987 Census of Agriculture and Related Statistics*, with descriptions of the agriculture census publications and information on data from other related Census Bureau activities.

COMPARABILITY OF THE DATA

Maintenance of a reasonably comparable agricultural data series from census to census is a major objective of the census of agriculture. This comparability may be affected by changes in (1) the price structure of the economy, (2) definitions of data concepts being measured, (3) the methodologies used for collecting and processing the data, and (4) procedures used for estimating or imputing data.

The 1987 agriculture census used the same farm definition employed in the census since 1974, and the basic data published for censuses from 1974-1987 are directly comparable in that sense. Data on acreage, production, and inventories for 1987 and 1982 are generally comparable, although dollar figures for expenses and sales are given in current dollars, unadjusted for inflation or deflation. In general, data for censuses since 1974 are not fully comparable with data for earlier enumerations because of changes in the farm definition (see ch. 1).

²These libraries received a selection of the publications of a variety of Federal departments and offices. There were approximately 130 Census libraries, generally local public libraries.

APPENDIX A.

Provisions of Title 13, United States Code, Relating to the 1987 Census of Agriculture

TITLE 13, UNITED STATES CODE—CENSUS

CHAPTER 1. ADMINISTRATION

Subchapter I—General Provisions

Section 1. Definitions

As used in this title, unless the context requires another meaning or unless it is otherwise provided—

- (1) “Bureau” means the Bureau of the Census;
- (2) “Secretary” means the Secretary of Commerce; and
- (3) “respondent” includes a corporation, company, association, firm, partnership, proprietorship, society, joint stock company, individual, or other organization or entity which reported information, or on behalf of which information was reported, in response to a questionnaire, inquiry, or other request of the Bureau.

Section 2. Bureau of the Census

The Bureau is continued as an agency within, and under the jurisdiction of, the Department of Commerce.

Section 5. Questionnaires; number, form, and scope of inquiries

The Secretary shall prepare questionnaires, and shall determine the inquiries, and the number, form, and subdivisions thereof, for the statistics, surveys, and censuses provided for in this title.

Section 6. Information from other Federal departments and agencies; acquisition of reports from other governmental and private sources

- (a) The Secretary, whenever he considers it advisable, may call upon any other department, agency, or establishment of the Federal Government, or of the government of the District of Columbia, for information pertinent to the work provided for in this title.
- (b) The Secretary may acquire, by purchase or otherwise, from States, counties, cities, or other units of government, or their instrumentalities, or from private persons and agencies, such copies of records, reports, and other material as may be required for the efficient and economical conduct of the censuses and surveys provided for in this title.

- (c) To the maximum extent possible and consistent with the kind, timeliness, quality and scope of the statistics required, the Secretary shall acquire and use information available from any source referred to in subsection (a) or (b) of this section instead of conducting direct inquiries.

Section 7. Printing; requisitions upon Public Printer; publication of bulletins and reports

The Secretary may make requisition upon the Public Printer for miscellaneous printing necessary to carry out the provisions of this title. He may further have printed by the Public Printer, in such editions as he deems necessary, preliminary and other census bulletins, and final reports of the results of the several investigations authorized by this title, and may publish and distribute such bulletins and reports.

Section 8. Authenticated transcripts or copies of certain returns; other data; restrictions on use; disposition of fees received

- (b) Subject to the limitations contained in sections 6(c) and 9 of this title, the Secretary may furnish copies of tabulations and other statistical materials which do not disclose the information reported by, or on behalf of, any particular respondent, and may make special statistical compilations and surveys, for departments, agencies, and establishments of the Federal Government, the government of the District of Columbia, the government of any possession or area (including political subdivisions thereof) referred to in section 191 (a) of this title, State or local agencies, or other public and private persons and agencies, upon payment of the actual or estimated cost of such work. In the case of nonprofit agencies or organizations, the Secretary may engage in joint statistical projects, the purpose of which are otherwise authorized by law, but only if the cost of such projects are shared equitably, as determined by the Secretary.
- (c) In no case shall information furnished under this section be used to the detriment of any respondent or other person to whom such information relates, except in the prosecution of alleged violations of this title.
- (d) All moneys received in payment for work or services enumerated under this section shall be

deposited in a separate account which may be used to pay directly the costs of such work or services, to repay appropriations which initially bore all or part of such costs, or to refund excess sums when necessary.

Section 9. Information as confidential; exception

- (a) Neither the Secretary, nor any other officer or employee of the Department of Commerce or bureau or agency thereof, may, except as provided in section 8 of this title—
- (1) use the information furnished under the provisions of this title for any purpose other than the statistical purposes for which it is supplied; or
 - (2) make any publication whereby the data furnished by any particular establishment or individual under this title can be identified; or
 - (3) permit anyone other than the sworn officers and employees of the Department or bureau or agency thereof to examine the individual reports.

No department, bureau, agency, officer, or employee of the Government, except the Secretary in carrying out the purposes of this title, shall require, for any reason, copies of census reports which have been retained by any such establishment or individual. Copies of census reports which have been so retained shall be immune from legal process, and shall not, without the consent of the individual or establishment concerned, be admitted as evidence or used for any purpose in any action, suit, or other judicial or administrative proceeding.

Section 12. Mechanical and electronic development

The Secretary is authorized to have conducted mechanical and electronic development work as he determines is needed to further the functions and duties of carrying out the purposes of this title and may enter into such developmental contracts as he may determine to be in the best interest of the Government.

Subchapter II—Officers and Employees

Section 21. Director of the Census; duties

The Bureau shall be headed by a Director of the Census, appointed by the President, by and with the advice and consent of the Senate. The Director shall perform such duties as may be imposed upon him by law, regulations, or orders of the Secretary.

Section 22. Qualifications of permanent personnel

All permanent officers and employees of the Bureau shall be citizens of the United States.

Section 23. Additional officers and employees

- (a) The Secretary may establish, at rates of compensation to be fixed by him without regard to the Classification Act of 1949, as many temporary positions as may be necessary to meet the requirements of the work provided for by law. Bureau employees who are transferred to any such temporary positions shall not lose their permanent civil service status by reason of the transfer. The Secretary may make appointments to such temporary positions in conformity with the civil service laws and rules.
- (b) In addition to employees of the Department of Commerce, employees of other departments and independent offices of the Government may, with the consent of the head of the respective department or office, be employed and compensated for field work in connection with the work provided for by law without regard to section 301 of the Dual Compensation Act.
- (c) The Secretary may utilize temporary staff, including employees of Federal, State, or local agencies or instrumentalities, and employees of private organizations to assist the Bureau in performing the work authorized by this title, but only if such temporary staff is sworn to observe the limitations imposed by section 9 of this title.

Section 24. Special employment provisions

- (a) The Secretary may utilize the services of nontemporary employees of the Bureau (by assignment, promotion, appointment, detail, or otherwise) in temporary positions established for any census, for not to exceed the period during which appropriations are available for that census. Whenever the Secretary determines that the services of an employee which have been utilized under this section are no longer required in such a temporary position, he may, without regard to the provisions of any other law, return the employee to a continuing position, with rank and compensation not less than that which he held in his last permanent position in the Bureau: *Provided*, That no employee shall, by reason of his service in a temporary position under this subsection, lose the protection of any law or regulation with respect to his separation, suspension, furlough, or reduction in rank or compensation below the level held in his last permanent position in the Bureau. Service by a nontemporary employee in a temporary position under this subsection shall be creditable for step increases (both periodic and longevity) under title VII of the Classification Act of 1949, as amended, as though it were a continuation of service in his last permanent position.
- (b) As used in this title with respect to appointments or positions, "temporary" shall be construed to

mean not in excess of one year, or not in excess of the specific period during which appropriations are available for the conduct of a particular census, whichever is longer. No employee of the Bureau who holds only a temporary appointment within the meaning of this section shall be considered as other than strictly temporary for purposes of any other provision of law relating to separations, suspensions, or reductions in rank or compensation.

- (d) The Secretary may fix compensation on a piece-price basis without limitation as to the amount earned per diem, and payments may be made to enumerators for the use of private automobiles on official business without regard to section 4 of the Travel Expense Act of 1949, as amended (5 U.S.C. 837), but at rates not in excess of the rates provided by that Act.
- (e) The Secretary may authorize the expenditure of necessary sums for travel expenses of persons selected for appointment for attendance at training courses held by the Department of Commerce with respect to any of the work provided for by law.
- (f) Notwithstanding any other provision of law prohibiting the expenditure of public money for telephone service, the Secretary, under such regulations as he shall prescribe, may authorize reimbursement for tolls or charges for telephone service from private residences or private apartments to the extent such charges are determined by the Secretary to have been incurred to facilitate the collection of information in connection with the censuses and surveys authorized by this title.

Section 25. Duties of supervisors, enumerators, and other employees

- (a) Each supervisor shall perform the duties imposed upon him by the Secretary in the enforcement of chapter 5 of this title in accordance with the Secretary's orders and instructions.
- (b) Each enumerator or other employee detailed to serve as enumerator shall be charged with the collection in his subdivision of the facts and statistics called for on such schedules as the Secretary determines shall be used by him in connection with any census or survey provided for by chapter 5 of this title.

Section 26. Transportation by contract

The Secretary may contract with field employees for the rental and use within the continental limits of the United States of means of transportation, other than motorcycle, automobile, or airplane, and for the rental and use outside of the continental United States of any means of transportation, which means may be owned by the field employee.

Such rental contracts shall be made without regard to section 4 of the Travel Expense Act of 1949, as amended (5 U.S.C. 837). The rentals shall be at rates equivalent to the prevailing rental rates of the locality. The rental contracts within the continental United States may be entered into only when the use by the field employee of such other means of transportation is safer, more economical, or more advantageous to the Government than use of his motorcycle, automobile, or airplane in conducting the census.

CHAPTER 5. CENSUSES

Subchapter II—Population, Housing, Agriculture, Irrigation, and Unemployment

Section 142. Agriculture and Irrigation

- (a) The Secretary shall in 1979, in 1983, and in every fifth year beginning after 1983, take a census of agriculture.
- (b) In conjunction with the census to be taken under subsection (a) of this section in 1979, in 1988, and every tenth year beginning after 1988, the Secretary shall take a census of irrigation.
- (c) The data collected in each of the censuses taken under this section shall relate to the year immediately preceding the year in which such census is taken.

Subchapter V—Geographic Scope, Preliminary and Supplemental Statistics, and Use of Sampling

Section 191. Geographic scope of censuses

- (a) Each of the censuses authorized by this chapter shall include each State, the District of Columbia, the Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, and the Commonwealth of Puerto Rico, and as may be determined by the Secretary, such other possessions and areas over which the United States exercises jurisdiction, control, or sovereignty. Inclusion of other areas over which the United States exercises jurisdiction or control shall be subject to the concurrence of the Secretary of State.
- (b) For censuses taken in the Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, or any possession or area not specifically designated in subsection (a) of this section, the Secretary may use census information collected by the Governor or highest ranking Federal official, if such information was obtained in accordance with plans prescribed or approved by the Secretary.

- (c) If, pursuant to a determination by the Secretary under subsection (a) of this section, any census is not taken in a possession or area over which the United States exercises jurisdiction, control, or sovereignty, the Secretary may include data obtained from other Federal agencies or government sources in the census report. Any data obtained from foreign governments shall be obtained through the Secretary of State.

Section 193. Preliminary and supplemental statistics

In advance of, in conjunction with, or after the taking of each census provided for by this chapter, the Secretary may make surveys and collect such preliminary and supplementary statistics related to the main topic of the census as are necessary to the initiation, taking, or completion thereof.

Section 195. Use of sampling

Except for the determination of population for purposes of apportionment of Representatives in Congress among the several States, the Secretary shall, if he considers it feasible, authorize the use of the statistical method known as "sampling" in carrying out the provisions of this title.

Section 196. Special censuses

The Secretary may conduct special censuses for the government of any State, or of any county, city, or other political subdivision within a State, for the government of the District of Columbia, and for the government of any possession or area (including political subdivisions thereof) referred to in section 191(a) of this title, on subjects covered by the censuses provided for in this title, upon payment to the Secretary of the actual or estimated cost of each such special census. The results of each special census shall be designated "Official Census Statistics." These statistics may be used in the manner provided by applicable law.

CHAPTER 7. OFFENSES AND PENALTIES

Subchapter I—Officers and Employees

Section 211. Receiving or securing compensation for appointment of employees

Whoever—

- (1) receives or secures to himself any fee, reward, or compensation as a consideration for the appointment of any person as supervisor, enumerator, clerk, or other officer or employee of the Department of Commerce or bureau or agency thereof, referred to in subchapter II of chapter 1 of this title: or

- (2) in any way receives or secures to himself any part of the compensation paid to any person so appointed—shall be fined not more than \$3,000 or imprisoned not more than five years, or both.

Section 212. Refusal or neglect of employees to perform duties

Whoever, being an employee referred to in subchapter II of chapter 1 of this title, and having taken and subscribed the oath of office, neglects or refuses, without justifiable cause, to perform the duties enjoined on such employee by this title, shall be fined not more than \$500.

Section 213. False statements, certificates, and information

- (a) Whoever, being an officer or employee referred to in subchapter II of chapter 1 of this title, wilfully and knowingly swears or affirms falsely as to the truth of any statement required to be made or subscribed by him under oath by or under authority of this title, shall be guilty of perjury, and shall be fined not more than \$2,000 or imprisoned not more than five years, or both.
- (b) Whoever, being an officer or employee referred to in subchapter II of chapter 1 of this title
- (1) willfully and knowingly makes a false certificate or fictitious return; or
- (2) knowingly or willfully furnishes or causes to be furnished, or, having been such an officer or employee, knowingly or wilfully furnished or caused to be furnished, directly or indirectly, to the Secretary or to any other officer or employee of the Department of Commerce or bureau or agency thereof, any false statement or false information with reference to any inquiry for which he was authorized and required to collect information provided for in this title—

shall be fined not more than \$2,000 or imprisoned not more than five years, or both.

Section 214. Wrongful disclosure of information

Whoever, being or having been an employee or staff member referred to in subchapter II of chapter 1 of this title, having taken and subscribed the oath of office, or having sworn to observe the limitations imposed by section 9 of this title, publishes or communicates any information, the disclosure of which is prohibited under the provisions of section 9 of this title, and which comes into his possession by reason of his being employed (or otherwise providing services) under the provisions of this title, shall be fined not more than \$5,000 or imprisoned not more than five years, or both.

Subchapter II—Other Persons

Section 221. Refusal or neglect to answer questions; false answers

- (a) Whoever, being over eighteen years of age, refuses or wilfully neglects, when requested by the Secretary, or by any other authorized officer or employee of the Department of Commerce or bureau or agency thereof acting under the instructions of the Secretary or authorized officer, to answer, to the best of his knowledge, any of the questions on any schedule submitted to him in connection with any census or survey provided for by subchapters I, II, IV, and V of chapter 5 of this title, applying to himself or to the family to which he belongs or is related, or to the farm or farms of which he or his family is the occupant, shall be fined not more than \$100.
- (b) Whoever, when answering questions described in subsection (a) of this section, and under the conditions or circumstances described in such subsection, willfully gives any answer that is false, shall be fined not more than \$500.

Section 222. Giving suggestions or information with intent to cause inaccurate enumeration of population

Whoever, either directly or indirectly, offers or renders to an officer or employee of the Department of Commerce or bureau or agency thereof engaged in making an enumeration of population under subchapter II, IV, or V of chapter 5 of this title, any suggestion, advice, information, or assistance of any kind, with the intent or purpose of causing an inaccurate enumeration of population to be made, shall be fined not more than \$1,000 or imprisoned not more than one year, or both.

Section 223. Refusal, by owners, proprietors, etc., to assist census employees

Whoever, being the owner, proprietor, manager, superintendent, or agent of any hotel, apartment house, boarding or lodging house, tenement, or other building, refuses or wilfully neglects, when requested by the Secretary or by any other officer or employee of the Department of Commerce or bureau or agency thereof, acting under the instructions of the Secretary, to furnish the names of the occupants of such premises, or to give free ingress thereto and egress therefrom to any duly accredited representative of such Department or bureau or agency thereof, so as to permit the collection of statistics with respect to any census provided for in subchapters I and II of chapter 5 of this title, or any survey authorized by subchapter IV or V of such chapter insofar as such survey relates to any of the

subjects for which censuses are provided by such subchapters I and II, including, when relevant to the census or survey being taken or made, the proper and correct enumeration of all persons having their usual place of abode in such premises, shall be fined not more than \$500.

Section 224. Failure to answer questions affecting companies, businesses, religious bodies, and other organizations; false answers

Whoever, being the owner, official, agent, person in charge, or assistant to the person in charge, of any company, business, institution, establishment, religious body, or organization of any nature whatsoever, neglects or refuses, when requested by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof, to answer completely and correctly to the best of his knowledge all questions relating to his company, business, institution, establishment, religious body, or other organization, or to records or statistics in his official custody, contained on any census or other schedule or questionnaire prepared and submitted to him under the authority of this title, shall be fined not more than \$500; and if he wilfully gives a false answer to any such question, he shall be fined not more than \$10,000.

Section 225. Applicability of penal provisions in certain cases

- (a) In connection with any survey conducted by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof pursuant to subchapter IV of chapter 5 of this title, the provisions of sections 221, 222, 223, and 224 of this title shall apply—
 - (1) with respect to the answering of questions and furnishing of information, only to such inquiries as are within the scope of the schedules and questionnaires and of the type and character heretofore used in connection with the taking of complete censuses, under subchapters I and II of chapter 5 of this title, or in connection with any censuses hereafter taken pursuant to such subchapters;
 - (2) only after publication of a determination with reasons therefor certified by the Secretary, or by some other authorized officer or employee of the Department of Commerce or bureau or agency thereof with the approval of the Secretary, that the information called for is needed to aid or permit the efficient performance of essential governmental functions or services, or has significant application to the needs of the public, business, or industry and is not publicly available from nongovernmental or other governmental sources;
 - (3) in the case of any new survey, only after public notice, given by the Secretary or other

authorized officer or employee of the Department of Commerce or bureau or agency thereof at least thirty days in advance of requesting a return, that such survey is under consideration.

- (b) The provisions for imprisonment provided by section 222 of this title shall not apply in connection with any survey conducted pursuant to subchapter II of chapter 3 of this title, or to subchapter IV of chapter 5 of this title.
- (d) Where the doctrine, teaching, or discipline of any religious denomination or church prohibits the disclosure of information relative to membership,

a refusal, in such circumstances, to furnish such information shall not be an offense under this chapter.

Subchapter III—Procedure

Section 241. Evidence

When any request for information, made by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof, is made by registered or certified mail or telegram, the return receipt therefor or other written receipt thereof shall be prima facie evidence of an official request in any prosecution under such section.

Appendix B.

Historical Notes

ORIGINS AND EARLY DEVELOPMENT

The First Censuses: 1790-1840

The United States Constitution, Article I, section 2, required an enumeration of the “whole Number of free Persons, including those bound to Service for a Term of Years, and excluding Indians not taxed, three-fifths of all other Persons ... within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of ten years” The authors intended, by this headcount, to provide for the equitable distribution to each State of taxes and representation in the House of Representatives, and the first such census was carried out in 1790.

Some members of the Government, as well as others, recognized at once that such a periodic and universal enumeration of the country could be used to gather a great deal of useful information on other things than just the population. James Madison, then a member of the House of Representatives for Virginia, introduced a bill to use the census to obtain information on occupations and other economic subjects, as well as basic data on the age, sex, and race of the population; the House approved the idea, but the Senate rejected it. Madison had to content himself with a less ambitious census, which collected data only on the number and sex of free white persons, free white males by age, number of all other persons, and number of slaves.

The explosive growth of the new United States soon prompted reconsideration of Madison’s proposals, and the third census, for 1810 (Madison having become President, coincidentally, in 1809), included questions on the kind, quantity, and value of goods manufactured.¹ At its founding, and for much of the 19th century, the United States was primarily an agricultural nation—fully 95 percent of the population enumerated in the first census lived on the land—but it was not until 1820, and the fourth census, that a question specifically relating to agriculture was included on the census schedule, and it asked only how many, if any, members of each household were engaged in agriculture.

The census continued to collect data on manufacturing after 1810, and expanded the number of items directed to that end in each succeeding census, but made no further

attempt to obtain agriculture information until 1840. The sixth decennial census introduced separate schedules of questions relating to mining, agriculture, commerce, manufactures and trades, and navigation. The agricultural schedule included inquiries on cereals or various other crops, and on livestock. The results were published with the rest of the census data, but were considered unreliable and too lacking in detail to be useful. The data users of the time soon began demanding that the census collect more detailed information, and that the Government pay more attention to ensuring the accuracy of the data collected and published.

Expanding the Agriculture Census

The dissatisfaction with the 1840 census prompted Congress to give particular attention to the organization and data content of the 1850 census. A select committee of the House of Representatives considered the problems involved in the census and recommended that the Federal Government establish a permanent census office. While the Senate shared many of the concerns expressed by the House, it declined to support the latter proposal. Instead, the Senators suggested only that the congressional legislation concerning the census exhort persons employed in the operation to pay strict attention to their duties, and the permanent census office had to wait another half-century. Nevertheless, the 1850 census assumed much of the specialized organization that has since characterized the censuses, and is often considered the first “modern” enumeration.

The increased specialization began at the top, where the Congress transferred the responsibility for supervising the census from the Department of State to the newly formed Department of the Interior. The interest in more detailed data resulted in the establishment of six subject areas for data collection, including agriculture, each with a separate schedule of questions. The agriculture questionnaire, or “schedule,” was far more elaborate and detailed than its predecessor, asking for the name of the person(s) in each household who operated a farm, and making relatively detailed inquiries on acreage and agricultural activities. Questions asked included the quantities produced for 32 crops, wool, and dairy products; the value of farm implements and machinery, animals slaughtered, and homemade manufactures; quantity and value of livestock; and the cash value of the farm. The 1850 census publications included the total number of farms for the United States (1.4 million) and each State; acreage (294 million acres under cultivation); and total value of farms, buildings, livestock, machinery, and equipment (nearly \$4 billion).

¹The Federal Government published a separate report covering the nondemographic data collected in the third census: *A Statement of the Arts and Manufactures of the United States of America, for the year 1810*. This document may be considered the forerunner of the Census Bureau’s enormous economic statistical publishing program.

The agricultural censuses for 1860 and 1870 were virtual repeats of that of 1850. The 1870 census publication program, however, used maps to present statistical data, in addition to the conventional tables. The census law of 1879 provided for the appointment by the President (with Senate confirmation) of up to 150 local supervisors for the 1880 census (at least 1 for each State or territory) as well as for employing specialists to collect data on certain census subject matter areas, such as manufactures and mining. The local supervisors were responsible for the actual data collection, as well as for hiring suitable enumerators. This enlarged staff permitted closer supervision of the enumeration and thus, it was hoped, greater accuracy. The 1880 agriculture census schedule included new items on tenure, weeks of hired labor, costs for building and maintaining fences, and cost of fertilizer purchased. The census used several specialized questionnaires to collect detailed production information on cereal crops, meat, tobacco, hops, cotton culture and the cottonseed oil industry, forest products, fruit growing and orchards, and sheep and wool. Special enumerators visited operators involved in these particular production areas and completed the specific questionnaire required, or left a questionnaire with the respondent, who was asked to complete the form and mail it to the census office.²

The agriculture census expanded further for 1890, when the agriculture schedule doubled in length—including new inquiries on agricultural organizations, floriculture, and irrigation—and again used special questionnaires for selected operations. The population census also collected agricultural data, asking for information on farm mortgages.

The 1900 agricultural census introduced a question on the race of the farm operator, but was otherwise similar to the previous enumeration. The agriculture census entered the age of automated data processing in 1900 as well, when the census staff used punchcards and electric tabulating machines to process and tabulate the statistics. This equipment tabulated the results of the 1890 population census, and was adapted for the agriculture enumeration by the development and addition of an automatic sorter (required because of the large number of crop cards used in processing the agriculture data) and the use of a new keypunch machine.

THE 20TH CENTURY

Program Development

The establishment of a permanent Census Bureau—The first 12 U.S. censuses used temporary organizations, established a few months before the official census date and

disbanded once the data had been collected and published. This temporary existence had been sufficient for the earliest enumerations, which had collected minimal data, but the elaboration of the census operation, and of the kinds and volume of data tabulated and published, seemed to require more time and resources than could be provided by a staff and office organized and disbanded for each census. The results of the 1880 census dissatisfied many data users, leading to a campaign among interested professional and commercial organizations—e.g., the National Board of Trade, the American Statistical Association, and the American Economic Association—urging the creation of a permanent census office. The 12th census, for 1900, was the last carried out on the old ad hoc basis. By that time the limitations of the old system had become well known and the advantages of a permanent census office (better work load distribution, improved planning capacity, the ability to carry out surveys and censuses in the years between the constitutionally mandated enumerations, and so on) were so obvious that in 1902 Congress authorized the establishment of the permanent census office within the Department of the Interior. The new unit, later designated the Bureau of the Census, moved to the newly created Department of Commerce and Labor in the following year, and when the Department was divided in 1913, was assigned to the Department of Commerce, where it has since remained.

Agriculture census programs—The various censuses' statistics proved so useful that as early as 1880 the former chairman of the American Statistical Association suggested expanding the decennial census by adding a mid-decade enumeration. Many of the same persons and associations pushing for a permanent statistical office also urged this, as well the addition of specialized censuses to the agriculture program. In 1910, Congress directed the Bureau to carry out a decennial census of irrigation as part of the agriculture census, and in 1920 added a decennial census of drainage. The legal requirement for a census of drainage lasted into the 1980's, but lack of interest among data users prompted Congress to remove it from the census law in 1985. Special censuses of horticultural specialties also were added to the agriculture census program, although at irregular intervals—i.e., as part of the 1890, 1930, 1950, 1959, 1969, 1978, and 1987 censuses. By 1987, the "special" censuses routinely were carried out for the year following the general agriculture census's reference year, using operator lists drawn from the census respondent lists. Thus the irrigation and horticultural censuses used 1988 as their reference year, rather than 1987.

Congress also had considered the question of mid-decade enumerations, and while it had not directed that the population census be taken on a quinquennial basis, in 1909 it passed legislation calling for a mid-decade census of agriculture for the year 1915, and for every 10th year thereafter (in addition to the decennial efforts in years ending in "0"). Congress reversed itself in March 1915, repealing that section of the law requiring a census for

²The original agriculture schedules for the 1850-1880 censuses were retained by the Federal Government until the mid-20th century, when they were turned over to various State archives. Most were microfilmed, either by the National Archives and Records Administration, or, in some cases, by State or private organizations, and microfilm copies of the schedules for this period also are available. These are the only agricultural censuses for which the schedules have survived; the individual census questionnaires now are routinely destroyed after the statistical data have been extracted for tabulation.

1915, but again, in 1919, authorized a mid-decade agriculture enumeration beginning with a census for 1925. Subsequent agricultural censuses have been on a 5-year cycle, with occasional modifications, in years ending in "0" and "5," collecting data for the preceding crop year. This system continued until 1954, when Congress codified the Bureau's operations in Title 13, United States Code—Census, and established new reference years for the agricultural and economic censuses. Now agricultural censuses were to be every 5 years, in years ending in "4" and "9," and collect data for the preceding year. (The other economic censuses also were for years between the decennial censuses, e.g., for years ending in "2" and "7.") The agricultural (and irrigation and drainage) censuses, ostensibly done in years ending in "9," actually continued to be carried out as part of the decennial census operation.

The advantages of obtaining agricultural and economic census data for the same year, providing a single "snapshot" of the national economy, were obvious to most observers, and it was not long before there was considerable support for simultaneous agricultural and economic censuses. The Department of Commerce and the Bureau recommended in 1972 that the dates of the agriculture census be changed to coincide with those of the economic censuses; in 1976 Congress enacted Public Law 94-229, requiring agriculture censuses for 1978, 1982, and every fifth year thereafter, making them concurrent, for 1982 and after, with the economic censuses.

Enumeration dates, timing, and methodologies—Prior to the 1950's the agriculture census was usually carried out during the first months of the year following the reference year. The Bureau enumerated agriculture at the same time as the population censuses in decennial census years—e.g., in April of the census year for 1910, and from 1930 through 1950 (the 1920 census date was January 1 of that year)—to make use of the field and office staffs already in place. The long gap between the end of the reference year and the beginning of the censuses in these years presented a significant problem for respondents trying to answer the census accurately. The mid-decade censuses for 1925 through 1945 occurred in January of the year following the reference year, to collect the data on the entire calendar year as soon as possible after its end.

The 1920 and the mid-decade enumerations provided data for reference periods corresponding to those used in the U.S. Department of Agriculture crop and livestock estimates (issued as of December 1 and January 1 respectively), but winter weather made canvassing, particularly in rural areas, very difficult. In addition, there were problems fitting a fairly long interview into the busy workday of the average farmer. The Bureau tested a methodology intended to mitigate these problems as part of the 1920 census. Local mail carriers, who were assumed to have sufficient knowledge about the people and farms on their routes to permit them to check the accuracy of responses, as well as avoid at least part of the problem of long interviews, were employed to deliver the questionnaires, pick them up

when completed, and carry out a preliminary review of the responses. The plan had mixed results, particularly in the rural test area, and was not adopted as a general enumerative technique until tried again in the 1950's. (In the 1950 census, mail carriers delivered the questionnaires to rural route boxholders, who were asked to complete the forms and hold them until an enumerator arrived to pick them up.) For the first mid-decade agriculture census in 1925, the Bureau tried again to improve the completeness by making a special effort to hire as enumerators people identified with agriculture. The presidents of State agricultural colleges recommended persons to act as supervisors, forest rangers from the Department of Agriculture enumerated farms near national forests, employees of the Bureau of Reclamation canvassed irrigation projects, and Indian agents collected data for farms on Indian reservations. (In later canvasses, farmers and farmers' wives frequently were hired to carry out the canvass.)

The 1954 agriculture census inaugurated an attempt to collect the required data as near as possible to the end of the crop year of the reference year; canvassing began in November of the reference year. This improved the quality of the data, and the Bureau continued to use this procedure for the 1959 and 1964 censuses, but weather still presented a serious problem for canvassing.

The Census Bureau adopted mailout/mailback methodology as the rule for the 1969 agriculture census, permitting a return to a January data-collection operation. It had this procedure for the 1963 Economic Censuses, and decided to use it in major portions of the 1970 population and housing censuses as well. Employed in the agriculture census, mailout/mailback allowed farmers to complete their report forms at their own convenience, with full access to their own records, and gave them an opportunity to review and correct their own report forms. The Bureau compiled the address list of potential agricultural operations from the previous agriculture census records and from administrative records supplied by the Internal Revenue Service (IRS), the Social Security Administration, and the U.S. Department of Agriculture. The mailout, at the end of December 1969, requested inventory and production data for that year, as of December 31. The Bureau asked farmers to complete the forms and mail them back; field enumeration was retained only for Puerto Rico, Guam, the U.S. Virgin Islands, the Trust Territory of the Pacific Islands, and American Samoa, and for certain followup activities.

While far more convenient for farmers and more economic than using a field staff, the mailout/mailback census had problems of its own. Most important among these were (1) compiling a complete address list, and (2) obtaining timely response from farmers. Mail list compilation was particularly difficult with respect to small farms, which were not likely to be included in many of the administrative records the agency used to assemble its list. Adequate response rates required multiple followup mailings—six or

seven in a typical census—as well as telephone enumeration of particularly large or important nonrespondent operations, over a period of several months.

Despite these problems, and they remained significant for the 1987 census, the overall coverage obtained by mailout/mailback was only marginally lower than from the old canvassing methodology. The savings in funds realized by the mail census, as well as the convenience (and hence reduced resistance to response for the agricultural operators), were considered to outweigh the drawbacks of the technique.

Sampling—The Bureau introduced sampling for specific information in the 1940 agriculture census, when it sampled the collected data for a series of special tabulations. The 1945 agriculture census used sampling as an enumeration method: While the census collected county-level data in a conventional canvassing operation, selected State-level estimates were obtained from an area-segment sample³ that included approximately 7 percent of all farms in the United States.

Later agriculture censuses sampled extensively as a means to reduce overall respondent burden by collecting selected data from only certain farm operations, and then developing estimates for all farms based on the sample data, particularly after the adoption of the mailout/mailback enumeration. The technique for the general census used a short form that included the core items requested of all farms, and a long form that included both the core items and additional questions on areas of special interest, such as farm debt and finances, machinery and equipment, conservation practices, use of chemicals, and so on. The sample used generally included all farms expected to meet specified value-of-sales or acreage limits, plus a random sample of all other farms on the census lists.

The Bureau also made extensive use of sampling in its coverage evaluation program to estimate the completeness of the enumeration and to adjust census statistics to compensate for nonrespondent operations.

Agricultural services censuses—Increasing interest in businesses providing services to agricultural operations led the Census Bureau to develop a census of agricultural services for the 1969 agriculture census program. This specialized enumeration aimed at collecting business information (i.e., volume of sales, payroll, number of employees, and so on) at the establishment level on specified

types of service operations, such as veterinary services, soil treatment operations, animal and livestock services other than veterinary, soil and crop services, landscapers, farm labor management firms, and the like. The Bureau prepared mail lists from administrative records (e.g., IRS individual, partnership, and corporation tax records) and enumerated the service establishments by mail, publishing tabulations for the United States and for States, with limited data available for counties. The services' enumeration was repeated for the 1974 and 1978 agriculture censuses, but following the 1978 operation Congress withdrew funding and ended the program.

Followon sample surveys—The 1987 Census of Agriculture program included two followon sample surveys and a special census of horticultural specialty operations. Followon surveys made it possible to select the most efficient samples to collect detailed data on subjects of special interest without adding greatly to the overall respondent burden. These surveys drew a sample of farms with specified characteristics (for the 1987 program, samples of farms using irrigation, farms with rented land and their landlords, and horticultural specialty operations) from the pool of agriculture census farms, and requested operators to provide more detailed information on their agricultural activities than it was possible to ask in the general census.

The Bureau carried out the first agriculture followon survey after the 1954 census, with a mail sample survey of farm expenditures. Since then, every agriculture census program except that for 1982 included at least one followon survey (the original plans for the 1982 census called for several, but these were canceled because of budget constraints). The 1978 program included sample surveys of farm finances, farm and ranch irrigation practices, farm energy use, and a census of horticultural specialties. The 1987 followon program originally consisted of a horticultural specialties census, a farm and ranch irrigation practices sample survey, an agriculture economics and land ownership survey, and a survey of irrigation organizations, but the last was dropped for budgetary reasons.

The followon operations drew samples from the agriculture census itself, so the census data collection operation and the subsequent identification of sample operations for any followon survey had to be completed before the latter could get under way. Thus the followon surveys (or censuses) usually were carried out for the calendar year following the census reference year; e.g., the 1987 followon program data-collection activities all took place in 1989, and requested data for calendar year 1988.

Report Form Content and Format

Content—Each census of agriculture required that a balance be struck between the opposing requirements of collecting the maximum amount of detailed information about agriculture and keeping response burden to a minimum. Data users discovered new items about which they needed information for each enumeration; accommodating

³An area-segment sample typically involved identifying particular geographic area segments, usually expected to have a specified average number of agricultural operations, and sampling the total number of segments identified. For the 1945 census, a 1-in-18 sample of area segments (each expected to contain five agricultural operations) in all counties was selected, and this, together with 50,000 large farms selected for certain inclusion, made up the national sample. Once a sample was selected, the Census Bureau or cooperating agency (USDA's National Agriculture Statistics Service (NASS) and its predecessor, the Statistical Reporting Service (SRS) frequently collaborated with the Bureau, making USDS's June Enumerative Survey area sample available for census evaluation, and other purposes) canvassed the farms in the segments to collect the data needed.

these needs with the realities of collecting the data desired from farm operators meant that report-form content and format were under continual study and redesign.

In the 19th century, the agriculture census schedules asked for simple production quantities and total sales values for selected products, with relatively few items on such things as machinery and equipment, or fertilizers used. Changes to these schedules generally were restricted to the kinds of crops and livestock for which data were requested. The 1900 census introduced questions on the race and tenure of farm operators, and from then on until today, the agriculture census collected a considerable amount of social and economic information, along with the crop and livestock data. During the period between the World Wars, questions were added on such things as the availability of electricity, telephone service, and paved roads, as well as the degree of mechanization of farm operations, and nonfarm employment and income. The race, sex, and ethnic background of farm operators became important objects of the census questionnaire after World War II, and the 1978 and later agriculture census report forms asked for the respondent's sex, and whether he or she was of Spanish/Hispanic origin.

Business organization, off-farm income, and participation in a variety of Federal Government agricultural programs became increasingly important to data users as well. Some information on organization and income had been requested since the 1920's, and following World War II, items were added on participation in various Federal loan and land-conservation programs. For 1974, the census questionnaire introduced an item on farm credit and debt, and for the 1987 census, additional inquiries on production expenses.

Format—The agriculture censuses employed a field canvass of farm operators until the 1969 census. During the 19th century, enumerators used pages in large ledger-type binders for collecting the agriculture (as well as other census) data. The Census Bureau began using separate agricultural questionnaires in the 1900 census, and has continued to do so since, except for the 1945 enumeration, which reverted to the binder format as a wartime measure.

The growing demand for more and more detailed data, and the opposing demand to hold respondent burden to a minimum led to compromises in every census, and to experiments during the 1940 and later censuses in tailoring report forms to reflect the special characteristics of agriculture in various parts of the country. The tailored forms typically had two sets of questions, one asking for basic information of all farm operations, and a second, varying from area to area, covering the crops and livestock produced there. This specialization of report forms reached its peak in the 1964 census, when there was a separate questionnaire for each State, Puerto Rico, Guam, and the Virgin Islands.

The agency eliminated the specialized forms for the 1969 census, when it designed two standard questionnaires—a “short” form asking for basic information, and a

“long” form that included additional items. Tailored report forms⁴ were used only for Hawaii, Puerto Rico, and the outlying areas. The census used the long form for farms in the 50 States expected to have \$2,500 or more in agricultural products sold during the census year, while the short form went to smaller farms. A similar format was used for the 1974 census, while the 1978 census had a variation of the system, with a somewhat longer basic questionnaire used for all farms, but with a “sample” questionnaire that included all the basic items plus six additional sections of inquiries for a sample of about 20 percent of all farms. Larger page size and other format changes enabled the Bureau to collect the data needed while reducing overall response burden by over 30 percent.

Standardization simplified the job in terms of designing, printing, mailing, and processing the questionnaire, but respondents still were unhappy about questions irrelevant to their own operations. The 1982 census reintroduced tailored questionnaires, although this time they were limited to specialization for 12 geographic regions of the country, plus separate questionnaires for the outlying areas, and with sample and nonsample forms⁵ for each region. The agriculture census “regions” did not coincide either with the Bureau's census geographic regions or with the USDA's regions, but were simply groupings of States in which the Bureau expected to find similar types of crops and livestock operations. The nonsample report form contained all the items requested of all farmers, while the sample version contained both the “core” items requested on the nonsample form, and additional questions, and was used for about 20 percent of all farms. The Bureau continued to use this system of regionalized/sample and nonsample report forms for the 1987 census, although the number of regions was raised to 13. (In the 1982 census, the Bureau there were 10 multi-State regions, while Florida and Hawaii each made up a region of their own. For the 1987 enumeration, Alaska was designated a separate region as well.)

Processing and Publishing the Data

Processing—Processing the census data during most of the 19th century was a fairly straightforward operation; the enumeration staff returned completed schedules to the census office and the clerical staff tabulated and compiled the data by hand. The introduction of mechanical punching and electric tabulating equipment (first used in the 1890 population census, and for the 1900 agriculture census) was a major methodological and technological change, so much so that a comparable transformation in processing

⁴The Bureau also produced separate report forms for the agricultural services census, and the decennial censuses of irrigation, drainage, and horticultural specialties carried out as part of the 1969 program.

⁵The sample forms were further specialized by the use of “must” report forms. “Must” forms were used for very large or special operations, and were identical to the other sample forms in content. A different shading color for “must” forms facilitated identification of these cases during clerical processing.

waited until the advent of the electronic computer and automated data processing systems half a century later. Technical improvements to the equipment continued throughout the intervening decades (e.g., the 1940 agriculture census introduced automated editing of the census punchcards), however, the basic systems introduced for processing at the turn of the century remained in place until after World War II.

The Census Bureau played a major role in the development of modern computer technology. Its staff drew up the specifications and cooperated in the design of the "Universal Automatic Computer," better known as UNIVAC, the first general-purpose electronic computer system, which was installed at the Bureau's Philadelphia field office in 1951 for use in processing the 1950 population census. The system was moved to the Suitland headquarters in time for the 1954 agriculture census. Even with the new system, a large clerical staff was required to manually edit the individual report forms before the data were keyed to punchcards for computer processing. The Bureau continued to modernize and expand its computer systems to take advantage of rapid developments in the technology. The 1964 census introduced "string" punching, which saved time in key punching and computer processing. This technology reduced the total number of punchcards needed to transfer the data to magnetic tape, and used computerized programs to perform much of the editing and tabulating work. For the 1969 census, the Bureau dispensed with punchcards altogether, keying the agriculture data directly to small magnetic tape reels, "pooling" (i.e., consolidating) the data on standard computer tape reels, and shipping the tapes to the main computer facility at Suitland for processing. High-speed printers produced copies of tables for review and correction, and even for photo-offset reproduction for publication. For the 1974 census, computer disks replaced the small tape reels, and the Jeffersonville office transmitted the data to Suitland electronically via telephone datalink. For the 1978 census, individual barcode address labels and laser "reading" equipment facilitated automated check-in. For the 1982 census, the data were keyed directly to computer disk once again, but there was no clerical edit before keying, since the capabilities of the edit programs developed by the Bureau made such manual editing unnecessary. The 1982 census also saw the first use of the interactive data-base system, which allowed analysts and others access to the entire data file to resolve problems. This system was expanded further for 1987, using minicomputer systems, the data-storage capacity of which made it possible to dispense with the paper printouts required in the earlier systems.

Publication—The agriculture census data traditionally were published in printed reports, containing tabulations at the national, State, or even county level (as appropriate for each report series), with occasional use of illustrations and graphics. Since the turn of the century, this conventional system was modified successively to include individual

reports for each State and county, special reports on selected subjects, greatly increased use of graphics and the development of a graphics report, and the adoption of electronic and other publishing media.

The Bureau employed relatively simple geography for publishing census data. Until the 1987 census reports were issued, the standard area reports covered the country as a whole, census geographic regions (and occasionally census divisions), States, and counties. For the 1987 enumeration, the Bureau produced selected statistics at the five-digit ZIP Code level as well; this was the first time agriculture census data were published for a level below the county since the first farm enumeration.

The early census reports sometimes included selected maps and an occasional chart, but these were very limited in scope. The Bureau produced the first *Graphic Summary*, showing farm tenure and land use, as part of the 1945 agriculture census publication program, and for 1969, introduced computer-generated maps as well as additional charts and graphs. Renamed the *Agricultural Atlas of the United States* for 1987, the graphics report became a regular and popular part of the census publication program.

The Bureau issued agriculture census data on computer tape—in two standard computer languages—for the first time as part of the 1964 publication program, although only tapes of the preliminary data were offered. For the 1969 and following censuses, the Bureau provided the final census data in computer tape files, while the preliminary data were made available only on tape for the 1978 enumeration. As computers and computer analysis became more and more widespread, data users indicated that they needed both the preliminary and final agriculture census data on computer tape, and urged expansion of the agency's data publication in machine-readable format to include new media, such as flexible diskettes. For the 1982 census, the Bureau issued both preliminary and final data files on computer tape, and released the preliminary data on flexible diskettes as well. Conventional computer tape files were those for which the user had to have access to a mainframe computer and the necessary programming and service staff such an installation required. Flexible diskettes, on the other hand, could be used in the rapidly proliferating minicomputer and microcomputer systems, although they had the drawback of limited data capacity per diskette (e.g., the 1982 agriculture preliminary data file required over 100 diskettes). As an alternative medium to the flexible diskette, while retaining accessibility to large census data files for users who did not have a major computer facility, the Bureau developed data files for sale on compact disc-read only memory (CD-ROM). The CD-ROM format employed rigid plastic disks virtually identical to those introduced for audio recordings, and a single CD-ROM had a data capacity comparable to four high-density computer tapes. Moreover, while special "readers" were required to use the new product, the equipment could be added to

a standard minicomputer or even microcomputer system at minimal expense, while giving the user access to an enormous amount of data. The entire 1987 agriculture census data file could be contained on a single CD-ROM disk with room to spare. After producing two test disks to evaluate the capabilities of the new medium, the Bureau adopted it for future censuses and issued the final 1987 agriculture census data file on a single CD-ROM.

THE FARM DEFINITION

The first official definition of what constituted a farm for census purposes was used for the 1850 census, when any place qualified that had \$100 or more in total value of sales of agricultural products. Since 1850, acreage and dollar-value limits were added, altered, or removed, while a requirement evolved that the land on the place be (1) involved in, or connected with, agricultural operations, and (2) under the day-to-day control of a single management (either by an individual, partnership, corporation, or other organization).

The important point was, of course, the involvement with agricultural operations, which—again for census purposes—were the production of livestock, poultry, and animal specialties, and their products, and/or crops, including fruit, and greenhouse and nursery products. The land did not need to be a single contiguous tract to comprise a single farm, but had to be operated as a single economic unit (although exceptions were allowed; see the section on the 1950-1954 definition below).

The changes in the various criteria used in the farm definition, by census, were—

<i>1850-1860</i>	No acreage requirement, but a minimum of \$100 in sales of agriculture products.
<i>1870-1890</i>	Any place of 3 or more acres, involved with agricultural production, qualified as a farm. Places with less than 3 acres were considered farms if they had a minimum annual value of agricultural product sales of \$500.
<i>1900</i>	No acreage or minimum sales requirement, and cranberry marshes, greenhouses, and city dairies were included if they required the full-time services of at least one person.
<i>1910-1920</i>	A minimum of 3 acres, with \$250 or more in total value of sales, unless the individual operation required the full-time services of at least one person.

<i>1850-1860</i>	No acreage requirement, but a minimum of \$100 in sales of agriculture products.
<i>1925-1945</i>	The requirement of the full-time services of at least one person was deleted; otherwise the definition was unchanged.
<i>1950-1954</i>	Places of less than 3 acres qualified as farms if they had, or normally would have had, sales of \$150 or more in agricultural products during the census year. Places that began operating for the first time as farms in 1954 also were included. Parcels operated by sharecroppers, and tenant farms, counted as separate farms, even though the landlord handled the entire holding as a single unit. (Land retained and operated by the landlord also was counted as a separate unit.)
<i>1959-1974</i>	The acreage requirement was raised to 10 acres or more, with at least \$50 or more in agricultural product sales. A place of less than 10 acres qualified as a farm if it had sales of \$250 or more during the census year.
<i>1978-1987</i>	The acreage requirement was dropped and any place that had, or normally would have had, \$1,000 or more in total agricultural product sales during the census year, qualified as a farm.

The farm definitions used in Puerto Rico and the outlying areas differed from that employed in the States. In Puerto Rico, the definition generally required 3 or more cuerdas (a cuerda equals approximately .97 acres) and/or specified numbers of livestock, poultry, or fruit or nut trees. The outlying areas' definitions generally were similar, although in American Samoa a variety of different land-holding arrangements had to be taken into consideration in defining individual agricultural operations.

The Census Bureau and the Puerto Rican Government agreed to change the farm definition to give greater emphasis to product sales in the 1982 census, when a farm was any place with \$500 or more in annual sales of agricultural products, or any place of 10 cuerdas or more with \$100 in sales of agricultural products. The 1987/1990 agriculture censuses in the other outlying areas saw a similar change, when the crop, livestock, and acreage requirements were dropped, and a farm was defined as any place that had, or normally would expect to have, \$100 in annual sales of agricultural products.

Appendix C.

Organization of the Bureau of the Census and Key Personnel for the 1987 Census of Agriculture

During the 1987 Census of Agriculture period (October 1, 1985 to September 30, 1990), the Bureau of the Census was organized under a Director, a Deputy Director, and several Associate and Assistant Directors. With the approval of the Department of Commerce, the Census Bureau was reorganized in January 1987, when some positions and units were abolished and new ones were established. (See below for Bureau organizational charts for the census period.)

The list below, following the Executive Staff, is by operational division or office for the census period. Persons listed are those professional and other key personnel who were substantially involved in planning, conducting, and publishing the agriculture census, and disseminating the results. Dates are shown for individuals only when their service with a particular unit did not cover the entire period in which the unit was involved in agriculture census activities.

EXECUTIVE STAFF

The Director determined policies and directed the programs of the Bureau, taking into account applicable legislative requirements and data users' needs. The Director was responsible for the Census Bureau's activities and for coordinating its statistical programs with those of other Federal statistical agencies, with due recognition of the programs developed and regulations issued by the Office of Management and Budget and the Department of Commerce.

The Director was assisted by a Deputy Director who shared the responsibilities, performed the functions of the Director in the latter's absence, and was responsible for the Congressional Affairs, Program and Policy Development, and Public Information Offices, and the Office of the Deputy Chief Counsel. On their immediate staff, at the time of the 1987 agriculture census, were five Associate Directors (six after January 1987), seven Assistant Directors (five after January 1987), and several Special Assistants.

The Associate Director for Economic Programs (Associate Director for Economic Fields prior to January 1987) and the Assistant Director for Economic and Agriculture Censuses (who also served as Chief of the Economic Census Staff prior to January 1987) had overall responsibility for the 1987 agriculture census and coordinated the activities of all the divisions involved. The Agriculture Division prepared technical specifications and arranged for necessary services from the Census Bureau's support divisions. The functions and key personnel of all divisions and division units that worked on the census are listed below.

Director

Barbara E. Bryant, from Nov. 1989
C. Louis Kincannon, Acting, from Jan. 1989 to Nov. 1989
John G. Keane, to Jan. 1989

Staff

Chief Counsel, Vacant, from June 1986 to Oct. 1986 (position abolished Oct. 1986)
Gerard C. Iannelli, Chief Counsel, from Dec. 1985 to June 1986
Alfred J. Tella, Special Adviser, to Apr. 1986

Deputy Director

C. Louis Kincannon

Staff

Theodore G. Clemence, Senior Advisor, to Oct. 1988
Melvin A. Hendry, Census Bureau Committee Liaison Officer, to Dec. 1985

CONGRESSIONAL AFFAIRS OFFICE
(Congressional Liaison Office to Jan. 1987; prior to that date, it reported to the Assistant Director for Communications; Office of Congressional Affairs from Jan. 1987 to Mar. 1988)

This office advised the Director on all congressional matters involving the Census Bureau's activities and served as the primary point of coordination for maintaining liaison on such activities with the Congress in collaboration with the Department of Commerce's Office of Congressional Affairs (Office of Legislative Affairs after Jan. 1990).

A. Mark Neuman, Congressional Liaison Officer, from Aug. 1989
Frederick Ruth, Congressional Liaison Officer, from Oct. 1985 to Aug. 1989 (Acting from Aug. to Oct. 1985)
Leon H. Hampton, Jr., Congressional Liaison Officer, to July 1985

PROGRAM AND POLICY DEVELOPMENT OFFICE

This office assisted in the overall planning, reviewing, and evaluation of Bureau-wide programs; reviewed and evaluated program accomplishments in relation to plans; and served as the focal point for determining and assessing goals and long-range policy and resource plans.

M. Catherine Miller, Chief, from March 1990
Sherry L. Courtland, Chief, to March 1990

PUBLIC INFORMATION OFFICE

This office, which had been responsible to the Assistant Director for Communications prior to January 1987, directed the information, publicity, and press relations programs for the censuses, including preparation and dissemination of press releases and articles to general and specialized news media, and provided other assistance to news representatives.

James E. Gorman, Chief
Eugene M. Cagle, Assistant Chief
Angela Green, Public Affairs Specialist, from Oct. 1986
Mavis V. Dion, Public Affairs Specialist, to Sept. 1985
(position vacant, Sept. 1985 to Oct. 1986)

OFFICE OF THE DEPUTY CHIEF COUNSEL (Established Oct. 1986)

This office provided counsel and legal services to the Census Bureau subject to the authority of the Department of Commerce's Office of the General Counsel.

J. Patrick Heelen, Deputy Chief Counsel, from Oct. 1986

Assistant Director for Communications (Abolished January 1987)

The Assistant Director for Communications planned and directed the public affairs and promotional activities of the Bureau, provided congressional liaison services, advised the Deputy Director in these activities, and had responsibility for the Data User Services Division and the Public Information Office.

James E. Gorman, Acting, to Jan. 1987

Associate Director for Economic Programs (Associate Director for Economic Fields prior to Jan. 1987)

The Associate Director for Economic Programs planned and directed the economic statistical programs, and advised the Director in these fields. He supervised the Business, Construction Statistics, Economic Surveys, Foreign Trade, Governments, and Industry Divisions, and the Center for Economic Studies.

Charles A. Waite

Staff

Paula N. Muroff, Special Assistant
Walter E. Neece, Statistician
John O. Ostenso, Economic and Legislative Advisor, from July 1985

CENTER FOR ECONOMIC STUDIES

This center, reporting directly to the Associate Director for Economic Fields, planned, developed, and published analyses directed at improving the usefulness and validity of the Bureau's economic censuses and other economic data; developed and prepared studies of trends and relationships in the Bureau's economic reports and in series from other sources; and prepared special analytical and interpretative reports and monographs dealing with the data being published and the large body of economic microdata at its disposal. (Established as an independent unit in Jan. 1987, responsible to the Associate Director for Economic Programs.)

Robert H. McGuckin III, from Nov. 1986
Robert Bechtold, Acting Chief, from Dec. 1985 to Nov. 1986
John R. Norsworthy, Chief, to Dec. 1985

Assistant Director for Economic and Agriculture Censuses

This Assistant Director provided overall direction for program planning of the economic and agriculture censuses; developed budget requirements, time schedules, and controls; coordinated plans for data collection and publication, the development of census methodology, and the data-processing system; maintained liaison with other divisions for data collection and other support needs; and developed and coordinated a data dissemination program. Under the supervision of the Associate Director for Economic Programs, he was responsible for the Economic Census Staff and the Agriculture and Economic Programming Divisions, the last one as of January 1987. The Assistant Director also served as the Chief of the Economic Census Staff prior to July 1986.

Roger H. Bugenhagen, from Apr. 1986
John H. Berry, to Apr. 1986

Staff

Stanley M. Hyman, Special Assistant
John R. Wikoff, Special Assistant, to Jan. 1987

Associate Director for Management Services

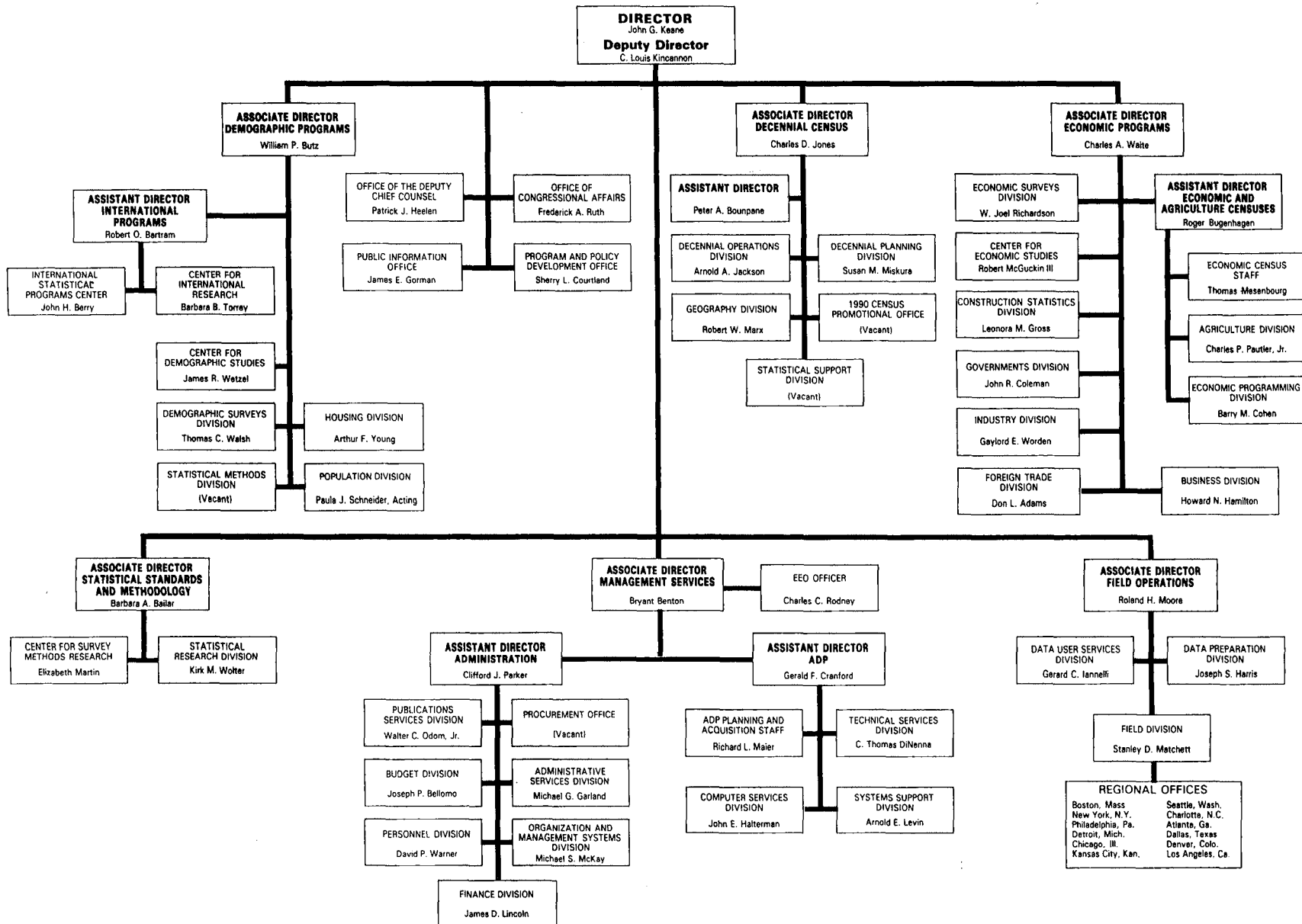
This Associate Director supervised administrative services, with due consideration of those specifically provided by the Department of Commerce, to all components of the Census Bureau; planned and directed programs for electronic data-processing operations and techniques; directed activities of the Equal Employment Opportunity Office; and advised the Director in these fields.

O. Bryant Benton

U.S. DEPARTMENT OF COMMERCE

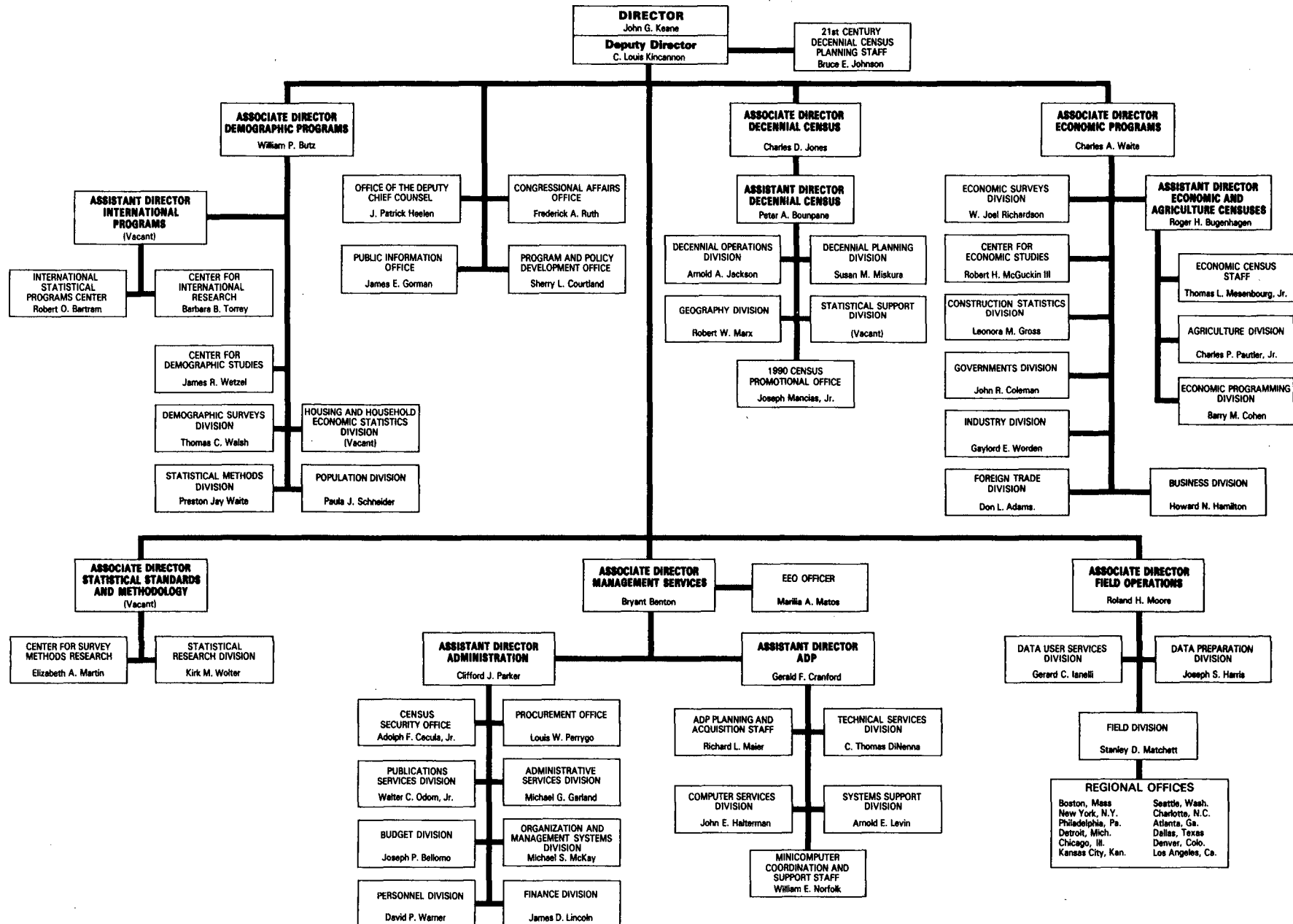
Bureau of the Census

Feb. 1, 1987



U.S. DEPARTMENT OF COMMERCE
Bureau of the Census

March 21, 1988



EQUAL EMPLOYMENT OPPORTUNITY OFFICE

This office guided and assisted the Associate Director for Management Services in equal employment opportunity matters.

Marilia Matos, Equal Employment Manager, from Sept. 1987 (position vacant from June 1987 to Sept. 1987)
Charles C. Rodney, Equal Employment Manager, to June 1987

Assistant Director for Automated Data Processing (ADP)

The Assistant Director assisted the Associate Director for Management Services in directing the Computer Services, Systems Support, and Technical Services Divisions, and the ADP Planning and Acquisition Staff.

Gerald F. Cranford

ADP PLANNING AND ACQUISITION STAFF

(Abolished as a staff reporting directly to the Assistant Director in Jan. 1987.)

Richard L. Maier, Chief, to Jan. 1987

Assistant Director for Administration

The Assistant Director assisted the Associate Director for Management Services in supervising the Administrative and Publications Services (two separate divisions prior to Feb. 1990), Budget, Finance, Organization and Management Systems, and Personnel Divisions, and the Procurement Office.

Clifford J. Parker

FINANCE STAFF

(Abolished as a staff reporting directly to the Assistant Director in Jan. 1987; see Finance Division.)

This staff performed financial analysis, maintained financial accounts, coordinated payroll and leave audits, and prepared financial reports.

James D. Lincoln, Acting Chief, from Mar. 1986 to Jan. 1987

William A. Prentice, Chief, to Mar. 1986

Associate Director for Field Operations

This Associate Director planned and directed data-collection and noncomputer-processing operations, and advised the Director in these matters. The Associate Director for Field Operations was responsible for the Data Preparation, Data User Services (after January 1987; prior to that date, this division officially reported to the Assistant

Director for Communications), Field, and Geography Divisions, the last one prior to January 1987. (At that time, Geography Division was placed under the Associate Director for Decennial Censuses.)

Roland H. Moore

Associate Director for Statistical Standards and Methodology

This Associate Director planned and directed programs relating to the statistical adequacy of proposed collections and the application of appropriate statistical methodology and techniques; carried out long-range studies on the basic problems of measuring social and economic phenomena; provided research and consulting facilities oriented specifically toward psychological and behavioral science factors; and advised the Director in these fields. He or she directed the following units: the Center for Survey Methods Research and the Statistical Research Division.

Robert M. Groves, from Mar. 1990

William P. Butz, Acting, from Jan. 1989 to Mar. 1990

C. Louis Kincannon, Acting, from Jan. 1988 to Jan. 1989

Barbara A. Bailar, to Dec. 1987

Staff

Lawrence H. Cox, Senior Mathematical Statistician
Carolee Bush, Project Coordinator, from May 1986 to July 1988

DIVISIONS AND OFFICES

Administrative and Publications Services Division

(Separate divisions prior to Feb. 1990; unless otherwise noted, all positions in the combined division were held from Feb. 1990.)

This division secured space, supplies, and equipment; arranged for communications, transportation, and related services; designed the census questionnaires in conjunction with the economic subject-matter divisions; and supplied art, editorial, copy preparation, and printing coordination services for census questionnaires and publications.

Chief

Walter C. Odom, Jr.

Staff

Wayne H. Massey, Special Assistant to the Chief

Michael G. Garland, Assistant Chief

Barbara J. Stanard, Chief, Space and Facilities Management Branch

Albert W. Cosner, Chief, Forms and Mail Management Branch

Joyce E. Teague, Chief, Economic/Administrative Forms Section

Cathern S. Kline, Chief, Forms/Mail Management Support Services Section

Russell S. Price, Chief, Property, Records, and Supply Branch

Gary J. Lauffer, Chief, Printing Branch, from July 1990 (position vacant from Feb. 1990 to July 1990)

Gerald A. Mann, Chief, Publications Planning and Graphics Branch

Larry D. Tackett, Chief, Recurring Publications Section

David M. Coontz, Chief, Electronic Graphics Section

Nicholas A. Preftakes, Chief, Creative and Design Staff

John T. Overby, Chief, Census Publications Section

Administrative Services Division

(Merged with Publications Services Division in Feb. 1990; unless otherwise noted, personnel continued in positions listed after divisions merged.)

This division secured space, supplies, and equipment; arranged for communications, transportation, and related services; and designed the census questionnaires in conjunction with the economic subject-matter divisions.

Chief

Michael G. Garland, from Mar. 1986 to Feb. 1990

Albert M. Cosner, Acting, from Dec. 1985 to Mar. 1986

Robert Kirkland, to Dec. 1985

Staff

Barbara J. Stanard, Assistant Chief, from May 1986 to Feb. 1990

Albert W. Cosner, Chief, Forms and Mail Management Branch

Joyce E. Teague, Chief, Economic/Administrative Forms Design Section, from Nov. 1988

Cathern S. Kline, Chief, Economic/Administrative Forms Design Section, to Nov. 1988

Cathern S. Kline, Chief, Forms/Mail Management Support Services Section, from Nov. 1988

Joyce E. Teague, Chief, Forms/Mail Management Support Services Section, to Nov. 1988

ADP Planning and Acquisition Staff

(Established as separate unit, Jan. 1987.)

This staff prepared long-range information technology plans for submission to the Department of Commerce, coordinated requirements with the Department of Commerce, and assisted the Census Bureau's divisions and offices in acquiring information technology.

Chief

Richard L. Maier, from Jan. 1987

Agriculture Division

The Agriculture Division formulated and developed overall plans and programs for the collection, processing, and dissemination of statistical data from surveys or censuses relating to agriculture, agricultural activities or products, equipment and facilities, and cotton ginning. It planned and developed systems, prepared computer specifications for the processing of agricultural information, and conducted research and prepared analytical reports for special studies related to agricultural production in the United States.

Chief

Charles P. Pautler, Jr.

Staff

✓ Elaine Richards, Administrative Officer, from Oct. 1989 (Position vacant, Sept. to Oct. 1989.)

Kathryn N. Walsh, Administrative Officer, from June to Sept. 1989

Sandra Viverette, Administrative Officer, to June 1989

Mark A. Meggs, Computer Systems Analyst, from April 1988

Patrick L. McDonald, Computer Systems Analyst, from Jan. 1987 to Nov. 1987

George E. Pierce, Assistant Chief, Planning, from Sept. 1987. (Chief, Agriculture Census Planning Staff to Sept. 1987)

Patricia A. Clark, Statistician

William A. Harlan, Chief, Procedures Branch, from Aug. 1986

Kent C. Hoover, Chief, Procedures Branch, to July 1986

Betty B. McKay, Statistician

Beverly E. Battle, Statistician

Christopher L. Berbert, Statistician

Donald F. Cheza, Statistician, to Dec. 1987

Sandra E. Hairston, Statistician

✓ Charles L. Kendall, Statistician, from June 1987

Bernadette L. Skinner, Statistician

Darrin M. Stalba, Statistician, from Sept. 1988

Douglas Joel Miller, Chief, Data Requirements and Outreach Branch, from Dec. 1987

Cynthia R. Shipley, Statistician, to Aug. 1989

✓ Quentin C. Coleman, Statistician, from Jan. 1987

Durwin Knutson, Statistician, from Jan. 1989

Francis D. Tolson, Statistician, to Sept. 1987

Susan E. Lockett, Statistician-in-training, from Sept. 1987

Janet L. Allen, Statistician-in-training, from Sept. 1989

Thomas J. Manning, Chief, Publications and Information Office

- ✓ Karin G. Meyers, Writer-Editor
- ✓ Janet T. Robertson, Editorial Assistant
- ✓ Tina M. Wimbush, Editorial Assistant, from Dec. 1987
- ✓ Sharon L. Powers, Information Officer, from Dec. 1989
- ✓ Debbie A. Norton, Information Officer, from Nov. 1988
- Brenda L. Prout, Information Officer, from Mar. 1987 to Oct. 1988
- Mary B. Burch, Information Officer, to June 1986
- Cecelia H. Peets, Writer-Editor, from Sept. 1990

John C. Womack, Assistant Chief, Agricultural Statistics, from March 1987

Richard R. Storm, Assistant Chief, Agricultural Statistics, to Nov. 1986

Avon B. Floyd, Special Assistant, to Aug. 1989

Arlon M. Scott, Statistician

Thomas M. Marks, Statistician

Thomas N. Scott, Statistician

✓ James C. Vogelsang, Statistician

Greer S. Cowley, Statistician, from July 1987 to Oct. 1989

✓ Neil R. Collignon, Statistician, from July 1987

Anne M. McGaughy, Statistician, from Dec. 1987 to Apr. 1989

John D. Ward, Statistician, from Jan. 1988 to May 1989

Scott Wright, Statistician, to Oct. 1989

James A. Liefer, Chief, Farm Economics Branch, from Oct. 1986

✓ John A. Blackledge, Chief, Farm Economics Branch, to June 1986

William R. Adams, Statistician, from April 1987 to July 1990

Donald F. Cheza, Statistician, from Dec. 1987

✓ Joseph M. Miller, Statistician, to Aug. 1986, and from Aug. 1987

Irving W. Copeland, Statistician

✓ Sandra C. Everett, Statistician, to June 1989

✓ Douglas Hartwig, Statistician, from June 1988

Brian L. Lounsbury, Statistician, from Jan. 1987 to Aug. 1987

Douglas John Miller, Statistician, from June 1987 to Aug. 1989

Scott Wright, Statistician, from Oct. 1989 to June 1990

Cynthia R. Pitts, Statistician, from June 1987 to July 1988

James E. Patterson, Statistician, to Dec. 1987

Donald R. Jahnke, Chief, Crop Statistics Branch

✓ John H. Barrett, Survey Statistician, to Sept. 1990

✓ Frank J. Shelton, Survey Statistician

Hubert E. Sites, Statistician, to Nov. 1987

Cynthia R. Pitts, Statistician, to May 1987

✓ Carl N. McAllister, Statistician

Roy J. Karkosh, Statistician, from Feb. 1988

✓ Nancy L. Swaim, Statistician, from Aug. 1985

✓ Herman C. Williams, Statistician, from Nov. 1988

Esther C. Darnell, Statistical Assistant

✓ Linda J. Hutton, Chief, Livestock Statistics Branch, from Apr. 1990 (position vacant from Jan. to Apr. 1990)

Thomas D. Monroe, Chief, Livestock Statistics Branch, to Jan. 1990

William R. Adams, Statistician, to Apr. 1987

John A. Branch, Statistician

✓ Albert W. Graybill, Statistician, to Dec. 1989

✓ Jerry D. Imel, Statistician

✓ John F. Lee, Statistician

✓ Mark A. Meggs, Statistician, to Apr. 1988

✓ Robert E. Miller, Statistician

James L. Thomas, Statistician

Joyce U. Paras, Statistician, to Feb. 1989

John D. Ward, Statistician, from May 1989

L. Odell Larson, Assistant Chief, Outlying Areas and Special Surveys, from July 1988 (position vacant from March to July 1988)

Carl J. Bostrom, Assistant Chief, Outlying Areas and Special Surveys (Special Surveys prior to Aug. 1987), from June 1986 to Mar. 1988 (position vacant from Jan. 1986 to June 1986)

Kenneth R. Norell, Assistant Chief, Special Surveys, to Jan. 1986

John A. Blackledge, Chief, Special Surveys Branch, from June 1986

Christopher S. Barteau, Statistician, from Sept. 1986 to Sept. 1988

Michael S. Elson, Statistician, from May 1987 to May 1989

Sara L. Hamrick, Statistician, from March 1989

Cleo R. Jenkins, Statistician, from Oct. 1987 to May 1989

Jeannette K. Mon, Statistician, from July 1986

Joseph M. Miller, Statistician, from Aug. 1986 to Aug. 1987

✓ Francis D. Tolson, Statistician, from Sept. 1987

✓ David I. Peterson, Statistician, from Aug. 1987

✓ Jody D. Roberts, Statistician, from June 1987

Dirk E. Van Dyke, Statistician, from Jan. 1989

✓ Kent C. Hoover, Chief, Outlying Areas Statistics Branch, from Mar. 1987

John C. Womack, Chief, Outlying Areas Statistics Branch, to Mar. 1987

✓ Demosthenes Birbilis, Statistician, to Apr. 1990

✓ Irma F. Harahush, Statistician, from Oct. 1987

✓ Ronald D. Lewis, Statistician

✓ Jeanette K. Mon, Statistician, to July 1986

✓ Zulma Riberas, Statistician, from Oct. 1989

✓ Aida Margarita Sole, Statistician, from June 1986

Gary Swenson, Statistician, from June 1986 to Mar. 1987

Cynthia Z. F. Clark, Assistant Chief, Research and Methodology

Charles R. Perry, Chief, Program Research and Development Branch, from May 1990

✓ Jane Dea Sandusky, Acting Chief, Program Research and Development Branch, from Nov. 1989 to May 1990

D. Dean Prochaska, Chief, Program Research and Development Branch, to Nov. 1989

Melody M. Atkinson, Statistician

Susan C. Beverage, Mathematical Statistician, from June 1988 to Jan. 1990

✓ William C. Davie, Mathematical Statistician

Bruce P. Hughes, Mathematical Statistician

James A. Joerger, Statistician

Emily Burton, Statistician, to Oct. 1987

Anne M. McGaughey, Mathematical Statistician, from Apr. 1987 to Nov. 1987, and from May 1989 to Feb. 1990

Donna R. Ruggles, Statistician, to Sept. 1987

Jane Dea Sandusky, Statistician

Karen E. Wright, Mathematical Statistician, from Aug. 1988

Elizabeth A. Vacca, Chief, Research and Methods Branch, from Oct. 1988

Ruth Ann Killion, Chief, Research and Methods Branch, from Jan. 1986 to Oct. 1987

Cynthia Z. F. Clark, Acting Chief, Research and Methods Branch, to Dec. 1985, and from Nov. 1987 to Sept. 1988

Nicholas S. Alberti, Mathematical Statistician, to Apr. 1987

Janice L. Ausby, Mathematical Statistician, to Feb. 1988

Scott M. Burroughs, Mathematical Statistician, from Jan. 1988

✓ Inez Chen, Mathematical Statistician, from Jan. 1988

Pamela W. Ferrari, Mathematical Statistician, to July 1987

Mary C. Gatt, Mathematical Statistician, from Jan. 1986

✓ Tommy W. Gaulden, Mathematical Statistician

Colleen Sullivan, Mathematical Statistician, from Aug. 1988

David V. Hornick, Mathematical Statistician, from Sept. 1988

Karen S. McKelvey, Mathematical Statistician, from May 1986

Dedrick L. Owens, Mathematical Statistician

Lisa Polgreen, Mathematical Statistician, to June 1987

Magdalena Ramos, Mathematical Statistician, from Sept. 1987

Michael I. Ringwelski, Mathematical Statistician, from Jan. 1988

Richard Schmehl, Mathematical Statistician, from Nov. 1988

Elizabeth A. Vacca, Mathematical Statistician, to Oct. 1988

Franklin Winters, Mathematical Statistician

Budget Division

This division performed budget functions that included the preparation of official budget estimates and justifications, and the allocation and control of funds.

Chief

Joseph P. Bellomo

Computer Services Division

This division operated and managed the Bureau's electronic computers and related auxiliary equipment; planned and performed associated coordination for data keying, scheduling for computer processing, staging, and tape library services; and provided user services, such as documentation, source program optimization, programming methodologies, and standards to facilitate the use of the Bureau's automated dataprocessing resources.

Chief

Marvin D. Raines, from Nov. 1988; Acting, from July to Nov. 1988

John E. Halterman, to July 1988

Staff

George M. Bowden, Assistant Chief, Administration, to Oct. 1989 (position abolished Oct. 1989; its functions were transferred to the Management and Administrative Systems Staff (which reported directly to the Division Chief) and Special Projects Staff (which reported to the Assistant Chief for Operations))

Gary H. Dickerson, Assistant Chief, Computer Analysis and Support

Robert C. Schlie, Assistant Chief, Operations, from Apr. 1989

Marvin D. Raines, Assistant Chief, Operations, from May 1987 to Apr. 1989 (position vacant from Jan. 1987 to May 1987)

Willie E. Clark, Assistant Chief, Operations, to Dec. 1986

Data Preparation Division

Based on specifications and procedures provided by the subject-matter/program division, this division in Jeffersonville, IN, performed large-scale processing operations, such as questionnaire labeling, mailing-package assembly, report followup and check-in, editing and coding of returns, data capture, and clerical review and correction of computer-identified problems. It also generated necessary correspondence related to these operations.

Chief

Joseph S. Harris, from Feb. 1986 (Acting, from Dec. 1985 to Feb. 1986)
Patricia M. Clark, Acting, from Oct. 1985 to Dec. 1985
Don L. Adams, to Oct. 1985

Staff

Patricia M. Clark, Assistant Chief, Operations

Plummer Alston, Jr., Assistant Chief, Administration, from July 1986

Jerry L. Hartman, Chief, Management and Procedures Branch

Juanita Jones, Chief, Statistical Methods and Quality Control Branch

William B. Neely, Chief, Data Systems Branch, from Dec. 1989

George E. Wilson, Chief, Data Systems Branch, to Dec. 1989

Jane L. Woods, Chief, Geography Branch, from Mar. 1989; Acting, from Jan. to Mar. 1989

Harold K. Wood, Chief, Geography Branch, from Aug. 1986 to Jan. 1989

Wendell McManus, Acting Chief, Geography Branch, from Oct. 1985 to Aug. 1986

J. Gary Doyle, Chief, Geography Branch, to Oct. 1985

Judith N. Petty, Chief, Census Processing Staff (Periodic Censuses and Related Surveys Branch prior to July 1989)

Carolyn Roseman, Chief, Support Services Staff, from Nov. 1988; Acting from Jan. to Nov. 1988

Kurt L. G. Legait, Chief, Support Services Staff, to Jan. 1988

Kurt L. G. Legait, Chief, Microfilm and Materials Services Branch, from Jan. 1988

Data User Services Division

This division, in cooperation with the Office of the Assistant Director for Economic and Agriculture Censuses, planned, coordinated, and administered a comprehensive data-dissemination and user-services program for these censuses; conducted seminars, workshops, and conferences; oversaw the Bureau's library operations; and prepared and produced user aids such as slides and video tapes, and reference materials such as this History.

Chief

Gerard C. Iannelli, from Sept. 1986; Acting, from July 1986 to Sept. 1986

Don L. Adams, Acting, from Oct. 1985 to June 1986

Michael G. Garland, to Oct. 1985

Staff

Marie Argana, Assistant Chief, User Services, from June 1987 (Acting Assistant Chief, from Oct. 1986 to June 1987)

Marshall L. Turner, Assistant Chief, User Services, to Oct. 1986

Alfonso E. Mirabal, Assistant Chief, Statistical Reports, from May 1989 (position vacant from Jan. 1987 to May 1989)

Paul T. Zeisset, Assistant Chief, Statistical Reports, to Jan. 1987

Frederick G. Bohme, Chief, Census History Staff

Michael A. Hovland, Agriculture Census Historian

Deborah Barrett, Chief, Customer Services Branch, from Sept. 1987; Acting from Dec. 1984 to Sept. 1987

Forrest B. Williams, Chief, Customer Services Branch, to Dec. 1984

Larry W. Carbaugh, Chief, State and Regional Programs Staff

Forrest B. Williams, Chief, Systems and Programming Staff, from Sept. 1987 (Acting Chief, from Dec. 1984 to Sept. 1987)

John Kavaliunas, Chief, User Training Branch, from Nov. 1988

Carmen A. Campbell, Acting Chief, User Training Branch, Mar. 1988 to Nov. 1988

Deborah Barrett, Acting Chief, User Training Branch, from Sept. 1987 to Mar. 1988; Chief to Sept. 1987

Decennial Planning Division

This division provided overall direction for program planning and coordination of the decennial census; assigned functional responsibilities to divisions; developed program priorities, budget requirements, and time schedules; monitored and documented program and budget status. The division was responsible for liaison with other Bureau divisions for data needs and associated information and materials, and also with the Office of the Secretary (of Commerce), advisory committees, and other Federal, State, and local government agencies with regard to decennial census operations. The Decennial Planning Division had primary responsibility for supervising the 1990 Decennial Censuses in American Samoa and the Commonwealth of the Northern Mariana Islands, which included the 1990 Census of Agriculture for those areas. It coordinated all census activities in the areas, and cooperated with Agriculture Division in developing plans and materials for the agricultural enumeration.

Chief

Susan M. Miskura, Chief

Staff

Patricia A. Berman, Assistant Chief, Content and Products

Lourdes N. Flaim, Chief, Puerto Rico and Outlying Areas Branch, from Mar. 1988

Alfred J. Giglito, Acting Chief, Puerto Rico and Outlying Areas Branch, Jan. 1987 to Jan. 1988

George E. Hurn, Chief, Special Programs Branch, to Aug. 1987 (Branch renamed Puerto Rico and Outlying Areas Branch in Aug. 1987)

Thomas L. Ondra, Census Advisor, American Samoa, Nov. 1989 to October 1990

Carolyn R. Hay, Census Advisor, Northern Mariana Islands, Dec. 1989 to Sept. 1990

Paulette Lichtman-Panzer, Chief, Outlying Areas Section, from Sept. 1990

Janelle Fowler, Chief, Outlying Areas Section, Nov. 1988 to Sept. 1990

Irma F. Harahush, Chief, Outlying Areas Section, Nov. 1985 to Oct. 1987

Beulah S. Payne, Survey Statistician, Aug. 1986 to Apr. 1987

Nanette H. P. Sukla, Survey Statistician, July 1987 to Sept. 1988

Judy G. Belton, Survey Statistician, from Nov. 1987

Kimberly K. Giesbrecht, Survey Statistician, from Nov. 1987

Economic Census Staff

This staff coordinated and reviewed the planning, processing, and publication of the censuses; developed item schedules; and allocated census funds. The chief of this staff was the Assistant Director for Economic and Agriculture Censuses prior to July 1986 (see above).

Chief

Thomas L. Mesenbourg, from July 1986

Roger Bugenhagen, from Apr. 1986 to July 1986

John H. Berry, to Apr. 1986

Staff

Carole A. Ambler, Special Assistant, from Oct. 1987

Robert Marske, Special Assistant, from Dec. 1988

Beverly M. Eng, Special Assistant

B. J. Fitzpatrick, Special Assistant, from Feb. 1990

Mark Grice, Special Assistant, to Aug. 1985

Conrad J. Jacob, Coordinator, to Jan. 1987

Paul A. Zeisset, Special Assistant, from Jan. 1987

Thea J. Scott, Fiscal Analyst, from July 1986

Stanley M. Hyman, Survey Statistician

Economic Programming Division

(Established Jan. 1987)

This division planned and developed systems and prepared computer programs for the processing of all economic and agriculture censuses on electronic data-processing equipment on a consolidated basis, and provided systems-development activities needed.

Chief

Barry M. Cohen, from Jan. 1987

Staff

Robert G. Willner, Supervisory Computer Systems Analyst, from June 1990

David Onions, Chief, Computer Applications Research and Evaluation Branch, from Feb. 1988 to Apr. 1990 (position vacant from Oct. 1987 to Feb. 1988); Supervisory Computer Systems Analyst, from Jan. 1987 to Feb. 1988

Desmond J. Carron, Chief, Computer Applications Research and Evaluation Branch, from Jan. 1987 to Oct. 1987

Barbara L. Lambert, Computer Programmer Analyst, from Jan. 1987 to June 1987

John C. Leidich, Computer Programmer Analyst, from Jan. 1987 to Dec. 1989

Sandra L. Nokovich, Computer Programmer Analyst, from Jan. 1987 to Aug. 1987

Janice A. Ausby, Computer Programmer Analyst, from May 1988 to Aug. 1988

Leonard S. Sammarco, Computer Systems Analyst, from Jan. 1987

Rotha W. Cain, Computer Programmer Analyst, from Mar. 1988

David A. Tabaska, Computer Programmer Analyst, from June 1989

Sean G. Reed, Computer Programmer Analyst, from July 1990

John E. Adkins, Assistant Chief, Standard Statistical Establishment List and Agriculture Programs, from Jan. 1987

Sandra L. Nokovich, Chief, Agriculture Census Branch, from Feb. 1990

Vickie L. Cotton, Chief, Agriculture Census Branch, from Aug. 1989 to Feb. 1990 (Supervisory Computer Systems Analyst, from May 1987 to Aug. 1989)

Billy E. Stark, Chief, Agriculture Census Branch, from Jan. 1987 to Aug. 1989

Thaddeus S. Hess, Supervisory Computer Systems Analyst, from Jan. 1987 to Mar. 1990

Janet K. McGrane, Supervisory Computer Systems Analyst, from Jan. 1987 to Feb. 1990

Lisa B. Polgreen, Supervisory Computer Systems Analyst, from Oct. 1989

Dianne J. Simmons, Supervisory Computer Systems Analyst, from Jan. 1987 to Aug. 1989

Evelyn C. Proctor, Supervisory Computer Systems Analyst, from Oct. 1989 to Feb. 1990

Christina Arledge, Computer Programmer Analyst, from Apr. 1990

Janice A. Ausby, Computer Programmer Analyst, from Aug. 1988 to Jan. 1990

Mary L. Blackmon, Computer Programmer Analyst, from Feb. 1990

Hugh P. Watters, Computer Programmer Analyst, from Sept. 1990

Henry B. Evans, Computer Programmer Analyst, from Feb. 1990

Gilbert J. Flodine, Computer Programmer Analyst, from Sept. 1987

Trinh Vo, Computer Programmer Analyst, from July 1990

Clarence Hill, Computer Programmer Analyst, from Jan. 1987 to Feb. 1990

Hoa T. N. Nguyen, Mathematical Statistician, from Dec. 1990

Steven W. Laudrille, Computer Programmer Analyst, from Jan. 1987 to Feb. 1989

Morris A. Murray, Computer Programmer Analyst, from Jan. 1987 to Oct. 1987

Karen Hostetler, Computer Programmer Analyst, from Nov. 1988 to Apr. 1989

Annette S. Phillips, Computer Programmer Analyst, from Nov. 1988 to Sept. 1989

Evelyn Cabrera Proctor, Computer Programmer Analyst, from Jan. 1987 to Oct. 1989

Wilma C. Tarry, Computer Programmer Analyst, from Jan. 1987

Carole L. Williams, Computer Programmer Analyst, from May 1987 to Feb. 1990

Paul E. Poissant, Chief, Directory and Census Mailing List Branch, from Jan. 1987

Mark I. Kronish, Supervisory Computer Systems Analyst, from Jan. 1987

Susan Trefry Floor, Supervisory Computer Systems Analyst, from Mar. 1987

Raymond L. Abercrombie, Computer Programmer Analyst, from Jan. 1987

Pilar A. Baden, Computer Programmer Analyst, from Dec. 1989

John D. Bedwell, Computer Programmer Analyst, from Jan. 1987

William E. Dyer, Jr., Computer Programmer Analyst, from May 1988

Thaddeus S. Hess, Computer Systems Analyst, from Mar. 1990

Steven W. Laudrille, Computer Programmer Analyst, from Mar. 1990

Linda A. Raley, Computer Programmer Analyst, from Mar. 1988

William M. Sandusky, Computer Programmer Analyst, from Jan. 1987

James L. Kirk, Computer Systems Analyst, from Oct. 1987 to Dec. 1988

Robert D. Thomson, Computer Systems Analyst, from Feb. 1990

Edward F. Carr, Computer Programmer Analyst, from July 1990

Martin S. Harahush, Chief, Special Censuses/Surveys Programming Branch, from Feb. 1990

Sandra L. Nokovich, Chief, Special Censuses/Surveys Programming Branch, from July 1988 to Feb. 1990 (position vacant from Jan. to July 1988); Supervisory Computer Systems Analyst, from Aug. 1987 to July 1988

Lowell T. Wrucke, Chief, Special Censuses/Surveys Programming Branch, from Jan. 1987 to Jan. 1988

Mark A. Peitzmeier, Supervisory Systems Analyst, from Jan. 1987 to July 1987

Donald K. Salzman, Supervisory Computer Systems Analyst, from Nov. 1988

Janet K. McGrane, Supervisory Computer Systems Analyst, from Jan. 1987 to Feb. 1990

Mary L. Blackmon, Computer Programmer Analyst, from Jan. 1987 to Feb. 1990

Carol R. Blatt, Computer Programmer Analyst, from Feb. 1990

Rotha W. Cain, Computer Programmer Analyst, from Oct. 1987 to Mar. 1988

Deloris A. Cockrell, Computer Programmer Analyst, from Apr. 1990

Linhchi Conghuyen, Computer Programmer Analyst, from Feb. 1990

Henry B. Evans, Computer Programmer Analyst, from Nov. 1987 to Feb. 1990

Mary R. Evans, Computer Programmer Analyst, from June 1987 to May 1988

Llewellyn L. Forbes, Computer Programmer Analyst, from Oct. 1987

Frank J. Frederick, Computer Programmer Analyst, from Apr. 1988

Janet R. Phillips, Computer Programmer Analyst, from Feb. 1990

Mark F. Mildorf, Computer Programmer Analyst, from Jan. 1987 to Mar. 1987

Lisa B. Polgreen, Mathematical Statistician, from June 1987 to July 1988 (Computer Programmer Analyst, from July 1988 to Oct. 1989)

Jeffrey S. Rosen, Computer Programmer Analyst, from Dec. 1988 to Feb. 1990

Yolanda Santiago, Computer Programmer Analyst, from Jan. 1987 to Aug. 1988

Sheryl T. Smoot, Computer Programmer Analyst, from June 1990

Robert D. Thomson, Computer Programmer Analyst, from Nov. 1987 to Feb. 1990

Hugh P. Watters, Computer Programmer Analyst, from Jan. 1987 to Jan. 1990

John C. Leidich, Chief, Processing Automation and Control Branch, from Feb. 1990

Martin S. Harahush, Chief, Processing Automation and Control Branch, from June 1987 to Feb. 1990 (position vacant from Mar. 1987 to June 1987)

Kent C. Hoover, Chief, Processing Automation and Control Branch, from Jan. 1987 to Mar. 1987

Christine L. Ford, Supervisory Computer Systems Analyst, from Jan. 1990

Linda J. Hutton, Supervisory Computer Systems Analyst, from Jan. 1987 to Feb. 1987

Brian J. Lounsbury, Supervisory Computer Systems Analyst, from Aug. 1987 to Feb. 1990

James E. Thomas, Supervisory Computer Systems Analyst, from Jan. 1987
 Carol R. Blatt, Computer Programmer Analyst, from Dec. 1987 to Feb. 1990
 Henry B. Evans, Computer Programmer Analyst, from Jan. to Nov. 1987
 Linhchi Conghuyen, Computer Programmer Analyst, from Nov. 1988 to Feb. 1990
 Duc-Mong Nguyen, Computer Programmer Analyst, from Dec. 1989
 Janet R. Phillips, Computer Programmer Analyst, from Dec. 1989 to Feb. 1990
 Jeffrey S. Rosen, Computer Programmer Analyst, from Jan. 1987 to Dec. 1988
 Beverly B. Fransen, Computer Programmer, from Jan. to Feb. 1987
 Cecelia B. Whitaker, Operations Specialist, from Dec. 1987 to Feb. 1990

Field Division

This division collected and edited questionnaires used in the agriculture census of Puerto Rico. (The New York regional office processed the payrolls for the Puerto Rico censuses.) In addition, through information services specialists in the regional offices, the division assisted data users in using statistical data from all of the censuses.

Chief

Stanley D. Matchett

Staff

Susan A. Lavin, Assistant Chief, Surveys, from July 1987 (position vacant from Jan. 1987 to July 1987)
 Richard L. Bitzer, Assistant Chief, Surveys, to Jan. 1987
 Richard F. Blass, Assistant Chief, Methods, Research, and Evaluation (Research and Methodology prior to Oct. 1986)

Mary Ellen Beach, Chief, Methods and Performance Evaluation Branch (Field Methods Research Branch prior to Oct. 1986)

Karl K. Kindel, Assistant Chief, Automation Technology, to Jan. 1988

John W. Marshall, Assistant Chief, Management

Joe Cortez, Chief, Census Awareness and Products Staff, from July 1989 (position vacant from May to July 1989)

Alfonso Mirabal, Chief, Census Awareness and Products Staff, from Nov. 1986 to May 1989

Susan B. Hardy II, Chief, Census Awareness and Products Staff, to Sept. 1986 (Information Services Branch

prior to Oct. 1986; position vacant from Sept. 1986 to Nov. 1986)

Michael J. Weiler, Chief, Information Services Branch, to June 1985

Regional Offices (The directors of these offices were responsible directly to the chief of the Field Division)

ATLANTA, GA.

Director

James F. Holmes, from June 1985
 Susan A. Lavin, Acting, to June 1985

Staff

Michael D. Garner, Assistant Director, from Oct. 1987 (position vacant from July 1987 to Oct. 1987)
 Susan A. Lavin, Assistant Director, to July 1987
 Hector Feliciano, Area Manager, Puerto Rico, from Oct. 1987 to Sep. 1988

BOSTON, MA

Director

Arthur G. Dukakis

Staff

Kathleen N. Ludgate, Assistant Director, from Jan. 1988
 Leo J. Kearns, Assistant Director, to Jan. 1988

CHARLOTTE, NC

Director

William F. Hill, from June 1986
 John E. Bell, Acting, from Feb. 1986 to June 1986
 Joseph Harris, to Dec. 1985 (position vacant from Dec. 1985 to Feb. 1986)

Staff

E. Wilson Burdorf, Assistant Director, from Dec. 1988
 Larry Arnold, Assistant Director, from Aug. 1986 to Dec. 1988
 John E. Bell, Assistant Director, to June 1986 (position vacant from June 1986 to Aug. 1986)

CHICAGO, IL

Director

Stanley D. Moore

Staff

James L. Johnson, Assistant Director

DALLAS, TX

Director

John E. Bell, from Feb. 1987
John E. Reeder, Jr., to Feb. 1987

Staff

Willie R. Franklin, Assistant Director, from Oct. 1987
(position vacant from Feb. 1987 to Oct. 1987)
John E. Bell, Assistant Director, from June 1986 to Feb.
1987 (position vacant from Dec. 1985 to June 1986)
Bennie Daniels, Assistant Director, to Dec. 1985

DENVER, CO

Director

William F. Adams

Staff

Kenneth Ellwanger, Assistant Director, from Nov. 1988
Dean Schroeder, Assistant Director, to Nov. 1988

DETROIT, MI

Director

Dwight P. Dean, from Aug. 1987; Acting, from Feb. 1987 to
Aug. 1987
Robert G. McWilliam, to Feb. 1987

Staff

Jonathan J. Spendlove, Assistant Director, from Sept.
1987 (position vacant from July to Sept. 1987)
Robert J. Peterson, Assistant Director, to July 1987

KANSAS CITY, KS

Director

Marvin L. Postma

Staff

Bettie J. Bryant, Assistant Director, from Mar. 1987 (posi-
tion vacant from Aug. 1986 to Mar. 1987)
Stephen A. Mann, Assistant Director, to Aug. 1986

LOS ANGELES, CA

Director

John E. Reeder, from Oct. 1987; Acting, from Feb. 1987 to
Oct. 1987 (position vacant from Aug. 1986 to Feb. 1987)
Francis W. White, Jr., to Aug. 1986

Staff

Michael J. Flanagan, Assistant Director, from Dec. 1987
(position vacant from Oct. 1987 to Dec. 1987)
Michael J. Weiler, Assistant Director, to Oct. 1987

NEW YORK, NY

Director

Sheila Goehringer Grimm, from Nov. 1986 (position vacant
from June 1986 to Nov. 1986)
William F. Hill, to June 1986

Staff

Michael Longini, Assistant Director, from Feb. 1987
Sheila Goehringer, Assistant Director, to Nov. 1986

PHILADELPHIA, PA

Director

LaVerne V. Collins

Staff

Harold Hayes, Assistant Director, from Dec. 1986 (position
vacant from Aug. 1986 to Dec. 1986)
Larry Arnold, Assistant Director, to Aug. 1986

SEATTLE, WA

Director

Leo C. Schilling

Staff

Dannie L. Martin, Assistant Director

Finance Division

(Established as a division in Jan. 1987.)

This division performed financial analysis, maintained
financial accounts, coordinated payroll and leave audits,
and prepared financial reports.

Chief

James D. Lincoln, from Jan. 1987

Organization and Management Systems Division

This division planned and conducted management analysis and support functions, including organizational improvement studies, maintenance and control of the Bureau's integrated administrative data base, systems designs and inspection, and other management analysis and research.

Chief

Michael S. McKay

Personnel Division

This division provided personnel management services, which included position classification and pay administration, recruitment and employment, employee relations and services, and related personnel operations.

Chief

David P. Warner

Staff

Colleen Woodard, Assistant Chief, from Oct. 1985

Publications Services Division

(Merged with Administrative Services Division in Feb. 1990; unless otherwise noted, personnel continued in positions listed after divisions merged.)

This division supplied art, editorial, copy preparation, and printing coordination services for census questionnaires and publications.

Chief

Walter C. Odom, Jr., to Feb. 1990

Wayne H. Massey, Special Assistant to the Chief, to Feb. 1990

Staff

Everett L. Dove, Chief, Printing Branch, from Jan. 1986 to Feb. 1990

Sarajane Goodwin, Robert Warunek, Everett L. Dove, Alice L. Corbett, and Steven Shifler alternately served as Acting Chief, Printing Branch, from Jan. 1985 to Dec. 1985

Helen B. Burnett, Chief, Printing Procurement Section, from May 1987 to Feb. 1990

Jean E. Walker, Chief, Printing Procurement Section, to May 1987

Arlene Duckett, Printing Specialist

Gerald A. Mann, Chief, Publications Planning and Graphics Branch, to Feb. 1990

Larry D. Tackett, Chief, Recurring Publications Section, to Feb. 1990

Gloria T. Davis, Chief, Composition Unit, to Feb. 1990

David M. Coontz, Chief, Electronic Graphics Section, from Aug. 1987 to Feb. 1990

Nicholas A. Preftakes, Chief, Creative Design Staff, to Feb. 1990 (Design and Graphics Section Prior to Aug. 1987)

John T. Overby, Chief, Census Publications Section, to Feb. 1990

Helen M. Curtis, Composition Supervisor, to Oct. 1986 (position abolished Oct. 1986)

Debeorah L. Callison, Editor

Christine R. Nelson, Editor

Statistical Research Division

This division developed and evaluated statistical and other quantitative methods for use in the Bureau's programs; ensured that these methods were theoretically and operationally sound; furnished research information and consultative support; and conducted evaluation and research studies to provide statistical measures of the error in census data and to assess whether census procedures and methodologies could be improved in terms of accuracy, timeliness, and cost.

Chief

Robert D. Tortora, from Feb. 1990

Lawrence Ernst and Nash J. Monsour alternated monthly as Acting Chief from Aug. 1988 to Feb. 1990

Kirk M. Wolter, to Aug. 1988

Staff

Lawrence Ernst, Assistant Chief, Mathematics and Statistical Data Analysis, from Apr. 1987 (position vacant from July 1986 to Apr. 1987)

Brian Greenberg, Principal Researcher

Laura Zayatz, Mathematical Statistician, from Jan. 1989

Systems Support Division

This division planned and provided the activities required to maintain the Bureau's computers, communication facilities, and auxiliary hardware at required levels of operating effectiveness; and developed, modified, and maintained operational support software at performance levels necessary to process data and meet other Bureau objectives.

Chief

Arnold E. Levin

Staff

John Jerry Bell, Assistant Chief, User Support
Robert Munsey, Assistant Chief, Software Support

Technical Services Division

This division planned and performed engineering services, including research, development, and maintenance,

to provide and support electromechanical and electronic equipment required for automated document handling and data capture; and devised solutions to datacommunication problems.

Chief

C. Thomas DiNenna

Appendix D. Publications in Selected Series

The Census Bureau published an advance report for each county or equivalent with 10 or more farms during the census period, for each State and for the United States. Each report consisted of two pages with a short explanatory text giving reference information, the farm definition and symbols used in the table, and a table of summary data on farms, land in farms, and selected items (e.g., livestock and poultry, selected crops harvested, and so on). The advance reports were released in printed volumes (sold only in State sets), on computer tape and flexible diskette, and through private vendors DIALOG and CompuServe on CENDATA™, the Bureau's online computer access system, and the AgriData Network.

The Volume 1, *Geographic Area Series*, AC87-A, reports were published for the United States, each State, Puerto Rico, Guam, the U.S. Virgin Islands, American Samoa, and the Northern Mariana Islands. Each report contained detailed data tabulations for each county and county equivalent, and for the State or area. The Census Bureau issued the volume 1 reports in printed publications, on computer tape, online (highlights only) and in compact disc-read only memory (CD-ROM) format. (The reports for Puerto Rico,

Guam, the U.S. Virgin Islands, American Samoa and the Northern Marianas were released only in printed form, with highlights online.) The Volume 2, *Subject Series*, AC87-S, consisted of five reports—the *Agricultural Atlas of the United States* and the *History* were released only in printed reports; the *Ranking of States and Counties* also was a printed report, with highlights available online; and *Government Payments and Market Value of Agricultural Products Sold* and *ZIP Code Tabulations of Selected Items* were released in printed publications and on flexible diskette, with highlights online. Volume 3, *Related Surveys*, series AC87-RS, included two printed reports, Part 1, *Farm and Ranch Irrigation Survey (1988)*, and 2, the *Agricultural Economics and Land Ownership Survey (1988)*, with the data from each survey also available on flexible diskette and with highlights online. Volume 4, *Census of Horticultural Specialties (1988)*, series AC87-HOR-1, consisted of a single printed report, with tabulations available on flexible diskette, and with highlights released online. All the volume 2, 3, and 4 publications available on flexible diskettes also were included on a separate CD-ROM.

PRINTED REPORTS

Advance Reports, Series AC87-A(A)

State sets	Report No. (AC87-A)	No. of reports	Price	Approved for print	Published
Alabama	-01(A)	68	\$7.00	03/09/89	03/31/89
Alaska	-02(A)	5	1.50	05/01/89	05/18/89
Arizona	-04(A)	15	2.00	04/11/89	05/10/89
Arkansas	-05(A)	76	8.00	03/03/89	03/29/89
California	-06(A)	57	6.00	04/17/89	05/05/89
Colorado	-08(A)	60	6.50	03/14/89	04/07/89
Connecticut	-09(A)	9	2.00	11/14/88	12/09/88
Delaware	-10(A)	4	1.25	09/19/88	10/17/88
Florida	-12(A)	66	7.00	05/17/89	06/20/89
Georgia	-13(A)	160	16.00	04/20/89	05/22/89
Hawaii	-15(A)	5	1.50	05/30/89	06/16/89
Idaho	-16(A)	45	5.00	03/13/89	03/31/89
Illinois	-17(A)	103	11.00	01/10/89	01/31/89
Indiana	-18(A)	93	9.50	02/09/89	03/01/89
Iowa	-19(A)	100	10.00	04/27/89	05/23/89
Kansas	-20(A)	106	11.00	03/08/89	03/31/89
Kentucky	-21(A)	121	13.00	03/09/89	04/04/89
Louisiana	-22(A)	64	6.50	04/14/89	05/11/89
Maine	-23(A)	17	2.50	11/14/88	12/09/88
Maryland	-24(A)	24	3.00	10/07/88	11/04/88

PRINTED REPORTS—Con.

Geographic Area	Report No. (AC87-A)	Pages	Price	Approved for print	Published
Massachusetts	-25(A)	14	2.25	12/01/88	01/03/89
Michigan	-26(A)	82	8.50	02/27/89	03/21/89
Minnesota	-27(A)	87	9.00	05/01/89	05/22/89
Mississippi	-28(A)	83	8.50	04/12/89	05/11/89
Missouri	-29(A)	115	12.00	03/02/89	03/29/89
Montana	-30(A)	57	6.00	03/13/89	04/07/89
Nebraska	-31(A)	94	9.50	05/08/89	06/07/89
Nevada	-32(A)	17	2.50	02/10/89	03/02/89
New Hampshire	-33(A)	11	2.00	11/14/88	12/09/88
New Jersey	-34(A)	22	3.00	04/24/89	05/16/89
New Mexico	-35(A)	32	4.00	03/13/89	04/03/89
New York	-36(A)	58	6.00	02/28/89	03/21/89
North Carolina	-37(A)	100	10.00	04/19/89	05/16/89
North Dakota	-38(A)	54	5.50	01/17/89	02/13/89
Ohio	-39(A)	89	9.00	01/17/89	02/15/89
Oklahoma	-40(A)	78	8.00	04/19/89	05/12/89
Oregon	-41(A)	37	4.25	01/06/89	01/25/89
Pennsylvania	-42(A)	68	7.00	12/20/88	01/10/89
Rhode Island	-44(A)	6	1.50	10/25/88	11/18/88
South Carolina	-45(A)	47	5.00	04/18/89	05/11/89
South Dakota	-46(A)	68	7.00	04/18/89	05/11/89
Tennessee	-47(A)	96	9.50	05/08/89	06/07/89
Texas	-48(A)	255	24.00	05/09/89	06/07/89
Utah	-49(A)	30	3.50	02/10/89	03/02/89
Vermont	-50(A)	15	2.25	11/14/88	12/09/88
Virginia	-51(A)	98	10.00	04/03/89	05/05/89
Washington	-53(A)	40	4.50	02/10/89	03/02/89
West Virginia	-54(A)	55	6.00	02/01/89	02/15/89
Wisconsin	-55(A)	72	7.50	01/17/89	02/13/89
Wyoming	-56(A)	24	3.00	02/09/89	03/02/89
United States	-00(A)	1	1.00	11/16/89	12/07/89

Volume 1, Geographic Area Series, Series AC87-A

Geographic Area	Report No. (AC87-A)	Pages	Price	Approved for print	Published
Alabama	-1	436	\$20.00	07/25/89	08/15/89
Alaska	-2	104	4.75	08/08/89	08/29/89
Arizona	-3	244	11.00	06/22/89	07/14/89
Arkansas	-4	456	21.00	07/24/89	08/16/89
California	-5	424	19.00	05/25/89	06/16/89
Colorado	-6	396	18.00	06/08/89	06/29/89
Connecticut	-7	244	11.00	03/28/89	04/13/89
Delaware	-8	224	11.00	01/25/89	02/23/89
Florida	-9	436	20.00	07/18/89	08/03/89
Georgia	-10	704	29.00	07/26/89	08/15/89
Hawaii	-11	204	10.00	08/23/89	08/29/89
Idaho	-12	344	16.00	06/29/89	07/24/89
Illinois	-13	524	24.00	04/14/89	05/05/89
Indiana	-14	524	24.00	05/26/89	06/16/89

Volume 1, Geographic Area Series, Series AC87-A—Con.

Geographic Area	Report No. (AC87-A)	Pages	Price	Approved for print	Published
Iowa	-15	516	23.00	06/05/89	06/21/89
Kansas	-16	544	24.00	06/06/89	06/21/89
Kentucky	-17	596	27.00	07/26/89	08/08/89
Louisiana	-18	396	18.00	07/20/89	08/08/89
Maine	-19	276	13.00	04/05/89	05/11/89
Maryland	-20	284	13.00	02/22/89	03/13/89
Massachusetts	-21	244	11.00	03/21/89	03/31/89
Michigan	-22	484	22.00	05/30/89	06/16/89
Minnesota	-23	496	22.00	06/27/89	07/20/89
Mississippi	-24	476	22.00	07/21/89	08/16/89
Missouri	-25	324	26.00	06/09/89	06/29/89
Montana	-26	396	18.00	06/30/89	07/24/89
Nebraska	-27	264	23.00	06/23/89	07/14/89
Nevada	-28	264	12.00	06/22/89	07/10/89
New Hampshire	-29	244	11.00	03/20/89	03/31/89
New Jersey	-30	284	13.00	07/26/89	08/18/89
New Mexico	-31	324	15.00	07/06/89	07/27/89
New York	-32	424	19.00	07/19/89	08/07/89
North Carolina	-33	536	24.00	07/18/89	08/02/89
North Dakota	-34	396	18.00	06/22/89	07/10/89
Ohio	-35	522	23.00	04/19/89	05/05/89
Oklahoma	-36	476	22.00	07/21/89	08/08/89
Oregon	-37	336	16.00	04/17/89	05/05/89
Pennsylvania	-38	444	20.00	04/19/89	05/08/89
Rhode Island	-39	216	10.00	03/28/89	04/13/89
South Carolina	-40	356	16.00	07/26/89	08/15/89
South Dakota	-41	416	19.00	06/14/89	07/03/89
Tennessee	-42	504	23.00	07/25/89	08/08/89
Texas	-43	1,024	31.00	07/28/89	08/16/89
Utah	-44	296	14.00	06/13/89	06/29/89
Vermont	-45	244	11.00	03/24/89	04/13/89
Virginia	-46	524	24.00	07/25/89	08/08/89
Washington	-47	344	16.00	06/06/89	06/21/89
West Virginia	-48	364	17.00	04/18/89	05/05/89
Wisconsin	-49	456	21.00	03/14/89	03/29/89
Wyoming	-50	264	12.00	06/16/89	07/07/89
United States	-51	464	21.00	11/16/89	12/07/89
Puerto Rico	-52	276	13.00	08/09/89	08/29/89
Guam	-53	64	3.00	03/09/89	04/03/89
Virgin Islands	-54	64	3.00	05/12/89	05/31/89
American Samoa	-55	68	3.50	02/12/91	03/06/91
Northern Mariana Islands	-56	56	3.00	12/19/90	01/14/91

Volume 2, Subject Series, AC87-S

Part	Title	Price	Approved for print	Published
1	<i>Agricultural Atlas of the United States,</i> AC87-S-1	11.00	08/10/90	10/11/90
2	<i>Coverage Evaluation,</i> AC87-S-2	3.25	08/10/90	08/29/90
3	<i>Ranking of States and Counties,</i> AC87-S-3	7.00	09/27/90	10/17/90

Volume 2, Subject Series, AC87-S—Con.

Part	Title	Price	Approved for print	Published
4	<i>History, AC87-S-4</i>	11.00	09/23/92	10/15/92
5	<i>Government Payments and Market Value of Agricultural Products Sold, AC87-S-5</i>	28.00	10/12/90	11/08/90
6	<i>ZIP Code Tabulations of Selected Items, AC87-S-6</i>	31.00	07/13/90	08/23/90

Volume 3, Related Surveys, Series AC87-RS

1	<i>Farm and Ranch Irrigation Survey (1988), AC87-RS-1</i>	5.00	05/23/90	06/18/90
2	<i>Agricultural Economics and Land Ownership Survey (1988), AC87-RS-2</i>	11.00	08/07/90	08/31/90

**Volume 4, Census of Horticultural Specialties (1988),
Series AC87-HOR-1**

Title	Price	Approved for print	Published
<i>Census of Horticultural Specialties (1988)</i>	10.00	08/19/91	10/08/91

Appendix E.

Chronology of Major Activities

	Began	Completed
1985 CONTENT PRETEST		
Preview mailout	12/85	12/85
Initial mailout	12/85	12/85
Reminder card mailout	01/86	01/86
1st followup	02/86	02/86
2nd followup	03/86	03/86
3rd followup	04/86	04/86
Field interview followup	05/86	05/86
Telephone interview followup	05/86	05/86
Data entry	02/86	04/86
1986 SHORT FORM PRETEST		
Mailout	12/86	12/86
Telephone interviews	01/87	01/87
ADDRESS LIST COMPILATION		
Preliminary source list	10/86	04/87
Final source list	07/87	11/87
1987 CENSUS OF AGRICULTURE OF THE UNITED STATES		
Printing of report forms	01/87	02/88
Delivery of report forms	06/87	02/88
Addressing report forms	10/87	12/87
Initial mailout	12/87	12/87
Thank you/reminder card	01/88	01/88
1st followup—report form	02/88	02/88
2nd followup—letter	03/88	03/88
3rd followup—report form	04/88	04/88
4th followup—letter	05/88	05/88
5th followup—report form	06/88	06/88
Telephone followup	01/88	09/88
Citrus caretaker enumeration	05/87	11/87
Precomputer data processing		
Receipt and check-in	01/88	09/88
Correspondence	01/88	08/88
Interactive search	01/88	09/88
Data entry	01/88	09/88
Computer processing		
Formatting and simple edit	01/88	09/88
Complex edit and edit correction	01/88	11/88
Imputation for nonresponse	05/88	02/89
Data tabulation		
Analytical tabulations	06/88	02/89
Advance tabulations	08/88	12/89
Final tabulations for all geographic areas	09/88	01/90

	Began	Completed
1987 CENSUS OF AGRICULTURE OF THE UNITED STATES—Con.		
Publication program		
Advance reports	09/88	12/89
Volume 1, <i>Geographic Area Series</i>	01/89	12/89
Volume 2, <i>Subject Series</i>	07/90	03/92
Volume 3, <i>Related Surveys</i>	05/90	08/90
1987 COVERAGE EVALUATION		
Receive USDA 1987 June Enumerative Survey (JES) Data	09/87	09/87
Develop and implement linkage system	06/87	09/87
Develop coverage evaluation report form	01/87	09/87
Mailout and mail followup	03/88	07/88
Telephone followup	06/88	10/88
Edit and review coverage records	04/88	01/89
Coverage estimation	12/88	01/90
Produce Volume 1 publication tables	12/88	09/89
Publish Volume 2, Part 2, <i>1987 Coverage Evaluation</i>	08/90	08/90
1987 CENSUS OF AGRICULTURE IN PUERTO RICO		
Design report forms	11/85	08/87
Print report forms	10/87	01/88
Prepare special farms list	06/87	12/87
Memorandum of agreement with the Commonwealth Government	09/86	09/86
Prepare training and enumeration materials	08/86	04/87
Establish census office in Puerto Rico	01/88	01/88
Mailout to special farms	06/88	06/88
Recruit enumerators	04/88	07/88
Train enumerators	07/88	07/88
Field enumeration	07/88	10/88
Close census office	10/88	10/88
Data processing	07/88	05/89
Tabulation	03/89	06/89
Publication	08/89	08/89
1987 CENSUS OF AGRICULTURE IN GUAM		
Develop report form	06/86	06/87
Memorandum of agreement with the Territorial Government	07/86	04/87
Prepare training and enumeration materials	10/86	01/88
Prepare farm operator list	12/87	12/87
Establish census office	02/88	02/88
Recruit census staff	02/88	02/88
Training	02/88	02/88
Enumeration	02/88	04/88
Receipt and check-in	02/88	04/88
Data processing	04/88	10/88
Tabulation	11/88	01/89
Publication	03/89	03/89

Began**Completed****1987 CENSUS OF AGRICULTURE IN THE U.S. VIRGIN ISLANDS**

Develop report form	11/85	11/87
Memorandum of agreement with the Territorial Government	11/86	12/87
Prepare training and enumeration materials	06/86	04/88
Prepare list of farm operators	04/88	04/88
Establish census office	05/88	05/88
Recruit census staff	06/88	06/88
Training	06/88	07/88
Enumeration	07/88	08/88
Receipt and check-in	09/88	09/88
Data processing	09/88	01/89
Tabulation	12/88	04/89
Publication	05/89	05/89

1990 CENSUS OF AGRICULTURE IN AMERICAN SAMOA AND THE COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

Develop report form	04/89	08/89
Memorandums of agreement with the local governments	12/89	12/89
Prepare training and enumeration materials	04/89	04/90
Establish census office	01/90	01/90
Recruit census staff	01/90	03/90
Training	03/90	03/90
Enumeration	04/90	08/90
Receipt and check-in	08/90	09/90
Data processing	08/90	11/90
Tabulation	10/90	01/91
Publication	12/90	03/91

1988 CENSUS OF HORTICULTURAL SPECIALTIES

Mail pretest	07/87	10/87
Design report forms	01/87	07/88
Print report forms	11/88	01/89
Mail list compilation	12/88	01/89
NASS data collection	02/89	04/89
Initial census mailout	03/89	03/89
Thank you/reminder card	03/89	03/89
1st followup	04/89	04/89
2nd followup	05/89	05/89
3rd followup	05/89	05/89
4th followup	06/89	06/89
Census "adds" mailout	07/89	07/89
"Adds" mail followup	08/89	08/89
Data processing	12/90	05/91
Tabulation	05/91	08/91
Publication	08/91	09/91

1988 FARM AND RANCH IRRIGATION SURVEY

Design report forms	12/87	04/88
Print report forms	10/88	12/88
Mail list compilation	12/88	12/88
Initial mailout	01/89	01/89

	Began	Completed
1988 FARM AND RANCH IRRIGATION SURVEY—Con.		
1st followup	02/89	02/89
2nd followup	03/89	03/89
3rd followup	04/89	04/89
4th followup	05/89	05/89
Telephone followup	05/89	06/89
Data processing	02/89	06/89
Tabulation	07/89	04/90
Publication	05/90	06/90
1988 AGRICULTURAL ECONOMICS AND LAND OWNERSHIP SURVEY		
Design report forms	12/87	06/88
Print report forms	09/88	10/88
Mail list compilation	12/88	01/89
Pretest	09/88	09/88
Initial mailout (operators)	01/89	01/89
Mail followup (operators)	01/89	05/89
Initial mailout (landlords: Waves 1- 4)	03/89	07/89
Mail followup (landlords: Waves 1-4)	04/89	08/89
Data processing	02/89	09/89
Tabulation	09/89	07/90
Publication	08/90	08/90

APPENDIX F. Report Forms

CHANGES IN THE STANDARD REPORT FORMS

Background Information

Final authority for the design and content of all census data collection forms is vested in the Secretary of Commerce, who usually delegates this task to the Director of the Bureau of the Census. The Census Bureau routinely solicits comments and recommendations on the report forms from interested organizations and agencies, including the U.S. Department of Agriculture and the Bureau of Economic Analysis. The Bureau's own advisory committee on agriculture statistics reviews the suggestions, comments, and data requests submitted, and makes its own recommendations on the priorities to be assigned to various items for inclusion in the final report forms. (See ch. 2.)

1987 Census of Agriculture Report Forms

General design—The 1987 report form design was essentially the same as for 1982. The 1982 census reintroduced regionalized census report forms, identifying 12 geographic regions of the 50 States. Florida, Hawaii, and Texas each constituted a separate region. For the 1987 census, these States plus Alaska each were designated separate regions. The "regionalized report forms" used identical formats, but employed tailored items to list crops (sections 2 through 8) and livestock (section 15) common to the specific region covered by each version of the form. For example, section 2 ("Were any of the following CROPS harvested from 'THIS PLACE' in 1987?") of the form 87-A0203 (Michigan, Wisconsin, and Minnesota), and of form 87-A0205 (for Florida) requested acres and quantity harvested, and acres-irrigated data for the following crops, in the expected order of importance of each crop within the report form region:

Form 87-A0203

Corn (field) for grain or seed
Corn (field) for silage or green chop
Wheat for grain (including durum)
Oats for grain
Barley for grain
Rye for grain
Soybeans for beans
Beans, dry edible

Form 87-A0205

Corn (field) for grain or seed
Corn (field) for silage or green chop
Soybeans for beans
Sugarcane for sugar
Sugarcane for seed
Peanuts for dry nuts
Wheat for grain
Oats for grain

Form 87-A0203

Sunflower seed
Flaxseed
Sugar beets for sugar
Tobacco—all types
Potatoes, Irish

Form 87-A0205

Rye for grain
Cotton
Tobacco—all types
Potatoes, Irish
Sweetpotatoes and yams

Similarly, section 6 ("Were any STRAWBERRIES, CRANBERRIES, or OTHER BERRIES harvested FOR SALE from 'THIS PLACE' in 1987?") of the forms 87-A0201 (New England and the Middle Atlantic States) and 87-A0210 (Washington, Oregon, and Idaho) asked for total acres, acres harvested, and acres irrigated for berry crops. However, the form A0201 prelisted strawberries in the data table, with other crops and their codes listed for the respondent to write in as needed. The A0210 had no crops prelisted. The different crops included on the write-in lists in section 6 of the respective forms were as follows:

Form 87-A0201

Blackberries and dewberries
Blueberries, tame
Blueberries, wild
Cranberries
Raspberries
Other berries

Form 87-A0210

Blackberries and dewberries
Blueberries, tame
Boysenberries
Cranberries
Currants
Loganberries
Raspberries
Strawberries
Other berries

The census used sample and nonsample versions of each regionalized questionnaire (except for Alaska and Hawaii, where only sample forms were used); the sample versions included items asked of only a sample of respondents. The sample version of each regionalized form was further subdivided into "must" and "sample nonmust" forms, though there were no content variations between them.)

The nonsample form had four pages printed on a large sheet of white stock, 14" x 20 1/2", folded to 14" x 10 1/4". The sample version, used for "must" and "certainty" cases as well, was 14" x 26" overall, with six pages, folded to 14" x 10 1/4". (The additional pages on the sample form were two numbered half-pages, 14" x 5 1/2".) The sample questionnaire contained all the sections on the nonsample form, plus six additional sections requesting data on production expenses; use of commercial fertilizer, rock phosphate, or lime; use of insecticides, herbicides,

fungicides, nematicides, other pesticides, or other chemicals; machinery and equipment; estimated current market value of land and buildings; and income from farm-related sources in 1987.

The Bureau sent form 87-A0400 "short" report forms to over 900,000 addresses on the final census mail list, where their farm status was uncertain, while the remaining 3.2 million addresses constituted the mail universe for the standard report forms. Approximately 75 percent of these addresses received nonsample report forms, which asked for basic data on inventory, production, sales, and operator characteristics. Sample forms went to all addresses in Hawaii and Alaska, all "must" cases, and to a random sample of all the other addresses that were not sent the A0400 form. (See ch. 5 for details on the census mailout.)

The questionnaires were assigned form numbers by type of form (i.e., nonsample, sample-nonmust, and "must") and by geographic region. The nonsample questionnaires were forms 87-A0101 through -A0111, the sample-nonmust forms 87-A0201 through -A0213 (operators in Hawaii and Alaska received forms 87-A0212 or -A0213 respectively), while "must" cases were sent forms 87-A0301 through -A0311, as appropriate.

Changes in the data requested—The overall data content of the 1987 census report forms was similar to that of the 1982 census—the bulk of the data collected on agricultural operations naturally concerned number of farms, land in farms, production, and inventory. However, specific data requirements and priorities changed, and the census report forms were adjusted to reflect these. The principal changes to the "all farms" sections of the report forms for the 1987 enumeration were as follows:

Section 1. ACREAGE IN 1987	Item on "acres in this place" altered to emphasize "THIS PLACE." Item on land diverted to Federal commodity production reduction programs was moved to section 12.
Section 9. GROSS VALUE of CROPS SOLD from "THIS PLACE," in 1987 BEFORE taxes and expenses	"Barley" was added as a separate item.
Section 10. How were the ACRES in this place USED in 1987?	New title for land use section.
Section 11. Was any LAND in this place IRRIGATED at any time in 1987?	Item on source of water used for irrigation deleted.

Section 12. (NEW) Were any ACRES in this place SET ASIDE, DIVERTED, OR IDLED under FEDERAL acreage reduction programs in 1987?

Requested acres set aside under annual commodity acreage adjustment programs and acres under the Conservation Reserve Program.

Section 16. Did you or anyone else have any HORSES, BEES, FISH, GOATS, OTHER LIVE-STOCK, OR ANIMAL SPECIALTIES on this place in 1987?

Items on worms and chinchillas were deleted.

Section 18. GOVERNMENT CCC LOANS

Items on amount received in 1987 Commodity Control Corporation (CCC) loans for corn and soybeans were requested as separate items.

Section 19. (NEW) Payments received for participation in FEDERAL FARM PROGRAMS in 1987 (DO NOT INCLUDE CCC loans.)

An item was added asking amount received in cash payments, and payment-in-kind certificates.

Sections 22 through 28 were the "sample" items. The changes made to the sample sections of the report form were as follows:

Section 23. PRODUCTION EXPENSES paid by you and others for this place in 1987.

Items on tons of feed purchased and number of employees hired were deleted for 1987; the 1982 section on expenditures for energy (section 26) was deleted and its items added to section 23; items were added on the cost of repairs and maintenance, property taxes paid, cash rent paid, and "other" expenses. The section requested interest expense for loans secured and not secured by real estate.

Section 26. MACHINERY AND EQUIPMENT on this place on December 31, 1987—Include only equipment used for agricultural operations in 1986 or 1987.

The 1982 items on automobiles, corn heads for combines, and field forage harvesters were deleted for 1987; the item on tractors was altered to ask for data on tractors of less than 40 horsepower, and for those with 40 horsepower or more; the item on grain and bean combines requested information on both pulled and self-propelled types.

Section 28. (NEW)
INCOME FROM
FARM-RELATED
SOURCES IN 1987.
Report amount
received before taxes
and expenses.

This new section asked for data on farm-related income. (These data were last requested in the 1974 census.)

Puerto Rico and the Outlying Areas

Form 87-A1(PR), Puerto Rico—The 1987 report form for Puerto Rico was based on the 1982 form, with minor wording changes intended to simplify the form and improve response, and some organizational changes. Sections 1-20 of the report form requested data from all farm operators, while sections 21-25 asked for information only from a sample of farmers (see ch. 7).

Form 87-A1(G), Guam—The 1987 agriculture census report form for Guam was virtually identical in format and content to that used in 1982; the only changes involved reordering the listing of crops in section 3 (Crops Harvested in 1987) and minor changes in the wording of some of the crop names (e.g., "Beans, green," instead of "Green beans").

Form 87-A1(VI), U. S. Virgin Islands—The 1987 agriculture census form for the U.S. Virgin Islands also was little changed from that used in the 1982 enumeration, except for the deletion from section 2 (Land Used in Agriculture) of the item on whether the farm was on a hard surface (all weather) road.

Form 90-A1(NM), Northern Mariana Islands—The 1990 agriculture census of the Northern Mariana Islands (and American Samoa; see below) was carried out by the field enumeration staff of the 1990 Decennial Census for those areas, and was the first agricultural enumeration there since 1980. The 1990 agriculture census report form for the Northern Mariana Islands was similar in format and layout to the 1980 version, with relatively minor changes in content. A general modification to sections 2 (Field Crops, Melons, and Vegetables) and 3 (Fruits and Nuts) asked for data on volume of products sold, and value of those sales, for 1989. Other changes were as follows:

Section 1. LAND IN AGRICULTURE

The item (unnumbered) on the full name of the owner of this land was deleted, and the item on acres rented from others was expanded to ask for the name(s) of any landlords and the acres rented from each.

Section 2. FIELD CROPS, MELONS, AND VEGETABLES

The separate item requested production data on honeydew melons was deleted.

Section 3. FRUITS AND NUTS

The item on coffee was deleted. An item was added requesting the square feet under cover and/or acres planted in ornamental plants and other nursery crops.

Section 5. LIVESTOCK AND POULTRY

The items on carabaos was deleted, while items were added asking the value of livestock and poultry sales, and the value of chicken eggs sold.

Form 90-A1(AS), American Samoa—Modifications to the agriculture report form for the 1990 census in American Samoa were similar to those made to the form 90-A1(NM), and included asking for quantity and value of sales in 1989 in the crops and fruits and nuts sections. Other changes included the following:

Section 1. LAND IN AGRICULTURE

The item on acres owned was modified to ask whether any of the land was "communal," rather than *matai* land.* An item requesting the full name of the owner was deleted, and an item was added asking the name and acres rented from each landlord. The item asking whether the holding produced for home consumption or sale was split into two separate items.

Section 2. FIELD CROPS, MELONS, AND VEGETABLES

Green peas and green peppers were dropped from the listed crops, while green beans and melons were added.

Section 3. FRUITS AND NUTS

An item was added requesting the square feet under cover, and/or acres planted in ornamental plants and other nursery crops.

Section 5. LIVESTOCK AND POULTRY

Items were added asking the value of livestock and poultry sales and the quarts of milk sold.

*A *matai* is the chief or head of an extended family or tribe-like group. Land occupied and used by the group is traditionally considered *matai* land, although the *matai* may not personally have possession or use of it.

FACSIMILES OF SELECTED REPORT FORMS, INFORMATION SHEETS, AND FOLLOWUP LETTERS

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1985 Content Pretest Report Form 85-A1

DUE BY: JANUARY 31, 1986

OMB NO. 0607-0501 Approval Expires December 31, 1986

FORM **85-A1**
(10-31-85)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS



UNITED STATES CENSUS OF AGRICULTURE

Please complete this
form and RETURN TO

BUREAU OF THE CENSUS
1201 East Tenth Street
Jeffersonville, Indiana 47133

Note — If your records are not available, reasonable estimates may be used. If you cannot file by January 31, a time extension request may be sent to the above address. Include your 12-character Census File Number (CFN) as shown in your address label in all correspondence to us.

If you received more than one report form, enter extra Census File Number(s) here and return extra copies with your completed report.

CENSUS USE ONLY

035	036	037	038
039	040	041	042

NOTICE — Response to this inquiry is required by law (title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

In correspondence pertaining to this report, please refer to your Census File Number (CFN)

85-A1

(Please correct errors in name, address, and ZIP code.)

SECTION 1 ACREAGE IN 1985 Report land owned, rented, or used by you, your spouse, or by the partnership, corporation, or organization for which you are reporting. Include ALL LAND, REGARDLESS OF LOCATION OR USE — cropland, pastureland, rangeland, woodland, idle land, house lots, etc.

If the acres you operated in 1985 changed during the year, refer to the INFORMATION SHEET, Section 1.

1. All land owned ☐ None ☐ Number of acres

2. All land rented or leased FROM OTHERS, including land worked by you on shares, used rent free, in exchange for services, payment of taxes, etc. Include leased Federal, State, and railroad land. (DO NOT include land used on a per-head basis under a grazing permit.) Also complete item 5 below. ☐ None ☐ Number of acres

3. All land rented or leased TO OTHERS, including land worked on shares by others and land subleased. Also complete item 6 below. ☐ None ☐ Number of acres

4. ACRES IN THIS PLACE — ADD acres owned (item 1) and acres rented (item 2), then SUBTRACT acres rented TO OTHERS (item 3), and enter the result in this space. ☐ None ☐ Number of acres

For this census report these are the "ACRES IN THIS PLACE."
If the entry is zero please refer to the INFORMATION SHEET, Section 1.

5. If you rented land FROM OTHERS (item 2), enter the following information for each landlord.

Name of landlord	Mailing address (Include ZIP code)	Number of acres

List additional landlords on a separate sheet of paper.

6. If you rented land TO OTHERS (item 3), enter the following information for each renter.

Name of renter	Mailing address (Include ZIP code)	Number of acres

List additional renters on a separate sheet of paper.

7. Do you have any grazing permits on a per-head basis? ☐ None ☐ 053 Acres

a. Of the land you rented or leased to others, how many acres did you own? ☐ None ☐ 053 Acres

b. Do you have any grazing permits on a per-head basis? ☐ Yes — Mark (X) all boxes which apply ☐ No — Go to item 8

☐ Forest Service
☐ Taylor Grazing Sec. 3 (BLM)
☐ Indian Land
☐ Other — Specify

8. How many acres were diverted (or set-aside) under Federal commodity acreage reduction programs in 1985? ☐ None ☐ 055 Acres

9. LOCATION OF AGRICULTURAL ACTIVITY FOR THIS PLACE

a. In what county was the largest value of your agricultural products raised or produced?

County name	State	Number of acres
Principal county		056
		057
		058
		059

b. If you also had agricultural operations in any other county(ies), enter the county name(s), etc.

INSTRUCTIONS — Please report your crops in the appropriate section. Use section 7 to report ONLY those crops NOT listed in sections 2 through 6 and section 8. DO NOT INCLUDE crops grown on land rented to others.

SECTION 2 Were any of the FOLLOWING CROPS harvested from this place in 1985?

S2

	Acres harvested	Quantity harvested	Acres irrigated
1. Corn (field) for grain or seed (Report quantity on a dry shelled-weight basis) <input type="checkbox"/> None <input type="checkbox"/>	067	068 OR Bu. Lbs.	069
2. Corn (field) for silage or green chop <input type="checkbox"/>	070	071 Tons, green	072
3. Winter wheat for grain <input type="checkbox"/>	047	048 Bu.	049
4. Durum wheat for grain <input type="checkbox"/>	050	051 Bu.	052
5. Spring wheat, other than durum, for grain <input type="checkbox"/>	527	528 Bu.	529
6. Oats for grain <input type="checkbox"/>	076	077 Bu.	078
7. Sorghum for grain or seed, including milo <input type="checkbox"/>	082	083 OR Bu. Lbs.	084
8. Soybeans for beans <input type="checkbox"/>	088	089 Bu.	090
9. Cotton <input type="checkbox"/>	091	092 Bales	093
10. Tobacco — all types <input type="checkbox"/>	094	095 Lbs.	096
11. Potatoes, Irish <input type="checkbox"/>	097	098 Cwt.	099
12. Sweetpotatoes and yams <input type="checkbox"/>	100	101 Bu.	102

SECTION 3 Was any DRY HAY, GRASS SILAGE, HAYLAGE, or GREEN CHOP cut or harvested from this place in 1985? Include sorghum-sudan crosses and hay cut from pastures.

☐ YES — Complete this section ☐ NO — Go to section 4

If cuttings were made for both dry hay and grass silage, haylage, or green chop from the same fields, report the acreage in the appropriate items under DRY HAY and also under GRASS SILAGE, HAYLAGE, and GREEN CHOP.

S3

	Acres harvested	Quantity harvested	Acres irrigated
1. DRY HAY (If two or more cuttings of dry hay were made from the same acres, report acres only once, but report total tons from all cuttings.)	103	104 Tons, dry	105
a. Alfalfa and alfalfa mixtures for hay or dehydrating <input type="checkbox"/>	106	107 Tons, dry	108
b. Small grain hay — oats, wheat, barley, rye, etc. <input type="checkbox"/>	109	110 Tons, dry	111
c. Other tame dry hay — clover, lespedeza, timothy, Bermuda grass, Sudan grass, etc. <input type="checkbox"/>	112	113 Tons, dry	114
d. Wild hay <input type="checkbox"/>	115	116 Tons, dry	117
2. GRASS SILAGE, HAYLAGE, AND GREEN CHOP (hay crops cut and fed green) (If two or more cuttings were made from the same acres, report acres only once, but report total tons from all cuttings.) <input type="checkbox"/>	118	119 Tons, green	120
3. HAY SOLD — Did you sell any hay or grass silage in 1985? (Report value of hay sold in section 9, item 4) <input type="checkbox"/> Yes <input type="checkbox"/> No	121	122	123

PENALTY FOR FAILURE TO REPORT

<p>SECTION 4 Were any VEGETABLES, SWEET CORN, MELONS, etc., harvested FOR SALE from this place in 1985? (Exclude those grown for home use.)</p> <p>S4</p> <p>1 <input type="checkbox"/> YES — Complete this section</p> <p>2 <input type="checkbox"/> NO — Go to section 5</p> <p><small>NOTE: For Florida report for September 1, 1984 through August 31, 1985 harvest season; for all other States report for calendar year 1985.</small></p> <p>1. Land from which vegetables were harvested in 1985</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">Acres</th> <th colspan="2">Acres irrigated</th> </tr> <tr> <th>Whole acres</th> <th>Tenths</th> <th>Whole acres</th> <th>Tenths</th> </tr> <tr> <td>375</td> <td>/10</td> <td>376</td> <td>/10</td> </tr> </table> <p>2. From the list below, enter the crop name and code for each crop harvested in 1985. If more than one vegetable crop was harvested from the same acres, report acres for each crop. Report crops grown under protection in section 5.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Crop name</th> <th>Code</th> <th>Acres harvested</th> <th>Acres irrigated</th> </tr> <tr><td></td><td></td><td>/10</td><td>/10</td></tr> <tr><td></td><td></td><td>/10</td><td>/10</td></tr> <tr><td></td><td></td><td>/10</td><td>/10</td></tr> <tr><td></td><td></td><td>/10</td><td>/10</td></tr> <tr><td></td><td></td><td>/10</td><td>/10</td></tr> <tr><td></td><td></td><td>/10</td><td>/10</td></tr> <tr><td></td><td></td><td>/10</td><td>/10</td></tr> <tr><td></td><td></td><td>/10</td><td>/10</td></tr> </table> <p><small>If more space is needed, use separate sheet of paper.</small></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Crop name</th> <th>Code</th> <th>Crop name</th> <th>Code</th> <th>Crop name</th> <th>Code</th> </tr> <tr> <td>Asparagus</td> <td>379</td> <td>Eggplant</td> <td>415</td> <td>Pumpkins</td> <td>449</td> </tr> <tr> <td>Beans, snap (bush and pole)</td> <td>381</td> <td>Garlic</td> <td>421</td> <td>Radishes</td> <td>451</td> </tr> <tr> <td>Beets</td> <td>383</td> <td>Honeydew melons</td> <td>423</td> <td>Southern peas, green (cowpeas) — blackeyed, crowder, etc.</td> <td>408</td> </tr> <tr> <td>Broccoli</td> <td>385</td> <td>Lettuce and romaine</td> <td>427</td> <td>Spinach</td> <td>457</td> </tr> <tr> <td>Cabbage, head</td> <td>391</td> <td>Lima beans, green</td> <td>429</td> <td>Squash</td> <td>459</td> </tr> <tr> <td>Cantaloups and muskmelons</td> <td>395</td> <td>Mustard greens</td> <td>431</td> <td>Sweet corn</td> <td>481</td> </tr> <tr> <td>Carrots</td> <td>397</td> <td>Onions, dry</td> <td>433</td> <td>Tomatoes</td> <td>463</td> </tr> <tr> <td>Cauliflower</td> <td>399</td> <td>Onions, green</td> <td>435</td> <td>Turnips</td> <td>465</td> </tr> <tr> <td>Celery</td> <td>401</td> <td>Okra</td> <td>437</td> <td>Turnip greens</td> <td>467</td> </tr> <tr> <td>Collards</td> <td>407</td> <td>Peas, English, green (Exclude green southern peas)</td> <td>441</td> <td>Watermelons</td> <td>473</td> </tr> <tr> <td>Cucumbers and pickles</td> <td>411</td> <td>Peppers, sweet</td> <td>443</td> <td>Other vegetables — Specify</td> <td>475</td> </tr> <tr> <td></td> <td></td> <td>Peppers, hot</td> <td>445</td> <td></td> <td></td> </tr> </table>	Acres		Acres irrigated		Whole acres	Tenths	Whole acres	Tenths	375	/10	376	/10	Crop name	Code	Acres harvested	Acres irrigated			/10	/10			/10	/10			/10	/10			/10	/10			/10	/10			/10	/10			/10	/10			/10	/10	Crop name	Code	Crop name	Code	Crop name	Code	Asparagus	379	Eggplant	415	Pumpkins	449	Beans, snap (bush and pole)	381	Garlic	421	Radishes	451	Beets	383	Honeydew melons	423	Southern peas, green (cowpeas) — blackeyed, crowder, etc.	408	Broccoli	385	Lettuce and romaine	427	Spinach	457	Cabbage, head	391	Lima beans, green	429	Squash	459	Cantaloups and muskmelons	395	Mustard greens	431	Sweet corn	481	Carrots	397	Onions, dry	433	Tomatoes	463	Cauliflower	399	Onions, green	435	Turnips	465	Celery	401	Okra	437	Turnip greens	467	Collards	407	Peas, English, green (Exclude green southern peas)	441	Watermelons	473	Cucumbers and pickles	411	Peppers, sweet	443	Other vegetables — Specify	475			Peppers, hot	445			<p>SECTION 6 Were any STRAWBERRIES, CRANBERRIES, or OTHER BERRIES harvested FOR SALE from this place in 1985? (Exclude those grown for home use.)</p> <p>S6</p> <p>1 <input type="checkbox"/> YES — Complete this section</p> <p>2 <input type="checkbox"/> NO — Go to section 7</p> <p>From the list below, enter crop name and code. 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(Report fruit in section 8.)</p> <p>S7</p> <p>1 <input type="checkbox"/> YES — Complete this section</p> <p>2 <input type="checkbox"/> NO — Go to section 8</p> <p>From the list below, enter crop name and code. 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Beans, dry edible (excluding dry lima) (hundredweight)	554	Red clover seed (pounds)	671																																																																																																																																																																																																																																																																																							
Beans, dry lima (hundredweight)	557	Rice (hundredweight)	677																																																																																																																																																																																																																																																																																							
Buckwheat (bushels)	575	Rye for grain (bushels)	686																																																																																																																																																																																																																																																																																							
Corn cut for dry fodder, hogged or grazed (report acres only)	581	Ryegrass seed (pounds)	689																																																																																																																																																																																																																																																																																							
Dry southern peas (cowpeas) (bushels)	584	Safflower (pounds)	692																																																																																																																																																																																																																																																																																							
Emmer and spelt (bushels)	599	Sorghum cut for dry forage or hay (tons, dry)	698																																																																																																																																																																																																																																																																																							
Fescue seed (pounds)	602	Sorghum hogged or grazed (report acres only)	701																																																																																																																																																																																																																																																																																							
Flaxseed (bushels)	605	Sorghum for silage or green chop (tons, green)	685																																																																																																																																																																																																																																																																																							
Grains, mixed (bushels)	614	Sugar beets for sugar (tons)	719																																																																																																																																																																																																																																																																																							
Kentucky bluegrass seed (pounds)	629	Sugarcane for sugar (tons)	722																																																																																																																																																																																																																																																																																							
Lespedeza seed (pounds)	638	Sugarcane for seed (tons)	725																																																																																																																																																																																																																																																																																							
Mint for oil (pounds of oil)	644	Sunflower seed (pounds)	734																																																																																																																																																																																																																																																																																							
Peanuts for nuts (pounds)	656	Timothy seed (pounds)	746																																																																																																																																																																																																																																																																																							
Peas, dry edible (pounds)	659	Other crops (pounds) — Specify	752																																																																																																																																																																																																																																																																																							
<p>SECTION 5 Were any NURSERY and GREENHOUSE CROPS, MUSHROOMS, sod, bulbs, flowers, flower seeds, vegetable seeds and plants, vegetables under glass or other protection, GROWN FOR SALE on this place in 1985?</p> <p>S5</p> <p>1 <input type="checkbox"/> YES — Complete this section</p> <p>2 <input type="checkbox"/> NO — Go to section 6</p> <p>1. Nursery and greenhouse crops irrigated in 1985</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">Area irrigated</th> </tr> <tr> <th>Square feet</th> <th>Acres</th> </tr> <tr> <td>477</td> <td>478</td> </tr> </table> <p>2. From the list below, enter the crop name and code for each crop grown.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Crop name</th> <th>Code</th> <th>Square feet under glass or other protection in 1985</th> <th>Acres in the open in 1985</th> <th colspan="2">Sales in 1985</th> </tr> <tr> <th></th> <th></th> <th></th> <th>Whole acres</th> <th>Tenths</th> <th></th> </tr> <tr> <td></td> <td></td> <td></td> <td>1</td> <td>/10</td> <td>\$ 00</td> </tr> <tr> <td></td> <td></td> <td></td> <td>1</td> <td>/10</td> <td>\$ 00</td> </tr> <tr> <td></td> <td></td> <td></td> <td>1</td> <td>/10</td> <td>\$ 00</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Crop name</th> <th>Code</th> <th>Crop name</th> <th>Code</th> </tr> <tr> <td>Bedding plants (include vegetable plants)</td> <td>479</td> <td>Flowering plants</td> <td>710</td> </tr> <tr> <td>Bulbs (Exclude bulb flowering plants)</td> <td>482</td> <td>Mushrooms</td> <td>494</td> </tr> <tr> <td>Cut flowers and cut florist greens</td> <td>485</td> <td>Sod harvested</td> <td>497</td> </tr> <tr> <td>Nursery crops — ornamentals, fruit and nut trees, and vines</td> <td>488</td> <td>Vegetable and flower seeds</td> <td>500</td> </tr> <tr> <td>Foliage plants</td> <td>707</td> <td>Greenhouse vegetables</td> <td>503</td> </tr> <tr> <td></td> <td></td> <td>Other — Specify</td> <td>506</td> </tr> </table>	Area irrigated		Square feet	Acres	477	478	Crop name	Code	Square feet under glass or other protection in 1985	Acres in the open in 1985	Sales in 1985					Whole acres	Tenths					1	/10	\$ 00				1	/10	\$ 00				1	/10	\$ 00	Crop name	Code	Crop name	Code	Bedding plants (include vegetable plants)	479	Flowering plants	710	Bulbs (Exclude bulb flowering plants)	482	Mushrooms	494	Cut flowers and cut florist greens	485	Sod harvested	497	Nursery crops — ornamentals, fruit and nut trees, and vines	488	Vegetable and flower seeds	500	Foliage plants	707	Greenhouse vegetables	503			Other — Specify	506	<p>SECTION 8 Was there a combined total of 20 or more FRUIT TREES, including GRAPEVINES, CITRUS, and NUT TREES ON THIS PLACE in 1985?</p> <p>S8</p> <p>1 <input type="checkbox"/> YES — Complete this section</p> <p>2 <input type="checkbox"/> NO — Go to section 9</p> <p>1. TOTAL ACRES in bearing and nonbearing fruit orchards, citrus or other groves, vineyards, and nut trees on this place. (Do not include abandoned acres.)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">Total acres</th> <th colspan="2">Acres irrigated</th> </tr> <tr> <th>Whole acres</th> <th>Tenths</th> <th>Whole acres</th> <th>Tenths</th> </tr> <tr> <td>121</td> <td>/10</td> <td>122</td> <td>/10</td> </tr> </table> <p>2. From the list at the right, enter name and code for the fruit trees, grapevines, and nut trees on this place in 1985. Report the requested information for each crop even if not harvested because of low prices, damage from hail, frost, etc.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th rowspan="3">Crop name</th> <th rowspan="3">Code</th> <th colspan="2">NUMBER OF TREES OR VINES OF —</th> <th rowspan="3">Acres in trees and vines of all ages</th> <th rowspan="3">Quantity harvested</th> <th colspan="4">Unit of measure</th> </tr> <tr> <th rowspan="2">Nonbearing age</th> <th rowspan="2">Bearing age</th> <th colspan="4">Mark one</th> </tr> <tr> <th>Whole acres</th> <th>Tenths</th> <th>Lbs.</th> <th>Tons</th> <th>Boxes</th> <th>per box</th> </tr> <tr> <td></td> <td></td> <td>1</td> <td>2</td> <td>/10</td> <td>3</td> <td>4</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td></td> <td></td> <td>1</td> <td>2</td> <td>/10</td> <td>3</td> <td>4</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td></td> <td></td> <td>1</td> <td>2</td> <td>/10</td> <td>3</td> <td>4</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td></td> <td></td> <td>1</td> <td>2</td> <td>/10</td> <td>3</td> <td>4</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td></td> <td></td> <td>1</td> <td>2</td> <td>/10</td> <td>3</td> <td>4</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td></td> <td></td> <td>1</td> <td>2</td> <td>/10</td> <td>3</td> <td>4</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td></td> <td></td> <td>1</td> <td>2</td> <td>/10</td> <td>3</td> <td>4</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table> <p><small>If more space is needed, use separate sheet of paper.</small></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Noncitrus crops</th> <th>Code</th> <th>Citrus crops</th> <th>Code</th> </tr> <tr> <td>Apples</td> <td>123</td> <td>(Report quantity harvested for the 1984-85 harvest season)</td> <td></td> </tr> <tr> <td>Apricots</td> <td>129</td> <td>Grapefruit</td> <td>267</td> </tr> <tr> <td>Avocados</td> <td>135</td> <td>Lemons</td> <td>279</td> </tr> <tr> <td>Cherries, sweet</td> <td>345</td> <td>Limes</td> <td>285</td> </tr> <tr> <td>Cherries, tart</td> <td>687</td> <td>Oranges</td> <td>297</td> </tr> <tr> <td>Grapes, dry weight</td> <td>171</td> <td>Tangelos</td> <td>303</td> </tr> <tr> <td>Grapes, fresh weight</td> <td>177</td> <td>Tangerines</td> <td>309</td> </tr> <tr> <td>Olives (Report quantity for Sept. 1984 through March 1985 harvest season)</td> <td>207</td> <td>Other citrus — Specify</td> <td>316</td> </tr> <tr> <td>Peaches</td> <td>225</td> <td></td> <td></td> </tr> <tr> <td>Pears</td> <td>231</td> <td>Nut crops</td> <td>Code</td> </tr> <tr> <td>Plums and prunes, fresh weight</td> <td>243</td> <td>(Report quantity in meats)</td> <td></td> </tr> <tr> <td>Prunes, dry weight</td> <td>249</td> <td>Almonds</td> <td>321</td> </tr> <tr> <td>Other noncitrus — Specify</td> <td>261</td> <td>(Report quantity in shell)</td> <td></td> </tr> <tr> <td></td> <td></td> <td>Filberts and hazelnuts</td> <td>327</td> </tr> <tr> <td></td> <td></td> <td>Pecans</td> <td>339</td> </tr> <tr> <td></td> <td></td> <td>Walnuts, English</td> <td>357</td> </tr> <tr> <td></td> <td></td> <td>Other nut trees — Specify</td> <td>363</td> </tr> </table>	Total acres		Acres irrigated		Whole acres	Tenths	Whole acres	Tenths	121	/10	122	/10	Crop name	Code	NUMBER OF TREES OR VINES OF —		Acres in trees and vines of all ages	Quantity harvested	Unit of measure				Nonbearing age	Bearing age	Mark one				Whole acres	Tenths	Lbs.	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FORM 85-A1 (10-31-85)

SECTION 9 GROSS VALUE OF CROPS SOLD from this place in 1985, BEFORE taxes and expenses (Refer to the INFORMATION SHEET, Section 9.)

Report your best estimate of the value for each of the following groups of crops sold from this place in 1985. Include the value of the landlord's and/or contractor's share, estimating if necessary. Include value of Government CCC loans.

S9

	None	Dollars	Cents
1. Grains, soybeans and other beans sold in 1985			
a. Corn for grain		\$ 773	00
b. Wheat		\$ 774	00
c. Soybeans		\$ 775	00
d. Sorghum for grain		\$ 776	00
e. Barley		\$ 777	00
f. Oats		\$ 778	00
g. Other — rice, dry beans, dry peas, flaxseed, popcorn, safflower, sunflower seed, rye, etc.		\$ 779	00
2. Cotton and cottonseed		\$ 780	00
3. Tobacco		\$ 781	00
4. Hay, silage, field seeds, and grass seeds		\$ 782	00
5. Vegetables, sweet corn, and melons — Do not include Irish potatoes and sweetpotatoes, report them in item 7 below.		\$ 783	00
6. Fruits, nuts, berries — apples, peaches, grapes, citrus, pecans, strawberries, etc.		\$ 784	00
7. Other crops — Irish potatoes, sweetpotatoes, peanuts, sugar beets, sugarcane, mint for oil, etc. (Exclude nursery and greenhouse products) —		\$ 785	00
Specify		\$	00

SECTION 10 GOVERNMENT CCC LOANS

S10

1. Amount received in 1985 from Government CCC loans for — (Include regular and reserve loans, even if redeemed or forfeited)

	None	Dollars	Cents
a. Corn, sorghum, barley, and oats		\$ 799	00
b. Wheat		\$ 800	00
c. Cotton		\$ 801	00
d. Soybeans, peanuts, rye, rice, tobacco, and honey		\$ 802	00

SECTION 11 LAND USE IN 1985

S11

1. Copy ACRES IN THIS PLACE from section 1, item 4, page 1 _____ Acres

NOTE: For items 2 to 5 below, if the same land had more than one use in 1985, REPORT THAT LAND ONLY ONCE — in the use first listed below that applies. For example, cropland harvested and also pastured is to be reported only as "Cropland harvested."

2. **CROPLAND**

	None	Number of acres
a. Cropland harvested — Include all land from which crops were harvested or hay was cut, and all land in orchards, citrus groves, vineyards, and nursery and greenhouse products		787
b. Cropland used only for pasture or grazing — Include rotation pasture and grazing land that could have been used for crops without additional improvements		788
c. Cropland used for cover crops, legumes, and soil-improvement grasses, but NOT harvested and NOT pastured		789
d. Cropland on which all crops failed (Exception: Do not report here land in orchards and vineyards on which the crop failed. Such acreage is to be reported in item 2a.)		790
e. Cropland in cultivated summer fallow		791
f. Cropland idle		793
3. Woodland — Include all woodlots and timber tracts and cutover and deforested land with young timber growth.		794
a. Woodland pastured		795
b. Woodland not pastured		796
4. Other pastureland and rangeland — Include any pastureland other than cropland and woodland pasture		797
5. All other land — Land in house lots, ponds, roads, wasteland, etc. — Include any land not reported in items 2 through 4 above		798
6. TOTAL ACRES — Add the acres reported in items 2 through 5 (Should be the same as item 1 above.)		798

SECTION 12 Was any LAND in this place IRRIGATED at any time in 1985?

Irrigated land is all land watered by any artificial or controlled means — sprinklers, furrows or ditches, spreader dikes, etc. Include supplemental, partial, and preplant irrigation.

S12

1 ☐ YES — Complete this section

2 ☐ NO — Go to section 13

	None	Number of acres irrigated
1. How many acres of harvested land were irrigated? Include land from which hay was cut and land in bearing and nonbearing fruit and nut crops reported in section 11, item 2a.		680
2. How many acres of pastureland, rangeland, and any other lands not included in item 1 above were irrigated?		681

SECTION 13 Did you or anyone else have any CATTLE or CALVES on this place in 1985?

S13

1 ☐ YES — Complete this section

2 ☐ NO — Go to section 14

• DECEMBER 31, 1985 INVENTORY

	None	INVENTORY Number on this place Dec. 31, 1985
1. CATTLE AND CALVES of all ages (Total of a, b, c, and d below)		803
a. BEEF COWS — Include beef heifers that had calved		804
b. MILK COWS kept for production of milk or cream for sale or home use — Include dry milk cows and milk heifers that had calved		805
c. HEIFERS AND HEIFER CALVES (Exclude heifers that had calved)		806
d. STEERS, STEER CALVES, BULLS, AND BULL CALVES		807

• CATTLE AND CALVES SOLD FROM THIS PLACE IN 1985

Include those fed on this place on a contract or custom basis. Also report as sold cattle moved from this place to a feedlot for further feeding.

	None	Number sold in 1985	Gross value of sales
			Dollars Cents
2. Calves weighing less than 500 pounds		808	809 \$ 00
3. Cattle, including calves weighing 500 pounds or more		810	811 \$ 00
a. Of the total cattle sold, how many were FATTENED on this place on GRAIN or CONCENTRATES for 30 days or more and SOLD for SLAUGHTER?		812	813 \$ 00

• DAIRY PRODUCTS SOLD FROM THIS PLACE IN 1985

	None	DAIRY PRODUCTS Gross value of sales
		Dollars Cents
4. Gross value of sales of DAIRY PRODUCTS from this place in 1985 — Include milk, cream, butter, etc.		814 \$ 00

SECTION 14 Did you or anyone else have any HOGS or PIGS on this place in 1985?

S14

1 ☐ YES — Complete this section

2 ☐ NO — Go to section 15

• DECEMBER 31, 1985 INVENTORY

	None	INVENTORY Number on this place Dec. 31, 1985
1. HOGS and PIGS of all ages (Total of a and b below)		815
a. HOGS and PIGS used or to be used for BREEDING		816
b. OTHER HOGS and PIGS		817

• LITTERS FARROWED

	None	Number of litters
2. LITTERS FARROWED on this place between —		818
a. December 1, 1984 and May 31, 1985		819
b. June 1, 1985 and November 30, 1985		

• HOGS AND PIGS SOLD

	None	Number sold in 1985	Gross value of sales
			Dollars Cents
3. HOGS and PIGS SOLD from this place in 1985		820	821 \$ 00
4. Of the hogs and pigs sold, how many were sold as FEEDER PIGS for further feeding?		822	823 \$ 00

SECTION 15 Did you or anyone else have any SHEEP or LAMBS on this place in 1985?

S15

1 ☐ YES — Complete this section

2 ☐ NO — Go to section 16

• INVENTORY

	None	INVENTORY Number on this place Dec. 31, 1985	NUMBER SOLD in 1985
1. SHEEP and LAMBS of all ages		824	825
a. EWES 1 year old or older		826	

• SHEEP AND LAMBS SHORN

	None	Number shorn in 1985	Pounds of wool shorn in 1985
2. SHEEP and LAMBS SHORN		827	828

• Gross value of sales

	None	Gross value of sales
		Dollars Cents
3. What was the gross value of sales of SHEEP, LAMBS, and WOOL from this place in 1985?		829 \$ 00

SECTION 16 Did you or anyone else have any HORSES, BEES, FISH, GOATS, OTHER LIVESTOCK, or ANIMAL SPECIALTIES in 1985?

S16 1 ☐ YES — Complete this section 2 ☐ NO — Go to section 17

	INVENTORY Number on this place Dec. 31, 1985	Total quantity sold in 1985	Gross value of sales	
			Dollars	Cents
1. Horses and ponies of all ages	830	831	832	
		Number	\$	00
2. Colonies of bees	839	840	842	
		Number	\$	00
		Pounds honey		
3. Milk goats	843	844	846	
		Number	\$	00
		Gallons milk		
4. Angora goats	847	848	850	
		Number	\$	00
		Pounds mohair		
5. Other livestock or animal specialties in captivity (Enter name and code from "List A" below.)				
Name _____ Code _____	1	2		
		Number	\$	00

6. Fish and other aquaculture products (Enter name and code from "List B" below.)

Name _____ Code _____	Total quantity sold in 1985	Gross value of sales	
		Dollars	Cents
OR Pounds	2		
Number	\$		00

List A

Name	Code
Other goats	851
Mules, burros, and donkeys	833
Mink and their pelts	836
Rabbits and their pelts	854
All other livestock and livestock products — Specify	857

If more space is needed, use separate sheet of paper.

List B

Name	Code
Catfish	860
Trout	863
Other fish — Specify	866
Other aquaculture products — Specify	869

SECTION 17 Did you or anyone else have any POULTRY such as CHICKENS, TURKEYS, DUCKS, etc., on this place in 1985? (Include poultry grown for others on a contract basis.)

S17 1 ☐ YES — Complete this section 2 ☐ NO — Go to section 18

	INVENTORY Number on this place Dec. 31, 1985	Total number sold in 1985
None	892	893
1. HENS and PULLET of laying age		
2. Pullets for laying flock replacement		
a. PULLETS 3 months old or older not yet of laying age	894	895
b. PULLET CHICKS and PULLETS under 3 months old (Exclude commercial broilers)	896	
3. BROILERS, fryers, and other meat type chickens including capons and roasters	898	899
4. TURKEYS		
a. Turkeys for slaughter (Exclude breeders)	900	901
b. Turkey HENS kept for breeding	902	903
5. OTHER POULTRY raised in captivity — ducks, geese, pigeons or squab, pheasants, quail, etc. (Enter poultry name and code from the list below.)		
Poultry name _____ Code _____		
Poultry name _____ Code _____		
Name _____ Code _____	Name _____ Code _____	Name _____ Code _____
Ducks 904	Pigeons or squab 908	Quail 912
Geese 906	Pheasants 910	All other poultry — Specify 914
6. POULTRY HATCHED on this place in 1985 and placed or sold — chickens, turkeys, ducks, etc. —	None	
Specify kind of poultry _____	916	
7. Incubator egg capacity on December 31, 1985	917	
8. What was the gross value of sales of poultry and poultry products (eggs, etc.) from this place in 1985?		
	Gross value of sales	
	Dollars	Cents
	918	00
	\$	

SECTION 18 TYPE OF ORGANIZATION

S18 Mark (X) the one item which best describes the type of organization for this place in 1985. Refer to the INFORMATION SHEET, Section 18.

921

- FAMILY or INDIVIDUAL operation — (Exclude partnership and corporation) 1 ☐
- PARTNERSHIP operation — Include family partnerships 2 ☐
- INCORPORATED UNDER STATE LAW 3 ☐
- OTHER, such as estate or trust, prison farm, grazing association, Indian reservation, etc. 4 ☐

Go to section 20

Go to section 19

Specify below then go to section 20

Specify _____

SECTION 19 CORPORATE STRUCTURE (for incorporated operations only) Refer to the INFORMATION SHEET, Section 19.

S19

922

1. Is this a family-held corporation? 1 ☐ Yes 2 ☐ No
2. Are there more than 10 stockholders? 3 ☐ Yes 4 ☐ No

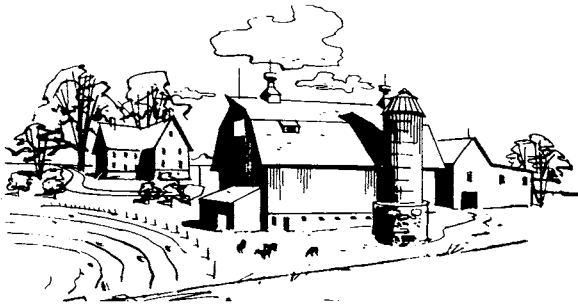
SECTION 20 CHARACTERISTICS AND OCCUPATION OF OPERATOR (Senior partner or person in charge) Refer to the INFORMATION SHEET, Section 20.

S20

923

1. RESIDENCE — Does the operator (senior partner or person in charge) live on this place? 1 ☐ Yes 2 ☐ No
2. PRINCIPAL OCCUPATION — At which occupation did the operator spend the majority (50 percent or more) of his/her worktime in 1985? For partnerships consider all members of the partnership together. 1 ☐ Farming 2 ☐ Other or ranching
3. OFF FARM WORK — How many days did the operator (senior partner or person in charge) work at least 4 hours per day off this place in 1985? Include work at a nonfarm job, business, or on someone else's farm for pay. (Exclude exchange farmwork) 1 ☐ None 2 ☐ 1—49 days 3 ☐ 50—99 days 4 ☐ 100—149 days 5 ☐ 150—199 days 6 ☐ 200 days or more
4. In what year did the operator (or senior partner) begin to operate any part of this place? Year
5. AGE of operator (senior partner or person in charge) Years old
6. RACE of operator (senior partner or person in charge) 1 ☐ White 2 ☐ Negro or Black 3 ☐ American Indian 4 ☐ Asian or Pacific Islander 9 ☐ Other — Specify
7. SEX of operator (senior partner or person in charge) 1 ☐ Male 2 ☐ Female
8. SPANISH ORIGIN — Is the operator (senior partner or person in charge) of Spanish origin or descent (Mexican, Puerto Rican, Cuban, or other Spanish)? 1 ☐ Yes 2 ☐ No

SECTION 21 PRODUCTION EXPENSES paid by you and others for this place in 1985		SECTION 23 Were any INSECTICIDES, HERBICIDES, FUNGICIDES, NEMATOCIDES, OTHER PESTICIDES, or OTHER CHEMICALS used on this place in 1985?		
S21 Include your best estimates of expenses paid by you, your landlord, contractors, buyers, and others for production of crops, livestock, and other agricultural products in 1985. DO NOT INCLUDE expenses connected with performing customwork for others; operation of nonfarm activities, businesses, or services; or household expenses not related to the farm business.		S23 1 <input type="checkbox"/> YES — Complete this section 2 <input type="checkbox"/> NO — Go to section 24 Include any materials provided by you, your landlords, or contractors. For each item listed, report acres only once. If multipurpose chemicals were used, report acreage treated for each purpose.		
1. Livestock and poultry purchased — cattle, calves, hogs, pigs, sheep, lambs, goats, horses, chicks, poults, started pullets, etc. None Dollars Cents		1. Sprays, dusts, granules, fumigants, etc., (fungicide, herbicide, insecticide, nematocide) to control — None Number of acres on which used		
<input type="checkbox"/> \$ 972 00		<input type="checkbox"/> 936		
2. Feed purchased for livestock and poultry — grain, hay, silage, mixed feeds, concentrates, etc. None Dollars Cents		a. Insects on crops, including hay <input type="checkbox"/> 937		
<input type="checkbox"/> \$ 973 00		b. Nematodes in crops <input type="checkbox"/> 938		
a. Commercially mixed formula feeds purchased — complete, supplement, concentrates, premixes. (Exclude ingredients purchased separately, such as soybean meal, cottonseed meal, and urea) None Dollars Cents		c. Diseases in crops and orchards (blights, smuts, rusts, etc.) <input type="checkbox"/> 939		
<input type="checkbox"/> \$ 974 00		d. Weeds, grass, or brush in crops and pasture. Include both pre-emergence and post emergence <input type="checkbox"/> 940		
3. Seed cost — for corn, other grains, soybeans, tobacco, cotton, etc. — Include plants and trees purchased None Dollars Cents		2. Chemicals for defoliation or for growth control of crops or thinning of fruit <input type="checkbox"/>		
<input type="checkbox"/> \$ 975 00		SECTION 24 MACHINERY AND EQUIPMENT on this place on December 31, 1985 (Include only equipment used for agricultural operations in 1984 or 1985.)		
4. Commercial fertilizer purchased — all forms, including rock phosphate and gypsum. Include cost of custom applications None Dollars Cents		S24 • Value of ALL machinery and equipment on this place, December 31, 1985		
<input type="checkbox"/> \$ 976 00		1. What is the estimated market value of ALL machinery, equipment, and implements usually kept on this place and used for the farm or ranch business? Include cars, trucks, tractors, combines, plows, disks, harrows, dryers, pumps, motors, irrigation equipment, dairy equipment including milkers and bulk tanks, livestock feeders, grinding and mixing equipment, etc. Estimated market value		
5. Agricultural chemicals purchased — Insecticides, herbicides, fungicides, other pesticides, etc. — Include cost of custom applications (Exclude lime) None Dollars Cents		<input type="checkbox"/> \$ 977 00		<div style="display: flex; justify-content: space-between;"><div>Dollars</div><div>Cents</div></div>
6. Gasoline and other petroleum fuel and oil purchased for the farm business —		<div style="display: flex; justify-content: space-between;"><div>943</div><div>00</div></div>		
a. Gasoline and gasohol None Dollars Cents		<div style="display: flex; justify-content: space-between;"><div>Total number on this place on December 31, 1985</div><div>Of the total, HOW MANY were manufactured in the last 5 years (1981 - 1985)?</div></div>		
<input type="checkbox"/> \$ 978 00		<div style="display: flex; justify-content: space-between;"><div>944</div><div>945</div></div>		
b. Diesel fuel None Dollars Cents		<div style="display: flex; justify-content: space-between;"><div>946</div><div>947</div></div>		
<input type="checkbox"/> \$ 979 00		<div style="display: flex; justify-content: space-between;"><div>948</div><div>949</div></div>		
c. LP gas, fuel oil, kerosene, natural gas, motor oil, and grease None Dollars Cents		<div style="display: flex; justify-content: space-between;"><div>950</div><div>951</div></div>		
<input type="checkbox"/> \$ 980 00		<div style="display: flex; justify-content: space-between;"><div>956</div><div>957</div></div>		
7. Electricity for the farm business (Exclude household expenses) None Dollars Cents		<div style="display: flex; justify-content: space-between;"><div>958</div><div>959</div></div>		
<input type="checkbox"/> \$ 981 00		<div style="display: flex; justify-content: space-between;"><div>960</div><div>961</div></div>		
8. Hired farm or ranch labor — wages and salaries paid, social security contributions, withholding taxes, insurance, unemployment compensation, etc. (See Information Sheet) None Dollars Cents		<div style="display: flex; justify-content: space-between;"><div>945</div><div>946</div></div>		
<input type="checkbox"/> \$ 982 00		<div style="display: flex; justify-content: space-between;"><div>947</div><div>948</div></div>		
9. Contract labor — Include expenditures for labor, such as harvesting of fruit, vegetables, berries, etc., performed on a contract basis by a contractor, crew leader, a cooperative, etc. None Dollars Cents		<div style="display: flex; justify-content: space-between;"><div>949</div><div>950</div></div>		
<input type="checkbox"/> \$ 983 00		<div style="display: flex; justify-content: space-between;"><div>951</div><div>952</div></div>		
10. Repairs and maintenance expenses for the upkeep of buildings, motor vehicles, and farm equipment None Dollars Cents		<div style="display: flex; justify-content: space-between;"><div>953</div><div>954</div></div>		
<input type="checkbox"/> \$ 984 00		<div style="display: flex; justify-content: space-between;"><div>955</div><div>956</div></div>		
11. Customwork, machine hire and rental of machinery and equipment — Include expenditures for use of equipment and for customwork such as grinding and mixing feed, plowing, combining, corn picking, drying, silo filling, spraying, dusting, fertilizing, etc. (Exclude cost of cotton ginning and application of fertilizer and chemicals) None Dollars Cents		<div style="display: flex; justify-content: space-between;"><div>957</div><div>958</div></div>		
<input type="checkbox"/> \$ 985 00		<div style="display: flex; justify-content: space-between;"><div>959</div><div>960</div></div>		
12. Interest paid on debts — (Refer to INFORMATION SHEET, Section 21)		<div style="display: flex; justify-content: space-between;"><div>961</div><div>962</div></div>		
a. Secured by real estate None Dollars Cents		<div style="display: flex; justify-content: space-between;"><div>963</div><div>964</div></div>		
<input type="checkbox"/> \$ 986 00		<div style="display: flex; justify-content: space-between;"><div>965</div><div>966</div></div>		
b. Not secured by real estate None Dollars Cents		<div style="display: flex; justify-content: space-between;"><div>967</div><div>968</div></div>		
<input type="checkbox"/> \$ 987 00		<div style="display: flex; justify-content: space-between;"><div>969</div><div>970</div></div>		
13. Cash rent paid for land and buildings in 1985 None Dollars Cents		<div style="display: flex; justify-content: space-between;"><div>971</div><div>972</div></div>		
<input type="checkbox"/> \$ 988 00		<div style="display: flex; justify-content: space-between;"><div>973</div><div>974</div></div>		
14. Property taxes paid — Include farm real estate, machinery, livestock, etc. for the farm business. (Exclude taxes paid by landlords) None Dollars Cents		<div style="display: flex; justify-content: space-between;"><div>975</div><div>976</div></div>		
<input type="checkbox"/> \$ 989 00		<div style="display: flex; justify-content: space-between;"><div>977</div><div>978</div></div>		
15. All other production expenses — Include insurance, water, animal health costs, grazing fees, marketing charges, miscellaneous farm supplies, etc. (Exclude depreciation, household expenses, and expenses not associated with the farm business) None Dollars Cents		<div style="display: flex; justify-content: space-between;"><div>979</div><div>980</div></div>		
<input type="checkbox"/> \$ 990 00		<div style="display: flex; justify-content: space-between;"><div>981</div><div>982</div></div>		
SECTION 22 Was any COMMERCIAL FERTILIZER, including ROCK PHOSPHATE, or LIME used on this place during 1985?		SECTION 25 ESTIMATED CURRENT MARKET VALUE OF LAND AND BUILDINGS		
S22 1 <input type="checkbox"/> YES — Complete this section 2 <input type="checkbox"/> NO — Go to section 23		S25 Please give your best ESTIMATE of the CURRENT MARKET VALUE of land and buildings for the acres reported in section 1, items 1, 2, and 3, page 1. None Estimated market value of land and buildings		
1. Acres of cropland fertilized in 1985 (Exclude cropland used only for pastures reported in section 11, item 2b) None Acres fertilized		<div style="display: flex; justify-content: space-between;"><div>996</div><div>997</div></div>		
<input type="checkbox"/> 932		<div style="display: flex; justify-content: space-between;"><div>998</div><div>999</div></div>		
2. Acres of pastureland and rangeland fertilized in 1985 reported in section 11, items 2b and 4 None Acres fertilized		<div style="display: flex; justify-content: space-between;"><div>996</div><div>997</div></div>		
<input type="checkbox"/> 933		<div style="display: flex; justify-content: space-between;"><div>998</div><div>999</div></div>		
3. LIME — tons of lime used and acres on which applied (Do not include land plaster or gypsum or lime for sanitation.) None Tons of lime Acres limed		<div style="display: flex; justify-content: space-between;"><div>996</div><div>997</div></div>		
<input type="checkbox"/> 934 935		<div style="display: flex; justify-content: space-between;"><div>998</div><div>999</div></div>		
SECTION 23 Were any INSECTICIDES, HERBICIDES, FUNGICIDES, NEMATOCIDES, OTHER PESTICIDES, or OTHER CHEMICALS used on this place in 1985?		SECTION 26 INCOME FROM FARM - RELATED SOURCES IN 1985		
S23 1 <input type="checkbox"/> YES — Complete this section 2 <input type="checkbox"/> NO — Go to section 24		S26 Report amount received before taxes and expenses.		
1. Sprays, dusts, granules, fumigants, etc., (fungicide, herbicide, insecticide, nematocide) to control — None Number of acres on which used		<div style="display: flex; justify-content: space-between;"><div>Farm-related income</div><div>Dollars Cents</div></div>		
<input type="checkbox"/> 936		<div style="display: flex; justify-content: space-between;"><div>991</div><div>992</div></div>		
a. Insects on crops, including hay <input type="checkbox"/> 937		<div style="display: flex; justify-content: space-between;"><div>993</div><div>994</div></div>		
b. Nematodes in crops <input type="checkbox"/> 938		<div style="display: flex; justify-content: space-between;"><div>995</div><div>996</div></div>		
c. Diseases in crops and orchards (blights, smuts, rusts, etc.) <input type="checkbox"/> 939		<div style="display: flex; justify-content: space-between;"><div>997</div><div>998</div></div>		
d. Weeds, grass, or brush in crops and pasture. Include both pre-emergence and post emergence <input type="checkbox"/> 940		<div style="display: flex; justify-content: space-between;"><div>999</div><div>1000</div></div>		
2. Chemicals for defoliation or for growth control of crops or thinning of fruit <input type="checkbox"/>		<div style="display: flex; justify-content: space-between;"><div>1001</div><div>1002</div></div>		
SECTION 24 MACHINERY AND EQUIPMENT on this place on December 31, 1985 (Include only equipment used for agricultural operations in 1984 or 1985.)		<div style="display: flex; justify-content: space-between;"><div>1003</div><div>1004</div></div>		
S24 • Value of ALL machinery and equipment on this place, December 31, 1985		<div style="display: flex; justify-content: space-between;"><div>1005</div><div>1006</div></div>		
1. What is the estimated market value of ALL machinery, equipment, and implements usually kept on this place and used for the farm or ranch business? Include cars, trucks, tractors, combines, plows, disks, harrows, dryers, pumps, motors, irrigation equipment, dairy equipment including milkers and bulk tanks, livestock feeders, grinding and mixing equipment, etc. Estimated market value		<div style="display: flex; justify-content: space-between;"><div>1007</div><div>1008</div></div>		
<input type="checkbox"/> \$ 943 00		<div style="display: flex; justify-content: space-between;"><div>1009</div><div>1010</div></div>		
• SELECTED machinery and equipment on this place, December 31, 1985. (Report only if used in 1984 or 1985.) None		<div style="display: flex; justify-content: space-between;"><div>1011</div><div>1012</div></div>		
<div style="display: flex; justify-content: space-between;"><div>944</div><div>945</div></div>		<div style="display: flex; justify-content: space-between;"><div>1013</div><div>1014</div></div>		
2. Motortrucks — Include pickups <input type="checkbox"/> 946		<div style="display: flex; justify-content: space-between;"><div>1015</div><div>1016</div></div>		
3. Wheel tractors other than garden tractors and motor tillers —		<div style="display: flex; justify-content: space-between;"><div>1017</div><div>1018</div></div>		
a. Less than 40 horsepower (PTO) <input type="checkbox"/> 947		<div style="display: flex; justify-content: space-between;"><div>1019</div><div>1020</div></div>		
b. 40 horsepower (PTO) or more <input type="checkbox"/> 948		<div style="display: flex; justify-content: space-between;"><div>1021</div><div>1022</div></div>		
4. Grain and bean combines, all types <input type="checkbox"/> 949		<div style="display: flex; justify-content: space-between;"><div>1023</div><div>1024</div></div>		
5. Cotton pickers and strippers <input type="checkbox"/> 950		<div style="display: flex; justify-content: space-between;"><div>1025</div><div>1026</div></div>		
6. Mower conditioners <input type="checkbox"/> 951		<div style="display: flex; justify-content: space-between;"><div>1027</div><div>1028</div></div>		
7. Pickup balers — Include rectangle and round balers <input type="checkbox"/> 952		<div style="display: flex; justify-content: space-between;"><div>1029</div><div>1030</div></div>		
SECTION 25 ESTIMATED CURRENT MARKET VALUE OF LAND AND BUILDINGS		<div style="display: flex; justify-content: space-between;"><div>1031</div><div>1032</div></div>		
S25 Please give your best ESTIMATE of the CURRENT MARKET VALUE of land and buildings for the acres reported in section 1, items 1, 2, and 3, page 1. None Estimated market value of land and buildings		<div style="display: flex; justify-content: space-between;"><div>1033</div><div>1034</div></div>		
<div style="display: flex; justify-content: space-between;"><div>996</div><div>997</div></div>		<div style="display: flex; justify-content: space-between;"><div>1035</div><div>1036</div></div>		
1. All land owned <input type="checkbox"/> 998		<div style="display: flex; justify-content: space-between;"><div>1037</div><div>1038</div></div>		
2. All land rented or leased FROM OTHERS <input type="checkbox"/> 999		<div style="display: flex; justify-content: space-between;"><div>1039</div><div>1040</div></div>		
3. All land rented or leased TO OTHERS <input type="checkbox"/> 1000		<div style="display: flex; justify-content: space-between;"><div>1041</div><div>1042</div></div>		
SECTION 26 INCOME FROM FARM - RELATED SOURCES IN 1985		<div style="display: flex; justify-content: space-between;"><div>1043</div><div>1044</div></div>		
S26 Report amount received before taxes and expenses.		<div style="display: flex; justify-content: space-between;"><div>1045</div><div>1046</div></div>		
1. Customwork and other agricultural services provided for farmers and others — plowing, planting, spraying, harvesting, preparation of products for market, etc. (If customwork is a separate business, refer to Information Sheet, section 26) None Farm-related income		<div style="display: flex; justify-content: space-between;"><div>Dollars</div><div>Cents</div></div>		
<input type="checkbox"/> \$ 991 00		<div style="display: flex; justify-content: space-between;"><div>1047</div><div>1048</div></div>		
2. Payments you received for participation in Government farm programs (Exclude Commodity Credit Corporation (CCC) loans.) <input type="checkbox"/> \$ 992 00		<div style="display: flex; justify-content: space-between;"><div>1049</div><div>1050</div></div>		
3. Gross cash rent or share payments received from renting out farmland or payments received from lease or sale of allotments — Include payments for livestock pastured on a per-head basis, per-month basis, per-pound basis, etc. <input type="checkbox"/> \$ 993 00		<div style="display: flex; justify-content: space-between;"><div>1051</div><div>1052</div></div>		
4. Sales of forest products and Christmas trees — Include maple products, naval stores, firewood, etc. <input type="checkbox"/> \$ 994 00		<div style="display: flex; justify-content: space-between;"><div>1053</div><div>1054</div></div>		
5. Other farm-related income , including recreational services, patronage dividends of cooperatives, sales of by-products, and other business or income which is CLOSELY RELATED to the agricultural operations on this place — Specify kind <input type="checkbox"/> \$ 995 00		<div style="display: flex; justify-content: space-between;"><div>1055</div><div>1056</div></div>		
SECTION 27 PERSON COMPLETING THIS REPORT — Please print		<div style="display: flex; justify-content: space-between;"><div>1057</div><div>1058</div></div>		
Name 999 Date		<div style="display: flex; justify-content: space-between;"><div>1059</div><div>1060</div></div>		
Telephone Area Code Number		<div style="display: flex; justify-content: space-between;"><div>1061</div><div>1062</div></div>		



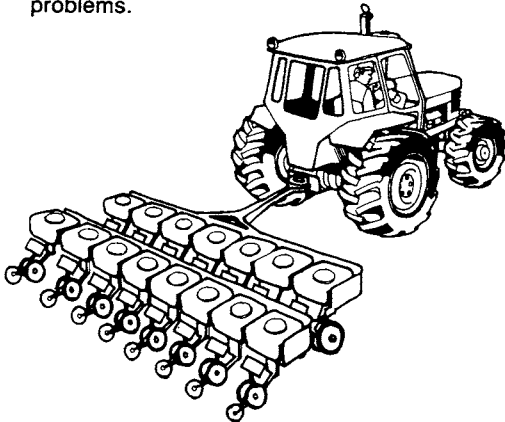
Why a Census?

A national census of agriculture is the only detailed source of information about America's agricultural production. It's a measurement of where farmers and ranchers stand, their farm supply needs, their production costs and cropping systems, and how trends are changing.

Agricultural data are gathered by other groups—but the census of agriculture is the Nation's only comprehensive program for the entire agricultural industry. Census information is sought by land-grant universities in research projects, by those who serve farmer and agribusiness clients, by farm organizations to evaluate and analyze programs, and by lawmakers to help meet the changing needs of America's largest industry.

How Are Census Data Used?

- Farm suppliers of fertilizer, seed, and equipment use census data to meet your needs for products.
- Your farm organization uses census data to evaluate and propose programs and policies that affect you.
- Marketing and distribution facilities are built based on census data to help you market your products.
- New technology is developed for your use by researchers using census data.
- Your elected representatives use census data to develop programs to help solve agricultural problems.



Who Plans the Questions?

Representatives of farmers and ranchers work with Census Bureau officials to determine what needs to be asked on the census report form. These representatives are leaders in the agricultural industry representing commodity organizations, States, suppliers of agricultural products, and universities, and include such organizations as:

American Farm Bureau Federation
 National Cattlemen's Association
 National Council of Farmer Cooperatives
 National Farmers Organization
 National Farmers Union
 The National Grange
 Agricultural Publishers Association
 American Agricultural Economics Association
 American Feed Industry Association
 American Meat Institute
 Association of Research Directors, Inc.
 Conference of Consumer Organizations
 Farm and Industrial Equipment Institute
 National Agri-Marketing Association
 National Agricultural Chemicals Association
 National Association of State Departments of Agriculture
 National Association of State Universities and Land-Grant Colleges
 National Food Processors Association
 Rural Sociological Society
 The Irrigation Association
 U.S. Department of Agriculture

What Happens to the Data?

Data are published only in tabulated totals—by State and county. No one but sworn Census Bureau employees see individual report forms, under penalty of law. Individual report forms are strictly confidential. Not even the Federal Freedom of Information Act can cause your report data to be made public.



The Census Bureau cannot, by law, provide individual data to other government agencies. No one may have access to your completed form except you.

1985 Content Pretest Report Form 85-A2

DUE BY JANUARY 31, 1986

OMB No. 0607-0501: Approval Expires December 31, 1986

FORM 85-A2 (10-31-85)	U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS	NOTICE — Response to this inquiry is required by law (title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.								
<h2 style="margin: 0;">UNITED STATES CENSUS OF AGRICULTURE</h2>		In correspondence pertaining to this report, please refer to your Census File Number (CFN)								
Please complete this form and RETURN TO BUREAU OF THE CENSUS 1201 East Tenth Street Jeffersonville, Indiana 47133		85-A2								
Note — If your records are not available, reasonable estimates may be used. If you cannot file by January 31, a time extension request may be sent to the above address. Include your 12-character Census File Number (CFN) as shown in your address label in all correspondence to us. If you received more than one report form, enter extra Census File Number(s) below and return extra copies with your completed report.										
A	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">035</td> <td style="width: 25%;">036</td> <td style="width: 25%;">037</td> <td style="width: 25%;">038</td> </tr> <tr> <td>039</td> <td>040</td> <td>041</td> <td>042</td> </tr> </table>	035	036	037	038	039	040	041	042	A
035	036	037	038							
039	040	041	042							
(Please correct errors in name, address, and ZIP code.)										
SECTION 1 ACREAGE IN 1985 Report land owned, rented, or used by you, your spouse, or by the partnership, corporation, or organization for which you are reporting. Include ALL LAND, REGARDLESS OF LOCATION OR USE — cropland, pastureland, rangeland, woodland, idle land, house lots, etc.										
If the acres you operated in 1985 changed during the year, refer to the INFORMATION SHEET, Section 1.										
1. All land owned <input type="checkbox"/> None		Number of acres 043								
2. All land rented or leased FROM OTHERS, including land worked by you on shares, used rent free, in exchange for services, payment of taxes, etc. Include leased Federal, State, and railroad land. (DO NOT include land used on a per-head basis under a grazing permit.) Also complete item 5 below <input type="checkbox"/>		044								
3. All land rented or leased TO OTHERS, including land worked on shares by others and land subleased. Also complete item 6 below <input type="checkbox"/>		045								
4. ACRES IN THIS PLACE — ADD acres owned (item 1) and acres rented (item 2), then SUBTRACT acres rented TO OTHERS (item 3), and enter the result in this space.		046								
For this census report these are the "ACRES IN THIS PLACE." If the entry is zero please refer to the INFORMATION SHEET, Section 1.										
5. If you rented land FROM OTHERS (item 2), enter the following information for each landlord										
	Name of landlord	Mailing address (Include ZIP code)								
		Number of acres								
List additional landlords on a separate sheet of paper.										
6. If you rented land TO OTHERS (item 3), enter the following information for each renter										
	Name of renter	Mailing address (Include ZIP code)								
		Number of acres								
List additional renters on a separate sheet of paper.										
a. Of the land you rented or leased to others, how many acres did you own? <input type="checkbox"/> None		053 Acres								
7. Did you have any grazing permits on a per-head basis?										
054 1 <input type="checkbox"/> Yes — Mark (X) all boxes which apply.		3 <input type="checkbox"/> Forest Service								
2 <input type="checkbox"/> No — Go to item 8		5 <input type="checkbox"/> Indian Land								
		4 <input type="checkbox"/> Taylor Grazing, Sec. 3 (BLM)								
		6 <input type="checkbox"/> Other — Specify _____								
8. How many acres were diverted (or set-aside) under Federal commodity acreage reduction programs in 1985? <input type="checkbox"/> None		055 Acres								
9. LOCATION OF AGRICULTURAL ACTIVITY FOR THIS PLACE										
a. In what county was the largest value of your agricultural products raised or produced?										
Principal county →	County name	State								
		Number of acres								
		056								
		057								
		058								
		059								
b. If you also had agricultural operations in any other county(ies), enter the county name(s), etc.										

PENALTY FOR FAILURE TO REPORT

INSTRUCTIONS — Please report your crops in the appropriate section. Use section 8 to report ONLY those crops NOT listed in sections 2 through 7. DO NOT INCLUDE crops grown on land rented to others.

SECTION 2 Were any of the FOLLOWING CROPS harvested from this place in 1985?

S2	None	Acres harvested	Quantity harvested	Acres irrigated
1. Corn (field) for grain or seed (Report quantity on a dry shelled- weight basis) . . .	<input type="checkbox"/>	067	068 Bu. 1 OR Lbs.	069
2. Corn (field) for silage or green chop	<input type="checkbox"/>	070	071 Tons, green	072
3. Winter wheat for grain	<input type="checkbox"/>	047	048 Bu.	049
4. Durum wheat for grain	<input type="checkbox"/>	050	051 Bu.	052
5. Spring wheat, other than durum, for grain	<input type="checkbox"/>	527	528 Bu.	529
6. Oats for grain	<input type="checkbox"/>	076	077 Bu.	078
7. Sorghum for grain or seed, including milo	<input type="checkbox"/>	082	083 OR Bu. 1 Lbs.	084
8. Soybeans for beans	<input type="checkbox"/>	088	089 Bu.	090
9. Cotton	<input type="checkbox"/>	091	092 Bales	093
10. Tobacco — all types	<input type="checkbox"/>	094	095 Lbs.	096
11. Potatoes, Irish	<input type="checkbox"/>	097	098 Cwt.	099

SECTION 3 Was any DRY HAY, GRASS SILAGE, HAYLAGE, or GREEN CHOP cut or harvested from this place in 1985?
Include sorghum-sudan crosses and hay cut from pastures.

S3 1 ☐ YES — Complete this section 2 ☐ NO — Go to section 4

If cuttings were made for both dry hay and grass silage, haylage, or green chop from the same fields, report the acreage in the appropriate items under DRY HAY and also under GRASS SILAGE, HAYLAGE, and GREEN CHOP.

1. **DRY HAY** (If two or more cuttings of dry hay were made from the same acres, report acres only once, but report total tons from all cuttings.)
- a. Alfalfa and alfalfa mixtures for hay or dehydrating
- b. Small grain hay — oats, wheat, barley, rye, etc.
- c. Other tame dry hay — clover, lespedeza, timothy, Bermuda grass, Sudan grass, etc.
- d. Wild hay

2. **GRASS SILAGE, HAYLAGE, AND GREEN CHOP** (hay crops cut and fed green) (If two or more cuttings were made from the same acres, report acres only once, but report total tons from all cuttings.)

3. **HAY SOLD** — Did you sell any hay or grass silage in 1985?

(Report value of hay sold in section 9, item 4) 1 ☐ Yes 2 ☐ No

Acres harvested	Quantity harvested (Report either dry or green weight as indicated)	Acres irrigated
103	104 Tons, dry	105
106	107 Tons, dry	108
109	110 Tons, dry	111
112	113 Tons, dry	114
115	116 Tons, green	117

SECTION 4 Were any VEGETABLES, SWEET CORN, MELONS, etc., harvested FOR SALE from this place in 1985? (Exclude those grown for home use.)

1 ☐ YES — Complete this section 2 ☐ NO — Go to section 5

NOTE — For Florida report for September 1, 1984 through August 31, 1985 harvest season; for all other States report for calendar year 1985.

1. Land from which vegetables were harvested in 1985

Acres		Acres irrigated	
Whole acres	Tenths	Whole acres	Tenths
375	/10	376	/10

2. From the list on the right, enter the crop name and code for each crop harvested in 1985. If more than one vegetable crop was harvested from the same acres, report acres for each crop. Report crops grown under protection in section 5.

Crop name	Code	Acres harvested	Acres irrigated
		/10	/10
		/10	/10
		/10	/10
		/10	/10
		/10	/10

Crop name	Code	Crop name	Code
Asparagus	379	Onions, green	435
Beans, snap (bush and pole)	381	Okra	437
Beets	383	Peas, English, green (Exclude green southern peas)	441
Broccoli	385	Peppers, sweet	443
Cabbage, head	391	Peppers, hot	445
Cantaloups and muskmelons	395	Pumpkins	449
Carrots	397	Radishes	451
Cauliflower	399	Southern peas, green (cowpeas) — blackeyed, crowder, etc.	409
Celery	401	Spinach	457
Collards	407	Squash	459
Cucumbers and pickles	411	Sweet corn	461
Eggplant	415	Tomatoes	463
Garlic	421	Turnips	465
Honeydew melons	423	Turnip greens	467
Lettuce and romaine	427	Watermelons	473
Lima beans, green	429	Other vegetables — Specify	475
Mustard greens	431		
Onions, dry	433		

If additional space is needed to enter crops, use separate sheet of paper.

SECTION 5 Were any NURSERY and GREENHOUSE CROPS, MUSHROOMS, sod, bulbs, flowers, flower seeds, vegetable seeds and plants, vegetables under glass or other protection, GROWN FOR SALE on this place in 1985?

S5

1 ☐ YES — **Complete this section**2 ☐ NO — **Go to section 6**

None

Area irrigated		
Square feet	Acres	Tenths
477	478	/10

1. Nursery and greenhouse crops irrigated in 1985. ☐

2. From the list on the right, enter the crop name and code for each crop grown.

Crop name	Code	Square feet under glass or other protection in 1985	Acres in the open in 1985		Sales in 1985	
			Whole acres	Tenths	Dollars	Cents
			1	/10	\$	00
			1	/10	\$	00
			1	/10	\$	00

Crop name Code

Bedding plants (include vegetable plants) . . . 479

Bulbs (exclude bulb flowering plants) . . . 482

Cut flowers and cut florist greens . . . 485

Nursery crops — ornamentals, fruit and nut trees, and vines . . . 488

Foliage plants . . . 707

Flowering plants . . . 710

Mushrooms . . . 494

Sod harvested . . . 497

Vegetable and flower seeds . . . 500

Greenhouse vegetables . . . 503

Other — Specify . . . 506

If additional space is needed to enter crops, use separate sheet of paper.

SECTION 6 Were any STRAWBERRIES, CRANBERRIES, or OTHER BERRIES harvested FOR SALE from this place in 1985? (Exclude those grown for home use)

S6

1 ☐ YES — **Complete this section**2 ☐ NO — **Go to section 7**

From the list on the right, enter crop name and code. Report quantity harvested in unit specified with crop name.

Crop name	Code	Acres harvested		Quantity harvested	Acres irrigated	
		Whole acres	Tenths		Whole acres	Tenths
			/10	1	2	/10
			/10	1	2	/10
			/10	1	2	/10

Crop name Code

Blackberries and dewberries (pounds) . . 509

Blueberries, tame (pounds) . . . 512

Blueberries, wild (pounds) . . . 515

Cranberries (100-lb. barrels) . . . 521

Raspberries (pounds) . . . 533

Strawberries (pounds) . . . 536

All other berries (pounds) — Specify . . . 539

If additional space is needed to enter crops, use separate sheet of paper.

SECTION 7 Was there a combined total of 20 or more FRUIT TREES, including GRAPEVINES, CITRUS, and NUT TREES ON THIS PLACE in 1985?

S7

1 ☐ YES — **Complete this section**2 ☐ NO — **Go to section 8**1. **TOTAL ACRES** in bearing and nonbearing fruit orchards, citrus or other groves, vineyards, and nut trees on this place. (Do not include abandoned acres.)

Total acres		Acres irrigated	
Whole acres	Tenths	Whole acres	Tenths
121	/10	122	/10

2. From the list on the right, enter name and code for the fruit trees, grapevines, and nut trees on this place in 1985. Report the requested information for each crop even if not harvested because of low prices, damage from hail, frost, etc.

Crop name	Code	NUMBER OF TREES OR VINES OF —		Acres in trees and vines of all ages		Quantity harvested	Unit of measure (Mark one)				
		Nonbearing age	Bearing age	Whole acres	Tenths		Lbs.	Tons	Boxes	Lbs per box	
			1	2	/10	3	4	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	5
			1	2	/10	3	4	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	5
			1	2	/10	3	4	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	5
			1	2	/10	3	4	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	5
			1	2	/10	3	4	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	5
			1	2	/10	3	4	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	5
			1	2	/10	3	4	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	5

If additional space is needed to enter crops, use separate sheet of paper.

Noncitrus crops Code

Apples . . . 123

Apricots . . . 129

Avocados . . . 135

Cherries, sweet . . . 345

Cherries, tart . . . 587

Grapes, dry weight . . . 171

Grapes, fresh weight . . . 177

Olives (Report quantity for Sept. 1984 through March 1985 harvest season) . . . 207

Peaches . . . 225

Pears . . . 231

Plums and prunes, fresh weight . . . 243

Prunes, dry weight . . . 249

Other noncitrus — Specify . . . 261

Citrus crops Code

Report quantity harvested for the 1984–1985 harvest season

Grapefruit . . . 267

Lemons . . . 279

Limes . . . 285

Oranges . . . 297

Tangelos . . . 303

Tangerines . . . 309

Other citrus — Specify . . . 315

Nut crops Code

(Report quantity in meats)

Almonds . . . 321

(Report quantity in shell)

Filberts and hazelnuts . . . 327

Pecans . . . 339

Walnuts, English . . . 357

Other nut trees — Specify . . . 363

SECTION 10 GOVERNMENT CCC LOANS

S10

1. Amount received in 1985 from Government CCC loans for — (Include regular and reserve loans, even if redeemed or forfeited.)

	None	Dollars	Cents
a. Corn, sorghum, barley, and oats	<input type="checkbox"/>	799	00
b. Wheat	<input type="checkbox"/>	800	00
c. Cotton	<input type="checkbox"/>	801	00
d. Soybeans, peanuts, rye, rice, tobacco, and honey	<input type="checkbox"/>	802	00

SECTION 11 LAND USE IN 1985

S11

1. Copy ACRES IN THIS PLACE from section 1, item 4, page 1 Acres

NOTE: For items 2 to 5 below, if the same land had more than one use in 1985, REPORT THAT LAND ONLY ONCE — in the use first listed below that applies. For example, cropland harvested and also pastured is to be reported only as "Cropland harvested."

2. CROPLAND

	None	Number of acres
a. Cropland harvested — Include all land from which crops were harvested or hay was cut, and all land in orchards, citrus groves, vineyards, and nursery and greenhouse products	<input type="checkbox"/>	787
b. Cropland used only for pasture or grazing — Include rotation pasture and grazing land that could have been used for crops without additional improvements.	<input type="checkbox"/>	788
c. Cropland used for cover crops, legumes, and soil-improvement grasses, but NOT harvested and NOT pastured	<input type="checkbox"/>	789
d. Cropland on which all crops failed — (Exception: Do not report here land in orchards and vineyards on which the crop failed. Such acreage is to be reported in item 2a.)	<input type="checkbox"/>	790
e. Cropland in cultivated summer fallow	<input type="checkbox"/>	791
f. Cropland idle	<input type="checkbox"/>	793
3. Woodland — Include all woodlots and timber tracts and cutover and deforested land with young timber growth.		794
{ a. Woodland pastured	<input type="checkbox"/>	795
{ b. Woodland not pastured	<input type="checkbox"/>	796
4. Other pastureland and rangeland — Include any pastureland other than cropland and woodland pasture	<input type="checkbox"/>	797
5. All other land — Land in house lots, ponds, roads, wasteland, etc. — Include any land not reported in items 2 through 4 above.	<input type="checkbox"/>	798
6. TOTAL ACRES — Add the acres reported in items 2 through 5 (Should be the same as item 1 above.)		

SECTION 12 Was any LAND in this place IRRIGATED at any time in 1985?

Irrigated land is all land watered by any artificial or controlled means — sprinklers, furrows or ditches, spreader dikes, etc. Include supplemental, partial, and preplant irrigation.

S12

1 ☐ YES — Complete this section 2 ☐ NO — Go to section 13

	None	Number of acres irrigated
1. How many acres of harvested land were irrigated?	<input type="checkbox"/>	680
Include land from which hay was cut and land in bearing and nonbearing fruit and nut crops reported in section 11, item 2a.		
2. How many acres of pastureland, rangeland, and any other lands not included in item 1 above were irrigated?	<input type="checkbox"/>	681

SECTION 13 Did you or anyone else have any SHEEP or LAMBS on this place in 1985?

S13

1 ☐ YES — Complete this section 2 ☐ NO — Go to section 14

	None	INVENTORY Number on this place Dec. 31, 1985	NUMBER SOLD in 1985
1. SHEEP and LAMBS of all ages	<input type="checkbox"/>	824	825
a. EWES 1 year old or older	<input type="checkbox"/>	826	
2. SHEEP and LAMBS SHORN	<input type="checkbox"/>	Number shorn in 1985	Pounds of wool shorn in 1985
		827	828
3. What was the gross value of sales of SHEEP, LAMBS, and WOOL from this place in 1985?	<input type="checkbox"/>	Gross value of sales Dollars	Cents
		829	00

SECTION 14 Did you or anyone else have any CATTLE or CALVES on this place in 1985?

S14

1 ☐ YES — **Complete this section** 2 ☐ NO — **Go to section 15****• DECEMBER 31, 1985 INVENTORY**

1. CATTLE AND CALVES of all ages (Total of a, b, c, and d below) ☐ None
- a. BEEF COWS — Include beef heifers that had calved ☐
- b. MILK COWS kept for production of milk or cream for sale or home use — Include dry milk cows and milk heifers that had calved ☐
- c. HEIFERS AND HEIFER CALVES — (Exclude heifers that had calved) ☐
- d. STEERS, STEER CALVES, BULLS, AND BULL CALVES ☐

INVENTORY Number on this place Dec. 31, 1985	
803	Total
804	Beef cows
805	Milk cows
806	Heifers and heifer calves
807	Steers and bulls of all ages

• CATTLE AND CALVES SOLD FROM THIS PLACE IN 1985

Include those fed on this place on a contract or custom basis. Also report as sold cattle moved from this place to a feedlot for further feeding.

2. Calves weighing less than 500 pounds ☐ None
3. Cattle, including calves weighing 500 pounds or more ☐
- a. Of the total cattle sold, how many were FATTENED on this place on GRAIN or CONCENTRATES for 30 days or more and SOLD for SLAUGHTER? ☐

Number sold in 1985	Gross value of sales	
	Dollars	Cents
808	809	00
810	811	00
812	813	00

• DAIRY PRODUCTS SOLD FROM THIS PLACE IN 1985

4. Gross value of sales of DAIRY PRODUCTS from this place in 1985 — Include milk, cream, butter, etc. ☐ None

DAIRY PRODUCTS Gross value of sales	
Dollars	Cents
814	00

SECTION 15 Did you or anyone else have any HOGS or PIGS on this place in 1985?

S15

1 ☐ YES — **Complete this section** 2 ☐ NO — **Go to section 16****• DECEMBER 31, 1985 INVENTORY**

1. HOGS and PIGS of all ages — (Total of a and b below) ☐ None
- a. HOGS and PIGS used or to be used for BREEDING ☐
- b. OTHER HOGS and PIGS ☐

INVENTORY Number on this place Dec. 31, 1985	
815	Total
816	Breeding
817	Other

• LITTERS FARROWED

2. LITTERS FARROWED on this place between — ☐ None
- a. December 1, 1984 and May 31, 1985 ☐
- b. June 1, 1985 and November 30, 1985 ☐

Number of litters	
818	
819	

• HOGS AND PIGS SOLD

3. HOGS and PIGS SOLD from this place in 1985 ☐ None
4. Of the hogs and pigs sold, how many were sold as FEEDER PIGS for further feeding? ☐

Number sold in 1985	Gross value of sales	
	Dollars	Cents
820	821	00
822	823	00

SECTION 16 Did you or anyone else have any HORSES, BEES, FISH, GOATS, OTHER LIVESTOCK, or ANIMAL SPECIALTIES in 1985?

S16

1 ☐ YES — **Complete this section**2 ☐ NO — **Go to section 17**

None

1. Horses and ponies of all ages ☐2. Colonies of bees ☐3. Milk goats ☐4. Angora goats ☐5. Other livestock or animal specialties in captivity
(Enter name and code from "List A" on the right.)

Name _____ Code _____

INVENTORY Number on this place Dec. 31, 1985	Total quantity sold in 1985	Gross value of sales	
		Dollars	Cents
830	831	832	00
	Number		
838	840	842	
	Number		
	841	\$	00
	Pounds honey		
843	844	846	
	Number		
	845	\$	00
	Gallons milk		
847	848	850	
	Number		
	849	\$	00
	Pounds mohair		
	1	2	
	Number	\$	00

List A

Name Code
 Other goats 851
 Mules, burros, and
 donkeys 833
 Mink and their pelts . . . 836
 Rabbits and their pelts 854
 All other livestock and
 livestock products —
 Specify 857

List B

Name Code
 Catfish 860
 Trout 863
 Other fish — Specify . . 866
 Other aquaculture
 products — Specify . . 869

6. Fish and other aquaculture products (Enter name and code from "List B" on the right.)

Name _____ Code _____

If additional space is needed, use separate sheet of paper.

Total quantity sold in 1985	Gross value of sales	
	Dollars	Cents
1 — OR — Pounds	2	
Number	\$	00

SECTION 17 Did you or anyone else have any POULTRY such as CHICKENS, TURKEYS, DUCKS, etc., on this place in 1985? (Include poultry grown for others on a contract basis.)

S17

1 ☐ YES — **Complete this section**2 ☐ NO — **Go to section 18**

None

1. HENS and PULLETS of laying age ☐

2. Pullets for laying flock replacement

a. PULLETS 3 months old or older not yet of laying age ☐b. PULLET CHICKS and PULLETS under 3 months old
(Exclude commercial broilers) ☐3. BROILERS, fryers, and other meat-type chickens including capons and roasters ☐

4. TURKEYS

a. Turkeys for slaughter (Exclude breeders) ☐b. Turkey HENS kept for breeding ☐

5. OTHER POULTRY raised in captivity — ducks, geese, pigeons or squab, pheasants, quail, etc. (Enter poultry name and code from the list on the right.)

Poultry name _____ Code _____

Poultry name _____ Code _____

INVENTORY Number on this place Dec. 31, 1985	Total number sold in 1985
892	893
894	895
896	
898	899
900	901
902	903
	1
	1

Name Code
 Ducks 904
 Geese 906
 Pigeons or squab 908
 Pheasants 910
 Quail 912
 All other poultry —
 Specify 914

6. POULTRY HATCHED on this place in 1985 and placed or sold — chickens, turkeys, ducks, etc. — Specify kind of poultry _____ ☐7. Incubator egg capacity on December 31, 1985 ☐8. What was the gross value of sales of poultry and poultry products (eggs, etc.) from this place in 1985? ☐

None

Gross value of sales		
	Dollars	Cents
918		00
\$		

None

Number
916
917

SECTION 18 TYPE OF ORGANIZATION — Mark (X) the one item which best describes the type of organization for this place in 1985. Refer to the *INFORMATION SHEET, Section 18.*

S18

921

- FAMILY or INDIVIDUAL operation — (Exclude partnership and corporation). 1 ☐ } Go to section 20
- PARTNERSHIP operation — Include family partnerships 2 ☐ }
- INCORPORATED UNDER STATE LAW 3 ☐ Go to section 19
- OTHER, such as estate or trust, prison farm, grazing association, Indian reservation, etc. 4 ☐ Specify below then go to section 20

Specify _____

SECTION 19 CORPORATE STRUCTURE (for incorporated operations only)

S19

Refer to the *INFORMATION SHEET, Section 19.*

922

1. Is this a family-held corporation? 1 ☐ Yes 2 ☐ No
2. Are there more than 10 stockholders? 3 ☐ Yes 4 ☐ No

SECTION 20 CHARACTERISTICS AND OCCUPATION OF OPERATOR (Senior partner or person in charge)

S20

Refer to the *INFORMATION SHEET, Section 20.*

923

1. RESIDENCE — Does the operator (senior partner or person in charge) live on this place? 1 ☐ Yes 2 ☐ No

928

2. PRINCIPAL OCCUPATION — At which occupation did the operator spend the majority (50 percent or more) of his/her worktime in 1985? For partnerships consider all members of the partnership together. 1 ☐ Farming or ranching 2 ☐ Other

929

3. OFF-FARM WORK — How many days did the operator (senior partner or person in charge) work at least 4 hours per day off this place in 1985? Include work at a nonfarm job, business, or on someone else's farm for pay. (Exclude exchange farmwork).
- 1 ☐ None
- 2 ☐ 1—49 days
- 3 ☐ 50—99 days
- 4 ☐ 100—149 days
- 5 ☐ 150—199 days
- 6 ☐ 200 days or more

060

4. In what year did the operator (or senior partner) begin to operate any part of this place? _____ Year

925

5. AGE of operator (senior partner or person in charge) _____ Years old

924

6. RACE of operator (senior partner or person in charge)
- 1 ☐ White
- 2 ☐ Negro or Black
- 3 ☐ American Indian
- 4 ☐ Asian or Pacific Islander
- 9 ☐ Other — Specify _____

926

7. SEX of operator (senior partner or person in charge) 1 ☐ Male 2 ☐ Female

927

8. SPANISH ORIGIN — Is the operator (senior partner or person in charge) of Spanish origin or descent (Mexican, Puerto Rican, Cuban, or other Spanish)? 1 ☐ Yes 2 ☐ No

SECTION 21 Was any COMMERCIAL FERTILIZER, including ROCK PHOSPHATE, or LIME used on this place during 1985?

S21

1 ☐ YES — **Complete this section** 2 ☐ NO — **Go to section 22**

1. Acres of cropland fertilized in 1985 (Exclude cropland used only for pastures reported in section 11, item 2b) <input type="checkbox"/>	None	Acres fertilized
		932
2. Acres of pastureland and rangeland fertilized in 1985 reported in section 11, items 2b and 4. <input type="checkbox"/>		933
3. LIME — tons of lime used and acres on which applied (Do not include land plaster or gypsum or lime for sanitation) <input type="checkbox"/>	None	Acres limed
		934
	Tons of lime	935

SECTION 22 Were any INSECTICIDES, HERBICIDES, FUNGICIDES, NEMATOCIDES, OTHER PESTICIDES, or OTHER CHEMICALS used on this place in 1985?

S22

1 ☐ YES — **Complete this section** 2 ☐ NO — **Go to section 23**

Include any materials provided by you, your landlords, or contractors. For each item listed, report acres only once. If multipurpose chemicals were used, report acreage treated for each purpose.

1. Sprays, dusts, granules, fumigants, etc., (fungicide, herbicide, insecticide, nematocide) to control —	None	Number of acres on which used
		936
a. Insects on crops, including hay <input type="checkbox"/>		937
b. Nematodes in crops <input type="checkbox"/>		938
c. Diseases in crops and orchards (blights, smuts, rusts, etc.) <input type="checkbox"/>		939
d. Weeds, grass, or brush in crops and pasture Include both pre-emergence and post emergence <input type="checkbox"/>		940
2. Chemicals for defoliation or for growth control of crops or thinning of fruit <input type="checkbox"/>		

SECTION 23 MACHINERY AND EQUIPMENT ON THIS PLACE ON DECEMBER 31, 1985 (Include only equipment used for agricultural operations in 1984 or 1985.)

S23

• **Value of ALL machinery and equipment on this place, December 31, 1985**

1. What is the estimated market value of ALL machinery, equipment, and implements usually kept on this place and used for the farm or ranch business? Include cars, trucks, tractors, combines, plows, disks, harrows, dryers, pumps, motors, irrigation equipment, dairy equipment including milkers and bulk tanks, livestock feeders, grinding and mixing equipment, etc.

Estimated market value	
Dollars	Cents
943	
\$	00

• **SELECTED machinery and equipment on this place, December 31, 1985. (Report only if used in 1984 or 1985.)**

	None	Total number on this place on December 31, 1985	Of the total, HOW MANY were manufactured in the last 5 years (1981 – 1985)?
2. Motortrucks — Include pickups <input type="checkbox"/>		944	945
3. Wheel tractors other than garden tractors and motor tillers —		946	947
a. Less than 40 horsepower (PTO) <input type="checkbox"/>		948	949
b. 40 horsepower (PTO) or more <input type="checkbox"/>		950	951
4. Grain and bean combines, all types <input type="checkbox"/>		956	957
5. Cotton pickers and strippers <input type="checkbox"/>		958	959
6. Mower conditioners <input type="checkbox"/>		960	961
7. Pickup balers — Include rectangle and round balers <input type="checkbox"/>			

SECTION 24**PRODUCTION EXPENSES paid by you and others for this place in 1985**

S24

Include your best estimates of expenses paid by you, your landlord, contractors, buyers, and others for production of crops, livestock, and other agricultural products in 1985. DO NOT INCLUDE expenses connected with performing customwork for others; operation of nonfarm activities, businesses, or services; or household expenses not related to the farm business.

		None	Dollars	Cents
1. Livestock and poultry purchased — cattle, calves, hogs, pigs, sheep, lambs, goats, horses, chicks, poult, started pullets, etc.	<input type="checkbox"/>		972	00
2. Feed purchased for livestock and poultry — grain, hay, silage, mixed feeds, concentrates, etc.	<input type="checkbox"/>		973	00
a. Commercially mixed formula feeds purchased — complete, supplement, concentrates, premixes. (Exclude ingredients purchased separately, such as soybean meal, cottonseed meal, and urea)	<input type="checkbox"/>	None	Dollars	Cents
			974	00
3. Seed cost — for corn, other grains, soybeans, tobacco, cotton, etc. — Include plants and trees purchased	<input type="checkbox"/>		975	00
4. Commercial fertilizer purchased — all forms, including rock phosphate and gypsum. Include cost of custom application. (Exclude lime)	<input type="checkbox"/>		976	00
5. Agricultural chemicals purchased — Insecticides, herbicides, fungicides, other pesticides, etc. — Include cost of custom applications	<input type="checkbox"/>		977	00
6. Gasoline and other petroleum fuel and oil purchased for the farm business —			978	
a. Gasoline and gasohol	<input type="checkbox"/>		979	00
b. Diesel fuel	<input type="checkbox"/>		980	00
c. LP gas, fuel oil, kerosene, natural gas, motor oil, and grease	<input type="checkbox"/>		981	00
7. Electricity for the farm business (Exclude household expenses)	<input type="checkbox"/>		982	00
8. Hired farm or ranch labor — wages and salaries paid, social security contributions, withholding taxes, insurance, unemployment compensation, etc. (See Information Sheet)	<input type="checkbox"/>		983	00
9. Contract labor — Include expenditures for labor, such as harvesting of fruit, vegetables, berries, etc., performed on a contract basis by a contractor, crew leader, a cooperative, etc.	<input type="checkbox"/>		984	00
10. Repairs and maintenance expenses for the upkeep of buildings, motor vehicles, and farm equipment	<input type="checkbox"/>		985	00
11. Customwork, machine hire and rental of machinery and equipment — Include expenditures for use of equipment and for customwork such as grinding and mixing feed, plowing, combining, corn picking, drying, silo filling, spraying, dusting, fertilizing, etc. (Exclude cost of cotton ginning and application of fertilizer and chemicals.)	<input type="checkbox"/>		986	00
12. Interest paid on debts for the farm business — (Refer to Information Sheet, section 24)			987	
a. Secured by real estate	<input type="checkbox"/>		988	00
b. Not secured by real estate	<input type="checkbox"/>		989	00
13. Cash rent paid for land and buildings in 1985	<input type="checkbox"/>		990	00
14. Property taxes paid — Include farm real estate, machinery, livestock, etc. for the farm business. (Exclude taxes paid by landlords)	<input type="checkbox"/>			
15. All other production expenses — Include insurance, water, animal health costs, grazing fees, marketing charges, miscellaneous farm supplies, etc. (Exclude depreciation, household expenses, and expenses not associated with the farm business)	<input type="checkbox"/>			

SECTION 25 ESTIMATED CURRENT MARKET VALUE OF LAND and BUILDINGS

S25

Please give your best ESTIMATE of the CURRENT MARKET VALUE of land and buildings for the acres reported in section 1, items 1, 2, and 3, page 1.

None

Estimated market value
of land and buildings

Dollars Cents

1. All land owned ☐

996	\$	00
-----	----	----

2. All land rented or leased FROM OTHERS ☐

997	\$	00
-----	----	----

3. All land rented or leased TO OTHERS ☐

998	\$	00
-----	----	----

SECTION 26 INCOME FROM FARM — RELATED SOURCES IN 1985

S26

• Report amount received before taxes and expenses.

None

Farm-related income

Dollars Cents

1. Customwork and other agricultural services provided for farmers and others — plowing, planting, spraying, harvesting, preparation of products for market, etc. (If customwork is a separate business, refer to Information Sheet, section 26) ☐

991	\$	00
-----	----	----

2. Payments you received for participation in Government farm programs — (Exclude Commodity Credit Corporation (CCC) loans) ☐

992	\$	00
-----	----	----

3. Gross cash rent or share payments received from renting out farmland or payments received from lease or sale of allotments — Include payments for livestock pastured on a per-head basis, per-month basis, per-pound basis, etc. ☐

993	\$	00
-----	----	----

4. Sales of forest products and Christmas trees — Include maple products, naval stores, firewood, etc. ☐

994	\$	00
-----	----	----

5. Other farm-related income, including recreational services, patronage dividends of cooperatives, sales of by-products, and other business or income which is CLOSELY RELATED to the agricultural operations on this place —

995	\$	00
-----	----	----

Specify kind _____ ☐**SECTION 27 PERSON COMPLETING THIS REPORT — Please print**

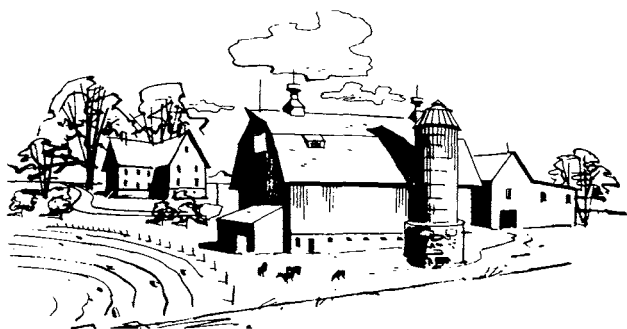
Name

999 Date

Telephone _____

Area code

Number



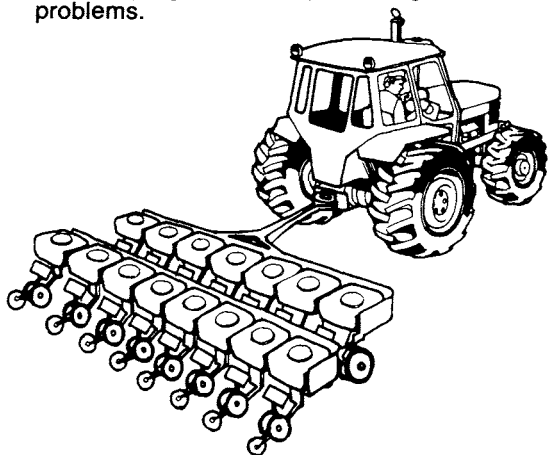
Why a Census?

A national census of agriculture is the only detailed source of information about America's agricultural production. It's a measurement of where farmers and ranchers stand, their farm supply needs, their production costs and cropping systems, and how trends are changing.

Agricultural data are gathered by other groups—but the census of agriculture is the Nation's only comprehensive program for the entire agricultural industry. Census information is sought by land-grant universities in research projects, by those who serve farmer and agribusiness clients, by farm organizations to evaluate and analyze programs, and by lawmakers to help meet the changing needs of America's largest industry.

How Are Census Data Used?

- Farm suppliers of fertilizer, seed, and equipment use census data to meet your needs for products.
- Your farm organization uses census data to evaluate and propose programs and policies that affect you.
- Marketing and distribution facilities are built based on census data to help you market your products.
- New technology is developed for your use by researchers using census data.
- Your elected representatives use census data to develop programs to help solve agricultural problems.



Who Plans the Questions?

Representatives of farmers and ranchers work with Census Bureau officials to determine what needs to be asked on the census report form. These representatives are leaders in the agricultural industry representing commodity organizations, States, suppliers of agricultural products, and universities, and include such organizations as:

American Farm Bureau Federation
 National Cattlemen's Association
 National Council of Farmer Cooperatives
 National Farmers Organization
 National Farmers Union
 The National Grange
 Agricultural Publishers Association
 American Agricultural Economics Association
 American Feed Industry Association
 American Meat Institute
 Association of Research Directors, Inc.
 Conference of Consumer Organizations
 Farm and Industrial Equipment Institute
 National Agri-Marketing Association
 National Agricultural Chemicals Association
 National Association of State Departments of Agriculture
 National Association of State Universities and Land-Grant Colleges
 National Food Processors Association
 Rural Sociological Society
 The Irrigation Association
 U.S. Department of Agriculture

What Happens to the Data?

Data are published only in tabulated totals—by State and county. No one but sworn Census Bureau employees see individual report forms, under penalty of law. Individual report forms are strictly confidential. Not even the Federal Freedom of Information Act can cause your report data to be made public.



The Census Bureau cannot, by law, provide individual data to other government agencies. No one may have access to your completed form except you.

1986 "Short" Form Pretest Report Form 86-A04

FORM 86-A04
(11-21-86)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

**UNITED STATES
CENSUS
OF AGRICULTURE**

BUREAU OF THE CENSUS
1201 East Tenth Street
Jeffersonville, IN 47133

Note — If your records are not available, reasonable estimates may be used. Please complete and return this form within 10 days after receipt.

If you received more than one report form, enter extra Census File Number(s) here and return extra copies with your completed report.

CENSUS USE ONLY

035 036 037 038
039 040 041 042

Please correct errors in name, address, and ZIP Code. ENTER street and number if not shown.

SECTION 1

1. During 1986, did you grow any crops or have any livestock or poultry or other agricultural products for home use or for sale? Examples: grains, hay, nursery and greenhouse crops, fruit, vegetables, cattle, hogs, sheep, poultry, goats, horses, bees, furbearing animals, fish in captivity, and other animal specialties. (Do not include crops or livestock on land rented to others.)

☐ YES — Please skip to section 2 ☐ NO — Go to item 2

2. Mark (X) the item(s) below that describes the addressee's relationship to agriculture and skip to section 10.

☐ Landlord only — rented land to others and had no separate crop or livestock operation. ☐ Never operated a farm or ranch.

☐ No longer operating — Sold farm or ranch or quit farming. ☐ Deceased.

☐ Land idle and not used for agriculture production in 1986. ☐ Other — Specify

SECTION 2 ACREAGE IN 1986 Report land owned, rented, or used by you, your spouse, or by the partnership, corporation, or organization for which you are reporting. Include ALL LAND, REGARDLESS OF LOCATION OR USE — cropland, pastureland, rangeland, woodland, idle land, house lots, etc.

None Number of acres

1. All land owned ☐ 043

2. All land rented or leased FROM OTHERS, including land worked by you on shares, used rent free, in exchange for services, payment of taxes, etc. Include leased Federal, State, and railroad land. (DO NOT include land used on a per-head basis under a grazing permit.) ☐ 044

3. All land rented or leased TO OTHERS, including land worked on shares by others and land subleased. Also complete item 5 below. ☐ 045

4. Acres in "THIS PLACE" — ADD acres owned (item 1) and acres rented (item 2), then SUBTRACT acres rented TO OTHERS (item 3), and enter the result in this space. ☐ 046

If the entry is zero please refer to the back of the cover letter.

5. Of the land you rented or leased to others, how many acres did you own? ☐ 053 Acres

6. In what county was the largest value of your agricultural products raised or produced? County name State

SECTION 3 LAND USE and IRRIGATION

• PART A — How were the ACRES in this place used in 1986?

None Number of acres

1. Cropland harvested — Include all land from which crops were harvested or hay was cut, and all land in orchards, citrus groves, vineyards, and nursery and greenhouse crops. ☐ 787

2. Cropland on which all crops failed — (Exception: Do not report here land in orchards and vineyards on which the crop failed.) ☐ 790

3. Cropland used only for pasture, woodland pastured, and other pastureland and rangeland ☐ 796

4. All other cropland, woodland, house lots, wasteland, etc., not reported in items 1 through 3 above. ☐ 799

• PART B — IRRIGATION

How many acres of harvested land were irrigated? Include land from which hay was cut and land in bearing and nonbearing fruit and nut crops. ☐ 680

SECTION 4 CROPS

• PART A — CROPS HARVESTED from "THIS PLACE" in 1986. (Do not include crops grown on land rented to others.)

	Acres harvested	Quantity harvested	Gross value of crops sold from "THIS PLACE"	
			Dollars	Cents
1. Alfalfa hay	103	104 Tons dry	782	00
2. Other hay — Specify kind	109	110 Tons dry	782	00
3. Corn for grain or seed	067	068 Bu.	773	00
4. Soybeans for beans	088	089 Bu.	775	00
5. Wheat for grain	073	074 Bu.	774	00
6. Tobacco — all types	094	095 Lbs.	781	00
7. Potatoes, Irish — (Do not include those grown for home use.)	097	098 Cwt.	785	00
8. Vegetables for sale (Do not include those grown for home use.)	375	10	783	00
9. Fruit orchards, citrus, vineyards, and nut trees	121	10	784	00
10. Other crops — For additional crops, enter the crop name and code from the list below. Report quantity harvested in the unit specified with crop name. (Report nursery and greenhouse crops in part B.)				

Crop name	Code	Acres harvested	Quantity harvested	Gross value of crops sold from "THIS PLACE"	
				Dollars	Cents
				00	
				00	
				00	

If more space is needed, use a separate sheet of paper.

Crop name	Code	Crop name	Code
Berries for sale (pounds) — Specify	539	Field seeds and grass seeds (pounds)	770
Corn for silage or green chop (tons, green)	070	Oats for grain (bushels)	076
Cotton (bales)	091	Other crops (pounds) — Specify	752

• PART B — NURSERY and GREENHOUSE CROPS GROWN FOR SALE on "THIS PLACE" in 1986

From the list below, enter the crop name and code for each crop grown.

Crop name	Code	Square feet under glass or other protection in 1986	Acres in the open in 1986		Sales in 1986	
			Whole acres	Tenths	Dollars	Cents
			1	10		00
			1	10		00

If more space is needed, use a separate sheet of paper.

Crop name	Code	Crop name	Code
Bedding plants (include vegetable plants)	479	Potted flowering plants	710
Cut flowers and cut florist greens	485	Foliage plants	707
Nursery crops — ornamentals, fruit and nut trees, and vines	488	Greenhouse vegetables	503
		Other — Specify	506

PENALTY FOR FAILURE TO REPORT

CONTINUE ON REVERSE SIDE

SECTION 5 LIVESTOCK and POULTRY**• PART A — CATTLE and CALVES**

1. CATTLE and CALVES of all ages ☐ None
- a. BEEF COWS — Include beef heifers that had calved. ☐
- b. MILK COWS kept for production of milk or cream for sale or home use — Include dry milk cows and milk heifers that had calved. ☐

INVENTORY Number on this place Dec. 1, 1986	
803	Total
804	Beef cows
805	Milk cows

**• CATTLE and CALVES SOLD
FROM THIS PLACE IN 1986**

Include those fed on this place on a contract or custom basis. Also report as sold cattle moved from this place to a feedlot for further feeding.

2. Calves weighing less than 500 pounds ☐
3. Cattle, including calves weighing 500 pounds or more ☐

Number sold in 1986	Gross value of sales	
	Dollars	Cents
808	809	00
810	811	00

• PART B — HOGS and PIGS

1. HOGS and PIGS of all ages ☐ None
- a. HOGS and PIGS used or to be used for BREEDING ☐

INVENTORY Number on this place Dec. 1, 1986	
815	Total
816	Breeding

2. HOGS and PIGS SOLD from this place in 1986 ☐
3. Of the hogs and pigs sold, how many were sold as FEEDER PIGS for further feeding? ☐

Number sold in 1986	Gross value of sales	
	Dollars	Cents
820	821	00
822	823	00

• PART C — SHEEP and LAMBS

1. SHEEP and LAMBS of all ages ☐ None
- a. EWES 1 year old or older. ☐

INVENTORY Number on this place Dec. 1, 1986		NUMBER SOLD in 1986	
824	825		
826			

2. What was the gross value of sales of SHEEP, LAMBS, and WOOL from this place in 1986? ☐

Gross value of sales	
Dollars	Cents
829	00

• PART D — POULTRY

1. HENS and PULLETS of laying age ☐ None
2. PULLETS for laying flock replacement
- a. PULLETS 3 months old or older not yet of laying age ☐
- b. PULLET CHICKS and PULLETS under 3 months old (Do not include commercial broilers.) ☐
3. BROILERS, fryers, and other meat-type chickens including capons and roasters ☐
4. Turkeys for slaughter (Do not include breeders.) ☐
5. OTHER POULTRY raised in captivity — ducks, geese, pigeons or squab, pheasants, quail, etc. (Enter poultry name and code from the list below.)

INVENTORY Number on this place Dec. 1, 1986		Total number sold in 1986	
892	893		
894	895		
896			
898	899		
900	901		

Poultry name _____ Code _____

Poultry name _____ Code _____

Name	Code	Name	Code	Name	Code
Turkey hens kept for breeding	902	Geese	906	Quail	912
Ducks	904	Pigeons or squab	908	All other poultry — Specify	914
		Pheasants	910		

6. What was the gross value of sales of poultry and poultry products (eggs, etc.) from this place in 1986? ☐

Gross value of sales	
Dollars	Cents
918	00

• PART E — HORSES, OTHER LIVESTOCK, FISH, and ANIMAL SPECIALTIES

1. Horses and ponies of all ages ☐ None
2. All other livestock, aquaculture, or livestock products. (Enter name and code from list below.)

Name _____ Code _____

Name _____ Code _____

INVENTORY Number on this place Dec. 1, 1986		Total quantity sold in 1986	Gross value of sales	
830	831	832	Dollars	Cents
		Number	\$	00
		Number	\$	00
		Number	\$	00

Name	Code	Name	Code	Name	Code
Colonies of bees	839	Mules, burros, donkeys	833	Catfish	860
Milk goats	843	Mink and their pelts	836	Trout	863
Angora goats	847	Rabbits and their pelts	854	Other fish — Specify	866
Other goats	851	Other livestock and products — Specify	857	Other aquaculture products — Specify	869

SECTION 6 GOVERNMENT CCC LOANS

Amount received in 1986 from Government CCC loans. Include regular and reserve loans, even if redeemed or forfeited.

Specify crop ☐ None Dollars Cents

SECTION 7 Payments received for participation in FEDERAL FARM PROGRAMS in 1986 (DO NOT INCLUDE CCC loans.)

1. Amount received in cash ☐ None Dollars Cents
2. Value of certificates received — payment-in-kind (PIK) or commodity certificates ☐ None Dollars Cents

SECTION 8 Acres in this place SET ASIDE, DIVERTED, or IDLED under FEDERAL acreage reduction programs in 1986

1. How many acres were set aside (or diverted) under ANNUAL commodity acreage adjustment programs? ☐ None Number of acres
2. How many acres were under the CONSERVATION RESERVE PROGRAM (10 year, CRP)? ☐ None Number of acres

SECTION 9 CHARACTERISTICS and OCCUPATION OF OPERATOR (Senior partner or person in charge)

1. RESIDENCE — Does the operator live on this place? ☐ Yes ☐ No
2. PRINCIPAL OCCUPATION — At which occupation did the operator spend the majority (50 percent or more) of his/her worktime in 1986? For partnerships consider all members of the partnership together. ☐ Farming ☐ Other or ranching
3. OFF-FARM WORK — How many days did the operator work at least 4 hours per day off this place in 1986? — Include work at a nonfarm job, business, or on someone else's farm for pay. (Do not include exchange farmwork.) ☐ None ☐ 1–49 days ☐ 50–99 days ☐ 100–149 days ☐ 150–199 days ☐ 200 days or more
4. In what YEAR did the operator begin to operate any part of this place? _____ Year
5. AGE of operator _____ Years old
6. RACE of operator ☐ White ☐ Negro or Black ☐ American Indian ☐ Asian or Pacific Islander ☐ Other — Specify
7. SEX of operator ☐ Male ☐ Female
8. SPANISH ORIGIN — Is the operator of Spanish origin or descent (Mexican, Puerto Rican, Cuban, or other Spanish)? ☐ Yes ☐ No

SECTION 10 PERSON COMPLETING THIS REPORT — Please print

Name _____ 999 Date _____

Telephone number _____ Area code _____ Number _____

1987 Census of Agriculture Report Form 87-A0210

OMB NO 0607 0534 Approval Expires September 30, 1989

87-A0210

87-A0210

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

UNITED STATES
CENSUS
OF AGRICULTURE

87-A0210

FORM (9-4-88)

Please complete this form and RETURN TO

BUREAU OF THE CENSUS
1201 East Tenth Street
Jeffersonville, IN 47133

Note — If your records are not available, reasonable estimates may be used. If you cannot file by February 1, a time extension request may be sent to the above address. Include your 12-character Census File Number (CFN) as shown in your address label in all correspondence to us.

If you received more than one report form, enter extra Census File Number(s) here and return extra copies with your completed report.

A

A

CENSUS USE ONLY

035036037038

039040041042

SECTION 1

ACREAGE IN 1987

Report land owned, rented, or used by you, your spouse, or by the partnership, corporation, or organization for which you are reporting. Include ALL LAND, REGARDLESS OF LOCATION OR USE — cropland, pastureland, rangeland, woodland, idle land, house lots, etc.

If the acres you operated in 1987 changed during the year, refer to the INFORMATION SHEET, section 1.

None

Number of acres

043

044

045

046

1. All land owned

2. All land rented or leased FROM OTHERS, including land worked by you on shares, used rent free, in exchange for services, payment of taxes, etc. Include leased Federal, State, and railroad land. (DO NOT include land used on a per-head basis under a grazing permit.) Also complete item 5 below.

3. All land rented or leased TO OTHERS, including land worked on shares by others and land subleased. Also complete item 6 below.

4. Acres in "THIS PLACE" — ADD acres owned (item 1) and acres rented (item 2), then SUBTRACT acres rented TO OTHERS (item 3), and enter the result in this space.

For this census report these are the acres in "THIS PLACE."

If the entry is zero please refer to the INFORMATION SHEET, section 1.

5. If you rented land FROM OTHERS (item 2), enter the following information for each landlord.

Name of landlord

Mailing address (Include ZIP Code)

Number of acres

List additional landlords on a separate sheet of paper.

6. If you rented land TO OTHERS (item 3), enter the following information for each renter.

Name of renter

Mailing address (Include ZIP Code)

Number of acres

List additional renters on a separate sheet of paper.

a. Of the land you rented or leased to others, how many acres did you own?

None

053

Acres

7. Did you have any grazing permits on a per-head basis?

054

3 Forest Service

4 Taylor Grazing Sec. 3 (BLM)

5 Indian Land

6 Other — Specify

1 Yes — Mark (X) all boxes which apply

2 No — Go to item 8

8. LOCATION OF AGRICULTURAL ACTIVITY FOR "THIS PLACE"

a. In what county was the largest value of your agricultural products raised or produced?

Principal county

County name

State

Number of acres

056

057

058

059

b. If you also had agricultural operations in any other county(ies), enter the county name(s), etc.

Other counties

INSTRUCTIONS — Response to this inquiry is required by law (Title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

In correspondence pertaining to this report, please refer to your Census File Number (CFN)

Please correct errors in name, address, and ZIP Code. ENTER street and number if not shown.

SECTION 2

Were any of the following CROPS harvested from "THIS PLACE" in 1987?

S2

None

1. Wheat for grain

2. Barley for grain

3. Oats for grain

4. Dry edible beans (Do not include dry limas.)

5. Lentils

6. Dry edible peas (Do not include Austrian winter peas and wrinkled seed peas.)

7. Austrian winter peas

8. Corn (field) for grain or seed (Report quantity on a dry shelled-weight basis.)

9. Corn (field) for silage or green chop

10. Sugar beets for sugar

11. Mint for oil

12. Potatoes, Irish

Acres harvested

Quantity harvested

Acres irrigated

073074Bu075

079080Bu081

076077Bu078

554555Cwt.556

635636Lbs.637

659560Lbs.661

548549Lbs.550

067068Bu069

070071Tons072

719720Tons721

644645Pounds of oil646

097098Cwt.099110

SECTION 3

Was any DRY HAY, GRASS SILAGE, HAYLAGE, or GREEN CHOP cut or harvested from "THIS PLACE" in 1987?

Include sorghum-sudan crosses and hay cut from pastures.

S3

1 Yes — Complete this section

2 No — Go to section 4

If cuttings were made for both dry hay and grass silage, haylage, or green chop from the same fields, report the acreage in the appropriate items under DRY HAY and also under GRASS SILAGE, HAYLAGE, and GREEN CHOP.

1. DRY HAY (If two or more cuttings of dry hay were made from the same acres, report acres only once, but report total tons from all cuttings.)

a. Alfalfa and alfalfa mixtures for hay or dehydrating

b. Small grain hay — oats, wheat, barley, rye, etc.

c. Other tame dry hay — clover, timothy, Sudangrass, fescue, crested wheatgrass, etc.

d. Wild hay

2. GRASS SILAGE, HAYLAGE, AND GREEN CHOP (If two or more cuttings were made from the same acres, report acres only once, but report total tons from all cuttings.)

3. HAY SOLD — Did you sell any hay or grass silage in 1987? (Report value of hay sold in section 9, item 2)

Acres harvested

Quantity harvested (Report either dry or green weight as indicated)

Acres irrigated

103104Tons, dry105

106107Tons, dry108

109110Tons, dry111

112113Tons, dry114

115116Tons, green117

PENALTY FOR FAILURE TO REPORT

SECTION 4 Were any VEGETABLES, SWEET CORN, MELONS, etc., harvested FOR SALE from "THIS PLACE" in 1987? (Do not include those grown for home use.)

- 54 1 ☐ YES — Complete this section
2 ☐ NO — Go to section 5

	Acres		Acres irrigated	
	Whole acres	Tenths	Whole acres	Tenths
1. Land from which vegetables were harvested in 1987	375	/10	376	/10

2. From the list below, enter the crop name and code for each crop harvested in 1987.
If more than one vegetable crop was harvested from the same acres, report acres for each crop. Report crops grown under protection in section 5.

Crop name	Code	Acres harvested	Acres irrigated
Peas, green	441	/10	442 /10
Sweet corn	461	/10	462 /10
		/10	/10
		/10	/10
		/10	/10
		/10	/10
		/10	/10

If more space is needed, use a separate sheet of paper.

Crop name	Code	Crop name	Code	Crop name	Code
Asparagus	379	Celery	401	Peppers, hot	445
Beans, green lima	429	Cucumbers and pickles	411	Pumpkins	449
Beans, snap (bush and pole)	381	Eggplant	415	Radishes	451
Beets	383	Garlic	421	Rhubarb	453
Broccoli	385	Honeydew melons	423	Spinach	457
Cabbage, head	391	Lettuce and romaine	427	Squash	459
Cantaloups and muskmelons	395	Mustard greens	431	Tomatoes	463
Carrots	397	Onions, dry	433	Turnips	465
Cauliflower	399	Onions, green	435	Watermelons	473
		Peppers, sweet	443	Other vegetables — Specify	475

SECTION 5 Were any NURSERY and GREENHOUSE CROPS, MUSHROOMS, sod, bulbs, flowers, flower seeds, vegetable seeds and plants, vegetables under glass or other protection, GROWN FOR SALE on "THIS PLACE" in 1987?

- 55 1 ☐ YES — Complete this section
2 ☐ NO — Go to section 6

	Area irrigated		
	Square feet	Acres	Tenths
1. Nursery and greenhouse crops irrigated in 1987	477	478	/10

2. From the list below, enter the crop name and code for each crop grown.

Crop name	Code	Square feet under glass or other protection in 1987	Acres in the open in 1987		Sales in 1987	
			Whole acres	Tenths	Dollars	Cents
			1	/10	\$	00
			1	/10	\$	00
			1	/10	\$	00

If more space is needed, use a separate sheet of paper.

Crop name	Code	Crop name	Code
Bedding plants (Include vegetable plants)	479	Potted flowering plants	710
Bulbs (Exclude bulb flowering plants)	482	Mushrooms	494
Cut flowers and cut florist greens	485	Sod harvested	497
Nursery crops — ornamentals, fruit and nut trees, and vines	488	Vegetable and flower seeds	500
Foliage plants	707	Greenhouse vegetables	503
		Other — Specify	506

SECTION 8 Was there a combined total of 20 or more FRUIT TREES, including GRAPEVINES and NUT TREES, on "THIS PLACE" in 1987?

- 58 1 ☐ YES — Complete this section
2 ☐ NO — Go to section 9

1. **TOTAL ACRES** in bearing and nonbearing fruit orchards, vineyards, and nut trees on this place. (Do not include abandoned acres.)

Total acres		Acres irrigated	
Whole acres	Tenths	Whole acres	Tenths
121	/10	122	/10

2. For those crops not listed below, enter the name and code from the list at the right for other fruit and nut trees on this place in 1987. Report the requested information for each crop even if not harvested because of low prices, damage from hail, frost, etc.

Crop name	Code	NUMBER OF TREES OR VINES OF --		Acres in trees and vines of all ages		Quantity harvested	Unit of measure Mark one				Lbs. per box
		Nonbearing age	Bearing age	Whole acres	Tenths		Lbs.	Tons	Boxes		
Apples	123		124	125	/10	126	127	1	2	3	128
Sweet cherries	345		346	347	/10	348	349	1	2	3	350
Tart cherries	587		588	589	/10	590	591	1	2	3	592
Pears	231		232	233	/10	234	235	1	2	3	236
			1	2	/10	3	4	1	2	3	5
			1	2	/10	3	4	1	2	3	5

If more space is needed, use a separate sheet of paper.

FORM 87-A0210 (9-4-86)

SECTION 6 Were any STRAWBERRIES, CRANBERRIES, or OTHER BERRIES harvested FOR SALE from "THIS PLACE" in 1987? (Do not include those grown for home use.)

- 56 1 ☐ YES — Complete this section
2 ☐ NO — Go to section 7

From the list below, enter the crop name and code. Report quantity harvested in unit specified with crop name.

Crop name	Code	Acres harvested		Quantity harvested	Acres irrigated	
		Whole acres	Tenths		Whole acres	Tenths
			/10	1	2	/10
			/10	1	2	/10
			/10	1	2	/10
			/10	1	2	/10

If more space is needed, use a separate sheet of paper.

Crop name	Code	Crop name	Code
Blackberries and dewberries (pounds)	509	Loganberries (pounds)	530
Blueberries, tame (pounds)	512	Raspberries (pounds)	533
Boysenberries (pounds)	518	Strawberries (pounds)	536
Cranberries (100-lb. barrels)	521	Other berries (pounds) — Specify	539
Currants (pounds)	524		

SECTION 7 Were any OTHER CROPS harvested from "THIS PLACE" in 1987 — small grains, field seeds, hops, sorghum, sunflower seed, or other crops not previously reported? (Report fruit in section 8.)

- 57 1 ☐ YES — Complete this section
2 ☐ NO — Go to section 8

From the list below, enter the crop name and code. Report quantity harvested in unit specified with crop name.

Crop name	Code	Acres harvested	Quantity harvested	Acres irrigated
			1	2
			1	2
			1	2
			1	2
			1	2

If more space is needed, use a separate sheet of paper.

Field seeds (grass, legume, etc.)	Code	Other crops	Code
Alfalfa seed (pounds)	542	Corn cut for dry fodder, hogged or grazed (report acres only)	581
Aisike clover seed (pounds)	545	Dill for oil (pounds)	586
Bentgrass seed (pounds)	560	Dry lima beans (hundredweight)	557
Bromegrass seed (pounds)	569	Grains, mixed (bushels)	614
Crimson clover seed (pounds)	593	Hops (pounds)	623
Fescue seed (pounds)	602	Mustard seed (pounds)	650
Kentucky bluegrass seed (pounds)	629	Popcorn (pounds, shelled)	662
Orchardgrass seed (pounds)	653	Rapeseed (pounds)	668
Red clover seed (pounds)	671	Rye for grain (bushels)	686
Ryegrass seed (pounds)	689	Safflower (pounds)	692
Timothy seed (pounds)	746	Sunflower seed (pounds)	734
Vetch seed (pounds)	755	Sorghum for grain or seed (bushels)	082
Wheatgrass seed (pounds)	758	Sorghum for silage or green chop (Do not include sorghum-sudan crosses) (tons, green)	085
White clover seed (pounds)	761	Soybeans for beans (bushels)	088
Other field seeds (pounds) — Specify	770	Sugar beets for seed (pounds)	718
		Sweet corn for seed (pounds)	740
		Triticale (bushels)	749
		Other crops (pounds) — Specify	752

Crop name	Code
Apricots	129
Grapes	177
Filberts and hazelnuts	327
Nectarines	201
Peaches	225
Plums and prunes	243
Walnuts, English	357
Other fruit and nuts — Specify	369

SECTION 9 GROSS VALUE of CROPS SOLD from "THIS PLACE" in 1987, BEFORE taxes and expenses (Refer to the INFORMATION SHEET, section 9.)
 S9 Report your best estimate of the value for each of the following groups of crops sold from this place in 1987. Include the value of the landlord's and/or contractor's share, estimating if necessary. Include value of Government CCC loans.

	None	Dollars	Cents
1. Grains, soybeans and other beans sold in 1987	<input type="checkbox"/>	773	00
a. Corn for grain	<input type="checkbox"/>	774	00
b. Wheat	<input type="checkbox"/>	775	00
c. Soybeans	<input type="checkbox"/>	776	00
d. Sorghum for grain	<input type="checkbox"/>	777	00
e. Barley	<input type="checkbox"/>	778	00
f. Oats	<input type="checkbox"/>	779	00
g. Other — rye, dry beans, dry peas, lentils, mustard seed, sunflower seed, etc.	<input type="checkbox"/>	782	00
2. Hay, silage, field seeds, and grass seeds	<input type="checkbox"/>	783	00
3. Vegetables, sweet corn, and melons — (Do not include Irish potatoes and sweet potatoes, report them in item 5 below.)	<input type="checkbox"/>	784	00
4. Fruits, nuts, and berries — apples, cherries, pears, grapes, filberts, strawberries, etc.	<input type="checkbox"/>	785	00
5. Other crops — sugar beets, mint for oil, hops, potatoes, etc. (Do not include nursery and greenhouse crops.) —	<input type="checkbox"/>		00
Specify			

SECTION 10 How were the ACRES in this place USED in 1987?
 S10

1. Copy acres in "THIS PLACE" from section 1, item 4, page 1 _____ Acres
NOTE: For items 2 to 5 below, if land was used for more than one purpose in 1987 report it in the FIRST land use listed below that applies. For example, report cropland harvested and also pastured, only as "Cropland harvested."

	None	Number of acres
2. CROPLAND	<input type="checkbox"/>	787
a. Cropland harvested — Include all land from which crops were harvested or hay was cut, and all land in orchards, citrus groves, vineyards, and nursery and greenhouse crops.	<input type="checkbox"/>	788
b. Cropland used only for pasture or grazing — Include rotation pasture and grazing land that could have been used for crops without additional improvements.	<input type="checkbox"/>	789
c. Cropland used for cover crops, legumes, and soil-improvement grasses, but NOT harvested and NOT pastured	<input type="checkbox"/>	790
d. Cropland on which all crops failed — (Exception: Do not report here land in orchards and vineyards on which the crop failed. Such acreage is to be reported in item 2a.)	<input type="checkbox"/>	791
e. Cropland in cultivated summer fallow	<input type="checkbox"/>	793
f. Cropland idle	<input type="checkbox"/>	794
3. Woodland — Include all woodlots and timber tracts and cutover and deforested land with young timber growth.	<input type="checkbox"/>	795
a. Woodland pastured	<input type="checkbox"/>	796
b. Woodland not pastured	<input type="checkbox"/>	797
4. Other pastureland and rangeland — Include any pastureland other than cropland and woodland pasture.	<input type="checkbox"/>	798
5. All other land — Land in house lots, ponds, roads, wasteland, etc. — Include any land not reported in items 2 through 4 above.	<input type="checkbox"/>	
6. TOTAL ACRES — Add the acres reported in items 2 through 5 (Should be the same as item 1 above.)		

SECTION 11 Was any LAND in this place IRRIGATED at any time in 1987?
 S11 Irrigated land is all land watered by any artificial or controlled means — sprinklers, furrows or ditches, spreader dikes, etc. Include supplemental, partial, and preplant irrigation.

1 ☐ YES — Complete this section
 2 ☐ NO — Go to section 12

	None	Number of acres irrigated
1. How many acres of harvested land were irrigated? Include land from which hay was cut and land in bearing and nonbearing fruit and nut crops reported in section 10, item 2a.	<input type="checkbox"/>	680
2. How many acres of pastureland, rangeland, and any other lands not included in item 1 above were irrigated?	<input type="checkbox"/>	681

SECTION 12 Were any ACRES in this place SET ASIDE, DIVERTED, OR IDLED under FEDERAL acreage reduction programs in 1987?
 S12

1 ☐ YES — Complete this section
 2 ☐ NO — Go to section 13

	None	Number of acres
1. How many acres were set aside (or diverted) under ANNUAL commodity acreage adjustment programs?	<input type="checkbox"/>	682
2. How many acres were under the CONSERVATION RESERVE PROGRAM (10 year, CRP)?	<input type="checkbox"/>	683

SECTION 13 Did you or anyone else have any CATTLE or CALVES on this place in 1987?
 S13

1 ☐ YES — Complete this section
 2 ☐ NO — Go to section 14

• DECEMBER 31, 1987 INVENTORY

	None	INVENTORY Number on this place Dec. 31, 1987
1. CATTLE AND CALVES of all ages (Total of a, b, c, and d below)	<input type="checkbox"/>	803
a. BEEF COWS — Include beef heifers that had calved.	<input type="checkbox"/>	804
b. MILK COWS kept for production of milk or cream for sale or home use — Include dry milk cows and milk heifers that had calved.	<input type="checkbox"/>	805
c. HEIFERS AND HEIFER CALVES — (Do not include heifers that had calved.)	<input type="checkbox"/>	806
d. STEERS, STEER CALVES, BULLS, AND BULL CALVES	<input type="checkbox"/>	807

• CATTLE AND CALVES SOLD FROM THIS PLACE IN 1987
 Include those fed on this place on a contract or custom basis. Also report as sold cattle moved from this place to a feedlot for further feeding.

	None	Number sold in 1987	Gross value of sales
			Dollars Cents
2. Calves weighing less than 500 pounds	<input type="checkbox"/>	808	809
3. Cattle, including calves weighing 500 pounds or more	<input type="checkbox"/>	810	811
a. Of the total cattle sold, how many were FATTENED on this place on GRAIN or CONCENTRATES for 30 days or more and SOLD for SLAUGHTER?	<input type="checkbox"/>	812	813

• DAIRY PRODUCTS SOLD FROM THIS PLACE IN 1987

	None	DAIRY PRODUCTS Gross value of sales
		Dollars Cents
4. Gross value of sales of DAIRY PRODUCTS from this place in 1987 — Include milk, cream, butter, etc.	<input type="checkbox"/>	814

SECTION 14 Did you or anyone else have any HOGS or PIGS on this place in 1987?
 S14

1 ☐ YES — Complete this section
 2 ☐ NO — Go to section 15

• DECEMBER 31, 1987 INVENTORY

	None	INVENTORY Number on this place Dec. 31, 1987
1. HOGS AND PIGS of all ages (Total of a and b below)	<input type="checkbox"/>	815
a. HOGS and PIGS used or to be used for BREEDING	<input type="checkbox"/>	816
b. OTHER HOGS and PIGS	<input type="checkbox"/>	817

• LITTERS FARROWED

	None	Number of litters
2. LITTERS FARROWED on this place between —	<input type="checkbox"/>	818
a. December 1, 1986 and May 31, 1987	<input type="checkbox"/>	819
b. June 1, 1987 and November 30, 1987	<input type="checkbox"/>	

• HOGS AND PIGS SOLD

	None	Number sold in 1987	Gross value of sales
			Dollars Cents
3. HOGS AND PIGS SOLD from this place in 1987	<input type="checkbox"/>	820	821
4. Of the hogs and pigs sold, how many were sold as FEEDER PIGS for further feeding?	<input type="checkbox"/>	822	823

SECTION 15 Did you or anyone else have any SHEEP or LAMBS on this place in 1987?
 S15

1 ☐ YES — Complete this section
 2 ☐ NO — Go to section 16

	None	INVENTORY Number on this place Dec. 31, 1987	NUMBER SOLD in 1987
1. SHEEP and LAMBS of all ages	<input type="checkbox"/>	824	825
a. EWES 1 year old or older	<input type="checkbox"/>	826	

• SHEEP and LAMBS SHORN

	None	Number shorn in 1987	Pounds of wool shorn in 1987
2. SHEEP and LAMBS SHORN	<input type="checkbox"/>	827	828

• Gross value of sales

	None	Gross value of sales
		Dollars Cents
3. What was the gross value of sales of SHEEP, LAMBS, and WOOL from this place in 1987?	<input type="checkbox"/>	829

SECTION 16 Did you or anyone else have any HORSES, BEES, FISH, GOATS, OTHER LIVESTOCK, or ANIMAL SPECIALTIES on this place in 1987?

S16 1 ☐ YES — Complete this section 2 ☐ NO — Go to section 17

	INVENTORY Number on this place Dec. 31, 1987	Total quantity sold in 1987	Gross value of sales	
			Dollars	Cents
1. Horses and ponies of all ages	830	831	832	
		Number	\$	00
2. Colonies of bees	839	840	842	
		Number	\$	00
3. Milk goats	843	844	846	
		Number	\$	00
4. Angora goats	847	848	850	
		Number	\$	00
5. Other goats	851	852	853	
		Number	\$	00
6. Mules, burros, and donkeys	833	834	835	
		Number	\$	00
7. Mink and their pelts	836	837	838	
		Number	\$	00
8. Rabbits and their pelts	854	855	856	
		Number	\$	00
9. All other livestock and livestock products	857	858	859	
		Number	\$	00

Specify _____

Name	Code	Name	Code
Trout	863	Other aquaculture products — Specify	869

If more space is needed, use a separate sheet of paper.

SECTION 17 Did you or anyone else have any POULTRY, such as CHICKENS, TURKEYS, DUCKS, etc., on this place in 1987? — Include poultry grown for others on a contract basis.

S17 1 ☐ YES — Complete this section 2 ☐ NO — Go to section 18

	INVENTORY Number on this place Dec. 31, 1987	Total number sold in 1987
1. HENS and PULLETS of laying age		
2. PULLETS for laying flock replacement		
a. PULLETS 3 months old or older not yet of laying age	894	895
b. PULLET CHICKS and PULLETS under 3 months old (Do not include commercial broilers.)	896	
3. BROILERS, fryers, and other meat-type chickens including capons and roasters	898	899
4. TURKEYS		
a. Turkeys for slaughter (Do not include breeders.)	900	901
b. Turkey HENS kept for breeding	902	903
5. OTHER POULTRY raised in captivity — ducks, geese, pigeons or squab, pheasants, quail, etc. (Enter poultry name and code from the list below.)		
Poultry name _____ Code _____		
Poultry name _____ Code _____		
Name Code Name Code Name Code		
Ducks 904 Pigeons or squab 908 Quail 912		
Geese 906 Pheasants 910 All other poultry — Specify 914		
6. POULTRY HATCHED on this place in 1987 and placed or sold — chickens, turkeys, ducks, etc. —	916	
Specify kind of poultry _____		
7. Incubator egg capacity on December 31, 1987	917	
8. What was the gross value of sales of poultry and poultry products (eggs, etc.) from this place in 1987?		
	Gross value of sales	
	Dollars Cents	
	\$ 00	

SECTION 18 GOVERNMENT CCC LOANS

S18

1. Amount received in 1987 from Government CCC loans for — None Dollars Cents

a. Corn 886 \$ 00

b. Wheat 887 \$ 00

c. Soybeans 888 \$ 00

d. Sorghum, barley, and oats 889 \$ 00

e. Rye and honey 891 \$ 00

SECTION 19 Payments received for participation in FEDERAL FARM PROGRAMS in 1987 (DO NOT INCLUDE CCC loans.) Refer to INFORMATION SHEET, section 19.

S19 None Dollars Cents

1. Amount received in cash 884 \$ 00

2. Value of certificates received — payment-in-kind (PIK) or commodity certificates 885 \$ 00

SECTION 20 TYPE OF ORGANIZATION

S20

Mark (X) the one item which best describes the type of organization for this place in 1987. Refer to the INFORMATION SHEET, section 20.

• FAMILY or INDIVIDUAL operation — (Do not include partnership and corporation.) 921 1 ☐ Go to section 22

• PARTNERSHIP operation — Include family partnerships. 2 ☐ Go to section 21

• INCORPORATED UNDER STATE LAW 3 ☐ Go to section 21

• OTHER, such as estate or trust, prison farm, grazing association, Indian reservation, etc. 4 ☐ Specify below then go to section 22

Specify _____

SECTION 21 CORPORATE STRUCTURE (for incorporated operations only)

S21 Refer to the INFORMATION SHEET, section 21.

1. Is this a family-held corporation? 922 1 ☐ Yes 2 ☐ No

2. Are there more than 10 stockholders? 3 ☐ Yes 4 ☐ No

SECTION 22 CHARACTERISTICS AND OCCUPATION OF OPERATOR (senior partner or person in charge)

S22 Refer to the INFORMATION SHEET, section 22.

1. RESIDENCE — Does the operator (senior partner or person in charge) live on this place? 923 1 ☐ Yes 2 ☐ No

2. PRINCIPAL OCCUPATION — At which occupation did the operator spend the majority (50 percent or more) of his/her worktime in 1987? For partnerships consider all members of the partnership together. 928 1 ☐ Farming 2 ☐ Other or ranching

3. OFF-FARM WORK — How many days did the operator (senior partner or person in charge) work at least 4 hours per day off this place in 1987? — Include work at a nonfarm job, business, or on someone else's farm for pay. (Do not include exchange farmwork.) 929 1 ☐ None 2 ☐ 1–49 days 3 ☐ 50–99 days 4 ☐ 100–149 days 5 ☐ 150–199 days 6 ☐ 200 days or more

4. In what YEAR did the operator (or senior partner) begin to operate any part of this place? 930 _____ Year

5. AGE of operator (senior partner or person in charge) 925 _____ Years old

6. RACE of operator (senior partner or person in charge) 924 1 ☐ White 2 ☐ Negro or Black 3 ☐ American Indian 4 ☐ Asian or Pacific Islander 5 ☐ Other — Specify _____

7. SEX of operator (senior partner or person in charge) 926 1 ☐ Male 2 ☐ Female

8. SPANISH ORIGIN — Is the operator (senior partner or person in charge) of Spanish origin or descent (Mexican, Puerto Rican, Cuban, or other Spanish)? 927 1 ☐ Yes 2 ☐ No

SECTION 23 PRODUCTION EXPENSES paid by you and others for this place in 1987				SECTION 25 Were any INSECTICIDES, HERBICIDES, FUNGICIDES, NEMATOCIDES, OTHER PESTICIDES, or OTHER CHEMICALS used on this place in 1987?																		
S23				S25																		
Include your best estimates of expenses paid by you, your landlord, contractors, buyers, and others for production of crops, livestock, and other agricultural products in 1987. (DO NOT INCLUDE expenses connected with performing customwork for others; operation of nonfarm activities, businesses, or services; or household expenses not related to the farm business.)				1 <input type="checkbox"/> YES — Complete this section 2 <input type="checkbox"/> NO — Go to section 26 Include any materials provided by you, your landlords, or contractors. For each item listed, report acres only once. If multipurpose chemicals were used, report acreage treated for each purpose.																		
1. Livestock and poultry purchased — cattle, calves, hogs, pigs, sheep, lambs, goats, horses, chicks, poults, started pullets, etc.	None	Dollars	Cents	1. Sprays, dusts, granules, fumigants, etc., (fungicide, herbicide, insecticide, nematocide) to control —	None	Acres on which used																
971 \$ 00				a. Insects on crops, including hay		936																
2. Feed purchased for livestock and poultry — grain, hay, silage, mixed feeds, concentrates, etc.				b. Nematodes in crops		937																
972 \$ 00				c. Diseases in crops and orchards (blights, smuts, rusts, etc.)		938																
a. Commercially mixed formula feeds purchased — complete, supplement, concentrates, premixes.				d. Weeds, grass, or brush in crops and pasture — Include both pre-emergence and post emergence.		939																
(Do not include ingredients purchased separately, such as soybean meal, cottonseed meal, and urea.)				2. Chemicals for defoliation or for growth control of crops or thinning of fruit		940																
973 \$ 00																						
3. Seed cost — for corn, other grains, soybeans, tobacco, cotton, etc. — Include plants and trees purchased.				SECTION 26 MACHINERY AND EQUIPMENT on this place on December 31, 1987 — Include only equipment used for agricultural operations in 1986 or 1987.																		
974 \$ 00				• Value of ALL machinery and equipment on this place, December 31, 1987																		
4. Commercial fertilizer purchased — all forms, including rock phosphate and gypsum. Include cost of custom applications.				1. What is the estimated market value of ALL machinery, equipment, and implements usually kept on this place and used for the farm or ranch business? — Include cars, trucks, tractors, combines, plows, disks, harrows, dryers, pumps, motors, irrigation equipment, dairy equipment including milkers and bulk tanks, livestock feeders, grinding and mixing equipment, etc.																		
975 \$ 00				<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Estimated market value</th> </tr> <tr> <th style="width: 50%;">Dollars</th> <th style="width: 50%;">Cents</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">943</td> <td style="text-align: center;">00</td> </tr> </tbody> </table>			Estimated market value		Dollars	Cents	943	00										
Estimated market value																						
Dollars	Cents																					
943	00																					
5. Agricultural chemicals purchased — Insecticides, herbicides, fungicides, other pesticides, etc. — Include cost of custom applications. (Do not include lime.)				• SELECTED machinery and equipment on this place, December 31, 1987. (Report only if used in 1986 or 1987.)																		
976 \$ 00				<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Total number on this place on December 31, 1987</th> <th style="width: 70%;">Of the total, HOW MANY were manufactured in the last 5 years (1983 - 1987)?</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">944</td> <td style="text-align: center;">945</td> </tr> <tr> <td style="text-align: center;">946</td> <td style="text-align: center;">947</td> </tr> <tr> <td style="text-align: center;">948</td> <td style="text-align: center;">949</td> </tr> <tr> <td style="text-align: center;">950</td> <td style="text-align: center;">951</td> </tr> <tr> <td style="text-align: center;">956</td> <td style="text-align: center;">957</td> </tr> <tr> <td style="text-align: center;">958</td> <td style="text-align: center;">959</td> </tr> <tr> <td style="text-align: center;">960</td> <td style="text-align: center;">961</td> </tr> </tbody> </table>			Total number on this place on December 31, 1987	Of the total, HOW MANY were manufactured in the last 5 years (1983 - 1987)?	944	945	946	947	948	949	950	951	956	957	958	959	960	961
Total number on this place on December 31, 1987	Of the total, HOW MANY were manufactured in the last 5 years (1983 - 1987)?																					
944	945																					
946	947																					
948	949																					
950	951																					
956	957																					
958	959																					
960	961																					
6. Gasoline and other petroleum fuel and oil purchased for the farm business —				2. Motortrucks — Include pickups																		
a. Gasoline and gasohol				3. Wheel tractors other than garden tractors and motor tillers —																		
977 \$ 00				a. Less than 40 horsepower (PTO)																		
b. Diesel fuel				b. 40 horsepower (PTO) or more																		
978 \$ 00				4. Grain and bean combines, all types																		
c. Natural gas				5. Cotton pickers and strippers																		
979 \$ 00				6. Mower conditioners																		
d. LP gas, fuel oil, kerosene, motor oil, grease, etc.				7. Pickup balers — Include rectangle and round balers																		
980 \$ 00				SECTION 27 ESTIMATED CURRENT MARKET VALUE OF LAND and BUILDINGS																		
7. Electricity for the farm business — (Do not include household expenses.)				Please give your best ESTIMATE of the CURRENT MARKET VALUE of land and buildings for all acres reported in section 1, items 1, 2, and 3, page 1.																		
981 \$ 00				<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Estimated market value of land and buildings</th> </tr> <tr> <th style="width: 50%;">Dollars</th> <th style="width: 50%;">Cents</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">996</td> <td style="text-align: center;">00</td> </tr> <tr> <td style="text-align: center;">997</td> <td style="text-align: center;">00</td> </tr> <tr> <td style="text-align: center;">998</td> <td style="text-align: center;">00</td> </tr> </tbody> </table>			Estimated market value of land and buildings		Dollars	Cents	996	00	997	00	998	00						
Estimated market value of land and buildings																						
Dollars	Cents																					
996	00																					
997	00																					
998	00																					
8. Hired farm and ranch labor — also include employer's cost for social security, workman's compensation, insurance premiums, pension plans, etc. (See INFORMATION SHEET)				1. All land owned																		
982 \$ 00				2. All land rented or leased FROM OTHERS																		
9. Contract labor — Include expenditures for labor, such as harvesting of fruit, vegetables, berries, etc., performed on a contract basis by a contractor, crew leader, a cooperative, etc.				3. All land rented or leased TO OTHERS																		
983 \$ 00				SECTION 28 INCOME FROM FARM-RELATED SOURCES in 1987																		
10. Repair and maintenance expenses for the upkeep of buildings, motor vehicles, and farm equipment				Report amount received before taxes and expenses.																		
984 \$ 00				<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Farm-related income</th> </tr> <tr> <th style="width: 50%;">Dollars</th> <th style="width: 50%;">Cents</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">992</td> <td style="text-align: center;">00</td> </tr> <tr> <td style="text-align: center;">993</td> <td style="text-align: center;">00</td> </tr> <tr> <td style="text-align: center;">994</td> <td style="text-align: center;">00</td> </tr> <tr> <td style="text-align: center;">995</td> <td style="text-align: center;">00</td> </tr> </tbody> </table>			Farm-related income		Dollars	Cents	992	00	993	00	994	00	995	00				
Farm-related income																						
Dollars	Cents																					
992	00																					
993	00																					
994	00																					
995	00																					
11. Customwork, machine hire and rental of machinery and equipment — Include expenditures for use of equipment and for customwork such as grinding and mixing feed, plowing, combining, corn picking, drying, silo filling, spraying, dusting, fertilizing, etc. (Do not include cost of cotton ginning and application of fertilizer and chemicals.)				1. Customwork and other agricultural services provided for farmers and others — plowing, planting, spraying, harvesting, preparation of products for market, etc. (If customwork is a separate business, refer to INFORMATION SHEET, section 28)																		
985 \$ 00				2. Gross cash rent or share payments received from renting out farmland or payments received from lease or sale of allotments — Include payments for livestock pastured on a per-head basis, per-month basis, per-pound basis, etc.																		
12. Interest paid on debts — (See INFORMATION SHEET)				3. Sales of forest products and Christmas trees — Include maple products, naval stores, firewood, etc.																		
a. Secured by real estate				4. Recreational services, patronage dividends of cooperatives, and other income which is CLOSELY RELATED to the agricultural operation on this place —																		
986 \$ 00				Specify _____																		
b. Not secured by real estate				SECTION 29 PERSON COMPLETING THIS REPORT — Please print																		
987 \$ 00				Name _____ Date _____																		
13. Cash rent paid for land and buildings in 1987 — (Do not include grazing fees.)				Telephone number _____ Area Code _____ Number _____																		
988 \$ 00																						
14. Property taxes paid — Include farm real estate, machinery, livestock, etc. for the farm business. (Do not include taxes paid by landlords.)																						
989 \$ 00																						
15. All other production expenses — Include insurance, water, animal health costs, grazing fees, marketing charges, miscellaneous farm supplies, etc. (Do not include depreciation, household expenses, and expenses not associated with the farm business.)																						
990 \$ 00																						
SECTION 24 Was any COMMERCIAL FERTILIZER, including ROCK PHOSPHATE, or LIME used on this place during 1987?				SECTION 25 Were any INSECTICIDES, HERBICIDES, FUNGICIDES, NEMATOCIDES, OTHER PESTICIDES, or OTHER CHEMICALS used on this place in 1987?																		
S24				S25																		
1 <input type="checkbox"/> YES — Complete this section 2 <input type="checkbox"/> NO — Go to section 25				1 <input type="checkbox"/> YES — Complete this section 2 <input type="checkbox"/> NO — Go to section 26																		
1. Acres of cropland fertilized in 1987 — (Do not include cropland for pastures reported in section 10, item 2b.)				1. Sprays, dusts, granules, fumigants, etc., (fungicide, herbicide, insecticide, nematocide) to control —																		
932				a. Insects on crops, including hay																		
2. Acres of pastureland and rangeland fertilized in 1987 reported in section 10, items 2b and 4				b. Nematodes in crops																		
933				c. Diseases in crops and orchards (blights, smuts, rusts, etc.)																		
3. LIME — tons of lime used and acres on which applied — (Do not include land plaster or gypsum or lime for sanitation.)				d. Weeds, grass, or brush in crops and pasture — Include both pre-emergence and post emergence.																		
934				2. Chemicals for defoliation or for growth control of crops or thinning of fruit																		
935																						

INFORMATION SHEET

1987 UNITED STATES CENSUS OF AGRICULTURE

Special Reporting Instructions

1. Who Should Report

WE NEED A REPLY FROM EVERYONE RECEIVING A REPORT FORM, INCLUDING individuals, landlords, tenants, partnerships, corporations, institutions, and THOSE NOT CONDUCTING AGRICULTURAL OPERATIONS. Each case included in the census has a unique Census File Number (CFN). In order to make the census results as complete and accurate as possible, we need to obtain information about every CFN.

2. If You Received More Than One Report Form for an Operation

Complete only ONE report form for an operation. Write "Duplicate" near the address label of each extra report form. Also, write the 11-digit census file number(s) of the DUPLICATE report(s) ON THE COMPLETED REPORT in the space provided to the left of the address label. Return the extra report(s) in the same envelope with your completed report form so that we can correct our records.

3. If You No Longer Farm

If you had agricultural operations **at any time during 1987**, please report all agricultural activity during the year. Report all land on your census form that you owned or rented. Also, report your 1987 crop and livestock production and 1987 sales.

Explain on the first page of the report form (or on a separate sheet of paper) that you quit farming or ranching and give the approximate date and the name and address of the present operator, if known.

4. If You Never Farmed or Have No Association With Agriculture

Please write a note on the report form near the address label explaining this and return the form so that we can correct our records. In our efforts to make the census as complete as possible, we obtained lists from various sources. We tried to eliminate duplicate and nonfarm addresses, however, it was not always possible to do so.

5. If You Have More Than One Agricultural Operation

Complete a report form for EACH SEPARATE and DISTINCT production unit, i.e., each individual farm, ranch, feedlot, greenhouse, etc., or combination of farms, etc., for which you maintain SEPARATE records of operating expenses and sales, livestock and other inventories, crop acreages, and production.

6. If You Have a Partnership Operation

Complete only ONE report for the entire partnership's agricultural operation and include all partners' shares on the one report. If members of the partnership also operate separate farms or ranches in addition to the partnership farming operation, separate report forms should be completed for each individual operation.

If two or more report forms were received for the same operation, mark each additional form as a "Duplicate." Return the duplicate report(s) in the same envelope with the completed partnership report, where possible, or write a note on the duplicate report, such as, "(Name of partner) has completed a report for the partnership (provide name and CFN of partnership)."

7. Landlord's or Contractor's Share

If you rented or leased land from others or had a contract for the production of agricultural products, include both your share and the landlord's or contractor's share of the production, sales, and expenses so your census report form will be complete for "THIS PLACE."

If you do not know the landlord's or contractor's share, include your BEST ESTIMATE. If you do not have records available for all data items, use your best estimate.

How to Enter Your Response

Enter your replies in the proper spaces, on the correct lines, and in the units requested, i.e., dollars, bushels, tons, etc. Write any explanation outside the answer spaces or on a separate sheet of paper.

All dollar figures may be entered in whole dollars. CENTS ARE NOT REQUIRED.

Enter whole numbers except where tenths are requested, such as acres of potatoes harvested. If you have 1/2, 1/3, or 1/4 of an acre, convert to tenths. For example, convert 1/2 to 5/10, 1/3 to 3/10, 1/4 to 2/10.

The census report form will contain sections and questions which do not apply to you. When this occurs, mark the "None" or "No" box and go on to the next item or section.

Instructions For Specified Sections

► Section 1 — ACREAGE IN 1987

Your answers to this section will determine the land (**Acres in "THIS PLACE"**) referred to in the rest of the report form.

When answering the acreage questions, include the land associated with your agricultural operations in 1987 whether in production or not. Include all land that you owned or rented during 1987 even if only for part of the year. Do not include any unrelated residential or commercial land.

IF YOU QUIT FARMING DURING 1987 — Complete the report form for the portion of the year that you did farm. Explain on the report form in the space to the left of the address label (or on another sheet of paper) when you stopped farming and include the name and address of the person now using the land.

Report all land in section 1 in whole acres.

Item 1 — All Land Owned — Report all land owned in 1987 whether held under title, purchase contract or mortgage, homestead law, or as heir or trustee of an undivided estate. Include all land owned by you and/or your spouse, or by the partnership, corporation, or organization for which you are reporting.

Item 2 — All Land Rented or Leased FROM OTHERS — Report all land rented by you or your operation even though the landlord may have supplied materials or supervision.

INCLUDE in item 2:

- a. Land for agricultural use that you rented from others for cash
- b. Land you worked on a share basis (crop or livestock)
- c. Land owned by someone else that you used rent-free
- d. Federal, State, Indian reservation, or railroad land rented or leased by the acre

DO NOT INCLUDE in item 2:

Land used on a per-head or animal unit license or permit basis, such as section 3 of the Taylor Grazing Act, National Forest, or Indian reservation permit land. If you had any of these permits, mark "yes" to item 7.

Item 3 — All Land Rented or Leased TO OTHERS — Include all land rented out for any purpose if it was part of the acreage reported in items 1 and 2. A report form will be obtained from each of your tenants to cover the operations on that land.

INCLUDE in item 3:

- a. Owned land rented to others for cash or a share of crops or livestock
- b. Land you rented from someone and then subleased to someone else
- c. Land worked for you by someone for a share of crops or livestock
- d. Land which you allowed others to use rent-free

Item 4 — Acres in "THIS PLACE" — This figure will show the total of all land you operated at any time in 1987.

If item 4, Acres in "THIS PLACE" is "0" and:

- a. You raised any crops or had any livestock or poultry on "THIS PLACE" in 1987, complete the report.
- b. All your land was operated by a renter or sharecropper, complete item 6 (name and address of renters), skip to and complete section 29, and explain briefly, "all land rented out," etc. Mail form in return envelope.
- c. You did not have any agricultural activity on owned or rented land in 1987, complete section 29 and explain briefly, such as "retired," "sold farm," and date. Give name and address of current operator if known and return form.

► Sections 2 through 8 — CROPS

Sections 2 through 8 provide space for reporting crops harvested during the 1987 crop year from the land shown in section 1, item 4 (Acres in "THIS PLACE") of your report. Please report your crops in the appropriate sections. Do NOT include any crops grown on land rented or leased TO OTHERS, or worked by others on shares during 1987.

Acres harvested — Enter the acres harvested in 1987. Round fractions to whole acres except where tenths are requested by "/10" in the reporting box, such as for potatoes.

Quantity harvested — If your unit of measure is different than the unit on the report form, please convert your figure for the quantity harvested to the unit requested. If the harvest was incomplete by December 31, 1987, please report the quantity harvested and estimated quantity to be harvested.

Acres irrigated — For each crop irrigated, report number of acres irrigated. Irrigation is defined as land watered by artificial or controlled means — sprinklers, furrows or ditches, spreader dikes, purposeful flooding, etc. Include acres that received supplemental, partial, and/or preplant irrigation. Do not report water applied in transplanting tobacco plants, trees, or vegetables as irrigation. Leave "Acres irrigated" blank for crops that are not irrigated.

How to Report Crops Harvested

► **Sections 2 and 3** — Report only for the listed crops.

► **Sections 4 through 8** — To report: (1) find the crop name and the code number from the list in the section; (2) enter crop name and code in the first two columns of the first available answer line in the section; (3) enter the information that is requested in the remaining columns. If you harvested a crop not listed in sections 4 through 8, use the "Other" code in the appropriate section and specify the crop name.

Double Cropping — If two or more crops were harvested from the same land (double cropping) report the total acres and production of each harvested crop in the appropriate section(s) of the report form.

Example: In 1987 you harvested 1,230 bushels of wheat from 40 acres, then on the same 40 acres planted soybeans, from which you harvested 1,550 bushels. You irrigated the soybeans but not the wheat.

Section 2 Were any of the following CROPS harvested from "THIS PLACE" in 1987?				
S2	None	Acres harvested	Quantity harvested	Acres irrigated
1. Cotton	<input type="checkbox"/>	091	092 Bales	093
2. Soybeans for beans	<input type="checkbox"/>	088 40	089 1,550 Bu.	090 40
3. Wheat for grain	<input type="checkbox"/>	073 40	074 1,230 Bu.	075
4. Oats for grain	<input type="checkbox"/>	076	077 Bu.	078

Interplanted Crops — If two crops were grown at the same time in alternating strips in the same field, report the portion of the field used for each crop.

Example: A 60 acre field was planted in cotton and soybeans, with two rows of cotton followed by an area of the same width planted in soybeans. No irrigation was used. Thirty acres of soybeans and 30 acres of cotton would be reported in the appropriate section(s).

Skip Row Planting — If a crop is planted in an alternating pattern of planted and non-planted rows, such as two rows planted and two rows skipped (2 X 2), report the portion of the field occupied by the crop in the appropriate section for that crop, and report the skipped portion as "Cropland idle" in section 10, item 2f.

► **Section 4 — VEGETABLES** — Report acres of vegetables harvested FOR SALE or commercial processing. Do not include vegetables grown for home use. Report the total acreage of each vegetable crop harvested.

Example: In 1987 you harvested 10 acres of lettuce from a field, then replanted the field in lettuce and harvested the 10 acres again. Both crops of lettuce were irrigated. Enter only 10 acres of land from which vegetables were harvested and 10 acres irrigated in item 1 of section 4, but write in 20 acres of lettuce harvested and 20 acres of lettuce irrigated in item 2 of section 4.

► **Section 8 — FRUITS and NUTS** — In counting the combined total of 20 or more trees and vines, include those for home use as well as those maintained for sale of the production. Acres in trees or vines that have been abandoned should not be included; these acres should be included in section 10, item 2f "Cropland idle."

If crops other than fruit and nut trees and vines were interplanted with trees or vines, report the total acres for the orchard crop in section 8 and the total acres of the interplanted crop in the appropriate section.

► **Section 9 — GROSS VALUE OF CROPS SOLD**

Report the value of all crops sold from "THIS PLACE" in 1987, regardless of the year they were harvested or who owned the land. Be sure to report gross values before deducting expenses and taxes. Include Government CCC loans received for "THIS PLACE" in 1987. Include payments received in 1987 from cooperatives or marketing organizations for crops produced on "THIS PLACE" regardless of the year in which the crops were harvested.

Also include as sales, your estimate of the value of any crop removed from "THIS PLACE" in trade for services, such as hay cut in exchange for fence repair, clearing, or other services. If the sale price or market value is not known, give your best estimate of the crop's market value when removed from "THIS PLACE."

DO NOT INCLUDE crops or crop products purchased from others and later sold.

► **Section 10 — USE OF ACRES IN "THIS PLACE"**

This section is used to classify the acres in "THIS PLACE" reported in section 1, item 4. (Do not include any acres you rented to others reported in section 1, item 3). The sum of the acres entered in various categories should equal total acres in "THIS PLACE."

Land Used for More Than One Purpose — Do not report the same acreage for more than one of the listed purposes. If part or all of your land was used for more than one listed purpose in 1987, report that land only in the first category listed. For example, if you plowed under a cover crop, and planted and harvested a grain crop, report the land in item 2a, "Cropland harvested," but do NOT report as "Cropland used for cover crops, legumes, etc." (item 2c).

Double Cropping — When more than one crop was harvested from the same land in 1987, report that land only ONCE as "Cropland harvested," in item 2a.

Interplanted Crops — If you interplanted crops, such as cotton in an orchard, report the total land used for both crops only ONCE, as "Cropland harvested," in item 2a.

Skip Row Planted Crops — Report the acres that represent the total nonplanted or skipped rows as "Cropland idle," item 2f. The acres that represent the planted rows should be reported as "Cropland harvested," in item 2a.

► **Section 12 — ACRES SET ASIDE, DIVERTED, OR IDLED UNDER FEDERAL ACREAGE REDUCTION PROGRAMS IN 1987**

Include in item 2 all acres in "THIS PLACE" retired from production and placed, by long-term contract, into the Conservation Reserve Program. Acres placed into the program during and prior to 1987 should be included.

► **Sections 13 through 17 — LIVESTOCK, POULTRY, OTHER LIVESTOCK, OR ANIMAL SPECIALTIES**

Animals and Poultry to Include in the Report — Report all animals, poultry, and animal specialties on "this place" (section 1, item 4) on December 31, 1987. Include all owned by you and any kept by you for others. Include animals on unfenced lands, National Forest land, district land, cooperative grazing association land, or rangeland administered by the Bureau of Land Management on a per-head or lease basis. Animals in transit on December 31, 1987, or animals on a short-term pasture (such as wheat pasture or crop residue) on a per-head or lease basis should be reported by the person who had control of the animals.

Animals and Poultry to Exclude from the Report — Do not report animals or poultry kept on land rented to others or kept under a share arrangement on land rented to others. Do not include animals quartered in feedlots which are not a part of "this place." Animals kept on a place not operated by you are to be included on the report for that place.

Animals Bought and Sold — DO NOT REPORT ANY ANIMALS BOUGHT AND THEN RESOLD WITHIN 30 DAYS. Such purchases and sales are considered "dealer" transactions, and are not included in this census.

Number Sold — Report all animals and poultry sold or removed from "this place" in 1987, without regard to ownership or who shared in the receipts. Include animals sold for a landlord or given to a landlord or others in trade or in payment for goods or services. Do NOT report number sold for any livestock or poultry kept on another place.

Dairy Termination Program or "Whole-Herd Dairy Buy-Out Program" — The amount received in 1987 from the Government under the dairy termination program should be included in section 19, item 1. Dairy animals and products sold in 1987 should be reported in section 13.

Animals Moved to Another Place — For animals moved from "this place" to another place, such as for further feeding, report animals as "sold" and give your best estimate of their market value when they left "this place."

Fat Cattle Sold — Cattle fattened on grain or concentrates for 30 days or more and sold for slaughter are reported in section 13, item 3a.

DO NOT INCLUDE WITH FATTENED CATTLE SOLD:

- a. Cattle and calves sold for further feeding
- b. Veal calves, or any calves weighing less than 500 pounds
- c. Dairy cows fed only the usual dairy ration before being sold

Value of Sales — Report the total gross value of animals and poultry sold or removed from "this place" in 1987 without deducting production or marketing expenses (cost of feed, cost of livestock purchased, cost of hauling and selling, etc.). If the sale price or market value is not known, give your best estimate of their market value when they left "this place." Do NOT report the value of sales of any livestock and poultry owned by you but kept and sold from a place you did not operate.

Contract and Custom Feeding Operations — Livestock or poultry kept by you on "this place" on a contract or custom basis should be included on this report REGARDLESS OF OWNERSHIP. Report as "INVENTORY" numbers of animals or poultry on the place on December 31, 1987. Report as "SOLD" animals and poultry kept on a contract or custom basis and removed or sold from the place in 1987. If the sale price or market value is not known, give your best estimate of the market value of the animals or poultry when they left the place.

► Section 16 — HORSES, BEES, FISH, GOATS, OTHER LIVESTOCK, OR ANIMAL SPECIALTIES

Item 2 — If you owned BEES — Report all colonies or hives of bees and honey operations conducted by you, regardless of where the hives were kept most of the year. Report hives or colonies, pounds of honey sold, and value of sales.

Items 7 and 8 — Mink pelts and rabbit pelts should be included in number sold and value of sales, but not in inventory.

Item 9 — Other Livestock and Livestock Products — Include in all other livestock and livestock products manure, beeswax, and any other animal products sold from "this place" in 1987. Please indicate units used in reporting.

Item 10 — Fish and Other Aquaculture Products — Report number of pounds sold and gross value of sales for each. Enter name and code from list.

► Section 17 — POULTRY

The person who furnished the housing and labor should report the poultry operation on his/her report form regardless of who owns the birds. Report as sold poultry that were taken or moved from the place in 1987.

► Section 18 — AMOUNT RECEIVED FROM GOVERNMENT CCC LOANS

Item 1 — Report the amount received under the regular or reserve program for commodities placed under CCC loan during 1987. Include amount received even if commodity was redeemed or forfeited prior to December 31, 1987.

Do not include CCC loans received to build crop storage facilities or amount received for storage payments in the reserve program.

► Section 19 — FEDERAL PAYMENTS RECEIVED

Report all payments received from Federal Farm Programs in 1987 regardless of whether payment was made in cash or commodity certificates. Include cash payments in item 1. In item 2, include the value of any certificates held or the value received from sale or redemption of any certificates in 1987.

Federal payments include receipts from Federal programs such as deficiency payments, "Whole-herd dairy buy-out," support price payments, indemnity programs, disaster payments, paid land diversion, inventory reduction payments, payments received for approved soil and water conservation projects, etc.

► Section 20 — TYPE OF ORGANIZATION

Use the following definitions to determine the type of organization for your operation:

Family or Individual Operation — Defined as farm or business organization controlled and operated by an individual (sole proprietor). Include family operations that are not incorporated and not operated under a partnership agreement.

Partnership Operation — Defined as two or more persons who have agreed on the amount of their contribution (capital and effort) and the distribution of profits. Co-ownership of land by husband and wife or joint filing of income tax forms by husband and wife DOES NOT constitute a partnership, unless a specific agreement to share contributions, decisionmaking, profits, and liabilities exists. Production under contract or under a share rental agreement DOES NOT constitute a partnership.

Incorporated Under State Law — A corporation is defined as a legal entity or artificial person created under the laws of a State to carry on a business. This definition does not include cooperatives. Information on type of corporation should be reported in section 21.

Other — Such as cooperatives (defined as an incorporated or unincorporated enterprise or an association created and formed jointly by the members), estate or trust (defined as a fund of money or property administered for the benefit of another individual or organization), prison farm, grazing association, Indian reservation, institution run by a government or religious entity, etc.

► Section 21 — CORPORATE STRUCTURE

This section is to be answered by corporations only. Answer both items. A family-held corporation has more than 50 percent of its stock owned by persons related by blood or marriage.

► Section 22 — CHARACTERISTICS AND OCCUPATION OF OPERATOR

This section collects information about the operator of "this place" defined as the individual owner, the operator, the senior partner, or person in charge for the type of organization reported in section 20.

For Family or Individual Operation — Complete this section for the operator.

For Partnership Operations — Answer all items, except item 2, for the "Senior Partner." The "Senior Partner" is the individual who is mainly responsible for the agricultural operations on "this place," not necessarily the person senior in age. If each partner shares equally in the day-to-day management decisions, consider the oldest as the "Senior Partner." For item 2 (Principal Occupation) consider all members of the partnership together. Please include as "farming" worktime at all types of agricultural enterprises, including work at greenhouses, nurseries, mushroom production, ranching, feedlots, broiler feeding, etc.

For Corporations and Other Operations (Cooperatives, Estates, etc.) — Complete section 22 for the person in charge, such as a hired manager, business manager, or other person primarily responsible for the on-site, day-to-day operation of the farm or ranch business.

Item 4 — Year Began Operation — Report the first year the operator or senior partner began to operate any part of "this place" on a continuous basis. If the operator returned to a place previously operated, report the year operations were resumed.

► Section 23 — PRODUCTION EXPENSES paid by you and others for "this place" in 1987

Include farm production expenses paid by you, your landlord, contractors, or anyone else for crops, livestock, or poultry produced on "this place." Include expenses incurred in 1987 even if they were not paid for in 1987. Please estimate if exact figures are not known. Refer to the individual expenditure items below for further explanations.

Livestock and Poultry Purchased — Report the cost of cattle, calves, hogs, pigs, sheep, lambs, horses, goats, chicks, pullets, poultry, etc., including breeding stock and dairy cows. Contract growers or custom feeders who did not own or purchase the livestock or poultry themselves should estimate the value of the cattle, calves, pigs, baby chicks, pullets, etc. at the time they came onto the place.

Feed Purchased for Livestock and Poultry — Report the purchase cost of corn, sorghum, oats, barley, other grains, silage, hay, mixed feed, concentrates, etc., fed to livestock and poultry on "this place." Contract livestock and poultry growers should estimate the value of feed provided by the contracting company. Custom feedyards should include feed costs for all cattle fed even if the owners of the cattle were billed for the feed. Feed raised on "this place" should not be reported as purchased.

Cost of Hired Farm and Ranch Labor — Include gross salaries and wages, commissions, dismissal pay, vacation pay, and paid bonuses paid to hired workers, family members, hired managers, administrative and clerical employees, and salaried corporate officers. Also, include supplemental cost for benefits such as employer's social security contributions, unemployment compensation, workmen's compensation insurance, life and medical insurance, pension plans, etc.

Contract Labor — Includes the labor costs of workers furnished on a contract basis by a labor contractor, crew leader, or cooperative for harvesting vegetables or fruit, shearing sheep, or similar farm activities. Do not include costs for building or repair work done by a construction contractor. Include the cost of customwork or machine hire in item 11.

Repair and Maintenance Expenses for the Upkeep of Buildings, Motor Vehicles, and Farm Equipment — Include the cost of repairs and upkeep of farm machinery, vehicles, buildings, fences, and other equipment used in the farm business. Do not include repairs to vehicles not used in the farm business or for equipment used only for performing customwork for others. Do not include expenditures for the construction of new buildings or the cost of additions to existing buildings.

Form 87-A01(I)

Interest Expense Paid on Debts — Report all interest expenses paid in 1987 for the farm business. Include interest on loans secured by land and buildings (real estate) in item 12a. Include all loans not secured by real estate such as for fertilizer, feed, and seed in item 12b. Include interest paid on CCC loans. Do not include interest associated with activities not related to production of crops or livestock on "this place" such as land or buildings rented to others, packing sheds, or feed mills that provide services to others. Do not include interest on owner/operator dwelling where amount is separated from interest on other land and buildings on "this place."

Cash Rent Paid for Land and Buildings In 1987 — Report rent paid in cash during 1987 for land and buildings in "this place." Do not include rent paid for operator dwelling or other nonfarm property. Do not include the value of shares of crops or livestock paid to landlords.

Property Taxes Paid — Include real estate property taxes you paid on the acres and buildings you operated and used in the farm business.

Do not include:

- a. Property taxes on land or buildings rented to someone else
- b. Taxes paid by landlords
- c. Property taxes paid on other property not associated with the farm business
- d. Income and excise taxes

All Other Production Expenses — Farm production costs not previously listed should be reported here. In addition to items listed on the report form, include bookkeeping charges, tax preparation fees, postage, advertising, commission for sale of cattle, and fees paid for farm-related advice or for farm consultants. Do not include depreciation or expenditures for the purchase of land and buildings or new or used machinery.

► Section 24 — COMMERCIAL FERTILIZER AND LIME

Report acres on which commercial fertilizer (items 1 and 2) or lime (item 3) was applied during 1987. If any acreage was fertilized or limed more than once, report acres ONLY ONCE in each item. Report expense for commercial fertilizer purchased, excluding lime, in section 23, item 4.

► Section 26 — MACHINERY AND EQUIPMENT

The estimated market value in item 1 refers to ALL machinery and equipment kept primarily on "this place" and used for the farm business. Report the value in its present condition, not the replacement or depreciated value. Specialized equipment, which is an integral part of a building, should be included as a part of the value of land and buildings.

► Section 27 — ESTIMATED CURRENT MARKET VALUE OF LAND AND BUILDINGS

The value for each of the three listed categories should be your estimate of the value of the land and buildings if they were sold in the current market. The real estate tax assessment value should not be used unless that value represents a full market value assessment and the land and buildings could reasonably be assumed to be sold at that price. Do not deduct real estate marketing charges from your estimate. Report the total value, not the value on a per acre basis.

► Section 28 — INCOME FROM FARM—RELATED SOURCES IN 1987

Item 1 through 4 refer only to those income producing activities for which you use part of the land, machinery, equipment, labor, or capital normally used on "this place," and which you do not consider as entirely separate from your farming activities. Report gross amounts received before taxes and expenses.

Item 1 — Customwork — Do not report income for customwork or agricultural services provided to others if operated as an entirely separate business from your agricultural operations.

Item 2 — Rental Income — Do not include rental income from nonfarm property.

Item 3 — Forest Products — Include only those forest products or Christmas trees cut from "this place," not items cut from other nonfarm timber acreage. Do not include income from saw mill business.

Item 4 — Other Farm-Related Income — Include income from hunting leases, fishing fees, and other recreational services, sales of farm by-products, and other business or income closely related to the agricultural operation on "this place." Include dividends for business done with farmer-owned cooperatives. Do not enter previously reported farm sales or income from investments not associated with the farm. Do not include retirement pensions or social security benefits received.

87-A01(L1)
(1987)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

OFFICE OF THE DIRECTOR

In reply refer to:
BUREAU OF THE CENSUS
1201 EAST TENTH STREET
JEFFERSONVILLE, IN 47133

FROM THE DIRECTOR
BUREAU OF THE CENSUS

The 1987 Census of Agriculture is underway. Our goal is to provide a complete and accurate measure of the Nation's agriculture. We need your completed report form to reach this goal.

Many changes have occurred in agriculture in the 5 years since the last census of agriculture was conducted. There is an urgent need for up-to-date and accurate statistics about our Nation's farmers and ranchers. Farmer organizations and the state, county, and Federal levels of government will use the statistical summaries from this census in making policy decisions affecting the agricultural industry. These decisions will no doubt have an effect on your operations. You can find a more extensive description of the uses of the census on the reverse side of this letter.

WHAT IS ENCLOSED IN THIS PACKAGE?

1. Census report form — please complete and return to the Census Bureau.
2. An information sheet.
3. Return envelope.

WHEN IS THE CENSUS REPORT FORM DUE?

Please return your completed report form by February 1, 1988. This reduces the need for costly mail and telephone follow-ups. Should a telephone call be necessary, a supervisor may listen in to assure that the interviewer is doing a proper job.

IS YOUR RESPONSE REQUIRED?

Yes, by law (Title 13, United States Code).

WILL YOUR ANSWERS BE KEPT CONFIDENTIAL?

Yes. By the same law, your report to the Census Bureau is confidential. Only sworn Census Bureau employees can see your report to prepare necessary statistical summaries that in no way reveal information about you as an individual. Also, the law provides that copies retained in your files are immune from any legal process.

WHAT IF THE INFORMATION IS NOT AVAILABLE?

Use your best estimates if you do not have records available to provide data for all items.

WHAT IF YOU DID NOT CONDUCT ANY AGRICULTURAL OPERATIONS IN 1987 OR NEED HELP COMPLETING THE REPORT FORM?

First, read the special reporting instructions on page 1 of the information sheet. If you need additional information, please write to us. Please include the 12-character Census File Number (CFN) that is shown in the address label.

Bureau of the Census
1201 East 10th Street
Jeffersonville, IN 47133

Thank you for cooperating with us in taking the 1987 Census of Agriculture.

The Census Bureau is grateful to you for your help in this important census.

Sincerely,

JOHN G. KEANE

Enclosures

WHY THE AGRICULTURE CENSUS?

The national census of agriculture measures where farmers and ranchers stand — their supply needs; their production costs; and what they produce, how they produce it, and how much is produced. And it suggests how changing trends can shape their future.

Others provide agricultural data — but the census is the Nation's only consistent, comprehensive source of farm and ranch information for each county and state and for the Nation. This information provides for local and national comparisons.

HOW ARE CENSUS DATA USED?

- Farmer organizations use census results to evaluate and propose programs and policies that affect all farmers and ranchers. The census data help them:
 - Decide the effect of proposed legislation on members.
 - Set up marketing programs for the membership.
 - Provide data to support the members' educational, legislative, and credit needs.
- Elected representatives use census information to develop programs to help solve such problems as:
 - Environmental, tax, and zoning questions; water resource problems; and land-use concerns.
 - Congress and the Administration evaluate the effects of potential changes in farm legislation — set aside programs, agricultural trade, and farm credit.
- Researchers use census data to develop new farm technology. We conduct studies and surveys to:
 - Provide better irrigation techniques.
 - Provide guidance in the careful use of agricultural chemicals (insect control) and other farm safety practices.
- Locating processing and distribution facilities are based on census information:
 - Allocations for railroad cars for grains and other shipments.
 - Locations of retail and wholesale outlets for farm goods.
 - Location of new grain elevators.
- Farm suppliers of fertilizer, seed, and equipment use census data to meet farmers' and ranchers' needs for products by helping to:
 - Determine how much of a product to manufacture and where to ship.
 - Locate new stores for distribution of supplies.

WHO PLANS THE QUESTIONS?

The Census Bureau works with representatives of farmers, ranchers, farm cooperatives and suppliers, state and local governments, and others to determine what questions should be asked in the census. The organizations represented are leaders in the agricultural industry and they include:

American Farm Bureau Federation
National Cattlemen's Association
National Council of Farmer Cooperatives
National Farmers Organization
National Farmers Union
The National Grange
Agricultural Publishers Association
American Agricultural Economics Association
American Feed Industry Association
American Meat Institute
Association of Research Directors, Inc.

Conference of Consumer Organizations
Farm and Industrial Equipment Institute
National Agri-Marketing Association
National Agricultural Chemicals Association
National Association of State Departments of Agriculture
National Association of State Universities and Land-Grant Colleges
National Food Processors Association
Rural Sociological Society
The Irrigation Association
U.S. Department of Agriculture

WHAT HAPPENS TO YOUR ANSWERS?

The Census Bureau publishes data only in tabulated totals — by county, state, and for the Nation. The publications are available in libraries, universities, and the Government Printing Office, and from the Census Bureau.

By law only sworn Census Bureau employees see individual report forms, which cannot be provided to other government agencies, nor released under the Freedom of Information Act.

Reminder/Thank You Card Form 87-A01(L2)

(Front)

U.S. DEPARTMENT OF COMMERCE

Bureau of the Census

Jeffersonville, Indiana 47144

87-A01(L2)

OFFICIAL BUSINESS

Penalty for Private Use, \$300

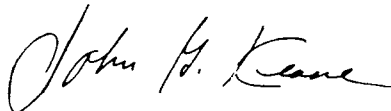
PRESORTED FIRST-CLASS MAIL
POSTAGE & FEES PAID
CENSUS
PERMIT No. G-58

(Back)

THANK YOU . . . if you returned the 1987 Census of Agriculture report form you received earlier this month.

If you have not returned your report form, please take a few minutes to complete and return it by February 1, 1988. Your prompt reply will aid in the early publication of the census of agriculture information for your State.

Sincerely,



JOHN G. KEANE
Director
Bureau of the Census

Followup Letter Form 87-A01(L3)

**87-A01(L3)
(1987)**



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47133

We recently sent you a 1987 Census of Agriculture report form. According to our records, we have not received your completed report. We are enclosing another copy of the report form. Please complete it using your best estimates for items where information is not available. We have included a preaddressed return envelope for your convenience.

IS YOUR RESPONSE REQUIRED?

Yes, by law (Title 13, United States Code). More importantly, this law requires that your report must be held **COMPLETELY CONFIDENTIAL**.

WHAT IF YOU DID NOT OPERATE A FARM OR RANCH, OR DID NOT HAVE ANY AGRICULTURAL PRODUCTION IN 1987?

Please complete Section 1 and refer to the special reporting instructions on page 1 of the enclosed information sheet.

HOW ARE CENSUS DATA USED?

By businesses, farm organizations, and government to make crucial decisions that can affect you and the Nation's agriculture. It is in your best interest to provide the information requested so these decisions are based on accurate data.

WHAT IF YOU HAVE A QUESTION OR NEED HELP?

Call our toll-free number at 1-800-233-6132 (1-800-233-6135 for Indiana residents) between 8:00 a.m. and 4:30 p.m. Eastern Time or write to us. If you prefer to write, all correspondence should be addressed to our Jeffersonville office and include the 12-character Census File Number (CFN) that is shown in the address label:

Bureau of the Census
1201 East Tenth Street
Jeffersonville, IN 47133

Thank you for your cooperation in completing your report form.

Sincerely,

ROGER H. BUGENHAGEN
Assistant Director for Economic
and Agriculture Censuses
Bureau of the Census

Enclosures

Followup Letter Form 87-A01(L4)

87-A01(L4)
(1987)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47133

WE ARE VERY CONCERNED.

We have not received your report form for the 1987 Census of Agriculture that was due February 1, 1988. If you mailed your report within the last several days, we thank you for your cooperation.

We need a reply from everyone who receives a census report form. If you did not raise crops or have livestock in 1987, please complete Section 1 of the report form and refer to the information sheet enclosed in the mail package we sent you earlier.

If you need help completing your report form, please call our toll free number 1-800-233-6132 (1-800-233-6135 for Indiana residents) between 8:00 a.m. and 4:30 p.m. Eastern Time or write to us. If you prefer to write, all correspondence should be addressed to our Jeffersonville office and include the 12-character Census File Number (CFN) that is shown in the address label:

Bureau of the Census
1201 East Tenth Street
Jeffersonville, IN 47133

Thank you for your prompt cooperation.

Sincerely,

ROGER H. BUGENHAGEN
Assistant Director for Economic
and Agriculture Censuses
Bureau of the Census

NOTICE — Response to this inquiry is required by law (Title 13, United States Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census Bureau employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

Followup Letter Form 87-A01(L5)

87-A01(L5)
(1987)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47133

We have not received your completed report form for the 1987 Census of Agriculture due February 1, 1988. For your convenience, we are enclosing a replacement report form. Use your best estimates if information for all items requested is not available.

We need a reply from everyone. If you did not operate a farm or ranch, or did not raise any crops or have livestock in 1987, please complete Section 1 and refer to the special reporting instructions on page 1 of the enclosed information sheet.

We are relying on your cooperation in the census. The filing of this report is required by law (Title 13, United States Code) and there are penalties for failure to report. By the same law, your report to the Census Bureau is **CONFIDENTIAL**. It may be seen only by sworn Census Bureau employees and may be used only for statistical purposes. Your report **CANNOT** be used for purposes of taxation, investigation, or regulation. Pertinent sections of the law are printed on the other side of this letter.

We need your report so that the census results for your county will be complete, accurate, and timely. Census data are used extensively by your farm organizations, Congress, the U.S. Department of Agriculture, other Federal and state agencies, agricultural experiment stations and colleges, farm publications, and the businesses on which you depend for services, supplies, and equipment.

Please take time **TODAY** to complete and return the report form. If you need help, you may call our toll free number 1-800-233-6132 (1-800-233-6135 for Indiana residents) between 8:00 a.m. and 4:30 p.m. Eastern Time or write to us. If you prefer to write, all correspondence should be addressed to our Jeffersonville office and include the 12-character Census File Number (CFN) that is shown in the address label:

Bureau of the Census
1201 East Tenth Street
Jeffersonville, IN 47133

Sincerely,

ROGER H. BUGENHAGEN
Assistant Director for Economic
and Agriculture Censuses
Bureau of the Census

Enclosures

**EXCERPTS FROM TITLE 13, UNITED STATES CODE WHICH
RELATE TO THE CENSUS OF AGRICULTURE**

AUTHORITY TO CONDUCT CENSUS — Section 142

- (a) The Secretary shall in 1979, in 1983, and in every fifth year beginning after 1983, take a census of agriculture.
- (c) The data collected in each of the censuses taken under this section shall relate to the year immediately preceding the year in which such census is taken.

AUTHORITY TO COLLECT PRELIMINARY AND SUPPLEMENTAL STATISTICS — Section 193

In advance of, in conjunction with, or after the taking of each census provided for by this chapter, the Secretary may make surveys and collect such preliminary and supplementary statistics related to the main topic of the census as are necessary to the initiation, taking, or completion thereof.

MANDATORY PROVISIONS OF LAW

Section 221

- (a) Whoever, being over eighteen years of age, refuses or willfully neglects, when requested by the Secretary, or by any other authorized officer or employee of the Department of Commerce or bureau or agency thereof acting under the instructions of the Secretary or authorized officer, to answer, to the best of his knowledge, any of the questions on any schedule submitted to him in connection with any census or survey provided for by subchapters I, II, IV, and V of chapter 5 of this title, applying to himself or to the family to which he belongs or is related, or to the farm or farms of which he or his family is the occupant, shall be fined not more than \$100.
- (b) Whoever, when answering questions described in subsection (a) of this section, and under the conditions or circumstances described in such subsection, willfully gives any answer that is false, shall be fined not more than \$500.

CONFIDENTIALITY OF INFORMATION

Section 9

Neither the Secretary, nor any other officer or employee of the Department of Commerce or bureau or agency thereof, may, except as provided in section 8 of this title (which permits only the release of identifiable personal information to a respondent of the heir, successor or agent of such respondent) —

- (1) use the information furnished under the provisions of this title for any purpose other than the statistical purposes for which it is supplied; or
- (2) make any publication whereby the data furnished by any particular establishment or individual under this title can be identified; or
- (3) permit anyone other than the sworn officers and employees of the Department or bureau or agency thereof to examine the individual reports.

No department, bureau, agency, officer, or employee of the Government, except the Secretary in carrying out the purposes of this title, shall require, for any reason, copies of census reports which have been retained by any such establishment or individual. Copies of census reports which have been so retained shall be immune from legal process, and shall not, without the consent of the individual or establishment concerned, be admitted as evidence or used for any purpose in any action, suit, or other judicial or administrative proceeding.

Section 214

Whoever, being or having been an employee or staff member referred to in subchapter II of chapter 1 of this title, having taken and subscribed the oath of office, or having sworn to observe the limitations imposed by section 9 of this title, publishes or communicates any information, the disclosure of which is prohibited under the provisions of section 9 of this title, and which comes into his possession by reason of his being employed (or otherwise providing services) under the provisions of this title, shall be fined not more than \$5,000 or imprisoned not more than 5 years, or both.

Followup Letter Form 87-A01(L6)

87-A01(L6)
(1987)



UNITED STATES DEPARTMENT OF COMMERCE Bureau of the Census

Data Preparation Division
Jeffersonville, Indiana 47133

Your 1987 Census of Agriculture report form is now long overdue. Please take time to complete and return your report form today. If you did not operate a farm or ranch, or did not raise any crops or have livestock in 1987, please complete Section 1 of the report form and refer to the information sheet enclosed in the mail package we sent earlier. Your best estimates are acceptable if you do not have records available for all items.

We need a reply from everyone who receives a census report form so that the census results for your county will be complete. Your own farm organizations and all levels of government use statistical summaries from the census to make decisions affecting the agriculture industry and likely affecting you.

If you need help completing your report form, please call our toll free number 1-800-233-6132 (1-800-233-6135 for Indiana residents) between 8:00 a.m. and 4:30 p.m. Eastern Time or write to us. If you prefer to write, all correspondence should be addressed to our Jeffersonville office and include the 12-character Census File Number (CFN) that is shown in the address label:

Bureau of the Census
1201 East Tenth Street
Jeffersonville, IN 47133

Thank you for your cooperation in completing your report form.

Sincerely,

ROGER H. BUGENHAGEN
Assistant Director for Economic
and Agriculture Censuses
Bureau of the Census

NOTICE — Response to this inquiry is required by law (Title 13, United States Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census Bureau employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

Followup Letter Form 87-A01(L7)

87-A01(L7)
(1987)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Data Preparation Division
Jeffersonville, Indiana 47133

This is the final notice asking you to file your 1987 Census of Agriculture report form. Your report was due on February 1, 1988. Your response is required by law (Title 13, United States Code) and there are penalties for failure to report. Traditionally, we have sought voluntary cooperation. Failure to report is cause for legal action.

Your report to the Census Bureau is **CONFIDENTIAL** by law. It may be seen only by sworn Census Bureau employees and may be used only for statistical purposes. Your report **CANNOT** be used for purposes of taxation, investigation, or regulation. Pertinent sections of the law are printed on the reverse side of this letter.

We have a responsibility to the farmers and ranchers of America to publish reliable statistics on agriculture for each county, state, and for the Nation. The information from the census is used by businesses, farm organizations, and government when making crucial decisions that affect you and the Nation's agriculture. It is in your best interest to provide the information requested so these decisions are based on complete and accurate data.

If you need help completing your report form, please call our toll free number 1-800-233-6132 (1-800-233-6135 for Indiana residents) between 8:00 a.m. and 4:30 p.m. Eastern Time or write to us. If you prefer to write, all correspondence should be addressed to our Jeffersonville office and include the 12-character Census File Number (CFN) that is shown in the address label:

Bureau of the Census
1201 East Tenth Street
Jeffersonville, IN 47133

Sincerely,

ROGER H. BUGENHAGEN
Assistant Director for Economic
and Agriculture Censuses
Bureau of the Census

Enclosures

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In advance of, in conjunction with, or after the taking of each census provided for by this chapter, the Secretary may make surveys and collect such preliminary and supplementary statistics related to the main topic of the census as are necessary to the initiation, taking, or completion thereof.

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Section 221

- (a) Whoever, being over eighteen years of age, refuses or willfully neglects, when requested by the Secretary, or by any other authorized officer or employee of the Department of Commerce or bureau or agency thereof acting under the instructions of the Secretary or authorized officer, to answer, to the best of his knowledge, any of the questions on any schedule submitted to him in connection with any census or survey provided for by subchapters I, II, IV, and V of chapter 5 of this title, applying to himself or to the family to which he belongs or is related, or to the farm or farms of which he or his family is the occupant, shall be fined not more than \$100.
- (b) Whoever, when answering questions described in subsection (a) of this section, and under the conditions or circumstances described in such subsection, willfully gives any answer that is false, shall be fined not more than \$500.

CONFIDENTIALITY OF INFORMATION

Section 9

Neither the Secretary, nor any other officer or employee of the Department of Commerce or bureau or agency thereof, may, except as provided in section 8 of this title (which permits only the release of identifiable personal information to a respondent of the heir, successor or agent of such respondent) —

- (1) use the information furnished under the provisions of this title for any purpose other than the statistical purposes for which it is supplied; or
- (2) make any publication whereby the data furnished by any particular establishment or individual under this title can be identified; or
- (3) permit anyone other than the sworn officers and employees of the Department or bureau or agency thereof to examine the individual reports.


No department, bureau, agency, officer, or employee of the Government, except the Secretary in carrying out the purposes of this title, shall require, for any reason, copies of census reports which have been retained by any such establishment or individual. Copies of census reports which have been so retained shall be immune from legal process, and shall not, without the consent of the individual or establishment concerned, be admitted as evidence or used for any purpose in any action, suit, or other judicial or administrative proceeding.

Section 214

Whoever, being or having been an employee or staff member referred to in subchapter II of chapter 1 of this title, having taken and subscribed the oath of office, or having sworn to observe the limitations imposed by section 9 of this title, publishes or communicates any information, the disclosure of which is prohibited under the provisions of section 9 of this title, and which comes into his possession by reason of his being employed (or otherwise providing services) under the provisions of this title, shall be fined not more than \$5,000 or imprisoned not more than 5 years, or both.

DUE BY FEBRUARY 1, 1988

OMB No. 0607-0534: Approval Expires September 30, 1989

FORM 87-A0400 (15-13-87)		U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS	
		UNITED STATES CENSUS OF AGRICULTURE	
Please complete this form and RETURN TO		BUREAU OF THE CENSUS 1201 East Tenth Street Jeffersonville, IN 47133	
Note — If your records are not available, reasonable estimates may be used. If you cannot file by February 1, a time extension request may be sent to the above address. Include your 12-character Census File Number (CFN) as shown in your address label in all correspondence to us.			
If you received more than one report form, enter extra Census File Number(s) here and return extra copies with your completed report.			
CENSUS USE ONLY	035	036	037
	039	040	041
SECTION 1			
1. At any time during 1987, did you plant, grow, or have any: <ul style="list-style-type: none">• Hay or tobacco?• Corn, wheat, or other grains?• Other crops? <div style="text-align: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No</div>			
2. At any time during 1987, did you raise, sell, or keep any: <ul style="list-style-type: none">• Cattle, hogs, sheep, or goats?• Chickens or other poultry?• Bees? <div style="text-align: right;"><input type="checkbox"/> Yes <input type="checkbox"/> No</div>			
If you answered YES to EITHER of these questions, go to SECTION 2. If you answered NO to BOTH of these questions, go to SECTION 10.			
SECTION 2 ACREAGE IN 1987 Report land owned, rented, or used by you, your spouse, or by the partnership, corporation, or organization for which you are reporting. Include ALL LAND, REGARDLESS OF LOCATION OR USE — cropland, pastureland, rangeland, woodland, idle land, house lots, etc.			
None		Number of acres	
1. All land owned		043	
2. All land rented or leased FROM OTHERS, including land worked by you on shares, used rent free, in exchange for services, payment of taxes, etc. Include leased Federal, State, and railroad land. (DO NOT include land used on a per-head basis under a grazing permit.)		044	
3. All land rented or leased TO OTHERS, including land worked on shares by others and land subleased. Also complete item 5 below.		045	
4. Acres in "THIS PLACE" — ADD acres owned (item 1) and acres rented (item 2), then SUBTRACT acres rented TO OTHERS (item 3), and enter the result in this space.		046	
If the entry is zero please refer to the Information Sheet, section 2.			
5. Of the land you rented or leased to others, how many acres did you own?		053	
		Acres	
6. In what county was the largest value of your agricultural products raised or produced?		County name State	
SECTION 3 LAND USE AND IRRIGATION			
• PART A — How were the ACRES in this place used in 1987?			
None		Number of acres	
1. Cropland harvested — Include all land from which crops were harvested or hay was cut, and all land in orchards, citrus groves, vineyards, and nursery and greenhouse crops.		787	
2. Cropland on which all crops failed — (Exception: Do not report here land in orchards and vineyards on which the crop failed.)		790	
3. Cropland idle, cropland used for cover crops, or cropland in cultivated summer fallow		793	
4. Cropland used only for pasture, woodland pastured, and other pastureland and rangeland		796	
5. All other woodland, wasteland, houselots, etc. not reported in items 1 through 4 above		797	
• PART B — IRRIGATION		Number of acres irrigated	
1. How many acres of harvested land were irrigated? Include land from which hay was cut and land in bearing and nonbearing fruit and nut crops.		880	
2. How many acres of pastureland, rangeland, and any other lands not included in item 1 above were irrigated?		881	
SECTION 4			
• PART A — CROPS HARVESTED from "THIS PLACE" in 1987. (Do not include crops grown on land rented to others.)			
1. Hay crops — None		Acres harvested Quantity harvested Gross value of crops sold	
a. Alfalfa and alfalfa mixtures		103	104 Tons, dry \$ 00
b. Small grain hay		106	107 Tons, dry \$ 00
c. Wild hay		112	113 Tons, dry \$ 00
d. Other hay — Specify kind		109	110 Tons, dry \$ 00
2. Corn for grain or seed		067	068 Bu. \$ 00
3. Soybeans for beans		088	089 Bu. \$ 00
4. Wheat for grain		073	074 Bu. \$ 00
5. Tobacco — all types		094	095 Lbs. \$ 00
6. Potatoes, Irish — (Do not include those grown for home use.)		087	/10 098 Lbs. \$ 00
7. All vegetables for sale (Do not include those grown for home use.)		None	Total acres Dollars Cents
Specify kind(s)		375	/10 \$ 00
8. All fruit and nut orchards, vineyards, and berries		None	Total acres Quantity harvested Dollars Cents
Specify kind(s)		121	/10 \$ 00
9. Other crops — For additional crops, enter the crop name and code from the list below. Report quantity harvested in the unit specified with crop name.			
Crop name	Code	Acres harvested	Quantity harvested Gross value of crops sold
			Dollars Cents
			\$ 00
			\$ 00
If more space is needed, use a separate sheet of paper.			
Crop name	Code	Crop name	Code
Barley for grain (bushels)	079	Oats for grain (bushels)	076
Corn for silage or green chop (tons, green)	070	Sorghum for grain-milo (bushels)	082
Cotton (bales)	091	Other crops (pounds) — Specify	752
• PART B — NURSERY and GREENHOUSE CROPS GROWN FOR SALE on "THIS PLACE" in 1987			
From the list below, enter the crop name and code for each crop grown.			
Crop name	Code	Square feet under glass or other protection	Acres in the open in 1987 Sales in 1987
			Whole acres Tenths Dollars Cents
			\$ /10 \$ 00
If more space is needed, use a separate sheet of paper.			
Crop name	Code	Crop name	Code
Bedding plants (include vegetable plants)	479	Potted flowering plants	710
Cut flowers and cut florist greens	485	Foliage plants	707
Nursery crops — ornamentals, fruit and nut trees, and vines	488	Greenhouse vegetables	503
		Other — Specify	508

SECTION 5

LIVESTOCK and POULTRY

PART A - CATTLE and CALVES

1. CATTLE and CALVES of all ages

a. BEEF COWS

b. MILK COWS

INVENTORY

Number on this place Dec. 31, 1987

803

Total

804

Beef cows

805

Milk cows

Value of DAIRY PRODUCTS

INVENTORY

Number on this place Dec. 31, 1987

814

Gross value of sales

Dollars

Cents

00

CATTLE and CALVES SOLD FROM THIS PLACE IN 1987

INVENTORY

Number on this place Dec. 31, 1987

808

Gross value of sales

Dollars

Cents

00

810

811

812

813

00

00

PART B - HOGS and PIGS

1. HOGS and PIGS of all ages

a. HOGS and PIGS used or to be used for breeding

INVENTORY

Number on this place Dec. 31, 1987

815

Total

816

Breeding

HOGS and PIGS SOLD from this place in 1987

INVENTORY

Number on this place Dec. 31, 1987

820

Gross value of sales

Dollars

Cents

00

822

823

00

Of the hogs and pigs sold, how many were sold as FEEDER PIGS for further feeding?

INVENTORY

Number on this place Dec. 31, 1987

824

NUMBER SOLD in 1987

825

826

SHEEP and LAMBS SHORN in 1987

INVENTORY

Number on this place Dec. 31, 1987

827

NUMBER

828

Pounds wool

What was the gross value of sales of SHEEP, LAMBS, and WOOL from this place in 1987?

INVENTORY

Number on this place Dec. 31, 1987

829

Gross value of sales

Dollars

Cents

00

PART C - SHEEP and LAMBS

1. SHEEP and LAMBS of all ages

a. EWES 1 year old or older

INVENTORY

Number on this place Dec. 31, 1987

824

NUMBER SOLD in 1987

825

826

SHEEP and LAMBS SHORN in 1987

INVENTORY

Number on this place Dec. 31, 1987

827

NUMBER

828

Pounds wool

What was the gross value of sales of SHEEP, LAMBS, and WOOL from this place in 1987?

INVENTORY

Number on this place Dec. 31, 1987

829

Gross value of sales

Dollars

Cents

00

PART D - POULTRY

1. HENS and PULLETS

a. HENS and PULLETS of laying age

b. PULLETS 3 months old or older not yet of laying age for layer replacement

c. PULLETS under 3 months old for layer replacement

INVENTORY

Number on this place Dec. 31, 1987

892

NUMBER SOLD in 1987

893

894

895

896

898

899

900

901

BROILERS, fryers, other meat-type chickens

TURKEYS for slaughter

OTHER POULTRY

POULTRY name

Code

Name/code

Name/code

Name/code

Turkey hens kept for breeding

902

Geese

906

Quail

912

Ducks

904

Pigeons or squab

908

All other poultry - Specify

914

Pheasants

910

Value of POULTRY and POULTRY PRODUCTS (eggs, etc.) sold from this place in 1987

INVENTORY

Number on this place Dec. 31, 1987

918

Gross value of sales

Dollars

Cents

00

PART E - HORSES, OTHER LIVESTOCK, ANIMAL SPECIALTIES, and FISH

1. Horses and ponies of all ages

2. Colonies of bees

3. Milk goats

4. Angora goats

5. Other livestock, fish, animal products

INVENTORY

Number on this place Dec. 31, 1987

830

Total quantity sold in 1987

831

Gross value of sales

Dollars

Cents

00

839

840

841

842

843

844

845

846

847

848

849

850

Other livestock, fish, animal products

1

2

Quantity

851

852

853

Amount received in 1987 from Government CCC loans

INVENTORY

Number on this place Dec. 31, 1987

854

Gross value of sales

Dollars

Cents

00

Payments received for participation in FEDERAL FARM PROGRAMS in 1987

INVENTORY

Number on this place Dec. 31, 1987

854

Gross value of sales

Dollars

Cents

00

Acres in this place SET ASIDE, DIVERTED, or IDLED under FEDERAL acreage reduction programs in 1987

INVENTORY

Number on this place Dec. 31, 1987

854

Gross value of sales

Dollars

Cents

00

CHARACTERISTICS and OCCUPATION of OPERATOR

1. RESIDENCE

2. PRINCIPAL OCCUPATION

3. OFF-FARM WORK

4. In what YEAR did the operator begin to operate any part of this place?

5. AGE of operator

6. RACE of operator

7. SEX of operator

8. SPANISH ORIGIN

PERSON COMPLETING THIS REPORT

Name

Area code

Number

Date

INFORMATION SHEET 1987 UNITED STATES CENSUS OF AGRICULTURE

Special Reporting Instructions

1. Who Should Report

WE NEED A REPLY FROM EVERYONE RECEIVING A REPORT FORM, INCLUDING individuals, landlords, tenants, partnerships, corporations, institutions, and THOSE NOT CONDUCTING AGRICULTURAL OPERATIONS. Each case included in the census has a unique Census File Number (CFN). In order to make the census results as complete and accurate as possible, we need to obtain information about every CFN.

2. If You Received More Than One Report Form for an Operation

Complete only ONE report form for an operation. Write "Duplicate" near the address label of each extra report form. Also, write the 11-digit census file number(s) of the DUPLICATE report(s) ON THE COMPLETED REPORT in the space provided to the left of the address label. Return the extra report(s) in the same envelope with your completed report form so that we can correct our records.

3. If You No Longer Farm

If you had agricultural operations at any time during 1987, please report all agricultural activity during the year. Report all land on your census form that you owned or rented. Also, report your 1987 crop and livestock production and 1987 sales.

Explain on the first page of the report form (or on a separate sheet of paper) that you quit farming or ranching and give the approximate date and the name and address of the present operator, if known.

4. If You Never Farmed or Have No Association With Agriculture

Please write a note on the report form near the address label explaining this and return the form so that we can correct our records. In our efforts to make the census as complete as possible, we obtained lists from various sources. We tried to eliminate duplicate and nonfarm addresses, however, it was not always possible to do so.

5. If You Have More Than One Agricultural Operation

Complete a report form for EACH SEPARATE and DISTINCT production unit, i.e., each individual farm, ranch, feedlot, greenhouse, etc., or combination of farms, etc., for which you maintain SEPARATE records of operating expenses and sales, livestock and other inventories, crop acreages, and production.

6. If You Have a Partnership Operation

Complete only ONE report for the entire partnership's agricultural operation and include all partners' shares on the one report. If members of the partnership also operate separate farms or ranches in addition to the partnership farming operation, separate report forms should be completed for each individual operation.

If two or more report forms were received for the same operation, mark each additional form as a "Duplicate." Return the duplicate report(s) in the same envelope with the completed partnership report, where possible, or write a note on the duplicate report, such as, "(Name of partner) has completed a report for the partnership (provide name and CFN of partnership)."

7. Landlord's or Contractor's Share

If you rented or leased land from others or had a contract for the production of agricultural products, include both your share and the landlord's or contractor's share of the production, sales, and expenses so your census report form will be complete for "THIS PLACE."

If you do not know the landlord's or contractor's share, include your BEST ESTIMATE. If you do not have records available for all data items, use your best estimate.

8. How to Enter Your Response

Enter your replies in the proper spaces, on the correct lines, and in the units requested, i.e., dollars, bushels, tons, etc. Write any explanation outside the answer spaces or on a separate sheet of paper. All dollar figures may be entered in whole dollars. CENTS ARE NOT REQUIRED.

Enter whole numbers except where tenths are requested, such as acres of potatoes harvested. If you have 1/2, 1/3, or 1/4 of an acre, convert to tenths. For example, convert 1/2 to 5/10, 1/3 to 3/10, 1/4 to 2/10.

The census report form will contain sections and questions which do not apply to you. When this occurs, mark the "None" or "No" box and go on to the next item or section.

Instructions For Specified Sections

► Section 2 — ACREAGE IN 1987

Your answers to this section will determine the land (Acres in "THIS PLACE") referred to in the rest of the report form.

When answering the acreage questions, include the land associated with your agricultural operations in 1987 whether in production or not. Include all land that you owned or rented during 1987 even if only for part of the year. Do not include any unrelated residential or commercial land.

Report all land in section 2 in whole acres.

Item 1 — All Land Owned — Report all land owned in 1987 whether held under title, purchased contract or mortgage, homestead law, or as heir or trustee of an undivided estate. Include all land owned by you and/or your spouse, or by the partnership, corporation, or organization for which you are reporting.

Item 2 — All Land Rented or Leased FROM OTHERS — Report all land rented by you or your operation even though the landlord may have supplied materials or supervision.

INCLUDE in item 2:

- a. Land for agricultural use that you rented from others for cash
- b. Land you worked on a share basis (crop or livestock)
- c. Land owned by someone else that you used rent-free
- d. Federal, State, Indian reservation, or railroad land rented or leased by the acre

DO NOT INCLUDE in item 2:

Land used on a per-head or animal unit license or permit basis, such as section 3 of the Taylor Grazing Act, National Forest, or Indian reservation permit land.

Item 3 — All Land Rented or Leased TO OTHERS — Include all land rented out for any purpose if it was part of the acreage reported in items 1 and 2. A report form will be obtained from each of your tenants to cover the operations on that land.

INCLUDE in item 3:

- a. Owned land rented to others for cash or a share of crops or livestock
- b. Land you rented from someone and then subleased to someone else
- c. Land worked for you by someone for a share of crops or livestock
- d. Land which you allowed others to use rent-free

Item 4 — Acres in "THIS PLACE" — This figure will show the total of all land you operated at any time in 1987.

If item 4, Acres in "THIS PLACE" is "0" and:

- a. You raised any crops or had any livestock or poultry on "THIS PLACE" in 1987, complete the report.
- b. All your land was operated by a renter or sharecropper, skip to and complete section 10, and explain briefly, "All land rented out," etc. Mail form in return envelope.
- c. You did not have any agricultural activity on owned or rented land in 1987, complete section 10 and explain briefly, such as "retired," "sold farm," and date. Give name and address of current operator if known and return form.

► Section 3 — LAND USE AND IRRIGATION

This section is used to classify the acres in "THIS PLACE" reported in section 2, item 4. Do not include any acres you rented to others reported in section 2, item 3. The sum of the acres entered in various categories should equal total acres in "THIS PLACE."

Land Used for More Than One Purpose — Do not report the same acreage for more than one of the listed purposes. If part or all of your land was used for more than one listed purpose in 1987, report that land only in the first category listed. For example, if you harvested a crop and later used the same land for pasture, report the land in part A, item 1, "Cropland harvested."

Double Cropping — When more than one crop was harvested from the same land in 1987, report that land only ONCE as "Cropland harvested," in part A, item 1 of this section.

Interplanted Crops — If you interplanted crops, such as cotton in an orchard, report the total land used for both crops only ONCE, as "Cropland harvested," in part A, item 1.

Skip Row Planted Crops — Report the acres that represent the total nonplanted or skipped rows as "Cropland idle," part A, item 3, the acres that represent the planted rows should be reported as "Cropland harvested," part A, item 1.

Irrigation is defined as land watered by artificial or controlled means — sprinklers, furrows or ditches, spreader dikes, purposeful flooding, etc. Include acres that receive supplemental, partial, and/or preplant irrigation. Do not report water applied in transplanting tobacco plants, trees, or vegetables as irrigation.

► Section 4 — CROPS

This section provides space for reporting crops harvested during the 1987 crop year from the land shown in section 2, item 4 (Acres in "THIS PLACE") of your report. A few crops are already listed on the form. For these crops, just report acres harvested, quantity harvested, and value of sales. If you produced crops not listed, write the name of the crop and code from the list provided and report the acres harvested, quantity harvested, and the value of sales.

Form 87-A04(I)

DO NOT INCLUDE:

- a. Any crops grown on land rented or leased TO OTHERS, or worked by others on shares during 1987.
- b. Crops or crop products purchased from others and later sold.

Acres Harvested — Enter the acres harvested in 1987. Round fractions to whole acres except where tenths are requested by "10" in the reporting box, such as potatoes.

Quantity Harvested — If your unit of measure is different than the unit on the report form, please convert your figure for the quantity harvested to the unit requested. If the harvest was incomplete by December 31, 1987, please report the quantity harvested and the estimated quantity to be harvested.

Gross Value of Crops Sold — Report the value of all crops sold from "THIS PLACE" in 1987, regardless of the year they were harvested or who owned the land. Be sure to report gross value before deducting expenses and taxes. Include Government CCC loans received for "THIS PLACE" in 1987. Include payments received in 1987 from cooperatives or marketing organizations for crops produced on "THIS PLACE."

Item 7 — Vegetables — Report acres of vegetables harvested FOR SALE or commercial processing. Do not include vegetables grown for home use. Report the total acreage of each vegetable crop harvested.

Item 8 — Fruit Orchards, Citrus, Vineyards, and Nut Trees — Report only if total of 20 or more trees and vines, include those for home use as well as those maintained for sale of their production. Acres in trees and vines that have been abandoned should not be included, these acres should be included in section 3, part A, item 3 "Cropland idle."

If crops other than fruit and nut trees and vines were interplanted with trees or vines, report the total acres for the orchard crop in item 8 and the total acres of the interplanted crop in the appropriate item.

Item 9 — Other Crops — To report: (1) find the crop name and the code number from the list under item 9; (2) enter crop name and code in the first two columns of the first available answer line under item 9; (3) enter the information that is requested in the remaining columns. If you harvested a crop not listed, use the "OTHER" code and specify the crop name. If you need additional space, use a separate sheet of paper to write the crop name(s), acres and quantity harvested, and gross value of crop(s) sold.

► Section 5 — LIVESTOCK, POULTRY, OTHER LIVESTOCK, OR ANIMAL SPECIALTIES

Parts A, B, C, and D — LIVESTOCK AND POULTRY

Animals and Poultry to Include in the Report — Report all animals, poultry, and animal specialties on "this place" (section 2, item 4) on December 31, 1987. Include all owned by you and any kept by you for others. Include animals on unfenced lands, National Forest land, district land, cooperative grazing association land, or rangeland administered by the Bureau of Land Management on a per-head or lease basis. Animals in transit on December 31, 1987, or animals on a short-term pasture (such as wheat pasture or crop residue) on a per-head or lease basis should be reported by the person who had control of the animals.

Animals and Poultry to Exclude from the Report — Do not report animals or poultry kept on land rented to others or kept under a share arrangement on land rented to others. Do not include animals quartered in feedlots which are not a part of "this place." Animals kept on a place not operated by you are to be included on the report for that place.

Animals Bought and Sold — DO NOT REPORT ANY ANIMALS BOUGHT AND THEN RESOLD WITHIN 30 DAYS. Such purchases and sales are considered "dealer" transactions, and are not included in this census.

Number Sold — Report all animals and poultry sold or removed from "this place" in 1987, without regard to ownership or who shared in the receipts. Include animals sold for a landlord or given to a landlord or others in trade or in payment for goods or services. Do NOT report number sold for any livestock or poultry kept on another place.

Dairy Termination Program or "Whole-Herd Dairy Buy-Out Program" — The amount received in 1987 from the Government under the dairy termination program should be included in section 7, item 1. Dairy cattle and calves sold should be reported in section 5, part A.

Animals Moved to Another Place — For animals moved from "this place" to another place, such as for further feeding, report animals as "sold" and give your best estimate of their market value when they left "this place."

Fat Cattle Sold — Cattle fattened on grain or concentrates for 30 days or more and sold for slaughter are reported in section 5, part A, item 4a.

DO NOT INCLUDE WITH FATTENED CATTLE SOLD:

- a. Cattle and calves sold for further feeding
- b. Dairy cows fed only the usual dairy ration before being sold
- c. Veal calves, or any calves weighing less than 500 pounds

Value of Sales — Report the total gross value of animals and poultry sold or removed from "this place" in 1987 without deducting production or marketing expenses (cost of feed, cost of livestock purchase, cost of hauling and selling, etc.). If the sale price or market value is not known, give your best estimate of their market value when they left "this place." Do NOT report the value of sales of any livestock and poultry owned by you but kept and sold from a place you did not operate.

Contract and Custom Feeding Operations — Livestock or poultry kept by you on "this place" on a contract or custom basis should be included on this report REGARDLESS OF OWNERSHIP. Report as "INVENTORY" numbers of animals or poultry on the place on December 31, 1987. Report as "SOLD" animals and poultry kept on a contract or custom basis and removed or sold from the place in 1987. If the sale price or market value is not known, give your best estimate of the market value of the animals or poultry when they left the place.

The person who furnished the housing and labor should report the poultry operation on his/her report form regardless of who owned the birds. Report as sold the number of poultry that were taken or moved from the place in 1987.

Part E — HORSES, OTHER LIVESTOCK, ANIMAL SPECIALTIES, AND FISH

If you owned BEES — Report all colonies or hives of bees and honey operations conducted by you, regardless of where the hives were kept most of the year. Report hives or colonies, pounds of honey sold, and value of sales.

Other Livestock and Livestock Products — Include in all other livestock and livestock products manure, beeswax, and any other animal products sold from "this place" in 1987. Mink pelts and rabbit pelts should be included in number sold and value of sales, but not in inventory.

Fish and Other Aquaculture Products — Report quantity sold and gross value of sales for each.

► Section 6 — AMOUNT RECEIVED FROM GOVERNMENT CCC LOANS

Item 1 — Report the amount received under the regular or reserve program for commodities placed under CCC loan during 1987. Include amount received even if commodity was redeemed or forfeited prior to December 31, 1987.

Do not include CCC loans received to build crop storage facilities or amount received for storage payments in the reserve program.

► Section 7 — FEDERAL PAYMENTS RECEIVED

Report all payments received from Federal Farm Programs in 1987 regardless of whether payment was made in cash or commodity certificates. Include cash payments in item 1. In item 2, include the value of any certificates held or the value received from sale or redemption of any certificates in 1987.

Federal payments include receipts from Federal programs such as deficiency payments, "Whole-Herd Dairy Buy-Out," support price payments, indemnity programs, disaster payments, paid land diversion, inventory reduction payments, payments received for approved soil and water conservation projects, etc.

► Section 8 — ACRES SET ASIDE, DIVERTED, OR IDLED UNDER FEDERAL ACREAGE REDUCTION PROGRAMS IN 1987

Include in item 2 all acres in "this place" retired from production and placed, by long-term contract, into the Conservation Reserve Program. Acres placed into the program during and prior to 1987 should be included.

► Section 9 — CHARACTERISTICS AND OCCUPATION OF OPERATOR

This section collects information about the operator of "this place" defined as the individual owner, the operator, the senior partner, or person in charge.

For Family or Individual Operation — Complete this section for the operator.


For Partnership Operations — Answer all items, except item 2, for the "Senior Partner." The "Senior Partner" is the individual who is mainly responsible for the agricultural operations on "this place," not necessarily the person senior in age. If each partner shares equally in the day-to-day management decisions, consider the oldest as the "Senior Partner." For item 2 (Principal Occupation) consider all members of the partnership together. Please include as "farming or ranching" worktime at all types of agricultural enterprises, including work at greenhouses, nurseries, mushroom production, ranching, feedlots, broiler feeding, etc.

For Corporation and Other Operations (Cooperatives, Estates, etc.) — Complete section 9 for the person in charge, such as a hired manager, business manager, or other person primarily responsible for the on-site, day-to-day operation of the farm or ranch business.

Item 4 — Year Began Operation — Report the first year the operator or senior partner began to operate any part of "this place" on a continuous basis. If the operator returned to a place previously operated, report the year operations were resumed.

Report Form 87-A0215, Citrus Caretakers

FORM **87-A0215**
(10-10-86)



**UNITED STATES
CENSUS OF AGRICULTURE
CITRUS CARETAKERS**

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

NOTICE — Response to this inquiry is required by law (title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

OMB No. 0607-0534; Approval Expires September 30, 1989

CENSUS USE ONLY

035	036	037	038
039	040	041	042

Please correct errors in name, address, and ZIP Code. ENTER street and number if not shown.

SECTION 1 ACREAGE IN 1987

Report land owned, rented, or used by you, your spouse, or by the partnership, corporation, or organization for which you are reporting. Include ALL LAND, REGARDLESS OF LOCATION OR USE — cropland, pastureland, rangeland, woodland, idle land, house lots, etc.

1. All land owned (include land in citrus groves which you cared for or managed for others). List on a separate sheet of paper the name, address, and acreage for each grove owner. ☐

2. All land rented or leased FROM OTHERS, including land worked by you on shares. (DO NOT include land which you cared for or managed for others.) Also complete item 5 of this section ☐

3. All land rented or leased TO OTHERS, including land worked on shares by others and land subleased. Also complete item 6 of this section ☐

4. Acres in "THIS PLACE" — ADD acres owned (item 1) and acres rented (item 2), then SUBTRACT acres rented TO OTHERS (item 3), and enter the results in this space. →

None Number of acres

043

044

045

046

For this census report these are the acres in "THIS PLACE."

5. If you rented land FROM OTHERS (item 2) enter the following information for each landlord.

Name of landlord	Mailing address (Include ZIP Code)	Number of acres

List additional landlords in REMARKS section, page 4.

6. If you rented land TO OTHERS (item 3) enter the following information for each renter.

Name of renter	Mailing address (Include ZIP Code)	Number of acres

List additional renters in REMARKS section, page 4.

7. LOCATION OF AGRICULTURAL ACTIVITY FOR "THIS PLACE"

a. Of the land you rented or leased to others, how many acres did you own? ☐ Acres

b. In what county was the largest value of your agricultural products raised or produced? ...

Principal county →	County name	State	Number of acres
Other counties			056
			057
			058
			059

b. If you also have agricultural operations in any other county(ies), enter the county name(s), etc.

SECTION 2 ACRES IN CITRUS GROVES AND OTHER ORCHARDS OR GROVES IN 1987

Total acres	Acres irrigated
121 / 10	122 / 10

1. TOTAL ACRES in bearing and nonbearing citrus or other groves on this place. (DO NOT include abandoned acres.) . . .

2. Report the following information for each item even if not harvested because of low prices, damage from frost, wind, etc. For interplanted trees estimate the area covered by each kind of fruit.

Crop name	Code	NUMBER OF TREES OR VINES OF —		Acres in trees or vines of all ages	Quantity harvested (1986–87 season)	Unit of measure — Mark one			
		Nonbearing age	Bearing age			Lbs.	Tons	Boxes	Lbs. per box
1. Total oranges	297	298	299	10	300	301	2	3	302
Optional — Complete only if you find it helpful in computing "Total oranges"	a. Valencia oranges			10					
	b. Navel oranges			10					
	c. Temple oranges			10					
	d. Other oranges			10					
2. Grapefruit	267	268	269	10	270	271	2	3	272
3. Honey tangerines (murcotts)	291	292	293	10	294	295	2	3	296
4. Other tangerines	309	310	311	10	312	313	2	3	314
5. Tangelos	303	304	305	10	306	307	2	3	308
6. Other citrus — Specify	Name	1	2	10	3	4	2	3	5
		1	2	10	3	4	2	3	5
		1	2	10	3	4	2	3	5
		1	2	10	3	4	2	3	5
7. Non-citrus fruit or nut trees or vines — Specify		1	2	10	3	4	2	3	5
		1	2	10	3	4	2	3	5

If more space is needed, use REMARKS section, page 4.

Gross value of sales	
Dollars	Cents
784	00

3. What was the gross value of sales of citrus and other fruits from this place in 1987? (Delivered-in value) . . .

SECTION 3 Were any NURSERY and GREENHOUSE CROPS, MUSHROOMS, sod, bulbs, flowers, flower seeds, vegetable seeds and plants, vegetables under glass or other protection, GROWN FOR SALE on "THIS PLACE" in 1987?

- 1 ☐ YES — Complete this section
 2 ☐ NO — Go to section 4

Area irrigated		
Square feet	Acres	Tenths
477	478	/10

1. Nursery and greenhouse crops irrigated in 1987 . . . ☐

2. From the list below, enter the crop name and code for each crop grown.

Crop name	Code	Square feet under glass or other protection in 1987	Acres in the open in 1987		Sales in 1987	
			Whole acres	Tenths	Dollars	Cents
			1	2		
				/10	\$	00
			1	2		
				/10	\$	00
			1	2		
				/10	\$	00
			1	2		
				/10	\$	00

If more space is needed, use REMARKS section, page 4.

Crop name	Code	Crop name	Code
Bedding plants (Include vegetable plants) . . .	479	Potted flowering plants . . .	710
Bulbs (Exclude bulb flowering plants) . . .	482	Mushrooms . . .	494
Cut flowers and cut florist greens . . .	485	Sod harvested . . .	497
Nursery crops — ornamentals, fruit and nut trees, vines, and citrus seedlings . . .	488	Vegetable and flower seeds . . .	500
Foliage plants . . .	707	Greenhouse vegetables . . .	503
		Other — Specify . . .	506

SECTION 4 How were the ACRES in this place USED in 1987?

1. Copy acres in "THIS PLACE" from section 1, item 4, page 1 . . . Acres

NOTE: For items 2 to 5 below, if land was used for more than one purpose in 1987 report it in the FIRST land use listed below that applies. For example, report cropland harvested and also pastured, only as "Cropland harvested."

2. CROPLAND

a. Cropland harvested — Include all land in bearing and nonbearing citrus groves, orchards, vineyards, nursery and greenhouse crops, and land from which crops were harvested or hay was cut. . . . ☐

b. Cropland used only for pasture or grazing — Include rotation pasture and grazing land that could have been used for crops without additional improvements. . . . ☐

c. Cropland used for cover crops, legumes, and soil-improvement grasses, but NOT harvested and NOT pastured ☐

d. Cropland on which all crops failed — (Exception: Do not report here land in groves and orchards on which the crop failed. Such acreage is to be reported in item 2a.) . . . ☐

e. Cropland in cultivated summer fallow ☐

f. Cropland idle — Include abandoned grove acres ☐

3. Woodland — Include all woodlots and timber tracts and cutover and deforested land with young timber growth.

- a. Woodland pastured . . . ☐
 b. Woodland not pastured . . . ☐

4. Other pastureland and rangeland — Include any pastureland other than cropland and woodland pasture. . . . ☐

5. All other land — Land in house lots, ponds, roads, wasteland, etc. — Include any land not reported in items 2 through 4 above. ☐

6. TOTAL ACRES — Add the acres reported in items 2 through 5 (Should be the same as item 1 above.) . . . ☐

SECTION 5 Was any LAND in this place IRRIGATED at any time in 1987?

Irrigated land is all land watered by any artificial or controlled means — sprinklers, furrows or ditches, spreader dikes, etc. Include supplemental, partial, and preplant irrigation.

- 1 ☐ YES — Complete this section
 2 ☐ NO — Go to section 6

	Number of acres irrigated	
	None	
1. How many acres of harvested land were irrigated? Include land from which hay was cut and land in bearing and nonbearing fruit and nut crops reported in section 4, item 2a. . . .	<input type="checkbox"/>	680
2. How many acres of pastureland, rangeland, and any other lands not included in item 1 above were irrigated?	<input type="checkbox"/>	681

SECTION 6 INCOME FROM FARM-RELATED SOURCES IN 1987
 Report amount received before taxes and expenses.

1. Customwork and other agricultural services provided for farmers and others — plowing, planting, spraying, harvesting, preparation of products for market, etc. (DO NOT include charges to grove owners whose land is a part of "THIS PLACE.")

Specify kind of work done ☐

2. Gross cash rent or share payments received from renting out farmland or payments received from lease or sale of allotments — Include payments for livestock pastured on a per-head basis, per-month basis, per-pound basis, etc. . . . ☐

3. Sales of forest products and Christmas trees — Include maple products, naval stores, firewood, etc. . . . ☐

4. Recreational services, patronage dividends of cooperatives, and other income which is CLOSELY RELATED to the agricultural operation on this place —

Specify ☐

	Farm-related income	
	Dollars	Cents
992	\$	00
993	\$	00
994	\$	00
995	\$	00

SECTION 7 TYPE OF ORGANIZATION

Mark (X) the one item which best describes the type of organization for this place in 1987.

- FAMILY OR INDIVIDUAL operation — (Do not include partnership and corporation.) 921 ☐ } Go to section 9
 • PARTNERSHIP operation — Include family partnerships 2 ☐ }
 • INCORPORATED UNDER STATE LAW 3 ☐ } Go to section 8
 • OTHER, such as estate or trust, prison farm, grazing association, Indian reservation, etc. . . . 4 ☐ } Specify below then go to section 9

Specify

SECTION 8 CORPORATE STRUCTURE (for incorporated operations only)

1. Is this a family-held corporation? 922 1 ☐ Yes 2 ☐ No
 2. Are there more than 10 stockholders? 3 ☐ Yes 4 ☐ No

SECTION 9 CHARACTERISTICS AND OCCUPATION OF OPERATOR (Senior partner or person in charge)

1. RESIDENCE — Does the operator (senior partner or person in charge) live on this place? 923 1 ☐ Yes 2 ☐ No

2. PRINCIPAL OCCUPATION — At which occupation did the operator spend the majority (50 percent or more) of his/her worktime in 1987? For partnerships consider all members of the partnership together 928 1 ☐ Farming 2 ☐ Other or ranching

3. OFF-FARM WORK — How many days did the operator (senior partner or person in charge) work at least 4 hours per day off this place in 1987? Include work at a nonfarm job, business, or on someone else's farm for pay. (Do not include exchange farmwork.) 929 1 ☐ None 2 ☐ 1–49 days 3 ☐ 50–99 days 4 ☐ 100–149 days 5 ☐ 150–199 days 6 ☐ 200 days or more

4. In what YEAR did the operator (or senior partner) begin to operate any part of this place? 960 _____ Year

5. AGE of operator (senior partner or person in charge) 925 _____ Years old

6. RACE of operator (senior partner or person in charge) 924 1 ☐ White 2 ☐ Negro or Black 3 ☐ American Indian 4 ☐ Asian or Pacific Islander 5 ☐ Other — Specify

7. SEX of operator (senior partner or person in charge) 926 1 ☐ Male 2 ☐ Female

8. SPANISH ORIGIN — Is the operator (senior partner or person in charge) of Spanish origin or descent (Mexican, Puerto Rican, Cuban, or other Spanish)? 927 1 ☐ Yes 2 ☐ No

SECTION 10 OTHER CROPS, LIVESTOCK, OR POULTRY — Were any CROPS other than citrus or nursery crops harvested from this place, or did you or anyone else have any LIVESTOCK OR POULTRY on this place in 1987? 1 <input type="checkbox"/> YES — Complete this section 2 <input type="checkbox"/> NO — Go to section 11	SECTION 14 SELECTED PRODUCTION EXPENSES paid by you and others for this place in 1987 Include your best estimates of expenses paid by you in connection with the grove caretaking or management business. Do not include expenses connected with customwork performed for others, operation of nonfarm activities such as packing or processing, businesses or services, not related to the farm business.																																																																									
1. CROPS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;">Name</th> <th style="width: 20%;">Acres</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;">Name</th> <th style="width: 20%;">Current inventory</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	Name	Acres							Name	Current inventory							<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">None</th> <th style="width: 15%;">Dollars</th> <th style="width: 15%;">Cents</th> </tr> </thead> <tbody> <tr><td>974</td><td> </td><td> </td></tr> <tr><td>1. Trees, seeds, bulbs, and plants purchased</td><td>\$</td><td>00</td></tr> <tr><td>2. Gasoline and other petroleum fuel and oil purchased for the farm business —</td><td> </td><td> </td></tr> <tr><td> a. Gasoline and gasohol</td><td>\$</td><td>00</td></tr> <tr><td> b. Diesel fuel</td><td>\$</td><td>00</td></tr> <tr><td> c. Natural gas</td><td>\$</td><td>00</td></tr> <tr><td> d. LP gas, fuel oil, kerosene, motor oil, grease, etc.</td><td>\$</td><td>00</td></tr> <tr><td>3. Electricity for the farm business — (Do not include household expenses.)</td><td>\$</td><td>00</td></tr> <tr><td>4. Hired farm and ranch labor — also include employer's cost for social security, workman's compensation, insurance premiums, pension plans, etc.</td><td>\$</td><td>00</td></tr> <tr><td>5. Contract labor — Include expenditures for labor, such as harvesting of fruit, vegetables, berries, etc., performed on a contract basis by a contractor, a crew leader, a cooperative, etc.</td><td>\$</td><td>00</td></tr> <tr><td>6. Repair and maintenance expenses for the upkeep of buildings, motor vehicles, and farm equipment</td><td>\$</td><td>00</td></tr> <tr><td>7. Customwork, machine hire, and rental of machinery and equipment — Include expenditures for use of equipment and for customwork such as picking, hauling, spraying, dusting, fertilizing, etc., performed by OTHERS.</td><td>\$</td><td>00</td></tr> <tr><td>8. Interest paid on debts —</td><td> </td><td> </td></tr> <tr><td> a. Secured by real estate</td><td>\$</td><td>00</td></tr> <tr><td> b. Not secured by real estate</td><td>\$</td><td>00</td></tr> <tr><td>9. Cash rent paid for land and buildings in 1987 — (Do not include grazing fees.)</td><td>\$</td><td>00</td></tr> <tr><td>10. Property taxes paid — Include farm real estate, machinery, livestock, etc. for the farm business. (Do not include taxes paid by landlords.)</td><td>\$</td><td>00</td></tr> <tr><td>11. All other production expenses — Include insurance, water, marketing charges, miscellaneous farm supplies, etc. (Do not include depreciation, household expenses, and expenses not associated with the farm business.)</td><td>\$</td><td>00</td></tr> </tbody> </table>	None	Dollars	Cents	974			1. Trees, seeds, bulbs, and plants purchased	\$	00	2. Gasoline and other petroleum fuel and oil purchased for the farm business —			a. Gasoline and gasohol	\$	00	b. Diesel fuel	\$	00	c. Natural gas	\$	00	d. LP gas, fuel oil, kerosene, motor oil, grease, etc.	\$	00	3. Electricity for the farm business — (Do not include household expenses.)	\$	00	4. Hired farm and ranch labor — also include employer's cost for social security, workman's compensation, insurance premiums, pension plans, etc.	\$	00	5. Contract labor — Include expenditures for labor, such as harvesting of fruit, vegetables, berries, etc., performed on a contract basis by a contractor, a crew leader, a cooperative, etc.	\$	00	6. Repair and maintenance expenses for the upkeep of buildings, motor vehicles, and farm equipment	\$	00	7. Customwork, machine hire, and rental of machinery and equipment — Include expenditures for use of equipment and for customwork such as picking, hauling, spraying, dusting, fertilizing, etc., performed by OTHERS.	\$	00	8. Interest paid on debts —			a. Secured by real estate	\$	00	b. Not secured by real estate	\$	00	9. Cash rent paid for land and buildings in 1987 — (Do not include grazing fees.)	\$	00	10. Property taxes paid — Include farm real estate, machinery, livestock, etc. for the farm business. (Do not include taxes paid by landlords.)	\$	00	11. All other production expenses — Include insurance, water, marketing charges, miscellaneous farm supplies, etc. (Do not include depreciation, household expenses, and expenses not associated with the farm business.)	\$	00
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SECTION 11 Was any COMMERCIAL FERTILIZER, including ROCK PHOSPHATE, or LIME used on this place during 1987? 1 <input type="checkbox"/> YES — Complete this section 2 <input type="checkbox"/> NO — Go to section 12	SECTION 15 ESTIMATED CURRENT MARKET VALUE OF LAND AND BUILDINGS Please give your best ESTIMATE of the CURRENT MARKET VALUE of land and buildings for the acres reported in section 1, items 1, 2, and 3, page 1.																																																																									
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SECTION 12 Were any INSECTICIDES, HERBICIDES, FUNGICIDES, NEMATOCIDES, OTHER PESTICIDES, or OTHER CHEMICALS used on this place in 1987? 1 <input type="checkbox"/> YES — Complete this section 2 <input type="checkbox"/> NO — Go to section 13	SECTION 16 PERSON COMPLETING THIS REPORT — Please print Name _____ 999 Date _____ Telephone number _____ Area code _____ Number _____																																																																									
Include any materials provided by you, your landlords, or contractors. For each item listed, report acres only once. If multipurpose chemicals were used, report acreage treated for each purpose. 1. Sprays, dusts, granules, fumigants, etc., (fungicide, herbicide, insecticide, nematocide) to control — None <input type="checkbox"/> Number of acres on which used 936 a. Insects on crops, including hay <input type="checkbox"/> 937 b. Nematodes in crops <input type="checkbox"/> 938 c. Diseases in crops and orchards (blights, smuts, rusts, etc.) <input type="checkbox"/> 939 d. Weeds, grass, or brush in crops and pasture (Include both pre-emergence and post emergence) <input type="checkbox"/> 940 2. Chemicals for defoliation or for growth control of crops or thinning of fruit <input type="checkbox"/> 941 3. Agricultural chemicals purchased — insecticides, herbicides, fungicides, other pesticides, etc. — (Include cost of custom applications. (Do not include lime.) <input type="checkbox"/> 976 Dollars Cents \$ 00	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">None</th> <th style="width: 15%;">Dollars</th> <th style="width: 15%;">Cents</th> </tr> </thead> <tbody> <tr><td>996</td><td> </td><td> </td></tr> <tr><td>1. All land owned — Include land in citrus groves which you cared for or managed for others.</td><td>\$</td><td>00</td></tr> <tr><td>2. All land rented or leased FROM OTHERS</td><td>\$</td><td>00</td></tr> <tr><td>3. All land rented or leased TO OTHERS</td><td>\$</td><td>00</td></tr> </tbody> </table>	None	Dollars	Cents	996			1. All land owned — Include land in citrus groves which you cared for or managed for others.	\$	00	2. All land rented or leased FROM OTHERS	\$	00	3. All land rented or leased TO OTHERS	\$	00																																																										
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SECTION 13 MACHINERY AND EQUIPMENT currently on this place — Include only equipment used for agricultural operations in 1986 or 1987. (Do not include equipment used for packing or processing of citrus.) • Value of ALL machinery and equipment currently on this place. 1. What is the estimated market value of ALL machinery, equipment, and implements usually kept on this place and used for the farm or ranch business? — Include cars, trucks, tractors, sprayers, plows, disks, harrows, pumps, motors, irrigation equipment, etc. Estimated market value Dollars Cents 943 \$ 00 • SELECTED machinery and equipment currently on this place. (Report only if used in 1986 or 1987.) <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Total number on this place</th> <th style="width: 70%;">Of the total, HOW MANY were manufactured in the last 5 years (1983–1987)</th> </tr> </thead> <tbody> <tr><td>944</td><td>945</td></tr> <tr><td>946</td><td>947</td></tr> <tr><td>948</td><td>949</td></tr> </tbody> </table> 2. Motortrucks — Include pickups <input type="checkbox"/> 944 3. Wheel tractors other than garden tractors and motor tillers — a. Less than 40 horsepower (PTO) <input type="checkbox"/> 946 b. 40 horsepower (PTO) or more <input type="checkbox"/> 948	Total number on this place	Of the total, HOW MANY were manufactured in the last 5 years (1983–1987)	944	945	946	947	948	949																																																																		
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1987 Survey of Nonrespondents, Report Form 87-A46(A)

FORM **87-A46(A)**
(2-8-88)



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

FROM THE AGRICULTURE DIVISION
BUREAU OF THE CENSUS

We are currently conducting a survey of nonrespondents to the 1987 Census of Agriculture. The results of this survey will be used to account for census nonrespondents in census data. This sample-based adjustment to the census will enable us to meet our goal of a complete and accurate measurement of our Nation's agriculture.

WHEN IS THE REPORT FORM DUE?

Please return your completed report form in the enclosed preaddressed envelope within 3 days of receipt. We need a response from everyone receiving this survey request. A prompt response will reduce the cost of additional mail and telephone contacts.

IS YOUR RESPONSE REQUIRED?

Yes, by law (Title 13, United States Code). Excerpts from the law are printed for your information on the back of the report form.

WILL YOUR ANSWERS BE KEPT CONFIDENTIAL?

Yes. By the same law, your report to the Census Bureau is kept confidential. Only sworn Census Bureau employees can see your report to prepare necessary statistical summaries. These summaries in no way reveal information about you as an individual.

WHAT IF YOU DID NOT CONDUCT ANY AGRICULTURAL OPERATIONS IN 1987 OR DO NOT CONSIDER YOURSELF A FARMER OR RANCHER?

If this is your situation, it is important that you complete the appropriate sections and return the report form. We need your information to accurately estimate the proportion of nonrespondent addresses that do not have census farm operations.

WHAT IF THE INFORMATION IS NOT AVAILABLE?

Use your best estimates if you do not have records available to provide the requested data for calendar year 1987.

Thank you for cooperating with us in completing the 1987 Census of Agriculture.

Sincerely,

ROGER H. BUGENHAGEN
Assistant Director for Economic
and Agriculture Censuses

Enclosure

Please answer the following questions

Item 1

a. At any time during 1987, did you plant or produce any —

YES NO

YES NO

(1) Hay, corn, or soybeans? ☐ ☐(5) Fruits, nuts, citrus fruits, or grapes? ☐ ☐(2) Wheat, sorghum, or other small grains? ☐ ☐(6) Vegetables, melons, or berries? ☐ ☐(3) Tobacco? ☐ ☐(7) Greenhouse or nursery crops? ☐ ☐(4) Peanuts, cotton, potatoes, sugar crops? ☐ ☐(8) Other crops? ☐ ☐

Continue with (5).

b. At any time during 1987 did you raise, sell, or keep any —

YES NO

YES NO

(1) Cattle, calves, hogs, or pigs? ☐ ☐(5) Bees, honey? ☐ ☐(2) Sheep, lambs, or goats? ☐ ☐(6) Fish in captivity? ☐ ☐(3) Chickens or other poultry? ☐ ☐(7) Other animal specialties, mink, rabbits, etc.? ☐ ☐(4) Horses, ponies, or mules? ☐ ☐

Continue with (5).

If you answered "YES" to ANY of the questions in a or b above, GO TO ITEM 2.

If you answered "NO" to ALL of the questions in a and b above, SKIP TO ITEM 6.

Item 2

Report all land owned, rented, or used by you, your spouse, or by the partnership, corporation, or organization for which you are reporting. Include ALL LAND, REGARDLESS OF LOCATION OR USE — cropland, pastureland, woodland, idle land, house lots, etc. None

Number of acres

a. Acres of land OWNED ☐b. Acres of land rented or leased FROM OTHERS, including land worked by you on shares, used rent free, in exchange for services, payment of taxes, etc. Include leased Federal, State, and railroad land. (DO NOT include land used on a per-head basis under a grazing permit.) ☐c. Acres of land rented or leased TO OTHERS, including land worked on shares by others and land subleased ☐

d. Please add the acres reported in items a and b. Subtract the acres rented to others in item c. The result, "ACRES IN THIS PLACE," is to be used for completing this report form.

Item 3

a. List other individuals associated with the operation of THIS PLACE at any time during 1987. Include partners, relatives, managers, or other associated persons. DO NOT include landlords or tenants.

If none, mark (X) this box ☐

First name, middle initial, last name	Number and street or rural route and box number			Relationship
	Post Office	State	ZIP Code	
First name, middle initial, last name	Number and street or rural route and box number			Relationship
	Post Office	State	ZIP Code	

b. List any farm or business name, other than the name on the label, used for this agricultural operation.

If none, mark (X) this box ☐

Name used _____

Item 4 List crops harvested in 1987 on the "ACRES IN THIS PLACE" reported in item 2d.If none, mark (X) this box. ☐

Name of crop <i>Hay, corn, wheat, soybeans, oats, barley, sorghum, cotton, tobacco, potatoes, melons, peanuts, berries, vegetables, nursery products, etc.</i> (a)	Acres harvested in 1987 (b)	Quantity harvested (c)	Unit of measure <i>Bushels, pounds, etc.</i> (d)	Value of sales including landlord's share <i>Dollars only</i> (e)
				\$
				\$
				\$
				\$
				\$

Item 5 Specify livestock or poultry on the "ACRES IN THIS PLACE" on December 31, 1987, or sold in 1987. Include any livestock or poultry, whether owned by you or by others.If none, mark (X) this box. ☐

Kind of livestock, poultry, or animal specialty <i>Cattle, hogs, chickens, turkeys, broilers, ducks, geese, horses, mules, goats, sheep, bees, fish, fur-bearing animals, other livestock</i> (a)	Number on this place on December 31, 1987 (b)	Number sold in 1987 (c)	Value of sales including landlord's or contractor's share <i>Dollars only</i> (d)
			\$
			\$
			\$
			\$

Item 6 Complete this item ONLY if you answered "NO" to ALL questions in item 1. Mark (X) all items that apply to addressee.☐ Rents all land to others and does not have separate crop or livestock operation.☐ SOLD farm or ranch before 1987.☐ Removed land from agricultural production in 1987.☐ Participates as a partner or shareholder of a farm or ranch operated by someone else.☐ Never operated a farm or ranch.☐ Participates in agricultural activities other than agriculture production — e.g., farm supplier, processor, feed mill operator, provider of customwork or farm management services, etc.☐ Other — Please specify ☒**Item 7** Person completing this report

Signature	Date completed (Month/day)	Telephone	
		Area code	Number

**EXCERPTS FROM TITLE 13, UNITED STATES CODE WHICH
RELATE TO THE CENSUS OF AGRICULTURE**

AUTHORITY TO CONDUCT CENSUS — Section 142

- (a) The Secretary shall in 1979, in 1983, and in every fifth year beginning after 1983, take a census of agriculture.
- (c) The data collected in each of the censuses taken under this section shall relate to the year immediately preceding the year in which such census is taken.

AUTHORITY TO COLLECT PRELIMINARY AND SUPPLEMENTAL STATISTICS — Section 193

In advance of, in conjunction with, or after the taking of each census provided for by this chapter, the Secretary may make surveys and collect such preliminary and supplementary statistics related to the main topic of the census as are necessary to the initiation, taking, or completion thereof.

MANDATORY PROVISIONS OF LAW

Section 221

- (a) Whoever, being over eighteen years of age, refuses or willfully neglects, when requested by the Secretary, or by any other authorized officer or employee of the Department of Commerce or bureau or agency thereof acting under the instructions of the Secretary or authorized officer, to answer, to the best of his knowledge, any of the questions on any schedule submitted to him in connection with any census or survey provided for by subchapters I, II, IV, and V of chapter 5 of this title, applying to himself or to the family to which he belongs or is related, or to the farm or farms of which he or his family is the occupant, shall be fined not more than \$100.
- (b) Whoever, when answering questions described in subsection (a) of this section, and under the conditions or circumstances described in such subsection, willfully gives any answer that is false, shall be fined not more than \$500.

Section 224

Whoever, being the owner, official, agent, person in charge, or assistant to the person in charge, of any company, business, institution, establishment, religious body, or organization of any nature whatsoever, neglects or refuses, when requested by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof, to answer completely and correctly to the best of his knowledge all questions relating to his company, business, institution, establishment, religious body, or other organization, or to records or statistics in his official custody, contained on any census or other schedule or questionnaire prepared and submitted to him under the authority of this title, shall be fined not more than \$500; and if he willfully gives a false answer to any such questions, he shall be fined not more than \$10,000.

CONFIDENTIALITY OF INFORMATION

Section 9

Neither the Secretary, nor any other officer or employee of the Department of Commerce or bureau or agency thereof, may, except as provided in section 8 of this title (which permits only the release of identifiable personal information to a respondent or the heir, successor or agent of such respondent) —

- (1) use the information furnished under the provisions of this title for any purpose other than the statistical purposes for which it is supplied; or
- (2) make any publication whereby the data furnished by any particular establishment or individual under this title can be identified; or
- (3) permit anyone other than the sworn officers and employees of the Department or bureau or agency thereof to examine the individual reports.

No department, bureau, agency, officer, or employee of the Government, except the Secretary in carrying out the purposes of this title, shall require, for any reason, copies of census reports which have been retained by any such establishment or individual. Copies of census reports which have been so retained shall be immune from legal process, and shall not, without the consent of the individual or establishment concerned, be admitted as evidence or used for any purpose in any action, suit, or other judicial or administrative proceeding.

Section 214

Whoever, being or having been an employee or staff member referred to in subchapter II of chapter I of this title, having taken and subscribed the oath of office, or having sworn to observe the limitations imposed by section 9 of this title, publishes or communicates any information, the disclosure of which is prohibited under the provisions of section 9 of this title, and which comes into his possession by reason of his being employed (or otherwise providing services) under the provisions of this title, shall be fined not more than \$5,000 or imprisoned not more than 5 years, or both.

1987 Classification Error Survey Report Form 87-A90

OMB No. 0607-0805: Approval Expires 12/31/89

FORM 87-A90 <small>(2-9-88)</small>	U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS	NOTICE - Response to this inquiry is required by law (Title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process. In correspondence pertaining to this report, please refer to your Census File Number (CFN)												
EVALUATION OF THE 1987 CENSUS OF AGRICULTURE														
Please complete and RETURN to		BUREAU OF THE CENSUS 1201 East Tenth Street Jeffersonville, IN 47133												
CENSUS USE ONLY	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center;">010</td> <td style="width: 33%; text-align: center;">011</td> <td style="width: 33%; text-align: center;">012</td> </tr> <tr> <td style="height: 20px;"></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">013</td> <td style="text-align: center;">014</td> <td style="text-align: center;">015</td> </tr> <tr> <td style="height: 20px;"></td> <td></td> <td></td> </tr> </table>	010	011	012				013	014	015				Please correct errors in name, address, and ZIP Code. ENTER street and number if not shown.
010	011	012												
013	014	015												
SECTION 1 This section asks about the kinds of associations and the types of activities that you or any member of your household might have with agriculture. The Census Bureau's definition of "farming" includes a large variety of activities, some of which you and others may not consider agricultural. Please read each question carefully.														
1. Which of the following describes your association with agriculture at anytime during 1987 -														
a. Sold your farm or ranch?	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%; text-align: center;">YES</th> <th style="width: 50%; text-align: center;">NO</th> </tr> <tr> <td style="text-align: center;">020 1 <input type="checkbox"/></td> <td style="text-align: center;">2 <input type="checkbox"/></td> </tr> </table>	YES	NO	020 1 <input type="checkbox"/>	2 <input type="checkbox"/>									
YES	NO													
020 1 <input type="checkbox"/>	2 <input type="checkbox"/>													
b. Retired from farming or ranching?	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">021 1 <input type="checkbox"/></td> <td style="text-align: center;">2 <input type="checkbox"/></td> </tr> </table>	021 1 <input type="checkbox"/>	2 <input type="checkbox"/>											
021 1 <input type="checkbox"/>	2 <input type="checkbox"/>													
c. Operated a farm or ranch?	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">022 1 <input type="checkbox"/></td> <td style="text-align: center;">2 <input type="checkbox"/></td> </tr> </table>	022 1 <input type="checkbox"/>	2 <input type="checkbox"/>											
022 1 <input type="checkbox"/>	2 <input type="checkbox"/>													
d. Operated a greenhouse or nursery?	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">023 1 <input type="checkbox"/></td> <td style="text-align: center;">2 <input type="checkbox"/></td> </tr> </table>	023 1 <input type="checkbox"/>	2 <input type="checkbox"/>											
023 1 <input type="checkbox"/>	2 <input type="checkbox"/>													
e. Operated a farm or ranch with all work being completed under a custom arrangement or by hired custom operators?	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">024 1 <input type="checkbox"/></td> <td style="text-align: center;">2 <input type="checkbox"/></td> </tr> </table>	024 1 <input type="checkbox"/>	2 <input type="checkbox"/>											
024 1 <input type="checkbox"/>	2 <input type="checkbox"/>													
f. Participated as a landlord, partner, investor, or corporate member of an agricultural operation?	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">025 1 <input type="checkbox"/></td> <td style="text-align: center;">2 <input type="checkbox"/></td> </tr> </table>	025 1 <input type="checkbox"/>	2 <input type="checkbox"/>											
025 1 <input type="checkbox"/>	2 <input type="checkbox"/>													
2. Which of the following describes your agricultural production activities at anytime during 1987 -														
a. Grew ANY CROPS (including hay, tobacco, vegetables, fruit, sod, etc.) or raised ANY LIVESTOCK OR POULTRY (including horses, goats, chickens, fish, bees, etc.)?	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">030 1 <input type="checkbox"/></td> <td style="text-align: center;">2 <input type="checkbox"/></td> </tr> </table>	030 1 <input type="checkbox"/>	2 <input type="checkbox"/>											
030 1 <input type="checkbox"/>	2 <input type="checkbox"/>													
b. Grew crops or raised livestock or poultry for your own or HOME USE?	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">031 1 <input type="checkbox"/></td> <td style="text-align: center;">2 <input type="checkbox"/></td> </tr> </table>	031 1 <input type="checkbox"/>	2 <input type="checkbox"/>											
031 1 <input type="checkbox"/>	2 <input type="checkbox"/>													
c. Grew crops or raised livestock or poultry as a HOBBY?	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">032 1 <input type="checkbox"/></td> <td style="text-align: center;">2 <input type="checkbox"/></td> </tr> </table>	032 1 <input type="checkbox"/>	2 <input type="checkbox"/>											
032 1 <input type="checkbox"/>	2 <input type="checkbox"/>													
3. At any time during 1987 did you have any other involvement with an agricultural operation?														
If YES, describe the type of involvement _____														
If you marked "YES" to ANY of the above items, continue with section 2 on page 2. If ALL items were marked "NO," go to section 6 on page 5.														

SECTION 2 This section asks about the NUMBER OF ACRES that was owned or used at any time during 1987 by the operator or operation named on the mailing label. Each census report should be completed for land under the day-to-day management of the person or operation listed on the mailing label. The land does not have to be "agricultural" — it can include your residence, woodland, pastureland, etc. — and it does not have to be located in a single place.		None	Number of acres
1. What is the total number of acres that you, your spouse, or organization owned during 1987? • Include acres owned for only part of the year as well as acres owned for the whole year.	<input type="checkbox"/>	050	
2. In 1987, how many acres of land did you, your spouse, or organization rent or lease FROM OTHERS? • Include land you work on shares, use rent-free, or in exchange for services, payment of taxes, etc. • Include leased Federal, State and railroad land. • Do not include land you use on a per-head basis under a grazing permit.	<input type="checkbox"/>	051	
3. In 1987, how many acres of land did you, your spouse, or organization rent or lease TO OTHERS? • Include land worked on shares by others and land subleased.	<input type="checkbox"/>	052	
4. Of the land you rent to others reported in item 3, how many acres do you own?	<input type="checkbox"/>	053	
5. Please add the acres reported in items 1 and 2. Subtract the acres rented to others in item 3. The resulting acreage is your CENSUS PLACE and should be used for completing the remainder of this report form.	<input type="checkbox"/>	054	
6. Of the land in your CENSUS PLACE reported in item 5 above, a. How many acres were used as pasture? • Include cropland used only for pasture, woodland pastured, and rangeland.	<input type="checkbox"/>	055	
b. How many acres were cropland on which all crops failed? • Do not include land in orchards and vineyards on which crops failed.	<input type="checkbox"/>	056	
7. In what county and State was the largest value of your agricultural products raised or produced?			
County	State		
8. Did you have agricultural operations in any other county or counties? 057 1 <input type="checkbox"/> YES — Enter the county and State name(s) and acreage 2 <input type="checkbox"/> NO			
County	State	Number of acres	
		058	
		059	
9. Provide name and mailing address of each landlord FROM whom you rented land or used land rent free or worked land on shares (acres reported in item 2 above).			
Name	Mailing address, city, State, ZIP Code	Number of acres	
		060	
		061	
		062	
10. Provide name and mailing address of each person TO whom you rented land and the number of acres rented (acres reported in item 3 above).			
Name	Mailing address, city, State, ZIP Code	Number of acres	
		063	
		064	
		065	

SECTION 3 This section asks for information about any person(s) who may have been involved during 1987 in your CENSUS PLACE . We know that our mailing list contains outdated addresses as well as duplicates, and we need to make sure we count each "farm" or "ranch" only once.			
1. What is the name of the person making the majority of the management decisions about your CENSUS PLACE?			
First name	Middle initial	Last name	
This person will be referred to as the OPERATOR of your CENSUS PLACE .			
a. What is the name of the operator's spouse?			
First name	Middle initial	Last name	
b. Does the operator live on the CENSUS PLACE? 070 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No			
c. In what year did the operator begin to operate any part of the CENSUS PLACE? 071 19 ____ Year			
d. At what occupation did the operator spend the majority of work time in 1987? 072 1 <input type="checkbox"/> Farming 2 <input type="checkbox"/> Other			
e. What is the operator's age? 073 ____ Years old			
f. What is the operator's sex? 074 1 <input type="checkbox"/> Male 2 <input type="checkbox"/> Female			
2. In the past two years, has the operator received mail at any address other than the one shown on the mail label?			
075 1 <input type="checkbox"/> Yes — Provide other address —————→ 2 <input type="checkbox"/> No		Mailing address <hr/> <div style="display: flex; justify-content: space-between;"> City State ZIP Code </div>	
3. For business purposes, does the operator use any other name for the CENSUS PLACE?			
076 1 <input type="checkbox"/> Yes — Provide other name —————→ 2 <input type="checkbox"/> No		Name <hr/> Mailing address <hr/> <div style="display: flex; justify-content: space-between;"> City State ZIP Code </div>	
4. Which type of organization best describes your CENSUS PLACE in 1987?			
077 1 <input type="checkbox"/> Individual or family operation (sole proprietorship), excluding partnership and corporation 2 <input type="checkbox"/> Partnership operation, including family partnership 3 <input type="checkbox"/> Corporation— incorporated under state law, including family corporation 4 <input type="checkbox"/> Other — Such as cooperative, estate, trust, etc. — Specify <u> </u>			
5. At any time during 1987 were there any other individuals associated with the operation of the CENSUS PLACE?			
078 1 <input type="checkbox"/> Yes — Provide information requested below 2 <input type="checkbox"/> No — Go to section 4			
Name	Mailing address, city, State, ZIP Code	Family relationship of this individual to operator of CENSUS PLACE (e.g. parent, uncle, son, not related)	Business relationship of this individual to operator of CENSUS PLACE (e.g. hired manager, business associate, partner, other)

SECTION 4 This section asks about the CROPS that were HARVESTED from your CENSUS PLACE in 1987. Please provide information about all crops including those grown under contract. This information is important for this evaluation. If you rent land from others, be sure to include the landlord's share of the harvest. Do not include crops grown on land that is rented to others.				
	a. How many acres were harvested in 1987?	b. How much was harvested in 1987?	c. What was the total dollar value of sales in 1987?	
			Dollars	Cents
1. Hay — all kinds except sorghum hay • Include grain hay, grass silage, wild hay, etc. • If two or more cuttings were made from the same land, REPORT ACRES ONLY ONCE but report total tons of all cuttings.	101	102 Tons, dry	103 \$	00
2. Corn for grain or seed	104	105 Bu.	106 \$	00
3. Corn for silage, cut for green chop or dry fodder. (Do not include acres already reported in item 2.)	107		108 \$	00
4. Soybeans for beans	109	110 Bu.	111 \$	00
5. Wheat for grain	112	113 Bu.	114 \$	00
6. Other small grains for grain — oats, barley, rye, rice, etc. Specify crop name(s): . . .	115		116 \$	00
7. Sorghum for grain or seed	117	118 Bu.	119 \$	00
8. Sorghum for silage, cut for green chop, dry forage or hay. • Do not include acres already reported in item 7 . . .	120		121 \$	00
9. Cotton	122	123 Bales	124 \$	00
10. Peanuts for nuts	125	126 Lbs.	127 \$	00
11. Tobacco — all types	128	129 Lbs.	130 \$	00
12. Irish potatoes • Exclude home use	131	132 Cwt.	133 \$	00
13. Sweetpotatoes and yams • Exclude home use	134	135 Bu.	136 \$	00
14. Vegetables, sweet corn, or melons for sale • Exclude home use	137		138 \$	00
15. Berries for sale • Exclude home use Specify crop name(s):	139		140 \$	00
16. Land in bearing and nonbearing fruit orchards, citrus or other groves, vineyards, and nut trees of all ages • Include land on which the fruit crop failed • Do not include abandoned acreages Specify crop name(s):	141		142 \$	00
17. All other crops • Include field seeds, sugar crops, dry beans, dry peas, sunflower seeds, etc. Specify crop name(s):	143		144 \$	00
18. Greenhouse or nursery crops — Specify <input checked="" type="checkbox"/>	145	146	147 \$	00

SECTION 5 This section asks about the LIVESTOCK AND POULTRY on your CENSUS PLACE . Information about all types of livestock and poultry are important for this evaluation. Please include all livestock and poultry present on December 31, 1987, no matter who owned them. Be sure to include all sales of any livestock or poultry fed on a contract or custom basis that were taken from your CENSUS PLACE at any time during 1987.					
	None	a. What was the INVENTORY on your CENSUS PLACE on December 31, 1987?	b. How many were sold in 1987?	c. What was the gross value of sales?	
				Dollars	Cents
1. On December 31, 1987, how many CATTLE and CALVES of all ages were on your CENSUS PLACE?	<input type="checkbox"/>	201	202	203	
Of these cattle and calves, how many were —				\$	00
a. Milk cows? (Include dry milk cows and milk heifers that had calved.)	<input type="checkbox"/>	204	205	206	
b. Other cattle and calves? (Include beef cows, heifers, steers, bulls, and calves.) ..	<input type="checkbox"/>	207	208	209	
2. What was the gross value of dairy products sold from on your CENSUS PLACE in 1987?	<input type="checkbox"/>			210	
3. On December 31, 1987, how many HOGS and PIGS of all ages were on your CENSUS PLACE?	<input type="checkbox"/>	211	212	213	
4. On December 31, 1987, were there any POULTRY on your CENSUS PLACE?	<input type="checkbox"/>	214	215	216	
Of this poultry, how many were —				\$	00
a. Hens and pullets of laying age?	<input type="checkbox"/>	217	218	219	
• Exclude started pullets being raised for sale ..	<input type="checkbox"/>	220	221	222	
b. Pullets 3 months old or older not yet of laying age?	<input type="checkbox"/>	223	224	225	
c. Broilers, fryers, and other meat-type chickens?	<input type="checkbox"/>			\$	00
• Include capons and roasters	<input type="checkbox"/>	226	227	228	
d. Other poultry raised in captivity?	<input type="checkbox"/>			\$	00
• Include turkeys, ducks, geese, etc.	<input type="checkbox"/>			\$	00
Specify kind <input checked="" type="checkbox"/>				\$	00
5. What was the gross value of eggs sold from your CENSUS PLACE in 1987?	<input type="checkbox"/>	230	231	232	
6. On December 31, 1987, were there HORSES and PONIES of any age on your CENSUS PLACE?	<input type="checkbox"/>	233	234	235	
• Include boarded horses and ponies	<input type="checkbox"/>			\$	00
7. On December 31, 1987, were there any SHEEP and LAMBS of all ages on your CENSUS PLACE?	<input type="checkbox"/>			\$	00
8. On December 31, 1987, were there any other livestock or livestock products on your CENSUS PLACE?	<input type="checkbox"/>	236	237	238	
• Include goats, mules, fur-bearing animals, colonies of bees, fish in captivity, honey, goats milk, wool, mohair, etc.	<input type="checkbox"/>	239	240	241	
Specify kind <input checked="" type="checkbox"/>		242	243	244	
				\$	00

SECTION 6 PERSON COMPLETING THIS REPORT			
Signature	300	Area code	Number
Date completed (Month/day/year)	What is your telephone number? <input type="text"/>		

1987 Census of Agriculture for Puerto Rico, Report Form 87-A1(PR)

OMB APPROVAL NO. 0607-0580; EXPIRES 09/89

FORM 87-A1(PR) (10-15-86)		U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS		NOTICE — Response to this inquiry is required by law (title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation.	
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> A1 </div>					
CENSUS OF AGRICULTURE — 1987 PUERTO RICO					
A. Report Form Identification					
Municipio No.	ED No.	Census use only	Farm serial number	Census use only	
		0 0			
Municipio		Barrio			
B. Operator's Name and Mailing Address					
Name		Middle name or initial		Surnames	
P.O. Box, R.F.D. and box number, number and street					
Barrio (if needed)					
City or town			ZIP Code		
Census use only					
035	036	037	038	039	
(Please correct errors in name, address, and ZIP Code.)					

Section 1 CUERDAS IN THE LAST 12 MONTHS

When reporting part of a cuerda, write in whole numbers under "centésimos," never in fractions or decimals. Example: Centésimos (Cent.) 05, 10, 25, 75, 95.

1. All land owned ☐ None ☐ Cuerdas Cent.

(Interviewer: If operator is a salaried manager, enter all land managed in "item 1 — All land owned" and enter this figure in "item 4 — Total cuerdas in this place.")

2. Land rented (or leased) from others ☐ Cuerdas Cent.

3. Land rented (or leased) to others (Do not include cuerdas worked by sharecroppers and "agregados.") ☐ Cuerdas Cent.

4. TOTAL CUERDAS IN THIS PLACE ☐ Cuerdas Cent.

(Interviewer: Add land owned (item 1) to land rented from others (item 2) then subtract land rented to others (item 3) and enter your answer here. For managed land enter figure from item 1.)

5. Land rented from others. (Give the following information for each of the landlords.)

Name	Address	Cuerdas	Cent.
		053	
		054	
		055	

6. Land rented to others. (Give the following information for each of the tenants.)

Name	Address	Cuerdas	Cent.
		056	
		057	
		058	

7. Land managed as a salaried manager. (Give the following information concerning your employer.)

Name	Address	Cuerdas	Cent.
		059	

Section 3 SUGARCANE

1. Was any SUGARCANE grown on this place during the last 12 months?

☐ Yes — Complete this section

☐ No — Go to section 4

	Cuerdas harvested (1)		Tons harvested (2)	
	Cuerdas	Cent.	Tons	
a. Fall cane	075		076	
b. Spring cane	077		078	
c. Ratoon cane	079		080	
d. Sojourn cane for seed	081			
e. Sojourn cane cut for feed	083			
f. TOTAL CANE (Add the figures entered in items "a" through "e" and enter the total in this space.)	085		086	

Section 4 COFFEE, TOBACCO, OR PINEAPPLES

1. Did you harvest any COFFEE, TOBACCO, OR PINEAPPLES from this place in the last 12 months?

☐ Yes — Complete this section

☐ No — Go to section 5

	Cuerdas harvested (1)		Amount harvested (2)	
	Cuerdas	Cent.		
a. Coffee grown in the shade	092		093	Lb.
b. Coffee grown in the open	094		095	Lb.
c. Tobacco	096		097	Lb.
d. Pineapples	098		099	Tons

Section 5 GRAINS AND FARINACEOUS CROPS

1. Were any of the FOLLOWING CROPS harvested from this place in the last 12 months?

	Cuerdas harvested (1)		Amount harvested (2)	
	Cuerdas	Cent.		Pounds
a. Pigeon peas	105		106	
b. Dry beans	107		108	
c. Green beans	109		110	
d. Corn	111		112	
e. Dasheens	113		114	
f. Cassava	115		116	
g. Celeriac	117		118	
h. Sweetpotatoes	119		120	
i. Yams	121		122	
j. Taniers	123		124	
k. Rice	125		126	
l. Other — Specify	127		128	

Section 2 LOCATION OF AGRICULTURAL LAND OPERATED BY YOU IN THE LAST 12 MONTHS

1. Are all of your agricultural operations located in the municipio and barrio shown in item A above?

☐ No — Complete this section

☐ Yes — Go to section 3

Write name and cuerdas for principal barrio and municipio on the first line; write names and cuerdas for additional barrios and municipios in spaces provided. If necessary, continue in "Remarks" on the last page.

	Name of barrio	Municipio	Cuerdas	Cent.
Principal barrio and municipio			065	
Other barrios and municipios			066	
			067	
			068	
			069	

TOTAL CUERDAS (Must equal cuerdas in section 1, item 4)

Section 6 FRUITS1. Are there any **FRUIT TREES** or **COCONUT PALMS** on this place?

- ☐ Yes — Complete this section
☐ No — Go to section 7

2. How many **cuerdas** in bearing and nonbearing fruit trees or coconut palms are on this place? →

Total	
Cuerdas	Cent.
134	

3. Which of these fruits are now planted or were harvested in the last 12 months?

	NUMBER OF TREES OR PLANTS OF —		Amount harvested (3)
	Nonbearing age (1)	Bearing age (2)	
a. Coconuts	135	136	137 No.
b. Grapefruits	138	139	140 No.
c. Oranges	141	142	143 No.
d. Avocados	144	145	146 No.
e. Chironjas	147	148	149 No.
f. Plantains	150	151	152 Hds.
g. Bananas	153	154	155 Hds.
h. Citron	156	157	158 Lb.
i. Mangoes	159	160	161 No.
j. Papayas	162	163	164 Lb.
k. Passion fruit	165	166	167 No.
l. Lemons and limes	168	169	170 Lb.
m. Other fruits — Specify	171	172	173 No.

Section 7 VEGETABLES1. Did you cultivate for sale any **VEGETABLES** in the last 12 months?

- ☐ Yes — Complete this section
☐ No — Go to section 8

2. Which of the following vegetables did you harvest from this place for sale in the last 12 months?

	Cuerdas harvested for sale (1)		Value of sales (2)
	Cuerdas	Cent.	Dollars only
a. Tomatoes	176	177	00
b. Cucumbers	178	179	00
c. String beans	180	181	00
d. Lettuce	182	183	00
e. Peppers	184	185	00
f. Cabbage	186	187	00
g. Eggplant	188	189	00
h. Pumpkins	190	191	00
i. Sweet cooking peppers	192	193	00
j. Other vegetables	194	195	00

Section 8 CULTIVATED AND/OR IMPROVED PASTURE1. Did you have any **CULTIVATED AND/OR IMPROVED PASTURE** on this place in the last 12 months?

- ☐ Yes — Complete this section
☐ No — Go to section 9

	Cuerdas for grazing only (1)		Cuerdas cut for roughage (2)	
	Cuerdas	Cent.	Cuerdas	Cent.
a. Paragrass	198	199		
b. Guinea grass	200	201		
c. Merker grass	202	203		
d. Pangola grass	204	205		
e. Molasses grass	206	207		
f. Milo (sorghum)	208	209		
g. Elephant grass	210	211		
h. Star grass	212	213		
i. Other cultivated grasses	214	215		

Section 9 ORNAMENTAL AND FLOWERING PLANTS, CUT FLOWERS, LAWN GRASS1. Did you grow any **ORNAMENTAL** or **FLOWERING PLANTS** or **LAWN GRASS** for sale on this place in the last 12 months?

- ☐ Yes — Complete this section
☐ No — Go to section 10

	Area used in the last 12 months			Value of sales (Dollars only) (3)
	Square feet under shade (1)	Cuerdas (2)	Cent.	
a. Lawn grass (sod)	None	222		223 00
b. Ornamental plants	224	225		226 00
c. Flowering plants (except orchids)	227	228		229 00
d. Orchid plants	230	231		232 00
e. Cut flowers (except orchids)	233	234		235 00
f. Orchid flowers	236	237		238 00

Section 10 OTHER CROPS1. Were any **OTHER CROPS** or agricultural products grown on this place in the last 12 months?

- ☐ Yes — Complete this section
☐ No — Go to section 11

	Cuerdas harvested	
	Cuerdas	Cent.
a. Watermelons	244	
b. Honeydew melons	245	
c. Tree seedlings (coffee, orange, plantains, etc.)	248	
d. Other — Specify	247	

Section 11 LAND USED IN THE LAST 12 MONTHS

The purpose of this section is to distribute all land on this place among items 2 through 4 below according to the way it was used in the last 12 months.

1. "TOTAL CUERDAS IN THIS PLACE" from section 1, item 4, on page 1 →

NOTE: If the same land was used for two or more purposes, report that land only once — in the first item that applies.

2. **CULTIVATED CROPLAND** (Include land harvested, land on which crops failed, land under cultivation whether harvested or not, land at rest, etc.)

a. Used for crops or suitable for cultivation

b. Cropland that lie at rest (applied to land which lie fallow)

3. **LAND IN PASTURES** —

a. Cultivated and/or improved pastures

b. Natural pastures

c. Pastures overgrown with brush

4. **OTHER LANDS** —

a. Woodland, forests, and underbrush that cannot be utilized for cultivation or pastures

b. Lakes, ponds, buildings, roads, fences, or wasteland

5. **TOTAL CUERDAS** — Add the cuerdas reported in items 2 through 4 and enter the total in this space. Total should be the same as item 1 above.**Section 12 IRRIGATION**

1. Did you irrigate any land on this place at any time during the last 12 months?

- ☐ Yes — Complete this section
☐ No — Go to section 13

2. Cuerdas irrigated from a **PUBLIC SYSTEM**3. Cuerdas irrigated from a **PRIVATE SYSTEM** (wells, rivers, brooks, etc.)

4. Major source of water used for irrigation

- 266 1 ☐ Well or cistern 4 ☐ Canal or irrigation district
 2 ☐ River or stream 5 ☐ Other — Specify
 3 ☐ Lake or private pond

Section 13 HOGS1. Do you or anyone else have any **HOGS** or **PIGS** on this place, or were any sold in the last 12 months?

- ☐ Yes — Complete this section
☐ No — Go to section 14

2. Hogs and piglets of all ages and sexes

(The total of items 2a and 2b should be the same as that in item 2.)

a. Less than 3 months of age

b. 3 months of age and older

3. Sows and gilts kept for breeding purposes

4. Boars of all ages kept for breeding purposes

	Number on this place July 1, 1988 (1)	Number sold in the last 12 months (2)
272		273
274		275
276		277
278		
280		

Section 14 CATTLE 1. Do you or anyone else have any CATTLE on this place, or were any sold from this place in the last 12 months? <input type="checkbox"/> Yes — Complete this section <input type="checkbox"/> No — Go to section 15 2. Cattle and calves of all ages: (If "None," mark (X) and go to item 3.) <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">Number on this place July 1, 1988</th> </tr> <tr> <th>Dairy cattle (1)</th> <th>Beef and other cattle (2)</th> </tr> <tr><td>287</td><td>288</td></tr> <tr><td>289</td><td>290</td></tr> <tr><td>291</td><td>292</td></tr> <tr><td>293</td><td>294</td></tr> <tr><td>295</td><td>296</td></tr> <tr><td>297</td><td>298</td></tr> <tr><td>299</td><td></td></tr> </table> <p>INTERVIEWER: The sum of questions "2a" through "2e" should be the same as item 2 above.</p> 3. Quarts of milk sold in the last 12 months _____ Quarts sold 4. Cattle sold from this place in the last 12 months (Include those fed by contract and taken from this place in the last 12 months.) <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">Number on this place July 1, 1988</th> </tr> <tr> <th>Dairy cattle sold</th> <th>Beef and other cattle sold</th> </tr> <tr><td>300</td><td>301</td></tr> <tr><td>302</td><td>303</td></tr> </table> <p>a. Bull calves and heifer calves _____ b. All other cattle, except calves _____</p>	Number on this place July 1, 1988		Dairy cattle (1)	Beef and other cattle (2)	287	288	289	290	291	292	293	294	295	296	297	298	299		Number on this place July 1, 1988		Dairy cattle sold	Beef and other cattle sold	300	301	302	303	Section 18 SALES What was the total market value of agricultural products sold from this place in the last 12 months, before taxes and expenses? <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th></th> <th>Dollars only</th> </tr> <tr><td>1. Sugarcane</td><td>\$ 347 00</td></tr> <tr><td>2. Tobacco</td><td>\$ 348 00</td></tr> <tr><td>3. Coffee</td><td>\$ 349 00</td></tr> <tr><td>4. Pineapples</td><td>\$ 350 00</td></tr> <tr><td>5. Grains and farinaceous crops (Do not include plantains and bananas, they are included in item 6.)</td><td>\$ 351 00</td></tr> <tr><td>6. Fruits — coconuts, oranges, grapefruits, plantains, bananas, papayas, citrons, avocados, West Indies cherries, etc.</td><td>\$ 352 00</td></tr> <tr><td>7. Poultry and poultry products — broilers, other chickens, eggs, turkeys, etc.</td><td>\$ 353 00</td></tr> <tr><td>8. Dairy products — milk, cheese, etc. (Do not include goat milk here, it should be included in item 12.)</td><td>\$ 354 00</td></tr> <tr><td>9. Cattle and calves</td><td>\$ 355 00</td></tr> <tr><td>10. Hogs</td><td>\$ 356 00</td></tr> <tr><td>11. Sheep and goats</td><td>\$ 357 00</td></tr> <tr><td>12. Other livestock and livestock products — horses, mules, bees, honey, goat milk, etc. — Specify</td><td>\$ 358 00</td></tr> <tr><td>13. Any other agricultural products sold — watermelons, honeydew melons, tree seedlings (coffee, orange, plantains, etc.), wood, hay, forage, silage, molasses, etc. — Specify</td><td>\$ 359 00</td></tr> </table>		Dollars only	1. Sugarcane	\$ 347 00	2. Tobacco	\$ 348 00	3. Coffee	\$ 349 00	4. Pineapples	\$ 350 00	5. Grains and farinaceous crops (Do not include plantains and bananas, they are included in item 6.)	\$ 351 00	6. Fruits — coconuts, oranges, grapefruits, plantains, bananas, papayas, citrons, avocados, West Indies cherries, etc.	\$ 352 00	7. Poultry and poultry products — broilers, other chickens, eggs, turkeys, etc.	\$ 353 00	8. Dairy products — milk, cheese, etc. (Do not include goat milk here, it should be included in item 12.)	\$ 354 00	9. Cattle and calves	\$ 355 00	10. Hogs	\$ 356 00	11. Sheep and goats	\$ 357 00	12. Other livestock and livestock products — horses, mules, bees, honey, goat milk, etc. — Specify	\$ 358 00	13. Any other agricultural products sold — watermelons, honeydew melons, tree seedlings (coffee, orange, plantains, etc.), wood, hay, forage, silage, molasses, etc. — Specify	\$ 359 00
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Section 15 OTHER LIVESTOCK 1. Do you or anyone else have any HORSES, SHEEP, GOATS, BEES, or OTHER LIVESTOCK on this place, or were any sold in the last 12 months? (Include all ages and sexes.) <input type="checkbox"/> Yes — Complete this section <input type="checkbox"/> No — Go to section 16 2. Specify <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Code</th> <th>Number on this place July 1, 1988 (1)</th> <th>Number sold in the last 12 months (2)</th> </tr> <tr><td></td><td></td><td>1</td></tr> <tr><td></td><td></td><td>1</td></tr> <tr><td></td><td></td><td>1</td></tr> </table> <p>LIST OF ENTRIES</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Name</th> <th>Code</th> <th>Name</th> <th>Code</th> </tr> <tr><td>Horses</td><td>304</td><td>Hives of bees</td><td>312</td></tr> <tr><td>Mules and donkeys</td><td>306</td><td>Honey (lb.)</td><td>314</td></tr> <tr><td>Sheep of both sexes</td><td>308</td><td>Rabbits</td><td>316</td></tr> <tr><td>Goats of both sexes</td><td>310</td><td>Other — Specify</td><td></td></tr> <tr><td></td><td></td><td></td><td>318</td></tr> </table>	Code	Number on this place July 1, 1988 (1)	Number sold in the last 12 months (2)			1			1			1	Name	Code	Name	Code	Horses	304	Hives of bees	312	Mules and donkeys	306	Honey (lb.)	314	Sheep of both sexes	308	Rabbits	316	Goats of both sexes	310	Other — Specify					318	Section 19 OTHER FARM-RELATED INCOME How much did you receive in the last 12 months from the following? <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th></th> <th>Dollars only</th> </tr> <tr><td>1. Custom farmwork done for others, such as: plowing, planting, spraying, harvesting, preparation of products for market, etc.</td><td>\$ 385 00</td></tr> <tr><td>2. Recreational services, such as: providing hunting, fishing, picnicking, camping, boarding and lodging, or other recreational facilities on this place</td><td>\$ 386 00</td></tr> <tr><td>3. For renting out farmland (Include payments for livestock pastured on a per-head basis, monthly payments, or through any other arrangement.)</td><td>\$ 387 00</td></tr> <tr><td>4. For participation in Government farm programs (Include only payments received from the Federal or Puerto Rican Government.)</td><td>\$ 388 00</td></tr> </table>		Dollars only	1. Custom farmwork done for others, such as: plowing, planting, spraying, harvesting, preparation of products for market, etc.	\$ 385 00	2. Recreational services, such as: providing hunting, fishing, picnicking, camping, boarding and lodging, or other recreational facilities on this place	\$ 386 00	3. For renting out farmland (Include payments for livestock pastured on a per-head basis, monthly payments, or through any other arrangement.)	\$ 387 00	4. For participation in Government farm programs (Include only payments received from the Federal or Puerto Rican Government.)	\$ 388 00								
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Section 16 POULTRY 1. Do you or anyone else have any CHICKEN HENS, PULLETS, ROOSTERS, BROILERS, or other poultry on this place or were any sold from this place in the last 12 months? <input type="checkbox"/> Yes — Complete this section <input type="checkbox"/> No — Go to section 17 2. How many — <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th></th> <th>Number on this place July 1, 1988 (1)</th> <th>Total sold in the last 12 months (Include poultry fed on a contract basis and taken from this place in the last 12 months.) (2)</th> </tr> <tr><td>a. Layers (Do not include started pullets raised for sale.) —</td><td></td><td></td></tr> <tr><td>(1) Less than 1 year old?</td><td>320</td><td>321</td></tr> <tr><td>(2) 1 year old or older?</td><td>322</td><td>323</td></tr> <tr><td>b. Started pullets? (Include those raised for sale only.)</td><td>324</td><td>325</td></tr> <tr><td>c. Fighting cocks?</td><td>326</td><td>327</td></tr> <tr><td>d. Other roosters?</td><td>328</td><td>329</td></tr> <tr><td>e. Broilers?</td><td>330</td><td>331</td></tr> <tr><td>f. Other fowl? (Turkeys, pigeons, guineas, etc.)</td><td>332</td><td>333</td></tr> <tr><td>g. Chicken eggs?</td><td></td><td>335 Dozens</td></tr> </table>		Number on this place July 1, 1988 (1)	Total sold in the last 12 months (Include poultry fed on a contract basis and taken from this place in the last 12 months.) (2)	a. Layers (Do not include started pullets raised for sale.) —			(1) Less than 1 year old?	320	321	(2) 1 year old or older?	322	323	b. Started pullets? (Include those raised for sale only.)	324	325	c. Fighting cocks?	326	327	d. Other roosters?	328	329	e. Broilers?	330	331	f. Other fowl? (Turkeys, pigeons, guineas, etc.)	332	333	g. Chicken eggs?		335 Dozens	Section 20 FARM OPERATOR CHARACTERISTICS All these questions refer to the person who operates this farm. 1. In what year did you start operating this land? 394 _____ Year 2. Do you (the operator) live — 395 1 <input type="checkbox"/> On this place? 4 <input type="checkbox"/> In a city or town? 2 <input type="checkbox"/> On another farm? 5 <input type="checkbox"/> Outside of Puerto Rico? 3 <input type="checkbox"/> In a rural area but not on a farm? 3. How old are you (the operator) now? 396 _____ Years old 4. Highest grade or year of school completed? 397 0 1 2 3 4 5 6 Elementary school 7 8 9 10 11 12 Secondary school 13 14 15 16 17 and over College or University 5. How many days did the operator (or the person in charge) WORK OFF this place at least 4 hours per day in the last 12 months? (Include work at a nonfarm job, business, or someone else's farm. Do not include exchange farmwork.) 398 1 <input type="checkbox"/> None 5 <input type="checkbox"/> 75–99 2 <input type="checkbox"/> 1–24 6 <input type="checkbox"/> 100–149 3 <input type="checkbox"/> 25–49 7 <input type="checkbox"/> 150–199 4 <input type="checkbox"/> 50–74 8 <input type="checkbox"/> 200 days or more 6. What did the largest part of your (the operator's) total income come from in the last 12 months? 399 1 <input type="checkbox"/> The sale of agricultural products (crops, livestock, poultry, milk, etc.) 2 <input type="checkbox"/> Other farm-related income 3 <input type="checkbox"/> Nonfarm-related income 7. What percent of your (the operator's) gross income received in the last 12 months came from farming? 400 1 <input type="checkbox"/> Less than 25% 3 <input type="checkbox"/> 50% to 74% 2 <input type="checkbox"/> 25% to 49% 4 <input type="checkbox"/> 75% or more 8. What is your (the operator's) main occupation? 401 1 <input type="checkbox"/> Agricultural 2 <input type="checkbox"/> Nonagricultural — Specify _____																								
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g. Chicken eggs?		335 Dozens																																																					
Section 17 TYPE OF FARM ORGANIZATION Which of the following best describes the type of your farm organization? INDIVIDUAL OR FAMILY FARM 341 <input type="checkbox"/> 1 PARTNERSHIP 2 <input type="checkbox"/> 2 CORPORATION 3 <input type="checkbox"/> 3 OTHER 4 <input type="checkbox"/> 4 Estate, cooperative, other type — Specify _____																																																							

These questions are to be filled by CENSUS ENUMERATOR.		a. Does A1 number end in 2 or 7? <input type="checkbox"/> Yes <input type="checkbox"/> No	
		b. Are cuerdas in section 1, item 4, 50 or more? <input type="checkbox"/> Yes <input type="checkbox"/> No	

Section 21 PRODUCTS FOR HOME CONSUMPTION	
Include all animals, products, and crops consumed or given away during the last week.	
Did you consume or give away any of the following during the last week?	
1. How many —	None
a. Quarts of milk? <input type="checkbox"/>	402 Quarts
b. Chicken eggs? <input type="checkbox"/>	403 Dozens
2. Livestock or poultry slaughtered or given away —	404
a. Cattle and calves? <input type="checkbox"/>	Number
b. Hogs and pigs? <input type="checkbox"/>	405 Number
c. Chickens, turkeys, pigeons, guineas, or others? <input type="checkbox"/>	406 Number
d. Sheep? <input type="checkbox"/>	407 Number
e. Goats? <input type="checkbox"/>	408 Number
f. Rabbits? <input type="checkbox"/>	409 Number
3. Crops —	410
a. Coffee? <input type="checkbox"/>	Lb.
b. Plantains? <input type="checkbox"/>	411 Hds.
c. Bananas? <input type="checkbox"/>	412 Hds.

Section 22 INSECTICIDES, HERBICIDES, FUNGICIDES, OTHER PESTICIDES, LIME, AND OTHER CHEMICALS	
Include the materials bought by you, the landlord, or any other person if it was applied by contract. For each item listed, report the cuerdas only once.	
Did you use any of these chemical products on this place in the last 12 months?	Tons used (1) Cuerdas on which used (2) Cuerdas Cent.
1. Lime (Do not include gypsum or lime used for sanitation.)	413 414
2. Chemical products used for spraying, dusting, fumigants, etc. (in the form of powder, liquid, or gas), to control —	415
a. Insects on crops, cultivated and improved pastures	416
b. Diseases in crops and orchards (blights, smuts, rusts, etc.)	417
c. Weeds or grass in crops and pastures	

Section 23 EXPENSES	
Include your estimate of expenses paid by you as well as others (landlord, contractors, buyers, etc.) for crops, livestock, or livestock products produced on this place.	
How much did you spend in the last 12 months for the following?	
1. Livestock and poultry purchased — cattle, calves, hogs, pigs, sheep, lambs, goats, horses, baby chicks, started pullets, etc.	418 Dollars only \$ 00
2. Feed purchased for livestock and poultry — grain, hay, silage, mixed feeds, concentrates, etc.	419 \$ 00
3. Medicines and drugs purchased for livestock and poultry	420 \$ 00
4. Seeds, bulbs, plants, and trees purchased	421 \$ 00
5. Commercial fertilizers	422 \$ 00
6. Gasoline and other fuel and oil products purchased for the farm business — diesel oil, LP gas, butane, propane, piped gas, kerosene, fuel oil, motor oil, grease, etc. (Do not include costs for items used in the family home or automobile.)	423 \$ 00
7. Wages and salaries paid to employees or hired farm workers (Include money paid in cash for farm labor including payments to family members and for Social Security taxes. Do not include housework or contract work.)	424 \$ 00
8. Contract labor (Include expenditures primarily for farm labor performed on a contract basis by a contractor, corporation, or cooperative, etc.)	425 \$ 00
9. Machine hire and customwork such as plowing, planting, harvesting, silo filling, spraying and dusting chemical products, etc.	426 \$ 00
10. Agricultural chemicals purchased	427 \$ 00

Section 24 MACHINERY, EQUIPMENT, BUILDINGS, AND FACILITIES ON THIS PLACE JULY 1, 1988	
1. How many of the following were on this place July 1, 1988? (Include all machinery, equipment, and facilities on this place, regardless of ownership, provided it was in working order.)	
a. Selected Machinery and Equipment	None Number
(1) Automobiles, jeeps, pick-up and motor trucks	432
(2) Rubber-tired wheel tractors	433
(3) Crawler tractors	434
(4) Carts (oxen or tractor drawn)	435
(5) Coffee depulpers	436
(6) Mechanical coffee dryers	437
(7) Solar or air coffee dryers	438
(8) Mechanical coffee washers	439
(9) Milking machines	440
(10) Milk coolers	441
(11) Emergency electric power plants	442
b. Selected Buildings and Facilities	
(1) Storage buildings for crops	443
(2) Buildings for machinery	444
(3) Houses for agregados and other workers	445
2. What is the estimated market value of ALL machinery and equipment usually kept on this place and used for the farm business? (Include cars, trucks, tractors, plows, disks, harrows, dryers, pumps, motors, irrigation equipment, dairy equipment including milkers and milk coolers, livestock feeders, grinding and mixing equipment, etc.)	
	Estimated market value (Dollars only) 446 \$ 00

Section 25 HIRED WORKERS, AGREGADOS, AND SHARECROPPERS	
1. In the last 12 months, did you hire any workers to do farmwork on this place (do not include employees of labor contractors who did work for you), or was any agregado family or sharecropper living on this place July 1, 1988?	
<input type="checkbox"/> Yes — Complete this section	
<input type="checkbox"/> No — Go to section 26	
2. Of the hired workers, how many worked on this place —	None Number
a. 5 months or more? <input type="checkbox"/>	452 Workers
b. Less than 5 months? <input type="checkbox"/>	453 Workers
3. How many agregado or sharecropper families were living on this place July 1, 1988? <input type="checkbox"/>	454 Families
REMARKS — Make any remarks you feel are necessary concerning this farm; the owner or manager; the crops, output per cuerda, size of farm; name and address of the owner if the land is managed or leased; etc.	

Section 26 PERSON COMPLETING THIS FORM — Please print	
Name	Date
460 Area code	461 Number
Telephone	809

1987 Census of Agriculture for Guam, Report Form 87-A1(G)

OMB APPROVAL NO. 0607-0580; EXPIRES 09/89

FORM 87-A1(G)
(5-20-87)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

A1

1987 CENSUS OF AGRICULTURE GUAM

NOTICE — Response to this inquiry is required by law (title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation.

FARM SERIAL NUMBER

From A2, column (6)

SECTION 1 OPERATOR

1. What is your (the operator's) name?
2. What is your (the operator's) mailing address?
(Give address where correspondence is received.)

Full name (First name, middle initial, last name)

Complete mailing address

SECTION 2 LAND IN AGRICULTURE

1. How many acres do you own?.....
2. How many acres do you rent from others?.....
3. For how many acres do you have a government land permit?.....
4. How many acres do you occupy without a land permit?.....
5. How many acres are furnished to you, in connection with your living quarters, by the government?.....
6. How many acres do you rent to others? (Do not include land used by U.S. military services.).....
7. TOTAL ACRES IN THIS PLACE (ADD the entries in items 1, 2, 3, 4, and 5, then SUBTRACT the entry in item 6.) —>

None	Acres	Tenths
<input type="checkbox"/>	041	/10
<input type="checkbox"/>	042	/10
<input type="checkbox"/>	043	/10
<input type="checkbox"/>	044	/10
<input type="checkbox"/>	045	/10
<input type="checkbox"/>	046	/10
<input type="checkbox"/>	047	/10

8. Is the farm located on a hard surface (all weather) road?..... 1 ☐ Yes 2 ☐ No — About how many miles is it to the nearest hard surface (all weather) road?

Miles	Tenths
049	/10

9. How many unpaid and paid farm hands (including the operator and his family) worked on this place in 1987?..... Total farm hands

- a. Of the unpaid farm hands (including the operator and unpaid family workers), how many worked —
- b. Of the paid farm hands (hired workers and paid members of operator's family), how many worked —

150 days or more?	25 to 149 days?	Less than 25 days?
051	053	054
055	056	057

10. What type of operating organization does this place have?.....
(If you are a manager, specify if working for an individual, partnership, corporation, cooperative, estate, trust, etc.)

- 1 ☐ Individual
- 2 ☐ Partnership
- 3 ☐ Corporation (Do not include cooperatives)
- 4 ☐ Other (Cooperative, estate, trust, etc.)

11. Is this holding producing mainly for home consumption or sale?.....

- 1 ☐ Home consumption — Go to section 3
- 2 ☐ Sale — Ask item 12

12. If producing mainly for sale, is it one of the following?.....

- 1 ☐ Vegetable holding
- 2 ☐ Field crop holding
- 3 ☐ Fruit and nut holding
- 4 ☐ Dairy holding
- 5 ☐ Livestock holding
- 6 ☐ Poultry holding
- 7 ☐ Mixed holding
- 8 ☐ Other — Specify

SECTION 3 CROPS HARVESTED IN 1987

- Were any of these VEGETABLES AND FIELD CROPS harvested in 1987?

1. Beans, green.....
2. Bittermelons.....
3. Cabbage, Chinese.....
4. Cabbage, head.....
5. Cantaloups.....

None

How many acres were harvested in 1987?		How many POUNDS were harvested in 1987?	How many POUNDS were sold in 1987?	What was the value of sales in 1987?
(a)		(b)	(c)	(d)
Acres	Tenths			
064	/10	065	066	067
068	/10	069	070	071
072	/10	073	074	075
076	/10	077	078	079
080	/10	081	082	083

SECTION 3 CROPS HARVESTED IN 1987 — Continued

• Were any of these **VEGETABLES AND FIELD CROPS** harvested in 1987?

6. Cassava (tapioca)..... ☐ None
7. Corn..... ☐
8. Cucumbers..... ☐
9. Eggplant..... ☐
10. Gado..... ☐
11. Muskmelons and pepinos..... ☐
12. Onions, green..... ☐
13. Peppers..... ☐
14. Pumpkins and squash..... ☐
15. Radishes..... ☐
16. Sweetpotatoes..... ☐
17. Taro..... ☐
18. Tomatoes..... ☐
19. Watermelons..... ☐
20. Yams..... ☐
21. Other vegetables and field crops — *Specify*..... ☐

How many acres were harvested in 1987?	How many POUNDS were harvested in 1987?		How many POUNDS were sold in 1987?	What was the value of sales in 1987?
	(a)	(b)		
Acres	Tenths	(b)	(c)	(d)
084	/10	085	086	087
088	/10	089	090	091
092	/10	093	094	095
096	/10	097	098	099
100	/10	101	102	103
104	/10	105	106	107
108	/10	109	110	111
112	/10	113	114	115
116	/10	117	118	119
120	/10	121	122	123
124	/10	125	126	127
128	/10	129	130	131
132	/10	133	134	135
136	/10	137	138	139
140	/10	141	142	143
144	/10	145	146	147

• **FRUITS AND NUTS**

22. Were there any fruit and nut trees or plants on this place or were any harvested in 1987?..... 058 ☐ Yes ☐ No — Skip to item 41

23. How much land is in bearing and nonbearing fruit trees and plants?.....

Acres	Tenths
058	10

24. Avocados..... ☐ None
25. Bananas..... ☐
26. Betelnuts..... ☐
27. Breadfruits..... ☐
28. Coconuts..... ☐
29. Grapefruit..... ☐
30. Guavas..... ☐
31. Lemons-Limes..... ☐
32. Mangoes..... ☐
33. Oranges..... ☐
34. Papayas..... ☐
35. Pineapples..... ☐
36. Soursops..... ☐
37. Starfruits..... ☐
38. Sweetsops..... ☐
39. Tangerines..... ☐
40. Other fruits, nuts, and tree crops — *Specify*..... ☐

How many trees or plants are of bearing age?	How many trees or plants are of bearing age?	How many pounds were harvested in 1987?	How many pounds were sold in 1987?	What was the value of sales in 1987?
(a)	(b)	(c)	(d)	(e)
148	149	150	151	152
153	154	155	156	157
158	159	160	161	162
163	164	165	166	167
168	169	170	171	172
173	174	175	176	177
178	179	180	181	182
183	184	185	186	187
188	189	190	191	192
193	194	195	196	197
198	199	200	201	202
203	204	205	206	207
208	209	210	211	212
213	214	215	216	217
218	219	220	221	222
223	224	225	226	227
228	229	230	231	232

41. Nursery and ornamental plants, flowering trees and plants, shrubs, etc.; on the place in the last 12 months.....

Number of plants on the place	Number of plants sold	What was the value of sales in 1987?
(a)	(b)	(c)
233	234	235

SECTION 4 LAND USE

Of the total acres on this place
(Section 2, item 7) —

- None
1. How many acres of land are in crops?..... ☐
2. How much cropland is used for pasture?..... ☐
3. How much cropland is not used for crops or pasture?..... ☐
4. How much pastureland is used for pasture or grazing?..... ☐
5. How much pastureland is not used for pasture or grazing?..... ☐
6. How many acres are in other land?..... ☐
7. TOTAL LAND (Add entries in items 1 through 6. The total should be equal to the entry in section 2, item 7.)..... ☐

Acres	Tenths
236	/10
238	/10
240	/10
242	/10
244	/10
246	/10
248	/10

SECTION 5 LIVESTOCK AND POULTRY

Do you or anyone else have any of the following livestock and poultry on this place or were any sold from this place in 1987?

- None
1. Carabaos of all ages..... ☐
2. Total cattle and calves of all ages..... ☐
(Must equal sum of a and b below.)
- a. Milk cows..... ☐
- b. All other cattle and calves..... ☐
3. Hogs and pigs of all ages..... ☐
4. Goats and kids of all ages..... ☐
5. Horses and colts of all ages..... ☐
6. Chicken hens 4 months old and over..... ☐
(Must equal sum of a and b below.)
- a. Commercial layers..... ☐
- b. Other chicken hens..... ☐
7. Chickens less than 4 months old..... ☐
8. Roosters and pullets..... ☐
9. Other poultry..... ☐
- a. Ducks..... ☐
- b. Geese..... ☐
- c. Pigeons..... ☐
- d. Other — Specify..... ☐

How many are on this place today? (a)	How many were sold in 1987? (b)	What was the value of sales in 1987? (c)
250	251	252
253	254	255
256	257	258
259	260	261
262	263	264
265	266	267
268	269	270
271	272	273
274	275	276
277	278	279
280	281	282
283	284	285
286	287	288
289	290	291
295	296	297
298	299	300

	Number sold in 1987 (a)	What was the value of sales in 1987? (b)
10. How many dozens of chicken eggs were sold during 1987?..... <input type="checkbox"/>	301	302
	Dozens	
11. How many quarts of milk were sold during 1987?..... <input type="checkbox"/>	303	304
	Quarts	

SECTION 6 FISHERY

- None
1. How many pounds of fish were caught during 1987?..... ☐

Total pounds caught (a)	Total pounds sold (b)	Value of sales in 1987 (c)
305	306	307

SECTION 7 SELECTED EXPENDITURES IN 1987

How much did you spend for each of the following in 1987?

1. Machine hire and customwork..... ☐ None
2. Wages and salaries paid to employees or hired farm workers (Do not include housework or contract construction work. Include cash payments only.)..... ☐ None
3. Feed purchased for livestock and poultry (Include cost of grain, feed, concentrates, and roughages; also amount paid for grinding and mixing feed.)..... ☐ None
4. Insecticides, fungicides, and herbicides..... ☐ None
5. Fertilizers and manure purchased..... ☐ None
6. Livestock and poultry purchased..... ☐ None

Dollars only

309

310

311

312

313

314

SECTION 8 EQUIPMENT AND FACILITIES USED ON THE PLACE IN 1987

1. How many of the following are on this place? (Include all specified equipment on this place today, regardless of ownership, provided it is in operating condition.)

None

Number

- a. Tractors of all kinds..... ☐ None
- b. Motortrucks..... ☐ None
- c. Automobiles..... ☐ None

315

316

317

2. Do you have the following on this place?

- a. Electricity..... ³¹⁸ 1 ☐ Yes 2 ☐ No
- b. Piped running water..... ³¹⁹ 1 ☐ Yes 2 ☐ No

SECTION 9 OPERATOR CHARACTERISTICS

The following questions are about the FARM OPERATOR.

1. Do you live on this place?..... ³²⁰ 1 ☐ Yes 2 ☐ No
2. In what year did you begin to operate this place?..... ³²¹ _____ Year
3. How old were you on your last birthday?..... ³²² _____ Years old
4. What is your main occupation?..... ³²³ 1 ☐ Agricultural 2 ☐ Nonagricultural
5. OFF-FARM WORK — How many days did the operator work 4 hours or more off this place in 1987?..... ³²⁴ 1 ☐ None 4 ☐ 100—149 days
Include work at a nonfarm job, business, or on someone else's farm. Exclude exchange farm work. 2 ☐ 1—49 days 5 ☐ 150—199 days
3 ☐ 50—99 days 6 ☐ 200 days or more

SECTION 10 ENUMERATOR'S RECORD (To be filled by the Census enumerator)

1. Who furnished the information in this report?..... ³²⁵ 1 ☐ Operator 4 ☐ Wife or member of the operator's family
2 ☐ Landlord
3 ☐ Hired laborer 5 ☐ Other — Specify _____

2. Remarks (Make any remarks needed in regard to the place, the owner or operator, the crops cultivated, or the livestock on this place.)

3. Residence of operator	a. Election District	b. Village
4. Location of land	a. Election District	b. ED number
5. Certified by	Enumerator's signature	Date
6. Checked by	Supervisor's signature	Date

1987 Census of Agriculture for the U.S. Virgin Islands, Report Form 87-A1(VI)

FORM 87-A1(VI) (8-11-86)	U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS	OMB APPROVAL NO. 0607-0580; EXPIRES 09/89 NOTICE — Response to this inquiry is required by law (title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation.																																								
<div style="border: 1px solid black; display: inline-block; padding: 2px 10px;">A1</div>																																										
1987 CENSUS OF AGRICULTURE VIRGIN ISLANDS		FARM SERIAL NUMBER From A2 column (6)																																								
Section 1 OPERATOR																																										
1. What is your (the operator's) name?		Full name (First name, middle initials, last name)																																								
2. What is your (the operator's) mailing address? <i>(Give address where correspondence is received.)</i>		Complete mailing address																																								
Section 2 LAND IN AGRICULTURE																																										
1. How many acres do you own? (If you own more than one tract of land, include all land in the Virgin Islands.)		None <input type="checkbox"/> Acres 041 /10																																								
2. How many acres do you rent from others? (Include acres worked on shares.)		042 /10																																								
3. How many acres do you operate for others as a hired or salaried manager?		043 /10																																								
4. How many acres do you rent to others?		044 /10																																								
5. TOTAL ACRES IN THIS PLACE (Add items 1 and 2, subtract item 4; if managed, enter data from item 3 here.)		045 /10																																								
6. How many unpaid and paid farmhands (including the operator and his family) worked on this place the last 12 months?		053 Total farmhands																																								
a. Of the unpaid farmhands (including the operator and unpaid family workers), how many worked —		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 33%;">150 days or more?</th> <th style="width: 33%;">25 to 149 days?</th> <th style="width: 33%;">Less than 25 days?</th> </tr> <tr> <td>054</td> <td>055</td> <td>056</td> </tr> <tr> <td>057</td> <td>058</td> <td>059</td> </tr> </table>	150 days or more?	25 to 149 days?	Less than 25 days?	054	055	056	057	058	059																															
150 days or more?	25 to 149 days?	Less than 25 days?																																								
054	055	056																																								
057	058	059																																								
b. Of the paid farmhands (hired workers and paid members of operator's family), how many worked —																																										
7. What type of operating organization does this place have? <i>(If you are a manager, specify if working for an individual, partnership, corporation, cooperative, estate, trust, etc.)</i>		060 <input type="checkbox"/> Individual <input type="checkbox"/> Partnership <input type="checkbox"/> Corporation (Do not include cooperatives) <input type="checkbox"/> Other (Cooperative, estate, trust, etc.)																																								
8. Is this holding producing mainly for home consumption or sale?		061 <input type="checkbox"/> Home consumption — Go to section 3 <input type="checkbox"/> Sale — Ask item 9																																								
9. If producing mainly for sale, which of the following is it?		062 <input type="checkbox"/> Vegetable holding <input type="checkbox"/> Poultry holding <input type="checkbox"/> Field and forage crop holding <input type="checkbox"/> Nursery holding <input type="checkbox"/> Fruit and nut holding <input type="checkbox"/> Mixed holding <input type="checkbox"/> Dairy holding <input type="checkbox"/> Other — Specify <input checked="" type="checkbox"/> <input type="checkbox"/> Livestock holding																																								
Section 3 CROPS HARVESTED IN THE LAST 12 MONTHS																																										
Include all crops harvested from July 1, 1987 to June 30, 1988 from the land reported in section 2, item 5, whether harvested by you or by someone else. Be sure to include the landlord's share. Do not include crops which were a complete failure or which were not harvested because of drought, labor shortage, low prices, or destruction from any cause. Report tenths of an acre, such as 1/10, 3/10, 1—5/10, etc.																																										
• Were any of these FORAGE crops cultivated on this place in the last 12 months?		None <input type="checkbox"/>																																								
1. Sugarcane		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 20%;">How many acres were planted?</th> <th style="width: 20%;">How many acres were for cutting?</th> <th style="width: 20%;">How many acres were for grazing?</th> <th style="width: 20%;">How many acres were used for both purposes?</th> <th style="width: 20%;">What was the value of sales in the last 12 months?</th> </tr> <tr> <th>(a)</th> <th>(b)</th> <th>(c)</th> <th>(d)</th> <th>(e)</th> </tr> <tr> <td>063</td> <td>064</td> <td>065</td> <td>066</td> <td>067</td> </tr> <tr> <td>..... /10</td> <td>..... /10</td> <td>..... /10</td> <td>..... /10</td> <td>.....</td> </tr> <tr> <td>068</td> <td>069</td> <td>070</td> <td>071</td> <td>072</td> </tr> <tr> <td>..... /10</td> <td>..... /10</td> <td>..... /10</td> <td>..... /10</td> <td>.....</td> </tr> <tr> <td>073</td> <td>074</td> <td>075</td> <td>076</td> <td>077</td> </tr> <tr> <td>..... /10</td> <td>..... /10</td> <td>..... /10</td> <td>..... /10</td> <td>.....</td> </tr> </table>	How many acres were planted?	How many acres were for cutting?	How many acres were for grazing?	How many acres were used for both purposes?	What was the value of sales in the last 12 months?	(a)	(b)	(c)	(d)	(e)	063	064	065	066	067 /10 /10 /10 /10	068	069	070	071	072 /10 /10 /10 /10	073	074	075	076	077 /10 /10 /10 /10
How many acres were planted?	How many acres were for cutting?	How many acres were for grazing?	How many acres were used for both purposes?	What was the value of sales in the last 12 months?																																						
(a)	(b)	(c)	(d)	(e)																																						
063	064	065	066	067																																						
..... /10 /10 /10 /10																																						
068	069	070	071	072																																						
..... /10 /10 /10 /10																																						
073	074	075	076	077																																						
..... /10 /10 /10 /10																																						
2. Sorghum																																										
3. TOTAL																																										

Section 3 CROPS HARVESTED IN THE LAST 12 MONTHS — Con.

• Were any of these FIELD CROPS harvested in the last 12 months?	None	How many ACRES were harvested in the last 12 months? (a)	How many POUNDS were harvested in the last 12 months? (b)	How many POUNDS were sold in the last 12 months? (c)	What was the VALUE of sales in the last 12 months? (d)
4. Cassava	<input type="checkbox"/>	078	/10	079	080
5. Dry beans	<input type="checkbox"/>	082	/10	083	084
6. Dry corn	<input type="checkbox"/>	086	/10	087	088
7. Sorghum for grain	<input type="checkbox"/>	090	/10	091	092
8. Sweetpotatoes	<input type="checkbox"/>	094	/10	095	096
9. Taniers	<input type="checkbox"/>	098	/10	099	100
10. Yams	<input type="checkbox"/>	102	/10	103	104
11. Other field crops — Specify	<input type="checkbox"/>	106	/10	107	108
	<input type="checkbox"/>		/10		109

• Were any of these VEGETABLE CROPS harvested in the last 12 months?	None	How many ACRES were harvested in the last 12 months? (a)	What was the VALUE of sales in the last 12 months? (b)
12. Cabbage	<input type="checkbox"/>	110	/10
13. Carrots	<input type="checkbox"/>	112	/10
14. Celery	<input type="checkbox"/>	114	/10
15. Cucumbers	<input type="checkbox"/>	116	/10
16. Eggplant	<input type="checkbox"/>	118	/10
17. Green beans	<input type="checkbox"/>	120	/10
18. Lettuce	<input type="checkbox"/>	122	/10
19. Okra	<input type="checkbox"/>	124	/10
20. Onions	<input type="checkbox"/>	126	/10
21. Peppers	<input type="checkbox"/>	128	/10
22. Spinach	<input type="checkbox"/>	130	/10
23. Squash	<input type="checkbox"/>	132	/10
24. Tomatoes	<input type="checkbox"/>	134	/10
25. Other vegetable crops — Specify	<input type="checkbox"/>	136	/10

• FRUITS AND NUTS

26. Are there any fruit and nut trees or plants on this place today or were any harvested in the last 12 months? ... 138 ☐ Yes ☐ No — Skip to item 39

27. How much land is in bearing and nonbearing fruit trees and plants today? ... 140

Acres	Tenths
140	/10

• Are any of the following kinds of FRUIT TREES, NUT TREES, OR PLANTS on this place?	None	How many trees or plants are not of bearing age? (a)	How many trees or plants are of bearing age? (b)	How much was harvested in the last 12 months? (c)	How many were sold in the last 12 months? (d)	What was the value of sales in the last 12 months? (e)
28. Avocados	<input type="checkbox"/>	141	Number	142	Fruits	143
29. Bananas	<input type="checkbox"/>	146	Hills	147	Bunches	148
30. Coconuts	<input type="checkbox"/>	151	Number	152	Nuts	153
31. Grapefruits	<input type="checkbox"/>	156	Number	157	Pounds	158
32. Limes and lemons	<input type="checkbox"/>	161	Number	162	Pounds	163
33. Mangoes	<input type="checkbox"/>	166	Number	167	Fruits	168
34. Oranges	<input type="checkbox"/>	171	Number	172	Pounds	173
35. Papayas	<input type="checkbox"/>	176	Number	177	Pounds	178
36. Pineapples	<input type="checkbox"/>	181	Number	182	Boxes	183
37. Plantains	<input type="checkbox"/>	186	Hills	187	Bunches	188
38. Other fruits, nuts, and tree crops — Specify	<input type="checkbox"/>	191		192		193

39. How many square feet under cover and/or acres did you have planted in ORNAMENTAL PLANTS or in any other NURSERY CROPS?

Square feet under cover	Acres	Tenths	What was the value of sales in the last 12 months?
196	197	/10	198

Section 4 LAND USE IN THE LAST 12 MONTHS

Land is to be reported in **ONLY ONE CATEGORY**. If two or more uses were made of the same land, report in the **FIRST** category that applies.

	None	Acres
1. How many acres were in crops harvested in the last 12 months? (Can be obtained by adding the acres of the various crops reported in section 3, items 1 through 39. However, if more than one crop was harvested from the same land, count this land only once for this item.)	<input type="checkbox"/>	199 /10
2. How many acres were in other cropland? (Include cropland pasture, crop failure, idle and fallow cropland, and cropland used for soil improvement crops.)	<input type="checkbox"/>	200 /10
3. How many acres were in other pasture or grazing land? (Include woodland pasture; do not include cropland pasture.)	<input type="checkbox"/>	201 /10
4. How many acres were in woodland? (Do not include woodland pasture.)	<input type="checkbox"/>	202 /10
5. How many acres were in other uses? (Include house lots, barn lots, lanes, roads, ditches, ponds, and wasteland.)	<input type="checkbox"/>	203 /10
6. TOTAL LAND (Add entries in items 1 through 5. This total should equal the entry in section 2, item 5.)	<input type="checkbox"/>	204 /10

	None	Number
7. How many wells are on this place?	<input type="checkbox"/>	205

Section 5 LIVESTOCK AND POULTRY ON THIS PLACE NOW AND NUMBER SOLD IN THE LAST 12 MONTHS

	None	How many are on this place now? (a)	How many were sold in the last 12 months? (b)	What was the value of sales in the last 12 months? (c)
1. Horses and colts, including ponies	<input type="checkbox"/>	206	207	208
2. Mules, asses, and burros of all ages	<input type="checkbox"/>	209	210	211
3. Sheep and lambs of all ages	<input type="checkbox"/>	212	213	214
4. Goats and kids of all ages	<input type="checkbox"/>	215	216	217
5. Hogs and pigs of all ages, including sows and boars (Must equal sum of a and b below.)	<input type="checkbox"/>	218	219	220
a. Pigs less than 8 months old	<input type="checkbox"/>	221	222	223
b. Hogs and pigs 8 months old or older	<input type="checkbox"/>	224	225	226
6. Cattle and calves of all ages (Must equal sum of a, b, c, and d below.)	<input type="checkbox"/>	227	228	229
a. Cows, including heifers that have calved	<input type="checkbox"/>	230	231	232
b. Heifers and heifer calves 1 year old or older (Do not include heifers that have calved.)	<input type="checkbox"/>	233	234	235
c. Bulls, bull calves, steers, and steer calves 1 year old or older	<input type="checkbox"/>	236	237	238
d. Calves less than 1 year old	<input type="checkbox"/>	239	240	241

	None	How many are on this place now? (a)	How many were sold in the last 12 months? (b)	What was the value of sales in the last 12 months? (c)
7. Chickens (hens, pullets, roosters, broilers, etc.)	<input type="checkbox"/>	242	243	244
a. How many are 5 months old or older?	<input type="checkbox"/>	245		
8. Turkeys, ducks, geese, and other poultry	<input type="checkbox"/>	248	249	250

	None	Number sold (a)	What was the value of sales in the last 12 months? (b)
9. How many dozens of chicken eggs were sold from this place in the last 12 months?	<input type="checkbox"/>	251 Dozens	252
10. How many quarts of milk were sold from this place in the last 12 months?	<input type="checkbox"/>	253 Quarts	254

Section 6 SELECTED EXPENDITURES IN THE LAST 12 MONTHS

	None	Dollars only
1. Machine hire and customwork	<input type="checkbox"/>	255 \$
2. Wages and salaries paid to employees or hired farmworkers (Do not include housework or contract construction work. Include cash payments only.)	<input type="checkbox"/>	256 \$
3. Feed purchased for livestock and poultry (Include cost of grain, feed, concentrates, and roughages; also amount paid for grinding and mixing feed.)	<input type="checkbox"/>	257 \$
4. Insecticides, fungicides, and herbicides	<input type="checkbox"/>	258 \$
5. Fertilizers and manure purchased	<input type="checkbox"/>	259 \$
6. Livestock and poultry purchased	<input type="checkbox"/>	260 \$

Section 7 EQUIPMENT AND FACILITIES USED ON THIS PLACE IN THE LAST 12 MONTHS

1. How many of the following are on this place? (Include all specified equipment on this place today, regardless of ownership, provided it is in operating condition.)

a. Tractors of all kinds

b. Motortrucks

c. Automobiles

None

Number

261

262

263

2. Do you have the following on this place?

a. Electricity

264

1 ☐ Yes2 ☐ No

b. Piped running water

265

1 ☐ Yes2 ☐ No**Section 8 OPERATOR CHARACTERISTICS**

The following questions are about the FARM OPERATOR.

1. Do you live on this place (the acres entered in section 2, item 5)?

266

1 ☐ Yes2 ☐ No

2. In what year did you begin to operate this place?

267

Year

3. Where were you born?

268

1 ☐ Virgin Islands3 ☐ Elsewhere — Specify2 ☐ Puerto Rico

4. How old were you on your last birthday?

269

Years old

5. Is your main occupation agricultural or nonagricultural?

270

1 ☐ Agricultural2 ☐ Nonagricultural

6. OFF FARM WORK — How many days did the operator work 4 hours or more off this place in the last 12 months? Include work at a nonfarm job, business, or on someone else's farm. (Exclude exchange farm work.)

271

1 ☐ None4 ☐ 100—149 days2 ☐ 1—49 days5 ☐ 150—199 days3 ☐ 50—99 days6 ☐ 200 days or more**Section 9 ENUMERATOR'S RECORD**

1. Who furnished the information in this report?

272

1 ☐ Operator4 ☐ Hired laborer2 ☐ Landlord5 ☐ Neighbor3 ☐ Wife or a member of the operator's family6 ☐ Other — Specify

2. Remarks (Make any remarks needed in regard to this place, the owner or operator, the crops cultivated, or the livestock on this place.)

3. Location of land

a. Island

b. Quarter or city

c. ED number

4. Certified by

Enumerator's signature

Date

5. Checked by

Supervisor's signature

Date

1990 Census of Agriculture for the Northern Mariana Islands, Report Form 90-A1(NM)

OMB No. 0607-0667: Approval Expires 09/30/90

NOTICE — Response to this inquiry is required by law (title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by persons who have sworn to uphold the confidentiality of the census and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation.					Part A — QUESTIONNAIRE IDENTIFICATION																	
FORM 90-A1(NM) <small>(10-4-89)</small>					U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS																	
1990 CENSUS OF AGRICULTURE NORTHERN MARIANA ISLANDS					<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">Island number</th> <th colspan="3" style="width: 40%;">FARM SERIAL NUMBER</th> <th style="width: 50%;">CENSUS USE ONLY</th> </tr> <tr> <th>ARA</th> <th>Block</th> <th>Map Spot</th> <th></th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>					Island number	FARM SERIAL NUMBER			CENSUS USE ONLY	ARA	Block	Map Spot					
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ARA	Block	Map Spot																				
Name of island					Municipality																	
Part B — OPERATOR'S NAME AND PHYSICAL LOCATION					Full name (First name, middle initial, last name)																	
Physical Location (Describe)																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="5" style="text-align: center;">CENSUS USE ONLY</th> </tr> <tr> <td style="width: 20%;">035</td> <td style="width: 20%;">036</td> <td style="width: 20%;">037</td> <td style="width: 20%;">038</td> <td style="width: 20%;">039</td> </tr> </table>					CENSUS USE ONLY					035	036	037	038	039								
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INSTRUCTIONS																						
Reporting land in section 1 This section is for recording information on all agricultural land the operator is associated with and for reporting the names of all landlords.					Question 2 — Acres rented or leased FROM OTHERS — Report all land rented, even though the landlord may have supplied equipment, fertilizer, or other materials and/or some supervision of the work.																	
Question 1 — Acres owned — Report all land owned whether held under title, purchase contract or mortgage, or as heir or trustee of an undivided estate, by you and/or your spouse, or by the partnership, corporation, or organization for which you are reporting.					Question 3 — Acres rented TO OTHERS — Include land rented to others for cash or a share of the crops or livestock or rent-free.																	
					Question 4 — Total acres in this place — The entry is the sum of the acres owned, plus acres rented FROM OTHERS, minus the acres rented TO OTHERS. This entry represents all tracts of land regardless of where located in the Northern Mariana Islands that is operated by the person in charge.																	
SECTION 1 LAND IN AGRICULTURE																						
001																						
1. How many acres do you own?						None	Acres	Tenths														
2. How many acres do you rent FROM OTHERS? (Include land used rent-free)						040		/10														
3. How many acres do you rent TO OTHERS? (Include land for which no rent is received)						042		/10														
4. TOTAL ACRES IN THIS PLACE — Add acres owned (question 1) and acres rented (question 2), then SUBTRACT acres rented TO OTHERS (question 3), and enter the result in this space.						044		/10														
						045		/10														
5. If you rented land FROM OTHERS, (question 2) enter the following information for each landlord.						<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 60%;">Name of landlord</th> <th style="width: 20%;">Acres</th> <th style="width: 20%;">Tenths</th> </tr> <tr> <td> </td> <td> </td> <td style="text-align: center;">/10</td> </tr> <tr> <td> </td> <td> </td> <td style="text-align: center;">/10</td> </tr> <tr> <td> </td> <td> </td> <td style="text-align: center;">/10</td> </tr> </table>				Name of landlord	Acres	Tenths			/10			/10			/10	
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6. How many separate TRACTS or PIECES of land or plantations are represented in the "Total acres in this place?"						046	Number of pieces															
7. Is this holding producing mainly for home consumption or sale? (Mark (X) one)						047	1 <input type="checkbox"/> Home consumption — GO to question 9 2 <input type="checkbox"/> Sale — ASK question 8															
8. If producing mainly for sale, which of the following is it? (Mark (X) one)						048	1 <input type="checkbox"/> Crop holding 2 <input type="checkbox"/> Livestock and/or poultry holding 3 <input type="checkbox"/> Mixed holding 4 <input type="checkbox"/> Other															
9. What percent of the farm operation is financed by each of the following sources?						None	Percent															
a. Operator						049		%														
b. Private						050		%														
c. Commercial						051		%														
d. Government						052		%														
e. Other — Specify						053		%														

SECTION 2 FIELD CROPS, MELONS, AND VEGETABLES

Did you harvest any **FIELD CROPS, MELONS, or VEGETABLES** in 1989 — such as yams, sweetpotatoes, taro, etc.?

- 002 1 ☐ Yes — Complete this section
2 ☐ No — GO to section 3

None

1. Cassava ☐
2. Chinese cabbage ☐
3. Corn ☐
4. Cucumbers ☐
5. Eggplant ☐
6. Melons (exclude watermelons) ☐
7. Sweetpotatoes ☐
8. Taro ☐
9. Watermelons ☐
10. Yams ☐
11. Other field crops and vegetables — Specify ☐

How many acres were harvested in 1989?		How many pounds were harvested in 1989?	How many pounds were sold in 1989?	What was the value of sales in 1989? (Dollars)
(a)		(b)	(c)	(d)
Acres	Tenths			
060	/10	061	062	063
				\$
064	/10	065	066	067
				\$
068	/10	069	070	071
				\$
072	/10	073	074	075
				\$
076	/10	077	078	079
				\$
080	/10	081	082	083
				\$
084	/10	085	086	087
				\$
088	/10	089	090	091
				\$
092	/10	093	094	095
				\$
096	/10	097	098	099
				\$
100	/10	101	102	103
				\$

SECTION 3 FRUITS AND NUTS

Do you have any **FRUIT and NUT** trees or plants on this place — such as coconuts, bananas, mangoes, etc.? (Quantity harvested in 1989 and number of trees and plants on enumeration day.)

- 003 1 ☐ Yes — Complete this section
2 ☐ No — GO to question 16

None

1. Avocados ☐
2. Bananas ☐
3. Betelnuts ☐
4. Breadfruits ☐
5. Coconuts ☐
6. Green oranges ☐
7. Guavas ☐
8. Lemons ☐
9. Limes ☐
10. Mangoes ☐
11. Papayas ☐
12. Pineapples ☐
13. Starfruits ☐
14. Tangerines ☐
15. Other fruits, nuts, and tree crops (coffee, grapefruit, sweetsops, etc.) — Specify ☐

How many trees or plants are on this place?	What quantity was harvested in 1989?	What quantity was sold in 1989?	What was the value of sales in 1989? (Dollars)
(a)	(b)	(c)	(d)
120	121	122	123
	Pounds	Pounds	\$
124	125	126	127
Clusters	Pounds	Pounds	\$
128	129	130	131
	Pounds	Pounds	\$
132	133	134	135
	Pounds	Pounds	\$
136	137	138	139
	Pounds	Pounds	\$
140	141	142	143
	Pounds	Pounds	\$
144	145	146	147
	Pounds	Pounds	\$
148	149	150	151
	Pounds	Pounds	\$
152	153	154	155
	Pounds	Pounds	\$
156	157	158	159
	Pounds	Pounds	\$
160	161	162	163
	Pounds	Pounds	\$
164	165	166	167
	Fruits	Fruits	\$
168	169	170	171
	Pounds	Pounds	\$
172	173	174	175
	Pounds	Pounds	\$
176	177	178	179
	Pounds	Pounds	\$

16. How many square feet under cover and/or acres did you have planted in **ORNAMENTAL PLANTS** or in any other **NURSERY CROPS**?

Square feet under cover	Acres	Tenths	What was the value of sales in 1989? (Dollars)
197	198	199	
		/10	\$

SECTION 4 LAND USE																																
004																																
Of the total acres in this place (section 1, question 4) —																																
1. How many acres are in crops?	None	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Acres</th> <th style="width: 50%;">Tenths</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">201</td> <td style="text-align: center;">/10</td> </tr> <tr> <td style="text-align: center;">202</td> <td style="text-align: center;">/10</td> </tr> <tr> <td style="text-align: center;">203</td> <td style="text-align: center;">/10</td> </tr> <tr> <td style="text-align: center;">204</td> <td style="text-align: center;">/10</td> </tr> <tr> <td style="text-align: center;">205</td> <td style="text-align: center;">/10</td> </tr> </tbody> </table>	Acres	Tenths	201	/10	202	/10	203	/10	204	/10	205	/10																		
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201	/10																															
202	/10																															
203	/10																															
204	/10																															
205	/10																															
2. How many acres are in other cropland (cropland pasture, crop fallure, idle cropland, and cropland used for soil improvement)?	<input type="checkbox"/>																															
3. How many acres are in other pasture or grazing land? (Include woodland pasture. Do not include cropland pasture.)	<input type="checkbox"/>																															
4. How many acres are in other land? (Include houselots, roads, woodland not pastured, wasteland, etc.)	<input type="checkbox"/>																															
5. TOTAL LAND (Add entries in questions 1 through 4. Total should be equal to entry in section 1, question 4.)																																
SECTION 5 LIVESTOCK AND POULTRY																																
005																																
How many of the following livestock and/or poultry are on this place today or were sold from this place in 1989?																																
1. Total cattle and calves of all ages (Total of "a" and "b" below)	None	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">How many are on this place today? (a)</th> <th style="width: 33%;">How many were sold in 1989? (b)</th> <th style="width: 33%;">What was the value of sales in 1989? (Dollars) (c)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">254</td> <td style="text-align: center;">255</td> <td style="text-align: center;">256</td> </tr> <tr> <td style="text-align: center;">257</td> <td style="text-align: center;">258</td> <td style="text-align: center;">259</td> </tr> <tr> <td style="text-align: center;">260</td> <td style="text-align: center;">261</td> <td style="text-align: center;">262</td> </tr> <tr> <td style="text-align: center;">263</td> <td style="text-align: center;">264</td> <td style="text-align: center;">265</td> </tr> <tr> <td style="text-align: center;">266</td> <td style="text-align: center;">267</td> <td style="text-align: center;">268</td> </tr> <tr> <td style="text-align: center;">269</td> <td style="text-align: center;">270</td> <td style="text-align: center;">271</td> </tr> <tr> <td style="text-align: center;">272</td> <td style="text-align: center;">273</td> <td style="text-align: center;">274</td> </tr> <tr> <td style="text-align: center;">275</td> <td style="text-align: center;">276</td> <td style="text-align: center;">277</td> </tr> <tr> <td style="text-align: center;">278</td> <td style="text-align: center;">279</td> <td style="text-align: center;">280</td> </tr> </tbody> </table>	How many are on this place today? (a)	How many were sold in 1989? (b)	What was the value of sales in 1989? (Dollars) (c)	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280
How many are on this place today? (a)	How many were sold in 1989? (b)	What was the value of sales in 1989? (Dollars) (c)																														
254	255	256																														
257	258	259																														
260	261	262																														
263	264	265																														
266	267	268																														
269	270	271																														
272	273	274																														
275	276	277																														
278	279	280																														
Of this total, how many are —																																
a. Milk cows	<input type="checkbox"/>																															
b. All other cattle and calves	<input type="checkbox"/>																															
2. Hogs and pigs of all ages	<input type="checkbox"/>																															
3. Goats and kids of all ages	<input type="checkbox"/>																															
4. Horses, mules, and colts of all ages	<input type="checkbox"/>																															
5. Other livestock — Specify <u> </u>	<input type="checkbox"/>																															
6. Chickens	<input type="checkbox"/>																															
7. Other poultry (ducks, pigeons, guineas, geese, turkeys, etc.) — Specify <u> </u>	<input type="checkbox"/>																															
8. How many dozens of chicken eggs were sold during 1989?																																
9. How many quarts of milk were sold during 1989?																																
SECTION 6 FISHERY																																
006																																
1. How many pounds of fish were caught on this place in 1989?																																
	None	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">Total pounds caught (a)</th> <th style="width: 33%;">Total pounds sold (b)</th> <th style="width: 33%;">Value of sales (Dollars) (c)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">305</td> <td style="text-align: center;">306</td> <td style="text-align: center;">307</td> </tr> </tbody> </table>	Total pounds caught (a)	Total pounds sold (b)	Value of sales (Dollars) (c)	305	306	307																								
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305	306	307																														
SECTION 7 SELECTED EQUIPMENT AND SPECIFIED FACILITIES USED ON THIS PLACE																																
007																																
1. How many of the following are on this place? (Include all specified equipment on this place today, regardless of ownership, provided it is in operating condition.)																																
a. Tractors of all kinds	None	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 100%;">Number</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">315</td> </tr> <tr> <td style="text-align: center;">316</td> </tr> <tr> <td style="text-align: center;">317</td> </tr> </tbody> </table>	Number	315	316	317																										
Number																																
315																																
316																																
317																																
b. Motortrucks	<input type="checkbox"/>																															
c. Automobiles	<input type="checkbox"/>																															
2. Do you have the following on this place?																																
a. Electricity	318	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No																														
b. Piped running water	319	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No																														

SECTION 8 OPERATOR CHARACTERISTICS

008

The following questions are about the FARM OPERATOR.

1. Do you live on this place? (The acres entered in section 1, question 4) 320 1 ☐ Yes 2 ☐ No
2. In what year did you begin to operate this place? 321 _____ Year
3. How old were you on your last birthday? 322 _____ Years old
4. What is your main occupation? 323 1 ☐ Agricultural 2 ☐ Nonagricultural
5. OFF-FARM WORK — How many days did the operator work at least 4 hours per day off this place in 1989? 324 1 ☐ None 4 ☐ 100—149 days
(Include work at a nonfarm job, business, or on someone else's farm. Exclude exchange farmwork.) 2 ☐ 1—49 days 5 ☐ 150—199 days
3 ☐ 50—99 days 6 ☐ 200 days or more

SECTION 9 **ENUMERATOR'S RECORD** *(To be completed by the Census enumerator)*

009

1. Who furnished the information in this report?
- 325 { 1 ☐ Operator
2 ☐ Landlord
3 ☐ Wife or member of the operator's family
- 4 ☐ Hired laborer
5 ☐ Other — Specify 7

2. Remarks (make any remarks needed in regard to the place, the owner or operator, the crops cultivated, or the livestock on this place.)

Enumerator: Ask at the completion of this questionnaire — “Besides you, (the operator) does any other person living in this household have 15 or more poultry (chickens, ducks, guineas, etc.); 5 or more livestock (cattle, hogs, goats, etc.); a combined total of 10 or more fruit or nut trees or plants; or any crops or vegetables harvested for sale during 1989?”

If "No." END INTERVIEW

If "Yes," enter note in "Remarks" section and complete another Agriculture report form for the other person.

3. Certified by enumerator

1331 Date

4. Checked by crew leader

332 Date

1990 Census of Agriculture for American Samoa, Report Form 90-A1(AS)

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1. Communal lands					2. Private land																																				
a. Any land used in owner-like possession for the benefit of the extended family should be reported as land owned under section 1, question 1. If the land is used for the sole benefit of the operator rather than the extended family, report the land under section 1, question 2 on a separate questionnaire.					Privately owned lands, not held or operated under the communal system — If crops were raised or livestock or poultry are kept, complete this agriculture questionnaire in the name of the person in charge. The person in charge is the one responsible for making the decisions. The person in charge will usually be the head of the family which plants or gathers the crops.																																				
b. Any land used to which title or right of ownership is not held, should be reported as land rented FROM OTHERS under section 1, question 2. Do this even though no rent is paid to the owner of this land.					3. All other land																																				
c. Any land to which the title is held or ownership claimed, which is used by a nonmember of the extended family, should be reported as land rented TO OTHERS under section 1, question 3. Do this even though no rent is paid by the nonmember. In such cases, a separate agriculture questionnaire should be completed for the lands reported under section 1, question 3 in the name of the person in charge.					Experimental farms, schools, churches, and other institutions — If crops were raised or livestock or poultry are kept, complete this agriculture questionnaire in the name of the institution. Also, give the name of the manager or superintendent in part B, above.																																				
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6. How many separate TRACTS or PIECES of land or plantations are represented in the "Total acres in this place?" 046 _____ Number of pieces																																									
7. Is this holding producing mainly for home consumption or sale? (Mark (X) one) 047 <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> 1 <input type="checkbox"/> Home consumption — GO to question 9 2 <input type="checkbox"/> Sale — ASK question 8 </div> <div> 048 <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> 1 <input type="checkbox"/> Crop holding 2 <input type="checkbox"/> Livestock and/or poultry holding 3 <input type="checkbox"/> Mixed holding 4 <input type="checkbox"/> Other </div> <div> </div> </div> </div> </div>																																									
8. If producing mainly for sale, which of the following is it? (Mark (X) one)																																									
9. What percent of the farm operation is financed by each of the following sources?																																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 60%;"></th> <th style="width: 10%; text-align: center;">None</th> <th style="width: 10%; text-align: center;">Percent</th> </tr> <tr> <td>a. Operator</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>049 %</td> </tr> <tr> <td>b. Private</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>050 %</td> </tr> <tr> <td>c. Commercial</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>051 %</td> </tr> <tr> <td>d. Government</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>052 %</td> </tr> <tr> <td>e. Other — Specify</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>053 %</td> </tr> </table>											None	Percent	a. Operator	<input type="checkbox"/>	049 %	b. Private	<input type="checkbox"/>	050 %	c. Commercial	<input type="checkbox"/>	051 %	d. Government	<input type="checkbox"/>	052 %	e. Other — Specify	<input type="checkbox"/>	053 %														
	None	Percent																																							
a. Operator	<input type="checkbox"/>	049 %																																							
b. Private	<input type="checkbox"/>	050 %																																							
c. Commercial	<input type="checkbox"/>	051 %																																							
d. Government	<input type="checkbox"/>	052 %																																							
e. Other — Specify	<input type="checkbox"/>	053 %																																							

SECTION 2 FIELD CROPS, MELONS, AND VEGETABLES					
Did you harvest any FIELD CROPS, MELONS, or VEGETABLES in 1989 — such as cabbage, cassava, taro, yams, etc.?					
002 1 <input type="checkbox"/> Yes — Complete this section 2 <input type="checkbox"/> No — GO to section 3		None			
		How many acres were harvested in 1989? (a)	What quantity was harvested in 1989? (b)	What quantity was sold in 1989? (c)	What was the value of sales in 1989? (Dollars) (d)
		Acres	Tenths		
1. Cabbage	<input type="checkbox"/>	060	/10	061 Pounds	062 Pounds \$
2. Cassava	<input type="checkbox"/>	064	/10	065 Roots	066 Roots \$
3. Corn	<input type="checkbox"/>	068	/10	069 Pounds	070 Pounds \$
4. Cucumbers	<input type="checkbox"/>	072	/10	073 Pounds	074 Pounds \$
5. Giant taro	<input type="checkbox"/>	076	/10	077 Roots	078 Roots \$
6. Green beans	<input type="checkbox"/>	080	/10	081 Pounds	082 Pounds \$
7. Melons (watermelons, honeydews, muskmelons, etc.)	<input type="checkbox"/>	084	/10	085 Pounds	086 Pounds \$
8. Sugarcane	<input type="checkbox"/>	088	/10	089 Pounds	090 Pounds \$
9. Taro	<input type="checkbox"/>	092	/10	093 Roots	094 Roots \$
10. Yams	<input type="checkbox"/>	096	/10	097 Roots	098 Roots \$
11. Other field crops and vegetables (kava, sweetpotatoes, tobacco, etc.) — Specify \nearrow	<input type="checkbox"/>	100	/10	101 Pounds	102 Pounds \$
SECTION 3 FRUITS AND NUTS					
Do you have any FRUIT and NUT trees or plants on this place — such as bananas, coconuts, mangoes, pineapples, etc.? (Quantity harvested in 1989 and number of trees and plants on enumeration day.)					
003 1 <input type="checkbox"/> Yes — Complete this section 2 <input type="checkbox"/> No — GO to question 14		None			
		How many trees or plants are on this place? (a)	What quantity was harvested in 1989? (b)	What quantity was sold in 1989? (c)	What was the value of sales in 1989? (Dollars) (d)
1. Avocados	<input type="checkbox"/>	120		121 Pounds	122 Pounds \$
2. Bananas	<input type="checkbox"/>	124	Clusters	125 Pounds	126 Pounds \$
3. Breadfruits	<input type="checkbox"/>	128		129 Pounds	130 Pounds \$
4. Cacao	<input type="checkbox"/>	132		133 Pounds	134 Pounds \$
5. Coconuts	<input type="checkbox"/>	136		137 Pounds	138 Pounds \$
6. Grapefruits	<input type="checkbox"/>	140		141 Pounds	142 Pounds \$
7. Lemons	<input type="checkbox"/>	144		145 Pounds	146 Pounds \$
8. Limes	<input type="checkbox"/>	148		149 Pounds	150 Pounds \$
9. Mangoes	<input type="checkbox"/>	152		153 Pounds	154 Pounds \$
10. Oranges	<input type="checkbox"/>	156		157 Pounds	158 Pounds \$
11. Papayas	<input type="checkbox"/>	160		161 Pounds	162 Pounds \$
12. Pineapples	<input type="checkbox"/>	164		165 Fruits	166 Fruits \$
13. Other fruits, nuts, and tree crops (pandanus, kopak, citrons, coffee, etc.) — Specify \nearrow	<input type="checkbox"/>	168		169 Pounds	170 Pounds \$
14. How many square feet under cover and/or acres did you have planted in ORNAMENTAL PLANTS or in any other NURSERY CROPS?		Square feet under cover 176	Acres 177	Tenths 178 /10	What was the value of sales in 1989? (Dollars) \$

SECTION 4 LAND USE			
004			
Of the total acres in this place (section 1, question 4) —			None
			Acres Tenths
1. How many acres are in crops?			201 /10
2. How many acres are in other cropland (cropland pasture, crop failure, idle cropland, and cropland used for soil improvement)?			202 /10
3. How many acres are in other pasture or grazing land? (Include woodland pasture. Do not include cropland pasture.)			203 /10
4. How many acres are in other land? (Include houselots, roads, woodland not pastured, wasteland, etc.)			204 /10
5. TOTAL LAND (Add entries in questions 1 through 4. Total should be equal to entry in section 1, question 4.)			205 /10
SECTION 5 LIVESTOCK AND POULTRY			
005			
How many of the following livestock and/or poultry are on this place today or were sold from this place in 1989?		None	
		How many are on this place today? (a)	How many were sold in 1989? (b)
		251	252
		253	254
		255	256
		257	258
		259	260
		261	262
		263	264
		265	266
		267	268
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		767	

[illegible]

1988 Census of Horticultural Specialties, Report Form 88-A19.1

FORM **88-A19.1**
11-21-88

**1988 CENSUS
OF HORTICULTURAL
SPECIALTIES**

**GREENHOUSE PRODUCTS,
OUTDOOR-GROWN FLORICULTURAL
PRODUCTS, NURSERY PRODUCTS,
MUSHROOMS, AND SOD**

**COMPLETE AND
RETURN TO**

Bureau of the Census
1201 East Tenth Street
Jeffersonville, IN 47132

CENSUS USE ONLY

0013	0014	0015	0016
0017	0018	0019	0020

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

NOTICE — Response to this inquiry is voluntary and is conducted according to title 13, U.S. Code. Your report to the Census Bureau is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

In correspondence pertaining to this report, please refer to the 11-digit Census File Number (CFN).

OMB Approval No. 0607-0639 Approval Expires 11/30/89

IMPORTANT — Please read the instructions below before completing the report form.

- Complete the section(s) 1 through 12 which pertain to your operation.
 - In sections 1 through 7, enter the plant name and corresponding code for plant(s) produced for sale. Report the number sold and value of sales at the total and wholesale levels in the appropriate line and column.
 - Report ALL UNFINISHED PLANT MATERIAL (i.e., cuttings, liners, plug seedlings, prefinished plants, tissue cultured plantlets) in section 7.

- Complete sections 13 through 19. These sections pertain to all horticultural operations.
- Exclude plants purchased from others but grown by you for less than 4 weeks for resale.
- If you did not operate a horticultural operation or all of your facilities were idle in 1988, briefly explain in section 18 your situation and complete section 19.
- Refer to the Information Sheet for additional reporting instructions. If more space is needed, list additional plants on a separate sheet.

SECTION 1 Were any POTTED FLOWERING PLANTS FOR INDOOR OR PATIO USE grown for sale on this place in 1988?

0001 1 ☐ YES — Complete part A below.
2 ☐ NO — Go to section 2.

Part A. Complete this part by entering the plant name and code from the list below. Report the number sold and value of sales by type of container (i.e., pots by size, hanging baskets). Report geraniums and other outdoor potted blooming annuals in section 2. Report unfinished plant material (prefinished plants, cuttings, liners, plug seedlings, tissue cultured plantlets, etc.) in section 7. If more space is needed, list additional plants on a separate sheet.

Plant name	Code	Type of container	Total sales		Wholesale sales only	
			Number of containers sold	Dollars only	Number of containers sold	Dollars only
Plant name <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	Code <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	Pots under 5 inches	1	\$.00	2	\$.00
		Pots 5 inches or over	4	\$.00	6	\$.00
		Hanging baskets	8	\$.00	10	\$.00
Plant name <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	Code <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	Pots under 5 inches	1	\$.00	2	\$.00
		Pots 5 inches or over	4	\$.00	6	\$.00
		Hanging baskets	8	\$.00	10	\$.00
Plant name <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	Code <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	Pots under 5 inches	1	\$.00	2	\$.00
		Pots 5 inches or over	4	\$.00	6	\$.00
		Hanging baskets	8	\$.00	10	\$.00
Plant name <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	Code <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	Pots under 5 inches	1	\$.00	2	\$.00
		Pots 5 inches or over	4	\$.00	6	\$.00
		Hanging baskets	8	\$.00	10	\$.00
Plant name <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	Code <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	Pots under 5 inches	1	\$.00	2	\$.00
		Pots 5 inches or over	4	\$.00	6	\$.00
		Hanging baskets	8	\$.00	10	\$.00
Plant name <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	Code <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	Pots under 5 inches	1	\$.00	2	\$.00
		Pots 5 inches or over	4	\$.00	6	\$.00
		Hanging baskets	8	\$.00	10	\$.00
Plant name <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	Code <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	Pots under 5 inches	1	\$.00	2	\$.00
		Pots 5 inches or over	4	\$.00	6	\$.00
		Hanging baskets	8	\$.00	10	\$.00
Plant name <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	Code <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	Pots under 5 inches	1	\$.00	2	\$.00
		Pots 5 inches or over	4	\$.00	6	\$.00
		Hanging baskets	8	\$.00	10	\$.00

PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME	CODE
African violet (Saintpaulia)	0021	Cyclamen	0089	Lily, Easter*	0141	Rose*	0249
Anthurium	0042	Gerbera daisy*	0081	Lily, other*	0153	Other potted flowering plants	
Azalea (finished florist showing color)	0033	Gloxinia	0093	Orchid*	0201	Specify	0261
Begonia	0045	Hibiscus	0105	Poinsettia	0213		
Chrysanthemum (Report hardy/garden chrysanthemums in section 2.)	0057	Hydrangea	0117	Potted flowering spring bulbs*	0225		
		Kalanchoe	0129	Primula	0237		

* Report cut flowers in section 3.

SECTION 2 Were any BEDDING/GARDEN PLANTS (including flowering and vegetable type bedding plants) grown for sale on this place in 1988?

 0002 ☐ YES — Complete part A below.
☐ NO — Go to section 3.

▶ **Part A** — Complete this part by entering the plant name and code from the list below. Report the number sold and value of sales by type of container (i.e., flats, pots by size, hanging baskets). Report vegetable transplants for commercial truck crop production in section 11. Report unfinished plant material (plug seedlings, cuttings, liners, tissue cultured plantlets, etc.) in section 7. If more space is needed, list additional plants on a separate sheet.

SPECIAL INSTRUCTIONS FOR REPORTING "FLATS" — Report in 11" X 22" flats or specify other flat size —

		Type of container	Total sales		Wholesale sales only	
			Number of containers sold	Dollars only	Number of containers sold	Dollars only
Plant name	Code	Flats	1	\$.00	2	\$.00
		Pots less than 5 inches	4	\$.00	6	\$.00
		Pots 5 inches or more	8	\$.00	10	\$.00
		Hanging baskets	12	\$.00	14	\$.00
Plant name	Code	Flats	1	\$.00	2	\$.00
		Pots less than 5 inches	4	\$.00	6	\$.00
		Pots 5 inches or more	8	\$.00	10	\$.00
		Hanging baskets	12	\$.00	14	\$.00
Plant name	Code	Flats	1	\$.00	2	\$.00
		Pots less than 5 inches	4	\$.00	6	\$.00
		Pots 5 inches or more	8	\$.00	10	\$.00
		Hanging baskets	12	\$.00	14	\$.00
Plant name	Code	Flats	1	\$.00	2	\$.00
		Pots less than 5 inches	4	\$.00	6	\$.00
		Pots 5 inches or more	8	\$.00	10	\$.00
		Hanging baskets	12	\$.00	14	\$.00
Plant name	Code	Flats	1	\$.00	2	\$.00
		Pots less than 5 inches	4	\$.00	6	\$.00
		Pots 5 inches or more	8	\$.00	10	\$.00
		Hanging baskets	12	\$.00	14	\$.00
Plant name	Code	Flats	1	\$.00	2	\$.00
		Pots less than 5 inches	4	\$.00	6	\$.00
		Pots 5 inches or more	8	\$.00	10	\$.00
		Hanging baskets	12	\$.00	14	\$.00
Plant name	Code	Flats	1	\$.00	2	\$.00
		Pots less than 5 inches	4	\$.00	6	\$.00
		Pots 5 inches or more	8	\$.00	10	\$.00
		Hanging baskets	12	\$.00	14	\$.00
Plant name	Code	Flats	1	\$.00	2	\$.00
		Pots less than 5 inches	4	\$.00	6	\$.00
		Pots 5 inches or more	8	\$.00	10	\$.00
		Hanging baskets	12	\$.00	14	\$.00
Plant name	Code	Flats	1	\$.00	2	\$.00
		Pots less than 5 inches	4	\$.00	6	\$.00
		Pots 5 inches or more	8	\$.00	10	\$.00
		Hanging baskets	12	\$.00	14	\$.00
Plant name	Code	Flats	1	\$.00	2	\$.00
		Pots less than 5 inches	4	\$.00	6	\$.00
		Pots 5 inches or more	8	\$.00	10	\$.00
		Hanging baskets	12	\$.00	14	\$.00

PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME — Vegetable type bedding plants	CODE
Ageratum	0273	Dusty Miller	0389	Impatiens, New Guinea	0449	Rose, potted garden	0561	Broccoli, cabbage,	
Alyssum	0289	Fuchsia	0385	Impatiens, other	0485	Salvia	0577	cauliflower, and	
Begonia	0305	Gezania	0401	Marigold	0491	Snapdragon	0593	other crucifers	0657
Chrysanthemum,		Geranium, grown from		Pansy	0497	Verbena	0609	Pepper, sweet or hot	0673
hardy/garden	0321	cuttings	0417	Perennials, herbaceous	0513	Vinca (Catharanthus		Tomato	0689
Coleus	0337	Geranium, grown from		Petunia	0528	roseus)?	0625	Other vegetable type	
Dianthus	0353	seed or seedlings	0433	Portulaca	0545	Other flowers	0641	bedding plants	0705

* Report vinca vine (V. major) and vinca groundcover (V. minor) in section 5.

F13M BR A19.1-12 21 88.

SECTION 2 BEDDING/GARDEN PLANTS — Continued									
		Type of container	Total sales		Wholesale sales only				
			Number of containers sold	Dollars only	Number of containers sold	Dollars only			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00			
		Pots less than 5 inches	4	\$.00	6	\$.00			
		Pots 5 inches or more	8	\$.00	10	\$.00			
			12	\$.00	14	\$.00			
		Hanging baskets		\$.00		\$.00			
PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME — Vegetable type bedding plants	CODE
Ageratum	0273	Dusty Miller	0369	Impatiens, New Guinea	0449	Rose, potted garden	0561	Broccoli, cabbage, cauliflower, and other crucifers	0657
Alyssum	0289	Fuchsia	0385	Impatiens, other	0465	Salvia	0577	Pepper, sweet or hot	0689
Begonia	0305	Gazania	0401	Marigold	0481	Snapdragon	0593	Tomato	0689
Chrysanthemum, hardy/garden	0321	Geranium, grown from cuttings	0417	Pansy	0497	Verbena	0609	Other vegetable type bedding plants	0705
Coleus	0337	Geranium, grown from seed or seedlings	0433	Perennials, herbaceous	0513	Vinca (Catharanthus roseus)*	0625		
Dianthus	0383			Petunia	0529	Other flowers	0641		
				Portulaca	0545				

* Report vinca vine (V. major) and vinca groundcover (V. minor) in section 5.

[illegible]

SECTION 6 Were there any **FOLIAGE PLANTS** grown for sale on this place in 1987?

0000 1 ☐ YES — Complete part A below. 2 ☐ NO — Go to section 7.

Part A — Complete this part by entering the plant name and code from the list below. Report the number of plants and value of sales for each plant type that was grown for sale. Report unfinished plant material to be grown on by others as unfinished plant material in section 7. If more space is needed, list additional plants on a separate sheet.

Plant name	Code	Type of container	Total sales		Wholesale sales only	
			Number of containers sold	Dollars only	Number of containers sold	Dollars only
		Pots under 4 inches	1	\$.00	2	\$.00
		Pots 4 to 7 inches	4	\$.00	6	\$.00
		Pots 8 to 13 inches	8	\$.00	10	\$.00
		Pots 14 to 22 inches	12	\$.00	14	\$.00
		Pots over 22 inches	16	\$.00	18	\$.00
		Hanging baskets under 8 inches	20	\$.00	22	\$.00
		Hanging baskets 8 inches or more	24	\$.00	26	\$.00
		Pots under 4 inches	1	\$.00	2	\$.00
		Pots 4 to 7 inches	4	\$.00	6	\$.00
		Pots 8 to 13 inches	8	\$.00	10	\$.00
		Pots 14 to 22 inches	12	\$.00	14	\$.00
		Pots over 22 inches	16	\$.00	18	\$.00
		Hanging baskets under 8 inches	20	\$.00	22	\$.00
		Hanging baskets 8 inches or more	24	\$.00	26	\$.00
		Pots under 4 inches	1	\$.00	2	\$.00
		Pots 4 to 7 inches	4	\$.00	6	\$.00
		Pots 8 to 13 inches	8	\$.00	10	\$.00
		Pots 14 to 22 inches	12	\$.00	14	\$.00
		Pots over 22 inches	16	\$.00	18	\$.00
		Hanging baskets under 8 inches	20	\$.00	22	\$.00
		Hanging baskets 8 inches or more	24	\$.00	26	\$.00
		Pots under 4 inches	1	\$.00	2	\$.00
		Pots 4 to 7 inches	4	\$.00	6	\$.00
		Pots 8 to 13 inches	8	\$.00	10	\$.00
		Pots 14 to 22 inches	12	\$.00	14	\$.00
		Pots over 22 inches	16	\$.00	18	\$.00
		Hanging baskets under 8 inches	20	\$.00	22	\$.00
		Hanging baskets 8 inches or more	24	\$.00	26	\$.00
		Pots under 4 inches	1	\$.00	2	\$.00
		Pots 4 to 7 inches	4	\$.00	6	\$.00
		Pots 8 to 13 inches	8	\$.00	10	\$.00
		Pots 14 to 22 inches	12	\$.00	14	\$.00
		Pots over 22 inches	16	\$.00	18	\$.00
		Hanging baskets under 8 inches	20	\$.00	22	\$.00
		Hanging baskets 8 inches or more	24	\$.00	26	\$.00
		Pots under 4 inches	1	\$.00	2	\$.00
		Pots 4 to 7 inches	4	\$.00	6	\$.00
		Pots 8 to 13 inches	8	\$.00	10	\$.00
		Pots 14 to 22 inches	12	\$.00	14	\$.00
		Pots over 22 inches	16	\$.00	18	\$.00
		Hanging baskets under 8 inches	20	\$.00	22	\$.00
		Hanging baskets 8 inches or more	24	\$.00	26	\$.00

PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME	CODE
Azalea	1134	Epipremnum (Pothos)	1246	Palms	1358	Spathiphyllum	1442
Cacti and succulents	1162	Ferns	1274	Philodendron	1388	Synonymium (Nephthytis)	1470
Dieffenbachia	1194	Ficus	1302	Schefflera (Brassia-and/or Schefflera)	1414	Other foliage plants — Specify	1498
Dracaena	1218	Hedera (Ivy)	1330				

SECTION 6 FOLIAGE PLANTS -- Continued					
	Type of container	Total sales		Wholesale sales only	
		Number of containers sold	Dollars only	Number of containers sold	Dollars only
Plant name <input type="text"/> Code <input type="text"/>	Pots under 4 inches	1	\$.00	2	\$.00
	Pots 4 to 7 inches	4	\$.00	6	\$.00
	Pots 8 to 13 inches	8	\$.00	10	\$.00
	Pots 14 to 22 inches	12	\$.00	14	\$.00
	Pots over 22 inches	16	\$.00	18	\$.00
	Hanging baskets under 8 inches	20	\$.00	22	\$.00
	Hanging baskets 8 inches or more	24	\$.00	26	\$.00
Plant name <input type="text"/> Code <input type="text"/>	Pots under 4 inches	1	\$.00	2	\$.00
	Pots 4 to 7 inches	4	\$.00	6	\$.00
	Pots 8 to 13 inches	8	\$.00	10	\$.00
	Pots 14 to 22 inches	12	\$.00	14	\$.00
	Pots over 22 inches	16	\$.00	18	\$.00
	Hanging baskets under 8 inches	20	\$.00	22	\$.00
	Hanging baskets 8 inches or more	24	\$.00	26	\$.00
Plant name <input type="text"/> Code <input type="text"/>	Pots under 4 inches	1	\$.00	2	\$.00
	Pots 4 to 7 inches	4	\$.00	6	\$.00
	Pots 8 to 13 inches	8	\$.00	10	\$.00
	Pots 14 to 22 inches	12	\$.00	14	\$.00
	Pots over 22 inches	16	\$.00	18	\$.00
	Hanging baskets under 8 inches	20	\$.00	22	\$.00
	Hanging baskets 8 inches or more	24	\$.00	26	\$.00
Plant name <input type="text"/> Code <input type="text"/>	Pots under 4 inches	1	\$.00	2	\$.00
	Pots 4 to 7 inches	4	\$.00	6	\$.00
	Pots 8 to 13 inches	8	\$.00	10	\$.00
	Pots 14 to 22 inches	12	\$.00	14	\$.00
	Pots over 22 inches	16	\$.00	18	\$.00
	Hanging baskets under 8 inches	20	\$.00	22	\$.00
	Hanging baskets 8 inches or more	24	\$.00	26	\$.00
Plant name <input type="text"/> Code <input type="text"/>	Pots under 4 inches	1	\$.00	2	\$.00
	Pots 4 to 7 inches	4	\$.00	6	\$.00
	Pots 8 to 13 inches	8	\$.00	10	\$.00
	Pots 14 to 22 inches	12	\$.00	14	\$.00
	Pots over 22 inches	16	\$.00	18	\$.00
	Hanging baskets under 8 inches	20	\$.00	22	\$.00
	Hanging baskets 8 inches or more	24	\$.00	26	\$.00
Plant name <input type="text"/> Code <input type="text"/>	Pots under 4 inches	1	\$.00	2	\$.00
	Pots 4 to 7 inches	4	\$.00	6	\$.00
	Pots 8 to 13 inches	8	\$.00	10	\$.00
	Pots 14 to 22 inches	12	\$.00	14	\$.00
	Pots over 22 inches	16	\$.00	18	\$.00
	Hanging baskets under 8 inches	20	\$.00	22	\$.00
	Hanging baskets 8 inches or more	24	\$.00	26	\$.00

PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME	CODE
Aglaonema	1134	Epipremnum (Pothos)	1248	Palms	1358	Spathephyllum	1442
Cacti and succulents	1162	Ferns	1274	Philodendron	1386	Syngonium (Nepthytis)	1470
Dieffenbachia	1190	Ficus	1302	Schefflera (Brassaia and/or Schefflera)	1414	Other foliage plants -- Specify	1498
Dracaena	1218	Hedera (Ivy)	1330				

SECTION 7 Were any UNFINISHED PLANT MATERIALS (For example, cuttings, liners, plug seedlings, tissue cultured plantlets, prefinished plants, etc.) grown/produced for sale on this place in 1987? (Exclude material for your own use.)

0007 ☐ YES — Complete this section by entering the plant name and code from the list below. Report the number sold and the value of sales by type of unfinished plant material. Also, report plant material sold to others for further growing on as prefinished plants. If more space is needed, list additional plants on a separate sheet.

☐ NO — Go to section 8.

Plant name	Code	Type of unfinished plant material	Total sales		Wholesale sales only	
			Number sold	Dollars only	Number sold	Dollars only
		Cuttings	1	\$.00	2	\$.00
		Liners	4	\$.00	6	\$.00
		Plug seedlings	8	\$.00	10	\$.00
		Prefinished plants	12	\$.00	14	\$.00
		Tissue cultured plantlets	16	\$.00	18	\$.00
		Cuttings	1	\$.00	2	\$.00
		Liners	4	\$.00	6	\$.00
		Plug seedlings	8	\$.00	10	\$.00
		Prefinished plants	12	\$.00	14	\$.00
		Tissue cultured plantlets	16	\$.00	18	\$.00
		Cuttings	1	\$.00	2	\$.00
		Liners	4	\$.00	6	\$.00
		Plug seedlings	8	\$.00	10	\$.00
		Prefinished plants	12	\$.00	14	\$.00
		Tissue cultured plantlets	16	\$.00	18	\$.00
		Cuttings	1	\$.00	2	\$.00
		Liners	4	\$.00	6	\$.00
		Plug seedlings	8	\$.00	10	\$.00
		Prefinished plants	12	\$.00	14	\$.00
		Tissue cultured plantlets	16	\$.00	18	\$.00
		Cuttings	1	\$.00	2	\$.00
		Liners	4	\$.00	6	\$.00
		Plug seedlings	8	\$.00	10	\$.00
		Prefinished plants	12	\$.00	14	\$.00
		Tissue cultured plantlets	16	\$.00	18	\$.00
		Cuttings	1	\$.00	2	\$.00
		Liners	4	\$.00	6	\$.00
		Plug seedlings	8	\$.00	10	\$.00
		Prefinished plants	12	\$.00	14	\$.00
		Tissue cultured plantlets	16	\$.00	18	\$.00
		Cuttings	1	\$.00	2	\$.00
		Liners	4	\$.00	6	\$.00
		Plug seedlings	8	\$.00	10	\$.00
		Prefinished plants	12	\$.00	14	\$.00
		Tissue cultured plantlets	16	\$.00	18	\$.00
		Cuttings	1	\$.00	2	\$.00
		Liners	4	\$.00	6	\$.00
		Plug seedlings	8	\$.00	10	\$.00
		Prefinished plants	12	\$.00	14	\$.00
		Tissue cultured plantlets	16	\$.00	18	\$.00

PLANT NAME — Potted flowering	CODE	PLANT NAME — Bedding/ Garden	CODE	PLANT NAME — Cut flower	CODE	PLANT NAME — Nursery	CODE	PLANT NAME — Foliage	CODE
African violet (Saintpaulia)	1526	Chrysanthemum, hardy/ garden	1726	Carnation, standard	1846	Broad-leaf evergreens	2046	Aglaonema	2266
Azalea	1546	Geranium from cuttings	1746	Carnation, miniature	1866	Citrus and subtropicals	2066	Dieffenbachia	2286
Chrysanthemum	1586	Geranium from seed or seedlings	1766	Chrysanthemum, standard	2654	Deciduous flowering trees	2086	Dracaena	2306
Gerbera daisy	1586	Impatiens, New Guinea	1786	Chrysanthemum, pompon	1886	Deciduous fruit and nut trees	2106	Epipremnum (Pothos)	2326
Hibiscus	1606	Rose	1806	Gerbera daisy	1906	Deciduous shade trees	2126	Ferns	2346
Kalanchoe	1626	Other bedding/garden plants — Specify	1826	Orchid, cattleya	1926	Deciduous shrubs	2146	Ficus	2366
Lily	1646			Orchid, cymbidium	1946	Herbaceous plants	2166	Palms	2386
Poinsettia	1666			Orchid, other	1966	Narrow-leaf evergreens	2186	Philodendron	2406
Rose	1686			Rose, hybrid tea	1986	Schefflera (Brassia and/or Schefflera)	2206	Schefflera (Brassia and/or Schefflera)	2426
Other potted flowering plants — Specify	1706			Rose, sweetheart	2006	Spathiphyllum	2226	Spathiphyllum	2446
				Other cut flowers — Specify	2026	Vines (landscape)	2246	Syngonium (Nepthytis)	2466
						Other nursery lining-out stock — Specify	2266	Other foliage plants — Specify	2486

SECTION 8 Was SOD grown for sale on this place in 1988?					
0008 1 <input type="checkbox"/> YES — Complete this section. 2 <input type="checkbox"/> NO — Go to section 9.					
		Acres harvested		Value of gross sales in 1988 (Dollars only)	
		Whole acres	Tenths	Total	Wholesale sales
1. Sod grown for sale		2506	/10	2507 \$.00	2508 \$.00
SECTION 9 Were any DRIED BULBS, CORMS, RHIZOMES, OR TUBERS (TO BE USED FOR FORCING) grown for sale on this place in 1988?					
0009 1 <input type="checkbox"/> YES — Complete this section. Report finished forced products in appropriate sections 1 and/or 3. 2 <input type="checkbox"/> NO — Go to section 10.					
		Acres harvested		Value of gross sales in 1988 (Dollars only)	
		Whole acres	Tenths	Total	Wholesale sales
1. Dried bulbs, corms, rhizomes, or tubers grown for sale		2509	/10	2510 \$.00	2511 \$.00
SECTION 10 Were any CULTIVATED MUSHROOMS grown for sale on this place in 1988? — See information sheet.					
0010 1 <input type="checkbox"/> YES — Complete this section. 2 <input type="checkbox"/> NO — Go to section 11.					
		Pounds produced	Bed area (Square feet)	Value of gross sales in 1988 (Dollars only)	
				Total	Wholesale sales
1. Cultivated mushrooms		2512	2513	2514 \$.00	2515 \$.00
SECTION 11 Were any GREENHOUSE PRODUCED VEGETABLES, VEGETABLE TRANSPLANTS FOR COMMERCIAL TRUCK CROP PRODUCTION OR VEGETABLE SEEDS grown/produced for sale on this place in 1988?					
0011 1 <input type="checkbox"/> YES — Complete parts A, B, and C below. Report bedding vegetable plants in section 2. 2 <input type="checkbox"/> NO — Go to section 12.					
Part A — GREENHOUSE PRODUCED VEGETABLES — Enter the information below. Report bedding vegetable plants in section 2. If more space is needed, list additional plants on a separate sheet.					
<input type="checkbox"/> None		Square feet under glass or other protection used in 1988		Value of gross sales in 1988 (Dollars only)	
				Total	Wholesale sales
1. Cucumbers		2516	2517 \$.00	2518 \$.00	2519 \$.00
2. Lettuce		2520	2521 \$.00	2522 \$.00	2523 \$.00
3. Peppers		2524	2525 \$.00	2526 \$.00	2527 \$.00
4. Tomatoes		2528	2529 \$.00	2530 \$.00	2531 \$.00
5. Other greenhouse produced vegetables — Specify <u>z</u>		2532	2533 \$.00	2534 \$.00	2535 \$.00
Part B — VEGETABLE TRANSPLANTS FOR COMMERCIAL TRUCK CROP PRODUCTION — Enter the information below. Report bedding vegetable plants in section 2. If more space is needed, list additional plants on a separate sheet.					
<input type="checkbox"/> None		Area used in 1988		Value of gross sales in 1988 (Dollars only)	
		Square feet under glass or other protection	Acres in the open Whole acres Tenths	Total	Wholesale sales
1. Broccoli, cabbage, cauliflower, and other crucifers.		2537	2538 /10	2539 \$.00	2540 \$.00
2. Peppers, sweet or hot		2541	2542 /10	2543 \$.00	2544 \$.00
3. Tomatoes		2545	2546 /10	2547 \$.00	2548 \$.00
4. Other vegetable transplants for commercial truck crop production — Specify <u>z</u>		2549	2550 /10	2551 \$.00	2552 \$.00
Part C — VEGETABLE SEEDS — Enter the information below.					
<input type="checkbox"/> None		Area used in 1988		Value of gross sales in 1988 (Dollars only)	
		Square feet under glass or other protection	Acres in the open Whole acres Tenths	Total	Wholesale sales
1. Vegetable seeds		2553	2554 /10	2555 \$.00	2556 \$.00
SECTION 12 Were any FLOWER SEEDS produced for sale on this place in 1988?					
0012 1 <input type="checkbox"/> YES — Complete this section. 2 <input type="checkbox"/> NO — Go to section 13.					
		Acres grown		Production (Pounds of clean seed)	
		Whole acres	Tenths	Value of gross sales in 1988 (Dollars only)	
				Total	Wholesale sales
1. Alyssum		2557	2558 /10	2559 \$.00	2560 \$.00
2. Delphinium		2561	2562 /10	2563 \$.00	2564 \$.00
3. Marigold		2565	2566 /10	2567 \$.00	2568 \$.00
4. Nasturtium		2569	2570 /10	2571 \$.00	2572 \$.00
5. Petunia		2573	2574 /10	2575 \$.00	2576 \$.00
6. Stock		2577	2578 /10	2579 \$.00	2580 \$.00
7. Sweet pea		2581	2582 /10	2583 \$.00	2584 \$.00
8. Verbena		2585	2586 /10	2587 \$.00	2588 \$.00
9. All other flower seeds — Specify <u>z</u>		2589	2590 /10	2591 \$.00	2592 \$.00

SECTION 13 LAND, STRUCTURES, EQUIPMENT, AND IRRIGATION

1. What is your best estimate of the current market value of land and buildings owned and/or rented by this business on December 31, 1988?

Dollars only	
2587	
\$	.00
2588	
\$	.00

2. What is the estimated market value of all machinery and equipment usually kept on this place and used for the horticultural operations?

3. Did you have land area covered by greenhouses in 1988?

- 2589 ☐ YES — Complete items a through e below. (Report area only once. Include aisles, walkways, etc.).
☐ NO — Go to item 4 below.

None

Square feet	
2590	
2591	
2592	
2593	

a. How much of the greenhouse area was under glass?

b. How much of the greenhouse area was under fiberglass and other rigid plastic covers?

c. How much of the greenhouse area was covered by plastic film (single or double cover) or other materials?

d. TOTAL LAND AREA COVERED BY GREENHOUSES — Should equal the sum of a + b + c.

Square feet	
2594	

e. How much of the greenhouse area was new greenhouse space erected during 1988?

4. Did you produce potted flowering plants, bedding/garden plants, cut flowers, cut cultivated florist greens, nursery plants, or foliage plants in 1988?

- 2595 ☐ YES — Complete items a through d below.
☐ NO — Go to item 7 below.

Report area for each horticultural category listed below. For example, if two crops of bedding/garden plants were harvested from 1,000 square feet, report 1,000 square feet in the "bedding/garden plants" category. If 500 square feet of potted flowering plants were also grown in the same area, report 500 square feet in the "potted flowering plants" category and 1,000 square feet in the "bedding/garden plants" category.

Potted flowering plants	Bedding/garden plants (Include vegetable type bedding plants.)	Cut flowers	Cut cultivated florist greens	Nursery crops (Include propagating area.)	Foliage plants
2596	2597	2598	2599	2600	2601
Sq. ft.	Sq. ft.	Sq. ft.	Sq. ft.	Sq. ft.	Sq. ft.
2602	2603	2604	2605	2606	2607
Whole acres	Whole acres	Whole acres	Whole acres	Whole acres	Whole acres
2608	2609	2610	2611	2612	2613
Tenths	Tenths	Tenths	Tenths	Tenths	Tenths
2614	2615	2616	2617	2618	2619
Tenths	Tenths	Tenths	Tenths	Tenths	Tenths

a. How much greenhouse space in 1988 was used for the production of

b. How much land covered by shade structures (frames, cloth, lath, saran, etc.) was used in 1988 for the production of

c. How much natural shade area (i.e., palm, citrus, etc.) was used in 1988 for the production of

d. How many acres in the open were used in 1988 for the outdoor production of (excluding land covered by natural shade or shade structures)

5. Did you irrigate land in 1988? (Exclude land covered by greenhouses.)

- 2620 ☐ YES — Complete items a through c below.
☐ NO — Go to section 14.

None

Acres irrigated	
2621	
	10
2622	
	10
2623	
	10

a. How many acres were irrigated for the outdoor production of nursery plants?

b. How many acres were irrigated for the outdoor production of sod?

c. How many acres were irrigated for the production of other horticultural crops grown in the open?

SECTION 14 SALES IN 1988 — Report figures to the nearest WHOLE DOLLAR. If book figures are not available, give your best estimate.

1. What were your gross sales during 1988 of all greenhouse plants, outdoor-grown floricultural plants, and nursery plants grown — potted flowering plants, bedding/garden plants, cut flowers, cut cultivated florist greens, nursery plants, foliage plants, unfinished, prefinished, and starter florist plants, greenhouse vegetables, vegetable transplants for commercial truck crop production, vegetable and flower seeds, sod, dried bulbs, corms, rhizomes, tubers, and cultivated mushrooms? — Do not include the sale of fertilizer, lime, spray materials, garden tools, etc.

None

Dollars only	
2624	
\$	.00
2625	
\$	.00
2626	
\$	.00
2627	
\$	.00

2. Of the total gross sales —

a. How much was wholesale sales?

b. How much was retail sales?

3. What were your returns and allowances (discounts and value of returned merchandise)?

SECTION 15 SELECTED PRODUCTION EXPENSES FOR THE TOTAL HORTICULTURAL OPERATION IN 1988 — Report figures to the nearest WHOLE DOLLAR. If book figures are not available, give your best estimate.

1. What was the cost of plants, seeds, bulbs, and florist and nursery stock purchased and used in the production activity during 1988? (Include cost of mushroom spawn.)

None

Dollars only	
2628	
\$	.00
2629	
\$	.00
2630	
\$	.00
2631	
\$	.00

2. What was the cost of commercial fertilizer (all forms) used in 1988? (Exclude purchases for resale.)

3. What was the cost of all other agricultural chemicals purchased for use in production activity (insecticides, herbicides, fungicides, other pesticides, etc.) during 1988? (Exclude fertilizer and lime.)

4. What was the cost of energy (natural gas, electricity, gasoline, gasohol, diesel fuel, LP gas, etc.) used for the horticultural production operation in 1988? (Include all heating and cooling cost. Exclude heat or air conditioning only for offices, retail outlets, etc.)

SECTION 16

GREENHOUSE, NURSERY, AND OTHER HORTICULTURAL LABOR USED ON THIS PLACE IN 1988 — Exclude employees not directly involved in growing operation, e.g., garden center clerks.

None

	Number of employees	Gross wages paid (Dollars only)
1. What was the total of the gross wages paid, including employer's cost for social security, workman's compensation, insurance premiums, pension plans, etc., for this business during 1988?	2632	\$00
2. Of the hired workers in 1988, how many were —	2633	2634
a. Part-time employees (worked less than 150 days)?	2635	2636
b. Full-time employees (worked 150 days or more)?		\$00

SECTION 17

TYPE OF HORTICULTURAL OPERATION AND LOCATION OF GROWING OPERATION(S) IN 1988

1. Type of ownership — Mark (X) the appropriate box.

2637 ☐ Individual proprietor ☐ Partnership ☐ Corporation ☐ Other — Specify

2. Location of growing operation(s) — Give the county location of the growing operation(s) included in this report form.

	County	State	Percent of sales
Principal county →			2638
Other counties }			2639
			2640
			2641

SECTION 18

REMARKS AND EXPLANATIONS — If you reported no sales in sections 1 through 12, please explain here the type of horticultural enterprise, if any, you operated in 1988. Also add any other remarks here. Use additional sheet(s), if necessary.

SECTION 19

PERSON COMPLETING THIS REPORT — Please print.

Name	Date
Address (Number and street, city, State, ZIP Code)	Telephone
	Area code Number

FORM 88-A19.1 (I)
(11-9-88)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

INFORMATION SHEET

1988 CENSUS OF HORTICULTURAL SPECIALTIES

1. General

A horticultural establishment is an operation growing and selling horticultural products (greenhouse products, outdoor-grown floricultural products, nursery products, mushrooms, and/or sod) during 1988.

Refer to the instructions below for completing your report form. The enclosed census report form is being used by producers and growers throughout the United States. Because it is meant for use in all parts of the country, it may contain sections and inquiries which do not apply to you. In this case, mark the "No" or "None" box and go on to the next item or section.

If you did not operate a horticultural operation or all of your facilities were idle in 1988, briefly explain your situation in section 18 and complete section 19.

2. If You Receive More Than One Report Form

If you had multiple horticulture operations, you should complete a report form for each separate and distinct production unit, i.e., each individual greenhouse, nursery, etc., or combinations of establishments, etc., for which you maintained separate records of operating expenses, sales, inventories, and production. Return any duplicate or extra report forms in the same envelope with the report(s) you complete so we can remove the extra addresses from our mail list. In the area of the address label of the report form you complete, write the 11-digit Census File Number (CFN) from the label of the extra report form(s).

3. Partnership Operations

A partnership is an association of two or more persons who have agreed, informally or under legal contract, on the amount of their contributions and profit distributions.

Complete only ONE report form for a partnership operation, including all partners' shares on the same report form. If two or more report forms were received for the partnership, see instruction 2 above.

Partners who also had separate operations of their own should complete report forms for those separate operations. For definition of a partnership, see the instructions for section 17.

4. How To Enter Your Responses On The Report Form

Please enter your answers in the proper spaces and in the units requested, i.e., dollars, pot size, pounds, etc. Write any explanations outside the answer spaces or on a separate sheet of paper. Enter whole numbers unless the "Tenths" column is provided, such as reporting acres of flower seeds in section 12. If you have 1/2 of an acre, convert to the nearest tenths. For example, convert 1/2 to 5/10.

If you do not have exact figures, please give your best estimates. You may indicate "EST." (for estimated) beside the answer if you like. For all dollar items, we need only whole dollars; cents are not required.

5. Completing The Report Form

► Sections 1 to 12 — Greenhouse Products, Outdoor-Grown Floricultural Products, Nursery Products, Mushrooms, and Sod

The units of measure on the report form are those most commonly used throughout the country. If you used a different unit of measure, please specify the unit and size or convert your figure to the unit requested.

When reporting value of sales, do not include products bought for resale without additional growing. Do not report sales of noncrop garden center items, i.e., chemicals, fertilizers, etc. Report the total value of sales (wholesale or retail) for those products grown on this place and sold directly from this place. Report only the wholesale value of any products sold through a retail outlet which was not on this place or if the retail outlet was considered a separate business establishment. Estimates are acceptable if exact figures are not available.

To Report Plants in Sections 1 to 7

In each of these sections, report any of the plants which you grew that are listed in that section.

1. Find the plant name and the corresponding code number in the list in that section.
2. Enter the plant name and code in the space provided in that section.
3. Enter the information requested in each column. In sections 1, 2, and 6, enter the information on the proper line for each type of container. In section 7, enter the information on the proper line to identify each type of unfinished plant material.
4. If additional columns are needed, use a separate sheet of paper.

To Report Plants in Sections 8 to 12

In each of these sections, enter the information requested for any of the specified plants which you grew that are listed in that section.

1. Enter the information requested in each column for the specified plants that you grew.
2. If additional columns are needed, use a separate sheet of paper.

If reporting in Section 8 — Sod, report the total acres of sod harvested from this place in 1988 and value of sales of the sod. Acreage planted to grass intended for sale as sod in subsequent years and not harvested in 1988 should not be reported.

If reporting in Section 10 — Cultivated Mushrooms, report the square feet of bedspace or other space, such as trays, used for mushrooms in 1988 only once even though the space was harvested multiple times or more than one crop was grown during the year. For example, if two crops of mushrooms were harvested from an area of 20,000 square feet of bedspace, report 20,000 square feet of area used. Note in the margin of the report form the number of times mushrooms were harvested from that area. Also include in this section gourmet varieties of mushrooms, such as shitake, which were harvested in 1988.

► Section 13 — Land, Structures, Equipment, and Irrigation

The estimated market value in item 2, refers to ALL machinery and equipment kept on this place and used for the horticultural business. The value should be an estimate of what the machinery and equipment would sell for in its present condition, not the replacement or depreciated value.

► Section 14 — Sales

In item 1, report the value received during 1988, regardless of the year in which the products were harvested. Give gross values (before deducting taxes and expenses). Report total values for a product or products sold in 1988 even though full payment may not have been received in 1988.

► Section 15 — Selected Production Expenses

Include expenses paid by you and by anyone else for the production of greenhouse products, outdoor-grown floricultural products, nursery products, mushrooms, and sod on this place. Also include 1988 expenses incurred even if not paid in 1988. Please give estimates if you do not know the exact figures.

► Section 16 — Horticultural Labor

Expenditures for hired labor should include gross wages or salaries, commissions, paid bonuses, and leave pay BEFORE DEDUCTIONS, PLUS THE VALUE OF BENEFITS PAID BY YOU, i.e., social security, taxes, unemployment compensation insurance, etc. Do not include room and board, house rent, or other items paid in kind. Exclude employees not directly involved in the growing operation, i.e., garden center clerks.

► Section 17 — Type of Horticultural Operation and Location of Growing Operation(s)

In item 1, use the following definitions to assist you in determining the type of ownership for your operation:

Individual Proprietor or Family Operation — Defined as a business organization controlled and operated by an individual (sole proprietor). Include family operations that are not incorporated and not operated under a partnership agreement.

Partnership — Defined as two or more persons who have agreed on the amount of their contribution (capital and effort) and the distribution of profits. Co-ownership of land by husband and wife or joint filing of income tax forms by husband and wife does not constitute a partnership, unless a specific agreement to share contributions, decisionmaking, profits, and liabilities exists. Producing products under contract or under share rental agreements does not constitute partnerships.

Corporation — Defined as a legal entity or artificial person created under the laws of a State to carry on a business; does not include cooperatives. Include family operations that are incorporated.

Other — If your operation did not fall into the provided categories, mark (X) this box and describe the type of ownership that this operation existed under during 1988.

In item 2, report the county or counties where the growing activities for the operation represented by this report form occurred in 1988. If the growing operations occurred in more than one county, list all of the counties involved and estimate the percent of the total gross sales produced in each county. Check the figures to ensure that the percentages sum to one hundred percent.

► Section 18 — Remarks and Explanations

Enter in this section an explanation if you did not report any sales in sections 1 through 12. Also add any other remarks or explanations here.

► Section 19 — Person Completing This Report Form

Print the name, address, and telephone number of the person completing this report form. Also, enter the date in the space provided when the report form is completed.

We estimate that it will take from 10 to 30 minutes to complete this report form, with 24 minutes being the average time. If you have any comments regarding these estimates or any other aspect of this census, send them to the Associate Director for Management Services, Room 2027, Bureau of the Census, Washington, DC 20233; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

1988 Census of Horticultural Specialties, Commercial Horticultural Survey, 1988 (NASS), Report Form 88-A19.2

Form 88-A19.2
(11-7-88)

U.S. DEPARTMENT OF AGRICULTURE
IN COOPERATION WITH
U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

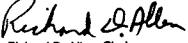
COMMERCIAL
HORTICULTURE SURVEY
1988

Dear Reporter:

The U.S. Department of Agriculture and the Bureau of the Census are cooperating in this survey of Horticultural Specialties to avoid duplicate contacts. Response to this survey is voluntary and not required by law. However, your cooperation in furnishing the information will be greatly appreciated. Your report will be held CONFIDENTIAL and used only in combination with other reports. The results will be published in the "1988 Horticulture Crops Summary" and the "1988 Census of Horticultural Specialties".

Your prompt mail response will save time and expense of a personal visit. Please use the enclosed envelope to mail your report by January 20, 1989.

Regards,


Richard D. Allen, Chairperson
Agricultural Statistics Board

(Please correct any errors in name, address, and ZIP Code.)

OMB Approval No. 0607-0639; Approval Expires 11/89

CENSUS
USE ONLY

0013

0014

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IMPORTANT — Please read the instructions below before completing the report form.

• Complete the section(s) 1 through 12 which pertain to your operation.

— In sections 1 through 7, enter the plant name and corresponding code for plant(s) produced for sale. Report the number sold and value of sales at the total and wholesale levels in the appropriate line and column.

— Report ALL UNFINISHED PLANT MATERIAL (i.e., cuttings, liners, plug seedlings, prefinished plants, tissue cultured plantlets) in section 7.

• Complete sections 13 through 19. These sections pertain to all horticultural operations.

• Exclude plants purchased from others but grown by you for less than 4 weeks for resale.

• If you did not operate a horticultural operation or all of your facilities were idle in 1988, briefly explain in section 18 your situation and complete section 19.

• Refer to the Information Sheet for additional reporting instructions. If more space is needed, list additional plants on a separate sheet.

SECTION 1 Were any POTTED FLOWERING PLANTS FOR INDOOR OR PATIO USE grown for sale on this place in 1988?

0001 1 ☐ YES — Complete parts A and B below.

2 ☐ NO — Go to section 2.

Part A — Complete this part by entering the plant name and code from the list below. Report the number sold and value of sales by type of container (i.e., pots by size, hanging baskets). Report geraniums and other outdoor potted blooming annuals in section 2. Report unfinished plant material (prefinished plants, cuttings, liners, plug seedlings, tissue cultured plantlets, etc.) in section 7. If more space is needed, list additional plants on a separate sheet.

Plant name	Code	Type of container	Total sales		Wholesale sales only	
			Number of containers sold	Dollars only	Number of containers sold	Dollars only
Plant name	Code	Pots under 5 inches	1	\$.00	2	\$.00
		4	5		6	7
		Pots 5 inches or over	8	\$.00	10	\$.00
Plant name	Code	Hanging baskets	9	\$.00	11	\$.00
		1	2		3	
		Pots under 5 inches	4	\$.00	6	\$.00
Plant name	Code	Pots 5 inches or over	8	\$.00	10	\$.00
		Hanging baskets	9	\$.00	11	\$.00
Plant name	Code	Pots under 5 inches	1	\$.00	2	\$.00
		4	5		6	7
		Pots 5 inches or over	8	\$.00	10	\$.00
Plant name	Code	Hanging baskets	9	\$.00	11	\$.00
		1	2		3	
		Pots under 5 inches	4	\$.00	6	\$.00
Plant name	Code	Pots 5 inches or over	8	\$.00	10	\$.00
		Hanging baskets	9	\$.00	11	\$.00
Plant name	Code	Pots under 5 inches	1	\$.00	2	\$.00
		4	5		6	7
		Pots 5 inches or over	8	\$.00	10	\$.00
Plant name	Code	Hanging baskets	9	\$.00	11	\$.00
		1	2		3	
		Pots under 5 inches	4	\$.00	6	\$.00
Plant name	Code	Pots 5 inches or over	8	\$.00	10	\$.00
		Hanging baskets	9	\$.00	11	\$.00
Plant name	Code	Pots under 5 inches	1	\$.00	2	\$.00
		4	5		6	7
		Pots 5 inches or over	8	\$.00	10	\$.00
Plant name	Code	Hanging baskets	9	\$.00	11	\$.00
		1	2		3	
		Pots under 5 inches	4	\$.00	6	\$.00
Plant name	Code	Pots 5 inches or over	8	\$.00	10	\$.00
		Hanging baskets	9	\$.00	11	\$.00

PLANT NAME

CODE

PLANT NAME

CODE

PLANT NAME

CODE

PLANT NAME

CODE

African violet (Saintpaulia)

0021

Cyclamen

0068

Lily, Easter*

0141

Poinsettia

0213

Anthurium

2642

Gerbera daisy*

0081

Lily, other*

0153

Potted flowering spring bulbs*

0225

Azalea (finished florist showing color)

0033

Gloxinia

0093

Orchid, dendrobium

0165

Primula

0237

Begonia

0045

Hibiscus

0105

Orchid, dendrobium (community)*

0177

Rose*

0249

Chrysanthemum (Report hardy/garden chrysanthemums in section 2.)

0057

Hydrangea

0117

Orchid, other*

0189

Other potted flowering plants — Specify

0261

Kalanchoe

0129

* Report cut flowers in section 3.

1987 CENSUS OF AGRICULTURE

APPENDIX F 245

SECTION 1 POTTED FLOWERING PLANTS FOR INDOOR OR PATIO USE — Continued

Part B — Complete this part by entering the area in production (including walkways, aisles, etc.) in 1988 and intentions for production in 1989 for the plants listed.

1. Flowering plants — POTS

- a. African violets (Saintpaulia)
- b. Azaleas (finished florist showing color)
- c. Chrysanthemums (Exclude hardy/garden mums.)
- d. Lilies, Easter
- e. Lilies, other
- f. Poinsettias
- g. All other potted flowering plants

Total area in production in 1988 (Square feet)	Intentions for production in 1989 (Pots)
X9055	X9081
X9069	X9075
X9062	X9088
X9078	X9082
X9083	X9089
X9090	X9096
X9097	X9103
Intentions for production in 1989 (Number of baskets)	
X9300	

2. Flowering plants — HANGING BASKETS**SECTION 2 Were any BEDDING/GARDEN PLANTS (including flowering and vegetable type bedding plants) grown for sale on this place in 1988?**

- 0002 1 ☐ YES — Complete parts A and B below.
2 ☐ NO — Go to section 3.

Part A — Complete this part by entering the plant name and code from the list below. Report the number sold and value of sales by type of container (i.e., flats, pots by size, hanging baskets). Report vegetable transplants for commercial truck crop production in section 11. Report unfinished plant material (plug seedlings, cuttings, liners, tissue cultured plantlets, etc.) in section 7. If more space is needed, list additional plants on a separate sheet.

SPECIAL INSTRUCTIONS FOR REPORTING "FLATS" — Report in 11" X 22" flats or specify other flat size —

		Type of container		Total sales		Wholesale sales only	
				Number of containers sold	Dollars only	Number of containers sold	Dollars only
Plant name <div></div>	Code <div></div>	Flats		1	\$.00	2	\$.00
		Pots less than 5 inches	4	5	\$.00	6	\$.00
		Pots 5 inches or more	8	9	\$.00	10	\$.00
		Hanging baskets	12	13	\$.00	14	\$.00
Plant name <div></div>	Code <div></div>	Flats		1	\$.00	2	\$.00
		Pots less than 5 inches	4	5	\$.00	6	\$.00
		Pots 5 inches or more	8	9	\$.00	10	\$.00
		Hanging baskets	12	13	\$.00	14	\$.00
Plant name <div></div>	Code <div></div>	Flats		1	\$.00	2	\$.00
		Pots less than 5 inches	4	5	\$.00	6	\$.00
		Pots 5 inches or more	8	9	\$.00	10	\$.00
		Hanging baskets	12	13	\$.00	14	\$.00
Plant name <div></div>	Code <div></div>	Flats		1	\$.00	2	\$.00
		Pots less than 5 inches	4	5	\$.00	6	\$.00
		Pots 5 inches or more	8	9	\$.00	10	\$.00
		Hanging baskets	12	13	\$.00	14	\$.00
Plant name <div></div>	Code <div></div>	Flats		1	\$.00	2	\$.00
		Pots less than 5 inches	4	5	\$.00	6	\$.00
		Pots 5 inches or more	8	9	\$.00	10	\$.00
		Hanging baskets	12	13	\$.00	14	\$.00
Plant name <div></div>	Code <div></div>	Flats		1	\$.00	2	\$.00
		Pots less than 5 inches	4	5	\$.00	6	\$.00
		Pots 5 inches or more	8	9	\$.00	10	\$.00
		Hanging baskets	12	13	\$.00	14	\$.00

PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME — Vegetable type bedding plants	CODE
Ageratum	0273	Dusty Miller	0369	Impatiens, New Guinea	0449	Rose, potted garden	0561	Broccoli, cabbage, cauliflower, and other crucifers	0657
Alyssum	0289	Fuchsia	0385	Impatiens, other	0465	Salvia	0577	Pepper, sweet or hot	0673
Begonia	0305	Gazania	0401	Marigold	0481	Snapdragon	0593	Tomato	0689
Chrysanthemum, hardy/garden	0321	Geranium, grown from cuttings	0417	Pansy	0497	Verbena	0609	Other vegetable type bedding plants	0705
Coleus	0337	Geranium, grown from seed or seedlings	0433	Perennials, herbaceous	0513	Vinca (Catharanthus roseus)*	0625		
Dianthus	0353			Petunia	0529	Other flowers	0641		
				Portulaca	0545				

* Report vinca vine (V. major) and vinca groundcover (V. minor) in section 5.

SECTION 2 BEDDING/GARDEN PLANTS — Continued

		Type of container	Total sales		Wholesale sales only	
			Number of containers sold	Dollars only	Number of containers sold	Dollars only
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00
		Pots less than 5 inches	4	\$.00	8	\$.00
		Pots 5 inches or more	8	\$.00	10	\$.00
		Hanging baskets	12	\$.00	14	\$.00
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00
		Pots less than 5 inches	4	\$.00	8	\$.00
		Pots 5 inches or more	8	\$.00	10	\$.00
		Hanging baskets	12	\$.00	14	\$.00
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00
		Pots less than 5 inches	4	\$.00	8	\$.00
		Pots 5 inches or more	8	\$.00	10	\$.00
		Hanging baskets	12	\$.00	14	\$.00
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00
		Pots less than 5 inches	4	\$.00	8	\$.00
		Pots 5 inches or more	8	\$.00	10	\$.00
		Hanging baskets	12	\$.00	14	\$.00
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00
		Pots less than 5 inches	4	\$.00	8	\$.00
		Pots 5 inches or more	8	\$.00	10	\$.00
		Hanging baskets	12	\$.00	14	\$.00
Plant name <input type="text"/>	Code <input type="text"/>	Flats	1	\$.00	2	\$.00
		Pots less than 5 inches	4	\$.00	8	\$.00
		Pots 5 inches or more	8	\$.00	10	\$.00
		Hanging baskets	12	\$.00	14	\$.00

PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME — Vegetable type bedding plants	CODE
Ageratum	0273	Dusty Miller	0389	Impatiens, New Guinea	0449	Rose, potted garden	0551	Broccoli, cabbage, cauliflower, and other crucifers	0657
Alyssum	0289	Fuchsia	0395	Impatiens, other	0455	Salvia	0577	Pepper, sweet or hot	0673
Begonia	0305	Gazania	0401	Marigold	0481	Snapdragon	0593	Tomato	0689
Chrysanthemum, hardy/garden	0321	Geranium, grown from cuttings	0417	Pansy	0497	Verbena	0609	Other vegetable type bedding plants	0705
Coleus	0337	Geranium, grown from seed or seedlings	0433	Perennials, herbaceous	0513	Vinca (Catharanthus roseus)*	0625		
Dianthus	0353			Petunia	0529	Other flowers	0641		
				Portulaca	0545				

* Report vinca vine (V. major) and vinca groundcover (V. minor) in section 5.

Part B — Complete this part by entering the area in production (including walkways, aisles, etc.) in 1988 and intentions for production in 1989 for the plants listed.

1. Bedding/garden plants — FLATS

a. Geraniums

b. All other flowering and foliar type bedding/garden plants

c. Vegetable type bedding plants (Exclude transplants for commercial production.)

2. Bedding/garden plants — POTS

a. Hardy/garden chrysanthemums

b. Geraniums, grown from cuttings

c. Geraniums, grown from seed or seedlings

d. All other flowering and foliar type bedding/garden plants

e. Vegetable type bedding plants (Exclude transplants for commercial production.)

3. Bedding/garden plants — FLOWERING HANGING BASKETS

Total area in production in 1988		Intentions for production in 1989	
X9117	Sq. ft.	X9121	Flats
X9122	Sq. ft.	X9126	Flats
X9127	Sq. ft.	X9131	Flats
X9132	Sq. ft.	X9136	Pots
X9139	Sq. ft.	X9145	Pots
X9145	Sq. ft.	X9152	Pots
X9153	Sq. ft.	X9159	Pots
X9160	Sq. ft.	X9166	Pots
Intentions for production in 1989 (Number of baskets)			
X9301			

[illegible]

SECTION 5

Were there any NURSERY PLANTS grown for sale on this place in 1988?

0005

1 ☐ YES — Complete parts A and B below.

2 ☐ NO — Go to section 6.

Part A

Complete this part by entering the plant name and code from the list below. Report the number of plants and value of sales for each plant type that was grown for sale. Report unfinished plant material (liners, cuttings, tissue cultured plantlets, etc.) in section 7. Also, report plant material to be grown on by others as prefinished plant material in section 7. If more space is needed, list additional plants on a separate sheet.

		Total sales		Wholesale sales only	
		Number of plants	Dollars only	Number of plants	Dollars only
Plant name	Code	1		2	
		\$	.00	\$	.00
Plant name	Code	1		2	
		\$	.00	\$	.00
Plant name	Code	1		2	
		\$	.00	\$	.00
Plant name	Code	1		2	
		\$	.00	\$	.00
Plant name	Code	1		2	
		\$	.00	\$	.00
Plant name	Code	1		2	
		\$	.00	\$	.00
Plant name	Code	1		2	
		\$	.00	\$	.00
Plant name	Code	1		2	
		\$	.00	\$	.00
Plant name	Code	1		2	
		\$	.00	\$	.00
Plant name	Code	1		2	
		\$	.00	\$	.00
Plant name	Code	1		2	
		\$	.00	\$	.00
Plant name	Code	1		2	
		\$	.00	\$	.00
Plant name	Code	1		2	
		\$	.00	\$	.00
Plant name	Code	1		2	
		\$	.00	\$	.00

DECIDUOUS SHADE TREES

CODE

DECIDUOUS FLOWERING TREES

CODE

BROAD-LEAF EVERGREENS

CODE

OTHER ENVIRONMENTALS

CODE

FRUIT AND NUT PLANTS

CODE

Ash 0946

Honey locust 0949

Linden 0953

Norway maple 0957

Pin oak 0961

Red maple 0965

Red oak 0969

River birch 0973

Sugar maple 0977

Sweet gum 0981

Other deciduous shade trees — Specify 0985

Amelanchier 0989

Callery pear 0993

Crabapple 0997

Dogwood 1001

Flowering cherry 1005

Flowering plum 1009

Golden rain 1013

Hawthorne 1017

Redbud 1021

Saucer magnolia 1025

Other deciduous flowering trees — Specify 1029

Azalea 1033

Eucalyptus 1037

Holly 1041

Pittosporum 1045

Rhododendron 1049

Other broad-leaf evergreens — Specify 1053

NARROW-LEAF EVERGREENS

CODE

For outdoor use:

Juniper 1057

Pine 1061

Spruce 1065

Yew 1069

Other narrow-leaf evergreens — Specify 1073

For cut Christmas trees 1077

Deciduous shrubs (except roses) 1081

Groundcovers 1085

Roses 1089

Vines 1093

Other herbaceous plants (e.g., hostas, peonies, daylilies, irises)* 1097

Other environmentals — Specify 1101

Citrus and subtropical fruit trees 1105

Deciduous fruit and nut trees 1109

Grapevines 1113

Small fruit plants (strawberry, blueberry, etc.) 1117

Other fruit and nut trees — Specify 1121

Report flowering and vegetable bedding plants in section 2.

Part B

How many of the nursery produced plants (ornamental plants, fruit and nut trees, grapevines, and small fruit plants) reported in part A above were —

1. Field grown plants (bare root, balled and burlapped, balled and potted)

2. Container grown plants

3. Other — Specify

None

Total		Wholesale sales	
Number sold	Sales		
1125	\$	1127	\$
	.00		.00
1128	\$	1130	\$
	.00		.00
1131	\$	1133	\$
	.00		.00

SECTION 6 Were there any **FOLIAGE PLANTS** grown for sale on this place in 1987?

code 1 ☐ YES — Complete parts A and B below. 2 ☐ NO — Go to section 7.

Part A — Complete this part by entering the plant name and code from the list below. Report the number of plants, and value of sales for each plant type that was grown for sale. Report unfinished plant material to be grown on by others as prefinished plant material in section 7. If more space is needed, list additional plants on a separate sheet.

Plant name	Code	Type of container	Total sales		Wholesale sales only	
			Number of containers sold	Dollars only	Number of containers sold	Dollars only
		Pots under 4 inches	1	\$.00	2	\$.00
		Pots 4 to 7 inches	4	\$.00	6	\$.00
		Pots 8 to 13 inches	8	\$.00	10	\$.00
		Pots 14 to 22 inches	12	\$.00	14	\$.00
		Pots over 22 inches	16	\$.00	18	\$.00
		Hanging baskets under 8 inches	20	\$.00	22	\$.00
		Hanging baskets 8 inches or more	24	\$.00	26	\$.00
		Pots under 4 inches	1	\$.00	2	\$.00
		Pots 4 to 7 inches	4	\$.00	6	\$.00
		Pots 8 to 13 inches	8	\$.00	10	\$.00
		Pots 14 to 22 inches	12	\$.00	14	\$.00
		Pots over 22 inches	16	\$.00	18	\$.00
		Hanging baskets under 8 inches	20	\$.00	22	\$.00
		Hanging baskets 8 inches or more	24	\$.00	26	\$.00
		Pots under 4 inches	1	\$.00	2	\$.00
		Pots 4 to 7 inches	4	\$.00	6	\$.00
		Pots 8 to 13 inches	8	\$.00	10	\$.00
		Pots 14 to 22 inches	12	\$.00	14	\$.00
		Pots over 22 inches	16	\$.00	18	\$.00
		Hanging baskets under 8 inches	20	\$.00	22	\$.00
		Hanging baskets 8 inches or more	24	\$.00	26	\$.00
		Pots under 4 inches	1	\$.00	2	\$.00
		Pots 4 to 7 inches	4	\$.00	6	\$.00
		Pots 8 to 13 inches	8	\$.00	10	\$.00
		Pots 14 to 22 inches	12	\$.00	14	\$.00
		Pots over 22 inches	16	\$.00	18	\$.00
		Hanging baskets under 8 inches	20	\$.00	22	\$.00
		Hanging baskets 8 inches or more	24	\$.00	26	\$.00
		Pots under 4 inches	1	\$.00	2	\$.00
		Pots 4 to 7 inches	4	\$.00	6	\$.00
		Pots 8 to 13 inches	8	\$.00	10	\$.00
		Pots 14 to 22 inches	12	\$.00	14	\$.00
		Pots over 22 inches	16	\$.00	18	\$.00
		Hanging baskets under 8 inches	20	\$.00	22	\$.00
		Hanging baskets 8 inches or more	24	\$.00	26	\$.00

PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME	CODE
Aglaonema	1134	Epipremnum (Pothos)	1246	Palma	1358	Spathiphyllum	1442
Cacti and succulents	1182	Ferns	1274	Philodendron	1388	Syngonium (Nepenthes)	1470
Dieffenbachia	1190	Ficus	1302	Schefflera (Brassia and/or Schefflera)	1414	Other foliage plants — Specify	1488
Dracaena	1218	Hedera (Ivy)	1330				

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SECTION 6 FOLIAGE PLANTS — Continued					
	Type of container	Total sales		Wholesale sales only	
		Number of containers sold	Dollars only	Number of containers sold	Dollars only
Plant name _____ Code _____ _____	Pots under 4 inches	1	\$.00	2	\$.00
	Pots 4 to 7 inches	4	\$.00	6	\$.00
	Pots 8 to 13 inches	8	\$.00	10	\$.00
	Pots 14 to 22 inches	12	\$.00	14	\$.00
	Pots over 22 inches	16	\$.00	18	\$.00
	Hanging baskets under 8 inches	20	\$.00	22	\$.00
	Hanging baskets 8 inches or more	24	\$.00	26	\$.00
Plant name _____ Code _____ _____	Pots under 4 inches	1	\$.00	2	\$.00
	Pots 4 to 7 inches	4	\$.00	6	\$.00
	Pots 8 to 13 inches	8	\$.00	10	\$.00
	Pots 14 to 22 inches	12	\$.00	14	\$.00
	Pots over 22 inches	16	\$.00	18	\$.00
	Hanging baskets under 8 inches	20	\$.00	22	\$.00
	Hanging baskets 8 inches or more	24	\$.00	26	\$.00
Plant name _____ Code _____ _____	Pots under 4 inches	1	\$.00	2	\$.00
	Pots 4 to 7 inches	4	\$.00	6	\$.00
	Pots 8 to 13 inches	8	\$.00	10	\$.00
	Pots 14 to 22 inches	12	\$.00	14	\$.00
	Pots over 22 inches	16	\$.00	18	\$.00
	Hanging baskets under 8 inches	20	\$.00	22	\$.00
	Hanging baskets 8 inches or more	24	\$.00	26	\$.00
Plant name _____ Code _____ _____	Pots under 4 inches	1	\$.00	2	\$.00
	Pots 4 to 7 inches	4	\$.00	6	\$.00
	Pots 8 to 13 inches	8	\$.00	10	\$.00
	Pots 14 to 22 inches	12	\$.00	14	\$.00
	Pots over 22 inches	16	\$.00	18	\$.00
	Hanging baskets under 8 inches	20	\$.00	22	\$.00
	Hanging baskets 8 inches or more	24	\$.00	26	\$.00
Plant name _____ Code _____ _____	Pots under 4 inches	1	\$.00	2	\$.00
	Pots 4 to 7 inches	4	\$.00	6	\$.00
	Pots 8 to 13 inches	8	\$.00	10	\$.00
	Pots 14 to 22 inches	12	\$.00	14	\$.00
	Pots over 22 inches	16	\$.00	18	\$.00
	Hanging baskets under 8 inches	20	\$.00	22	\$.00
	Hanging baskets 8 inches or more	24	\$.00	26	\$.00

PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME	CODE	PLANT NAME	CODE
Aglaonema	1134	Epipremnum (Pothos)	1246	Palms	1368	Spathiphyllum	1442
Cacti and succulents	1182	Ferns	1274	Philodendron	1386	Syngonium (Nepthytis)	1470
Dieffenbachia	1190	Ficus	1302	Schefflera (Brassia and/or Schefflera)	1414	Other foliage plants — Specify	1498
Dracaena	1218	Hedera (ivy)	1330				

Part B — Complete this part for FOLIAGE PLANTS FOR INDOOR OR PATIO USE grown for sale in 1988. Enter the area in production (including walkways, aisles, etc.) in 1988, total value of sales in 1988 for potted foliage plants, total value of wholesale sales in 1988 for potted foliage plants, and intentions for production in 1989 for the plants listed.

	Total area in production in 1988 (Square feet)	Total cost for unfinished foliage plants and rooted foliage cuttings purchased from others in 1988 for "Growing On" (Dollars)	Total value of sales (wholesale and retail) of potted foliage plants grown by you in 1988 (Dollars)	Total value of wholesale sales of potted foliage in 1988 (Dollars)	Intentions for potted foliage production in 1989 (Square feet)
1. Foliage plants — POTS	X9112	X9114	X9113	X9115	X9116
		\$.00	\$.00	\$.00	
2. Foliage plants — HANGING BASKETS					X9111

Intentions for production in 1989 (Number of baskets)

SECTION 7 Were any **UNFINISHED PLANT MATERIALS** (For example, cuttings, liners, plug seedlings, tissue cultured plantlets, prefinished plants, etc.) grown/produced for sale on this place in 1988? (Exclude material for your own use.)

0007 1 ☐ YES — Complete this section by entering the plant name and code from the list below. Report the number sold and the value of sales by type of unfinished plant material. Also, report plant material sold to others for further growing on as prefinished plants. If more space is needed, list additional plants on a separate sheet.

2 ☐ NO — Go to section 8.

Type of unfinished plant material	Total sales		Wholesale sales only	
	Number sold	Dollars only	Number sold	Dollars only
Cuttings	1	\$.00	2	\$.00
Liners	4	\$.00	6	\$.00
Plug seedlings	8	\$.00	10	\$.00
Prefinished plants	12	\$.00	14	\$.00
Tissue cultured plantlets	16	\$.00	18	\$.00
Cuttings	1	\$.00	2	\$.00
Liners	4	\$.00	6	\$.00
Plug seedlings	8	\$.00	10	\$.00
Prefinished plants	12	\$.00	14	\$.00
Tissue cultured plantlets	16	\$.00	18	\$.00
Cuttings	1	\$.00	2	\$.00
Liners	4	\$.00	6	\$.00
Plug seedlings	8	\$.00	10	\$.00
Prefinished plants	12	\$.00	14	\$.00
Tissue cultured plantlets	16	\$.00	18	\$.00
Cuttings	1	\$.00	2	\$.00
Liners	4	\$.00	6	\$.00
Plug seedlings	8	\$.00	10	\$.00
Prefinished plants	12	\$.00	14	\$.00
Tissue cultured plantlets	16	\$.00	18	\$.00
Cuttings	1	\$.00	2	\$.00
Liners	4	\$.00	6	\$.00
Plug seedlings	8	\$.00	10	\$.00
Prefinished plants	12	\$.00	14	\$.00
Tissue cultured plantlets	16	\$.00	18	\$.00
Cuttings	1	\$.00	2	\$.00
Liners	4	\$.00	6	\$.00
Plug seedlings	8	\$.00	10	\$.00
Prefinished plants	12	\$.00	14	\$.00
Tissue cultured plantlets	16	\$.00	18	\$.00
Cuttings	1	\$.00	2	\$.00
Liners	4	\$.00	6	\$.00
Plug seedlings	8	\$.00	10	\$.00
Prefinished plants	12	\$.00	14	\$.00
Tissue cultured plantlets	16	\$.00	18	\$.00
Cuttings	1	\$.00	2	\$.00
Liners	4	\$.00	6	\$.00
Plug seedlings	8	\$.00	10	\$.00
Prefinished plants	12	\$.00	14	\$.00
Tissue cultured plantlets	16	\$.00	18	\$.00

PLANT NAME — Potted flowering	CODE	PLANT NAME — Bedding/ Garden	CODE	PLANT NAME — Cut flower	CODE	PLANT NAME — Nursery	CODE	PLANT NAME — Foliage	CODE
African violet (Saintpaulia)	1526	Chrysanthemum, hardy/ garden	1726	Carnation, standard	1846	Broad-leaf evergreens	2046	Aglaonema	2266
Azalea	1546	Geranium from cuttings	1746	Carnation, miniature	1866	Citrus and subtropicals	2066	Dieffenbachia	2286
Chrysanthemum	1566	Geranium from seed or seedlings	1766	Chrysanthemum, standard	2654	Deciduous flowering trees	2086	Dracaena	2306
Gerbera daisy	1586	Impatiens, New Guinea	1786	Chrysanthemum, pompon	1886	Deciduous fruit and nut trees	2106	Epipremnum (Pothos)	2326
Hibiscus	1606	Rose	1806	Gerbera daisy	1906	Deciduous shade trees	2126	Ferns	2346
Kalanchoe	1626	Other bedding/garden plants — Specify	1826	Orchid, cattleya	1926	Deciduous shrubs	2146	Ficus	2366
Lily	1646			Orchid, cymbidium	1946	Herbaceous plants	2166	Palms	2386
Poinsettia	1666			Orchid, other	1966	Narrow-leaf evergreens	2186	Philodendron	2406
Rose	1686			Rose, hybrid tea	1986	Roses	2206	Schefflera (Brassia and/or Schefflera)	2426
Other potted flowering plants — Specify	1706			Rose, sweetheart	2006	Vines (landscape)	2226	Spthiphyllum	2446
				Other cut flowers — Specify	2026	Other nursery lining-out stock — Specify	2246	Synonium (Nepthytis)	2466
								Other foliage plants — Specify	2486

SECTION 8 Was SOD grown for sale on this place in 1988?					
0008 1 <input type="checkbox"/> YES — Complete this section.					
2 <input type="checkbox"/> NO — Go to section 9.					
Acres harvested		Value of gross sales in 1988 (Dollars only)			
Whole acres	Tenths	Total	Wholesale sales		
2506	/10	2507	.00	2508	.00
1. Sod grown for sale					
SECTION 9 Were any DRIED BULBS, CORMS, RHIZOMES, OR TUBERS (TO BE USED FOR FORCING) grown for sale on this place in 1988?					
0009 1 <input type="checkbox"/> YES — Complete this section. Report finished forced products in appropriate sections 1 and/or 3.					
2 <input type="checkbox"/> NO — Go to section 10.					
Acres harvested		Value of gross sales in 1988 (Dollars only)			
Whole acres	Tenths	Total	Wholesale sales		
2509	/10	2510	.00	2511	.00
1. Dried bulbs, corms, rhizomes, or tubers grown for sale					
SECTION 10 Were any CULTIVATED MUSHROOMS grown for sale on this place in 1988? — See information sheet.					
0010 1 <input type="checkbox"/> YES — Complete this section.					
2 <input type="checkbox"/> NO — Go to section 11.					
Pounds produced		Bed area (Square feet)		Value of gross sales in 1988 (Dollars only)	
Total		Wholesale sales			
2512	2513	2514	.00	2515	.00
1. Cultivated mushrooms					
SECTION 11 Were any GREENHOUSE PRODUCED VEGETABLES, VEGETABLE TRANSPLANTS FOR COMMERCIAL TRUCK CROP PRODUCTION OR VEGETABLE SEEDS grown/produced for sale on this place in 1988?					
0011 1 <input type="checkbox"/> YES — Complete parts A, B, and C below. Report bedding vegetable plants in section 2.					
2 <input type="checkbox"/> NO — Go to section 12.					
Part A — GREENHOUSE PRODUCED VEGETABLES — Enter the information below. Report bedding vegetable plants in section 2. If more space is needed, list additional plants on a separate sheet.					
<input type="checkbox"/> None					
Square feet under glass or other protection used in 1988		Value of gross sales in 1988 (Dollars only)			
Total		Wholesale sales			
2516	2517	2518	.00	2519	.00
2518	2519	2520	.00	2521	.00
2522	2523	2524	.00	2525	.00
2526	2527	2528	.00	2529	.00
2530	2531	2532	.00	2533	.00
1. Cucumbers					
2. Lettuce					
3. Peppers					
4. Tomatoes					
5. Other greenhouse produced vegetables — Specify <input checked="" type="checkbox"/>					
Part B — VEGETABLE TRANSPLANTS FOR COMMERCIAL TRUCK CROP PRODUCTION — Enter the information below. Report bedding vegetable plants in section 2. If more space is needed, list additional plants on a separate sheet.					
<input type="checkbox"/> None					
Area used in 1988		Value of gross sales in 1988 (Dollars only)			
Square feet under glass or other protection	Acres in the open		Total		Wholesale sales
Whole acres	Tenths				
2531	2532	/10	2533	.00	2534
2535	2536	/10	2537	.00	2538
2539	2540	/10	2541	.00	2542
2543	2544	/10	2545	.00	2546
1. Broccoli, cabbage, cauliflower, and other crucifers					
2. Peppers, sweet or hot					
3. Tomatoes					
4. Other vegetable transplants for commercial truck crop production — Specify <input checked="" type="checkbox"/>					
Part C — VEGETABLE SEEDS — Enter the information below.					
<input type="checkbox"/> None					
Area used in 1988		Value of gross sales in 1988 (Dollars only)			
Square feet under glass or other protection	Acres in the open		Total		Wholesale sales
Whole acres	Tenths				
2547	2548	/10	2549	.00	2550
1. Vegetable seeds					
SECTION 12 Were any FLOWER SEEDS produced for sale on this place in 1988?					
0012 1 <input type="checkbox"/> YES — Complete this section.					
2 <input type="checkbox"/> NO — Go to section 13.					
Acres grown		Production (Pounds of clean seed)		Value of gross sales in 1988 (Dollars only)	
Whole acres	Tenths	Total		Wholesale sales	
2551	/10	2552	2553	.00	2554
2555	/10	2556	2557	.00	2558
2559	/10	2560	2561	.00	2562
2563	/10	2564	2565	.00	2566
2567	/10	2568	2569	.00	2570
2571	/10	2572	2573	.00	2574
2575	/10	2576	2577	.00	2578
2579	/10	2580	2581	.00	2582
2583	/10	2584	2585	.00	2586
1. Alyssum					
2. Delphinium					
3. Marigold					
4. Nasturtium					
5. Petunia					
6. Stock					
7. Sweet pea					
8. Verbena					
9. All other flower seeds — Specify <input checked="" type="checkbox"/>					

SECTION 13 LAND, STRUCTURES, EQUIPMENT, AND IRRIGATION						Dollars only					
1. What is your best estimate of the current market value of land and buildings owned and/or rented by this business on December 31, 1988?						2587	\$.00				
2. What is the estimated market value of all machinery and equipment usually kept on this place and used for the horticultural operations?						2588	\$.00				
3. Did you have land area covered by greenhouses in 1988?											
2589 1 <input type="checkbox"/> YES — Complete items a through e below. (Report area only once. Include aisles, walkways, etc.). 2 <input type="checkbox"/> NO — Go to item 4 below.						None					
a. How much of the greenhouse area was under glass?						2590	Square feet				
b. How much of the greenhouse area was under fiberglass and other rigid plastic covers?						2591	Square feet				
c. How much of the greenhouse area was covered by plastic film (single or double cover)?						2592	Square feet				
d. TOTAL LAND AREA COVERED BY GREENHOUSES — Should equal the sum of a + b + c.						2593	Square feet				
e. How much of the greenhouse area was new greenhouse space erected during 1988?						2594	Square feet				
4. How much "other covered space" — slat, saran, shade houses, and other covers — was used for the production of florist crops (Report area only once. Include aisles, walkways, etc.)?						2574	Square feet				
5. How many open ground acres were used for the production of florist crops (Report area only once. Include aisles, walkways, etc.)?						2575	Acres Tenths /10				
6. Did you produce potted flowering plants, bedding/garden plants, cut flowers, cut cultivated florist greens, nursery plants, or foliage plants in 1988?											
2595 1 <input type="checkbox"/> YES — Complete items a through d below. 2 <input type="checkbox"/> NO — Go to item 7 below.											
Report area for each horticultural category listed below. For example, if two crops of bedding/garden plants were harvested from 1,000 square feet, report 1,000 square feet in the "bedding/garden plants" category. If 500 square feet of potted flowering plants were also grown in the same area, report 500 square feet in the "potted flowering plants" category and 1,000 square feet in the "bedding/garden plants" category.											
Potted flowering plants		Bedding/garden plants (include vegetable type bedding plants.)		Cut flowers		Cut cultivated florist greens		Nursery crops (include propagating area.)		Foliage plants	
2596		2597		2598		2599		2600		2601	
Sq. ft.		Sq. ft.		Sq. ft.		Sq. ft.		Sq. ft.		Sq. ft.	
2602		2603		2604		2605		2606		2607	
Sq. ft.		Sq. ft.		Sq. ft.		Sq. ft.		Sq. ft.		Sq. ft.	
2608		2609		2610		2611		2612		2613	
Whole acres Tenths		Whole acres Tenths		Whole acres Tenths		Whole acres Tenths		Whole acres Tenths		Whole acres Tenths	
/10		/10		/10		/10		/10		/10	
2614		2615		2616		2617		2618		2619	
/10		/10		/10		/10		/10		/10	
7. Did you irrigate land in 1988? (Exclude land covered by greenhouses.)											
2620 1 <input type="checkbox"/> YES — Complete items a through c below. 2 <input type="checkbox"/> NO — Go to section 14.											
None											
a. How many acres were irrigated for the outdoor production of nursery plants?											
2621											
/10											
b. How many acres were irrigated for the outdoor production of sod?											
2622											
/10											
c. How many acres were irrigated for the production of other horticultural crops grown in the open?											
2623											
/10											
SECTION 14 SALES IN 1988 — Report figures to the nearest WHOLE DOLLAR. If book figures are not available, give your best estimate.											
1. What were your gross sales during 1988 of all greenhouse plants, outdoor-grown floricultural plants, and nursery plants grown — potted flowering plants, bedding/garden plants, cut flowers, cut cultivated florist greens, nursery plants, foliage plants, unfinished, prefabricated, and starter florist plants, greenhouse vegetables, vegetable transplants for commercial truck crop production, vegetable and flower seeds, sod, dried bulbs, corms, rhizomes, tubers, and cultivated mushrooms? — Do not include the sale of fertilizer, lime, spray materials, garden tools, etc.											
None											
2624											
\$.00											
2625											
\$.00											
2626											
\$.00											
2627											
\$.00											
SECTION 15 SELECTED PRODUCTION EXPENSES FOR THE TOTAL HORTICULTURAL OPERATION IN 1988 — Report figures to the nearest WHOLE DOLLAR. If book figures are not available, give your best estimate.											
None											
2628											
\$.00											
2629											
\$.00											
2630											
\$.00											
2631											
\$.00											

SECTION 16

GREENHOUSE, NURSERY, AND OTHER HORTICULTURAL LABOR USED ON THIS PLACE IN 1988 — Exclude employees not directly involved in growing operation, e.g., garden center clerks.

None

Number of employees

Gross wages paid (Dollars only)

1. What was the total of the gross wages paid, including employer's cost for social security, workman's compensation, insurance premiums, pension plans, etc., for this business during 1988?

2632

\$

.00

2. Of the hired workers in 1988, how many were —

a. Part-time employees (worked less than 150 days)?

2633

\$

.00

b. Full-time employees (worked 150 days or more)?

2634

\$

.00

SECTION 17

TYPE OF HORTICULTURAL OPERATION AND LOCATION OF GROWING OPERATION(S) IN 1988

1. Type of ownership — Mark (X) the appropriate box.

2637

☐ Individual proprietor

☐ Partnership

☐ Corporation

☐ Other — Specify _____

2. Location of growing operation(s) — Give the county location of the growing operation(s) included in this report form.

	County	State	Percent of sales
Principal county →			2638
Other counties {			2639
			2640
			2641

SECTION 18

REMARKS AND EXPLANATIONS — If you reported no sales in sections 1 through 12, please explain here the type of horticultural enterprise, if any, you operated in 1988. Also add any other remarks here. Use additional sheet(s), if necessary.

SECTION 19

PERSON COMPLETING THIS REPORT — Please print.

Name

Date

Address (Number and street, city, State, ZIP Code)

Telephone

Area code

Number

FORM 88-A19.2 (11-7-88)

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256 APPENDIX F

1987 CENSUS OF AGRICULTURE

FORM 88-A19.2 (I)
(11-9-88)

INFORMATION SHEET **1989 COMMERCIAL HORTICULTURE SURVEY**

1. General

A horticultural establishment is an operation growing and selling horticultural products (greenhouse products, outdoor-grown floricultural products, nursery products, mushrooms, and/or sod) during 1988.

Refer to the instructions below for completing your report form. The enclosed census report form is being used by producers and growers throughout the United States. Because it is meant for use in all parts of the country, it may contain sections and inquiries which do not apply to you. In this case, mark the "No" or "None" box and go on to the next item or section.

If you did not operate a horticultural operation or all of your facilities were idle in 1988, briefly explain your situation in section 18 and complete section 19.

2. If You Receive More Than One Report Form

If you had multiple horticulture operations, you should complete a report form for each separate and distinct production unit, i.e., each individual greenhouse, nursery, etc., or combinations of establishments, etc., for which you maintained separate records of operating expenses, sales, inventories, and production. Return any duplicate or extra report forms in the same envelope with the report(s) you complete so we can remove the extra addresses from our mail list.

3. Partnership Operations

A partnership is an association of two or more persons who have agreed, informally or under legal contract, on the amount of their contributions and profit distributions.

Complete only ONE report form for a partnership operation, including all partners' shares on the same report form. If two or more report forms were received for the partnership, see instruction 2 above.

Partners who also had separate operations of their own should complete report forms for those separate operations. For definition of a partnership, see the instructions for section 17.

4. How To Enter Your Responses On The Report Form

Please enter your answers in the proper spaces and in the units requested, i.e., dollars, pot size, pounds, etc. Write any explanations outside the answer spaces or on a separate sheet of paper. Enter whole numbers unless the "Tenths" column is provided, such as reporting acres of flower seeds in section 12. If you have 1/2 of an acre, convert to the nearest tenths. For example, convert 1/2 to 5/10.

If you do not have exact figures, please give your best estimates. You may indicate "EST." (for estimated) beside the answer if you like. For all dollar items, we need only whole dollars; cents are not required.

5. Completing The Report Form

► **Sections 1 to 12 — Greenhouse Products, Outdoor-Grown Floriculture Products, Nursery Products, Mushrooms, and Sod**

The units of measure on the report form are those most commonly used throughout the country. If you used a different unit of measure, please specify the unit and size or convert your figure to the unit requested.

When reporting value of sales, do not include products bought for resale without additional growing. Do not report sales of noncrop garden center items, i.e., chemicals, fertilizers, etc. Report the total value of sales (wholesale or retail) for those products grown on this place and sold directly from this place. Report only the wholesale value of any products sold through a retail outlet which was not on this place or if the retail outlet was considered a separate business establishment. Estimates are acceptable if exact figures are not available.

To Report Plants in Sections 1 to 7

In each of these sections, report any of the plants which you grew that are listed in that section.

1. Find the plant name and the corresponding code number in the list in that section.
2. Enter the plant name and code in the space provided in that section.
3. Enter the information requested in each column. In sections 1, 2, and 6, enter the information on the proper line for each type of container. In section 7, enter the information on the proper line to identify each type of unfinished plant material.
4. If additional columns are needed, use a separate sheet of paper.

To Report Plants in Sections 8 to 12

In each of these sections, enter the information requested for any of the specified plants which you grew that are listed in that section.

1. Enter the information requested in each column for the specified plants that you grew.
2. If additional columns are needed, use a separate sheet of paper.

If reporting in Section 8 — Sod, report the total acres of sod harvested from this place in 1988 and value of sales of the sod. Acreage planted to grass intended for sale as sod in subsequent years and not harvested in 1988 should not be reported.

If reporting in Section 10 — Cultivated Mushrooms, report the square feet of bedspace or other space, such as trays, used for mushrooms in 1988 only once even though the space was harvested multiple times or more than one crop was grown during the year. For example, if two crops of mushrooms were harvested from an area of 20,000 square feet of bedspace, report 20,000 square feet of area used. Note in the margin of the report form the number of times mushrooms were harvested from that area. Also include in this section gourmet varieties of mushrooms, such as shitake, which were harvested in 1988.

► **Section 13 — Land, Structures, Equipment, and Irrigation**

The estimated market value in item 2, refers to ALL machinery and equipment kept on this place and used for the horticultural business. The value should be an estimate of what the machinery and equipment would sell for in its present condition, not the replacement or depreciated value.

► **Section 14 — Sales**

In item 1, report the value received during 1988, regardless of the year in which the products were harvested. Give gross values (before deducting taxes and expenses). Report total values for a product or products sold in 1988 even though full payment may not have been received in 1988.

► **Section 15 — Selected Production Expenses**

Include expenses paid by you and by anyone else for the production of greenhouse products, outdoor-grown floricultural products, nursery products, mushrooms, and sod on this place. Also include 1988 expenses incurred even if not paid in 1988. Please give estimates if you do not know the exact figures.

► **Section 16 — Horticultural Labor**

Expenditures for hired labor should include gross wages or salaries, commissions, paid bonuses, and leave pay BEFORE DEDUCTIONS, PLUS THE VALUE OF BENEFITS PAID BY YOU, i.e., social security, taxes, unemployment compensation insurance, etc. Do not include room and board, house rent, or other items paid in kind. Exclude employees not directly involved in the growing operation, i.e., garden center clerks.

► **Section 17 — Type of Horticultural Operation and Location of Growing Operation(s)**

In item 1, use the following definitions to assist you in determining the type of ownership for your operation:

Individual Proprietor or Family Operation — Defined as a business organization controlled and operated by an individual (sole proprietor). Include family operations that are not incorporated and not operated under a partnership agreement.

Partnership — Defined as two or more persons who have agreed on the amount of their contribution (capital and effort) and the distribution of profits. Co-ownership of land by husband and wife or joint filing of income tax forms by husband and wife does not constitute a partnership, unless a specific agreement to share contributions, decisionmaking, profits, and liabilities exists. Producing products under contract or under share rental agreements does not constitute partnerships.

Corporation — Defined as a legal entity or artificial person created under the laws of a State to carry on a business; does not include cooperatives. Include family operations that are incorporated.

Other — If your operation did not fall into the provided categories, mark (X) this box and describe the type of ownership that this operation existed under during 1988.

In item 2, report the county or counties where the growing activities for the operation represented by this report form occurred in 1988. If the growing operations occurred in more than one county, list all of the counties involved and estimate the percent of the total gross sales produced in each county. Check the figures to ensure that the percentages sum to one hundred percent.

► **Section 18 — Remarks and Explanations**

Enter in this section an explanation if you did not report any sales in sections 1 through 12. Also add any other remarks or explanations here.

► **Section 19 — Person Completing This Report Form**

Print the name, address, and telephone number of the person completing this report form. Also, enter the date in the space provided when the report form is completed.

We estimate that it will take from 10 to 30 minutes to complete this report form, with 24 minutes being the average time. If you have any comments regarding these estimates or any other aspect of this census, send them to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

1988 Farm and Ranch Irrigation Survey, Report Form 88-A62

DUE DATE: 30 DAYS AFTER RECEIPT OF FORM

FORM **88-A62**
(10-3-88)

1988 FARM AND RANCH IRRIGATION SURVEY

COMPLETE AND RETURN TO

Bureau of the Census
1201 East Tenth Street
Jeffersonville, IN 47133

NOTE

Consider as irrigated all land watered by any artificial or controlled means — sprinklers, furrows or ditches, spreader dikes, etc. Include preplant, partial, supplemental, or semi-irrigation. Include irrigation of pastureland, hayland, nonbearing orchardland, and cropland from which no crops were harvested in 1988. See additional instructions on the separate instruction sheet.

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

NOTICE — Response to this inquiry is required by law (Title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS **CONFIDENTIAL**. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are **immune from legal process**.

OMB No. 0607-0634; Approval Expires 12/90

Please mention the Census File Number (the 11-digit number in the upper left corner of the address label) if you write to us about this report.
(Please correct any error in name, address, and ZIP Code)

CENSUS USE ONLY	010	012	014	016	018	020	021	022
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Item 1 Was any land on the farm or ranch you operated irrigated at any time in 1988?

024 1 ☐ YES — Complete items 2 through 14 and 16 2 ☐ NO — Skip to item 15

Item 2 ACREAGE IN 1988

	None	Number of acres
a. All land owned	<input type="checkbox"/>	025
b. All land rented or leased from others, including land worked on shares, used rent free, in exchange for services, payments of taxes, etc. Include leased Federal, State, and railroad land. (Do not include land used on a per-head basis under a grazing permit.)	<input type="checkbox"/>	026
c. All land rented or leased to others, including land worked on shares by others and land subleased. (Do not include acres enrolled in the Conservation Reserve Program as land rented to others.)	<input type="checkbox"/>	027
d. TOTAL ACRES IN THIS PLACE — ADD acres owned (item a) and acres rented (item b), then SUBTRACT acres rented to others (item c), and enter your answer in this space.		028

Item 3 LAND USE IN 1988

1. Distribute all acres in this place in column (1) and all irrigated land in this place in column (2) among items a through d. If the same land had more than one use in 1988, report that land only once in the first use listed below that applies. (Please refer to the INSTRUCTION SHEET.)

	None	Number of acres (1)	None	Number of acres irrigated in 1988 (2)
a. Cropland				
(1) Cropland harvested — Include all land from which crops were harvested or hay was cut, and all land in orchards, citrus groves, and vineyards	<input type="checkbox"/>	029	<input type="checkbox"/>	030
(2) Cropland used only for pasture or grazing — Include rotation pasture and grazing land that could have been used for crops without additional improvements	<input type="checkbox"/>	031	<input type="checkbox"/>	032
(3) Other cropland — Include cropland used for cover crops, cropland on which all crops failed, cropland in cultivated summer fallow, and cropland idle	<input type="checkbox"/>	033	<input type="checkbox"/>	034
b. Woodland — Include woodland pastured and woodland not pastured	<input type="checkbox"/>	035		
c. Other pastureland and rangeland — Include any pastureland other than cropland and woodland pasture	<input type="checkbox"/>	037	<input type="checkbox"/>	038
d. All other land — Include any land not reported above. Include land in house lots, barn lots, corals, ponds, roads, wasteland, etc.	<input type="checkbox"/>	039		
e. TOTAL ACRES — Please sum columns 1 and 2 and enter the totals in these spaces. (Acres "IN THIS PLACE" should be equal to item 2d above.)		041 "IN THIS PLACE"		042 IRRIGATED
f. How many of the acres in 3e have been laser leveled?	<input type="checkbox"/>			040

2. Irrigated and non-irrigated yields from selected crops harvested from this place in 1988

(Please refer to the INSTRUCTION SHEET)

	None	Irrigated crop Include preplant and supplemental or semi-irrigation				Non-irrigated crop			
		Irrigated acres harvested	Average yield per irrigated acre harvested	Estimated quantity of water applied per acre		Non-irrigated acres harvested	Average yield per non-irrigated acre harvested		
				Average acre-feet	or	Total inches			
a. Corn (field) for grain or seed	<input type="checkbox"/>	050	1 Bushels, shelled	2	/10	or	3	4	5 Bushels, shelled
b. Corn (field) for silage or green chop	<input type="checkbox"/>	060	1 Tons, green	2	/10	or	3	4	5 Tons, green
c. Sorghum for grain or seed	<input type="checkbox"/>	070	1 Bushels	2	/10	or	3	4	5 Bushels
d. Wheat for grain	<input type="checkbox"/>	080	1 Bushels	2	/10	or	3	4	5 Bushels
e. Barley for grain	<input type="checkbox"/>	090	1 Bushels	2	/10	or	3	4	5 Bushels
f. Soybeans for beans	<input type="checkbox"/>	100	1 Bushels	2	/10	or	3	4	5 Bushels
g. Beans, dry edible	<input type="checkbox"/>	110	1 Cwt.	2	/10	or	3	4	5 Cwt.
h. Rice	<input type="checkbox"/>	120	1 Cwt.	2	/10	or	3	4	
i. Other small grains (oats, rye, etc.)	<input type="checkbox"/>	130		2	/10	or	3	4	
j. Alfalfa and alfalfa mixtures for hay or dehydrating	<input type="checkbox"/>	140	1 Tons, dry	2	/10	or	3	4	5 Tons, dry
k. All other hay including wild or native hay	<input type="checkbox"/>	150	1 Tons, dry	2	/10	or	3	4	5 Tons, dry
l. Peanuts for nuts	<input type="checkbox"/>	160	1 Pounds	2	/10	or	3	4	5 Pounds
m. Cotton	<input type="checkbox"/>	170	1 Lbs. lint	2	/10	or	3	4	5 Lbs. lint
n. Sugar beets for sugar	<input type="checkbox"/>	180	1 Tons	2	/10	or	3	4	5 Tons
o. Tobacco, all types	<input type="checkbox"/>	190	1 Pounds	2	/10	or	3	4	5 Pounds
p. Potatoes, Irish	<input type="checkbox"/>	200	1 Cwt.	2	/10	or	3	4	5 Cwt.
q. Land from which vegetables were harvested	<input type="checkbox"/>	210		2	/10	or	3	4	
r. Berries	<input type="checkbox"/>	220		2	/10	or	3	4	
s. Land in bearing and nonbearing fruit orchards, citrus or other groves, vineyards, and nut trees	<input type="checkbox"/>	230		2	/10	or	3	4	
t. All other crops — Specify	<input type="checkbox"/>			2	/10	or	3	4	
u. Pastureland, all types	<input type="checkbox"/>			2	/10	or	3	4	

Item 4 METHOD OF WATER DISTRIBUTION IN 1988 — Report acres irrigated by each type of FIELD distribution system listed below. If same land was irrigated by more than one method, report acres irrigated by each method used. (Please refer to the INSTRUCTION SHEET.)

		None	Acres irrigated	
a. Sprinkler irrigation				
(1) Center pivot				
a. High pressure (60 PSI or greater)		<input type="checkbox"/>	570	
b. Low pressure (under 60 PSI)		<input type="checkbox"/>	571	
(2) Mechanical-move				
a. Low Energy Precision Application (LEPA) — Application of water below leaf canopy		<input type="checkbox"/>	572	
b. All other mechanical move systems		<input type="checkbox"/>	573	
(3) Hand move		<input type="checkbox"/>	243	
(4) Solid set and permanent system		<input type="checkbox"/>	244	
b. Gravity irrigation				
(1) Gated pipe		<input type="checkbox"/>	245	
(2) Open ditch, siphon tubes		<input type="checkbox"/>	246	
(3) Flooding from underground pipe with valves, ditches, canals, dikes, and any other gravity method (excluding methods reported above)		<input type="checkbox"/>	247	
c. Drip or trickle irrigation		<input type="checkbox"/>	248	
d. Subirrigation (water applied beneath the ground, maintenance of water table at a predetermined depth)		<input type="checkbox"/>	249	

Item 5 METHOD OF WATER DISTRIBUTION, IRRIGATION FREQUENCY, AND APPLICATION OF COMMERCIAL FERTILIZERS AND PESTICIDES IN IRRIGATION WATER BY SELECTED CROPS IN 1988
(Please refer to the INSTRUCTION SHEET)

	None	Method of water distribution				Application of commercial fertilizer or pesticides in irrigation water		How many times were crops irrigated?				
		Sprinkler	Gravity	Drip or trickle	Sub-irrigation	Commercial fertilizer	Pesticide application	Less than 3	3 to 7	8 or more		
a. Corn (field) for grain or seed	<input type="checkbox"/>	250	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	800	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
b. Corn (field) for silage or green chop	<input type="checkbox"/>	260	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	803	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
c. Sorghum for grain or seed	<input type="checkbox"/>	270	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	808	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
d. Wheat for grain	<input type="checkbox"/>	280	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	809	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
e. Barley for grain	<input type="checkbox"/>	290	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	812	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
f. Soybeans for beans	<input type="checkbox"/>	300	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	815	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
g. Beans, dry edible	<input type="checkbox"/>	310	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	818	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
h. Rice	<input type="checkbox"/>	320	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	821	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
i. Other small grains (oats, rye, etc.)	<input type="checkbox"/>	330	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	824	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
j. Alfalfa and alfalfa mixtures for hay or dehydrating	<input type="checkbox"/>	340	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	827	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
k. All other hay including wild or native hay	<input type="checkbox"/>	350	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	830	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
l. Peanuts for nuts	<input type="checkbox"/>	360	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	833	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
m. Cotton	<input type="checkbox"/>	370	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	836	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
n. Sugar beets for sugar	<input type="checkbox"/>	380	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	839	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
o. Tobacco, all types	<input type="checkbox"/>	390	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	842	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
p. Potatoes, Irish	<input type="checkbox"/>	400	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	845	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
q. Land from which vegetables were harvested	<input type="checkbox"/>	410	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	848	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
r. Berries	<input type="checkbox"/>	420	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	851	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
s. Land in bearing and nonbearing fruit orchards, citrus or other groves, vineyards, and nut trees	<input type="checkbox"/>	430	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	854	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
t. All other crops	<input type="checkbox"/>	440	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	857	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
u. Pastureland, all types	<input type="checkbox"/>	450	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	860	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>

Item 6 ACRES IRRIGATED AND ESTIMATED QUANTITY OF WATER USED IN 1988 BY SOURCE
Report quantity of water in the unit or units of measure most convenient for you. If measurements are not available, give your best estimate for quantity of water used. If average acre-feet cannot be estimated, give combined pumping capacity and duration in days, or total depth of water applied.

a. Ground water from a well or wells located on this farm or another farm.

Estimated quantity of water used in 1988 — Report in unit most convenient for you

(1) Average acre-feet per acre irrigated (one acre-foot covers one acre one foot deep) ... 445 / 10

OR

(2) Gallons of water applied and duration

OR

(3) Total inches applied — Include all applications

b. On-farm surface supply not controlled by a water supply organization (stream, drainage ditch, lake, pond, spring, or reservoir on or adjacent to this farm).

Estimated quantity of water used in 1988 — Report in unit most convenient for you

(1) Average acre-feet per acre irrigated (one acre-foot covers one acre one foot deep) ... 450 / 10

OR

(2) Gallons of water applied and duration

OR

(3) Total inches applied — Include all applications

Item 6

ACRES IRRIGATED AND ESTIMATED QUANTITY OF WATER USED IN 1988 BY SOURCE — Continued

c. Off-farm water suppliers (U.S. Bureau of Reclamation; irrigation district; mutual, private, cooperative, or neighborhood ditches; commercial company or municipal or community water system)?

None — Go to item 7

454

Acres irrigated

455

Total acre-feet

456

Total cost of water received — Include all assessments, fees, or charges paid to water suppliers

\$.00

Dollars only

675

a. If water was received at no cost, check

1 ☐ No cost

457

(3) Did you allow any of your regular allocation of water to be used by others in 1988?

1 ☐ Yes — Enter number of acre-feet

458

2 ☐ No

Item 7

NUMBER OF IRRIGATION WELLS ON THIS PLACE IN 1988, WELL DEPTH, AND PUMPING CAPACITY

None

460

Number of wells used

a. Wells used in 1988

Enter number of feet

Depth of well	Depth to water at start of irrigation season	Pumping depth (Depth to bowls or impellers)	Pump capacity (Discharge from well) GPM	Operating pressure PSI
461	1	2	3	676
465	1	2	3	677
469	1	2	3	678
473	1	2	3	679
477	1	2	3	680
Average depth of well				
481	1	2	3	681

b. Wells not used in 1988, but capable of being used (Exclude abandoned wells.)

None

495

Number of wells not used

683

1 ☐ Yes 2 ☐ No

CENSUS USE ONLY

488

c. Does any part of your system contain back-flow-prevention devices?

1 ☐ Yes 2 ☐ No

Item 8

PUMPS, OTHER THAN WELL PUMPS, ON THIS PLACE IN 1988

Report all pumps on this place, whether they are in service or not, USED FOR —

None

Number of pumps	Average discharge capacity GPM
490	491
492	493
494	

a. Tailwater pits

490

b. Ponds, lakes, reservoirs, rivers, etc.

492

c. Relifting or boosting water within system

494

Item 9

ENERGY USE ON THIS PLACE IN 1988 FOR PUMPING IRRIGATION WATER BY POWER SOURCE — Include 1988 fuel adjustment cost. (Please refer to the INSTRUCTION SHEET.)

None

	Number of wells or pumps powered by type of energy used	Total cost of fuel used		Total quantity of fuel used	Acres irrigated by type of energy used
		Dollars	Cents		
a. Electricity	495	496	00	684 Kwh	497
b. Natural gas	498	499	00	685 Mcf	500
c. LP gas, propane, or butane	501	502	00	686 Gal.	503
d. Diesel fuel	504	505	00	687 Gal.	506
e. Gasoline and gasohol	507	508	00	688 Gal.	509

Item 10

MAINTENANCE AND REPAIR COSTS FOR IRRIGATION EQUIPMENT AND FACILITIES ON THIS PLACE IN 1988

(Please refer to the INSTRUCTION SHEET)

Include expenditures incurred in day-to-day operations; all other expenditures should be reported in item 11.

Amount spent for maintenance and repairs of irrigation equipment and facilities in 1988, including maintenance of on-farm ditches. Include landlord's share — Give estimate if actual figures are unavailable.

None

Dollars

Cents

510

\$

00

Item 11

EXPENDITURES IN 1988 FOR IRRIGATION WELLS, PUMPS, EQUIPMENT, AND OTHER IRRIGATION FACILITIES ON THIS PLACE

(Please refer to the INSTRUCTION SHEET)

Report expenditures in 1988 for irrigation facilities on this place whether made by you or someone else. Include landlord's share — Give estimates if actual figures are unavailable.

None

	Total expenditures		Purpose of expenditure Mark (X) principal purpose		
	Dollars	Cents	Replacement	Conservation	New expansion
a. Purchase of irrigation equipment and machinery — Include sprinklers, pipes, siphons, nozzles, pumps, motors, engines, etc., at net cost	511	00	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
b. New well construction or deepening of existing wells — Include drilling costs, cost of casing, and any costs to prepare well for installation of pump. (Do not include cost of pumps and motors.)	515	00	1 <input type="checkbox"/>		3 <input type="checkbox"/>
c. Construction or improvement of permanent storage and distribution systems (dams, ponds, reservoirs, permanent ditches, canals, flumes, etc.)	519	00	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
d. Land clearing and leveling for irrigation purposes	523	00		524	3 <input type="checkbox"/>

Item 12 IRRIGATION PRACTICES IN 1988**a. How did you decide when to apply water in 1988? — Mark (X) all that apply**

- 527 ☐ 1 Condition of crop (observation)
☐ 2 Feel of the soil
☐ 3 Use of soil moisture sensing devices such as moisture blocks or tensiometers
☐ 4 Use of commercial scheduling service
☐ 5 Media reports on crop-water needs (newspapers, radio, and TV)
☐ 6 Water delivered by irrigation organization in turn (no choice by water user)
☐ 7 By calendar schedule
☐ 8 Other — Specify _____

b. Did you have to discontinue irrigation during 1988 long enough to AFFECT crop yields?

- 669 ☐ 1 Yes — If "Yes", answer the following. ☐ 2 No — Go to item 13
 (Mark (X) all that apply) ☒
 670 ☐ 1 Shortage of surface water (water from reservoirs, lakes, streams, water supply organizations, etc.)
☐ 2 Shortage of ground water (lowering water level of wells or depletion of ground water)
☐ 3 Irrigation equipment failure
☐ 4 Energy shortage
☐ 5 Poor water quality
☐ 6 Loss of water rights
☐ 7 Cost of water
☐ 8 Other — Specify _____

Item 13 OTHER USES OF IRRIGATION WATER ON THIS PLACE IN 1988**Was irrigation used for any of the following secondary purposes?**

- a. Prevent freeze damage ☐
 b. Crop cooling to delay early budding or blooming ☐
 c. Leaching to remove salts from the soil (salinity control) ☐
 d. Other — land disposal of liquid livestock waste, etc. — Specify ☒

None

Acres on which applied	
440	
441	
442	
443	

Item 14 WATER MANAGEMENT PRACTICES FOR OPERATORS USING GRAVITY IRRIGATION**Did you use gravity irrigation to irrigate any land in 1988 (acres reported in item 4b)?**

- 671 ☐ 1 Yes — If "Yes", answer the following: ☒ 2 No — Go to item 15

On how many acres did you use these techniques?

- a. Irrigation water captured for further use (tailwater pits) ☐
 b. Surge flow or cablegation technique ☐
 c. Use of any special furring techniques, such as wide-spaced bed furrowing, compacted furrowing, or furrow diking — Specify technique used ☒

None

Number of acres	
672	
673	
674	

Item 15 IRRIGATED LAND IN 1987**a. Was any land irrigated on this place in 1987? Do not answer this item if you irrigated any land in 1988.**

- 528 ☐ 1 Yes — Answer b and c below ☒ 2 No — Go to item 16

b. Reason for not irrigating in 1988 — Mark (X) any of the following that apply:

- 529 ☐ 1 Sufficient soil moisture — no irrigation needed
☐ 2 Shortage of surface water (water from reservoirs, lakes, streams, water supply organizations, etc.)
☐ 3 Shortage of ground water (lowering water level of wells or depletion of ground water)
☐ 4 Irrigation uneconomical due to high fuel and power costs and/or low commodity prices
☐ 5 Irrigation equipment failure
☐ 6 Loss of water rights
☐ 7 Sold water rights
☐ 8 Other — Specify _____

c. Do you consider your discontinuance of irrigation to be permanent?

- 530 ☐ 1 Yes
☐ 2 No

Item 16 PERSON COMPLETING THIS FORM — Please print

Name	Date	Telephone	
		Area code	Number

ADDITIONAL INSTRUCTIONS FOR THE 1988 FARM AND RANCH IRRIGATION SURVEY

In completing the questionnaire, if exact figures are not available, give your best estimate. An estimate is more useful than an omitted answer.

- **Item 3.1 — LAND USE** — All acres "In This Place" should be reported only once, in the first category that applies.

Similarly, for each category of land use, report the acres irrigated in 1988 in the appropriate category.

Report all cropland, pastureland, and rangeland watered by artificial means at any time during 1988. In addition to fully irrigated land, report as irrigated any lands to which partial, supplemental, or semi-irrigation was applied. Also include any acreage which received only preplant irrigation (watered before planting). Haylands, pastureland, or rangeland should be reported as irrigated if spring flood water was spread by canals, ditches, spreader dikes, pipes, or other works.

- **Item 3.2 — IRRIGATED AND NON-IRRIGATED CROP YIELDS** — For each crop harvested, report separately the acreage and average yield from irrigated land and non-irrigated land.

Report harvested crops as irrigated if any water was artificially applied either before planting or during the crop growing season in 1988. Report the crop as irrigated if water was applied to supplement rainfall, even if the amount of water applied was not sufficient to obtain maximum yields.

Please give your best estimate of the quantity of water applied per acre for each irrigated crop. Report in either average acre-feet (one acre-foot covers one acre one foot deep) or total inches applied.

- **Item 4 — METHOD OF WATER DISTRIBUTION** — This item refers to the method used to spread water over the land. Report the acres of land irrigated by each type of field distribution system listed. Do not report information for the delivery system used to convey water from the source to the field, instead report information for the FIELD distribution system used.

- **Item 5 — METHOD OF WATER DISTRIBUTION, ETC., BY SELECTED CROPS** — Pesticides include chemicals used to control insects, weeds, nematodes, and diseases. Check the appropriate box if ANY commercial fertilizer or pesticides were used on a crop, even if only a portion of the crop was treated.

Report the maximum number of times any field for a crop was irrigated. Include the number of preplant irrigation applications in this figure.

- **Item 9 — ENERGY USE FOR IRRIGATION PUMPING** — Report the expenditures for fuel and power used in 1988 for irrigation pumping by each type of energy used on this place. Include in the cost figures any additional charges such as the "fuel adjustment charge" or any other type of additional charge which is based on the amount of power or fuel purchased.

Also report the total quantity of fuel used in the units specified and the acres irrigated by each type of energy used on this place. Again, give best estimates if actual figures are not available.

- **Item 10 — MAINTENANCE AND REPAIR COSTS** — Report all expenses in 1988 for keeping irrigation equipment and facilities in working order. Include expenses for tune-ups, oil changes, and repairs to pumps, motors, pipes, canals, sprinkler systems, etc. Also include expenses for ditch and canal cleanout.

- **Item 11 — IRRIGATION EXPENDITURES** — Report expenditures made in 1988 for the construction of irrigation facilities and purchase of irrigation equipment and machinery on this place. Include estimates of expenditures made by or shared with others (landlords, government agencies, etc.). Report cost of maintenance and repairs in Item 10.

NOTE — Based on tests with farmers and ranchers, it takes from 30 to 60 minutes to complete this form with most operators completing it in 43 minutes per response. If you have any comments regarding these estimates or any other aspect of this survey, send them to the Associate Director for Management Services, Room 2027, Bureau of the Census, Washington, DC 20233; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

1988 Agricultural Economics and Land Ownership Survey, Report Form 88-A9A, Operator's Report

DUE DATE: 30 DAYS AFTER RECEIPT OF FORM

OMB No. 0607-0630; Approval Expires 09/30/90

FORM **88-A9A**
(9-12-88) U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

1988 AGRICULTURAL ECONOMICS AND LAND OWNERSHIP SURVEY

OPERATOR'S REPORT

Please complete this
form and RETURN TO

BUREAU OF THE CENSUS
1201 East Tenth Street
Jeffersonville, IN 47133

**The financial needs of the American farmers are changing.
It is important to know facts such as:**

The relative debt burden of farmers
The capital investment, operating expenditures, and
the amount and sources of income of farmers

These and many other financial problems can be examined only by
obtaining information from you and the other survey respondents. Please
give the best answers you can, making estimates when you do not have
exact figures. Your answers will be combined with others so that
confidentiality is maintained. Please answer each question that applies
to you.

CENSUS USE ONLY	035	036	037	038
	039	040	041	042

NOTICE — Response to this inquiry is required by law (title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

In correspondence pertaining to this report, please refer to your Census File Number (CFN)

88-A9A

Please correct errors in name, address, and ZIP Code. ENTER street and number if not shown.

SECTION 1 ACREAGE IN 1988 AND CURRENT MARKET VALUE of land and buildings (See information sheet.) Include all cropland, pastureland, woodland, wasteland, idle land, house lots, etc.

- ALL FARM AND RANCH LAND OWNED ☐
- ALL land rented or leased FROM OTHERS, including land worked on shares; leased Federal, State, and railroad land; and land used rent free. (Do NOT include land used on a per-head basis under a grazing permit.) Also complete item 5 below. ☐
- ALL land rented or leased TO OTHERS, including land worked on shares by others and land subleased. (Do NOT include land enrolled in the Conservation Reserve Program.) ☐
- TOTAL ACRES IN "THIS PLACE"** (Please ADD acres owned (item 1 above) and acres rented (item 2 above), then SUBTRACT acres rented to others (item 3 above), and enter your answer in this space.)
"THIS PLACE" means your farm or ranch, feedlots, poultry houses, greenhouses, and/or any other agricultural operations.
- If you rented land FROM OTHERS (item 2 above), please enter the following information for each landlord:

Name of landlord	Mailing address of landlord	Number of acres rented
First name, middle initial, last name	Number and street or rural route and box number City State ZIP Code	280
First name, middle initial, last name	Number and street or rural route and box number City State ZIP Code	281
First name, middle initial, last name	Number and street or rural route and box number City State ZIP Code	282
First name, middle initial, last name	Number and street or rural route and box number City State ZIP Code	283
First name, middle initial, last name	Number and street or rural route and box number City State ZIP Code	284

6. If you have more than the 5 landlords listed above, how many additional landlords do you have? List these additional landlords on the continuation sheet.

Number
061

7. How much total cash rent did you pay for acres leased during 1988? ☐

None	Acres cash leased	Total cash rent	
		Dollars	Cents
	062	063	00

PLEASE READ

You may be able to skip most of this form if

- All the land you owned or rented from others was rented to or worked on shares by someone else in 1988.
 - There were no crops or livestock in 1988 on the acres in "THIS PLACE" (item 4 above).
 - The land you operated before 1988 has been sold and is now operated by someone else.
- If a, b, or c apply to your operation, please explain in section 13. Complete section 14 and mail back the report form in the return envelope.

None	Acres	Sales value	
		Dollars	Cents
8. Was any farm or ranch land sold by you in 1988 for —	064	065	00
	066	067	00
9. Was "THIS PLACE" described in item 4 above a managed operation where the operator was employed as a farm manager?	203	1 <input type="checkbox"/> YES	2 <input type="checkbox"/> NO
10. In 1988, did you purchase professional or farm management services such as recordkeeping, farm practices advice, financial planning, rent collection, etc.?	204	1 <input type="checkbox"/> YES	2 <input type="checkbox"/> NO

SECTION 2 AGRICULTURAL LAND OWNERSHIP				
The following questions refer to acres owned as reported in section 1, item 1. IF NO LAND WAS OWNED, SKIP TO SECTION 3.				
		Acres	Estimated market value Dollars Cents	
1a. Copy reported acres from section 1, item 1 . . .		140		
b. How many of these acres owned during 1988 were still owned by you on December 31, 1988? Report the market value of these owned acres		142	143	00
2. Using the market value reported in item 1b above as the TOTAL VALUE, please estimate the market value of the following:		None	051	
a. Operator dwelling if on acres in 1b			052	00
b. Dwelling(s) for hired labor if on acres in 1b			053	00
c. All other buildings and structures on acres in 1b			055	00
d. Land (excluding buildings)				00
3. Of the land owned by you on December 31, 1988 (item 1b), how many acres were obtained by:		None	Acres	
a. Purchase from non-relative			144	
b. Purchase from relative			145	
c. Inheritance or gift			146	
d. Other — Specify			147	
TOTAL (Should equal acres in item 1b)			148	
4. For all the farm and ranch land owned on December 31, 1988 (item 1b), please report the number of acres in the following land use categories:		None	Acres	
a. Cropland			171	
b. Orchard/vineyard			172	
c. Cropland used for permanent pasture			173	
d. All other pasture or rangeland			174	
e. Forest/woodland not pastured			175	
f. Other (farmstead, wasteland, roads, ditches, etc.)			176	
TOTAL (Should equal acres in item 1b)			177	
5. Please report land ACQUIRED and/or SOLD or DISPOSED OF during each specified time period and the total acreage OWNED at the end of each specified time period (December 31).				
Land owned on December 31 of year below	Land owned (Acres) (1)	Date	Land acquired (Acres) (2)	Land sold or disposed of (Acres) (3)
1988	178	During 1988	184	189
1987	179	1983 — 1987	185	190
1982	180	1979 — 1982	186	191
1978	181	1975 — 1978	187	192
1974	182	1970 — 1974	188	193
1969	183			

IF NO LAND ACQUIRED IN 1988 — SKIP TO ITEM 7.

6a. If you acquired land in 1988, PLEASE report estimated market value of land and buildings acquired and amount financed.

Market value December 31, 1988		Amount financed	
Dollars	Cents	Dollars	Cents
196		197	
\$	00	\$	00

6b. If you financed land purchased in 1988 (item 6a above), please enter the amount financed from the following sources:

	Amount financed	
None	Dollars	Cents
1. Federal land bank	\$	00
2. Farmers Home Administration	\$	00
3. Insurance companies	\$	00
4. Commercial banks/savings & loan companies	\$	00
5. Other (Include seller financing)	\$	00

7a. Report the following information for land you owned on December 31, 1988 and leased to others.

• Type of lease	Number of leases	Total acres leased to others	Market value of acres leased		Value of rent received in 1988	
			Dollars	Cents	Dollars	Cents
1. Cash	151	155	159		163	
2. Share	152	156	160		164	
3. Cash/share	153	157	161		165	
4. Other	154	158	162		166	

b. What were the expenses paid by you as landlord on land leased to others in 1988? (Include your estimate of taxes, insurance, and inputs you made to the agricultural production on land leased to others.)

None	Dollars	Cents
	170	00

8. For CASH LEASES reported in item 7 above, how many allow for adjustment of rental payment in the event of unusual or exceptional conditions?

None	Number of cash leases	Acres
	167	168

9. Of the farm and ranch land you owned on December 31, 1988 (item 1b above), how many acres were enrolled in the Federal Conservation Reserve Program?

None	Acres
	169

SECTION 3A PURCHASES AND EXPENDITURES DURING 1988 FOR THE AGRICULTURAL OPERATION			SECTION 4 DEBTS AS OF DECEMBER 31, 1988 (See enclosed information sheet.)		
<p>These items concern the kinds of purchases and expenditures made during 1988 for agricultural operations on "THIS PLACE" AS REPORTED IN SECTION 1, item 4. Report the total cost of the purchases or expenditures. (See enclosed information sheet.)</p> <p>• Capital expenditures for "THIS PLACE" during 1988</p>			<p>The debts to be reported are those owed as of December 31, 1988 arising from the operation of the acres reported in section 1, item 4 "THIS PLACE." (Exclude landlord debt.)</p>		
<p>None</p>			<p>None</p>		
<p>1. Expenditures for improvements on land such as irrigation improvements, land preparation, well drilling, ponds, drainage, roads, feedlots, fences, trench silos, lagoons, etc. (Exclude moveable equipment)</p>			<p>1. Federal Land Banks (or Federal Land Bank Associations)</p>		
<p>2. Expenditures for buildings and structures — Include new or additions to dwellings, barns, shelters, milking parlors, hog houses, poultry houses, crop storage, silos, etc. (Exclude repairs)</p>			<p>2. The Farmers' Home Administration</p>		
<p>3. Purchases of tractors and farm machinery (Report total cost minus trade-in values) { a. New b. Used</p>			<p>3. Commodity Credit Corporation loans — a. On crops b. For crop storage facilities</p>		
<p>4. Purchases of all trucks and autos (Report total cost minus trade-in values)</p>			<p>4. Insurance companies (Exclude premiums due)</p>		
<p>5. Purchases of breeding livestock and dairy cattle (Report all other livestock purchases in section 3b, item 2.)</p>			<p>5. Commercial banks and savings banks (national or State banks, trust companies, etc.)</p>		
<p>6. All other agricultural capital purchases — Include moveable irrigation equipment and machinery such as pipes, siphons, nozzles, pumps, and engines; other motor driven vehicles such as airplanes or other special use vehicles and equipment that were used on this place (Exclude capital purchases covered above)</p>			<p>6. Individuals from whom you bought part or all of this acreage — a. Under a mortgage or deed of trust b. Under a land purchase contract</p>		
<p>SECTION 3B AGRICULTURAL OPERATING EXPENSES and other purchases for this place during 1988. Do not include depreciation, income taxes, cash rent; expenditures for the purchase of land, buildings, or machinery; expenditures for the farm dwelling including repairs, real estate taxes, insurance, and other items; also EXCLUDE EXPENSES PAID BY LANDLORDS, and value of items furnished by contractors.</p>			<p>7. Production credit associations</p>		
<p>None</p>			<p>8. Other lenders — a. State and county lending agencies b. Mortgage companies, real estate agents or dealers, savings and loan associations, agricultural credit corporations, credit unions, livestock loan companies, and Small Business Administrations, etc.</p>		
<p>1. Expenditures for feed — grain, hay, silage, mixed feeds, concentrates, etc.</p>			<p>9. Merchants and dealers, including cooperatives, mail order companies, farm machinery companies, and other manufacturers. (Exclude debts on 30-day accounts) for purchase of — a. Tractors and farm machinery, including repairs b. Autos and trucks, including repairs, gasoline, oil, other fuel, feed, seed, fertilizer, livestock, poultry, and other purchases for the operation of this acreage from merchants and dealers, including building supplies, fencing, hardware, customwork, and similar purchases.</p>		
<p>2. Purchases of livestock and poultry other than breeding stock and dairy cattle (Report breeding stock and dairy cattle purchases in section 3A, item 5 above)</p>			<p>10. Any other individuals, relatives, friends, landlords, estates, etc. (Exclude debts on 30-day accounts)</p>		
<p>3. Purchases of fertilizer</p>			<p>11. Unpaid bills for veterinary services, utilities, past due taxes or insurance premiums, and debts for other purposes relating to this acreage. (Include all debts on accounts you do not expect to pay in 30 days)</p>		
<p>4. Purchases of herbicides and pesticides</p>			<p>SECTION 5 MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD DURING 1988 (See enclosed information sheet.)</p>		
<p>5. Expenditures for hired and contract labor (Report gross cash payments to employees, including paid family members, before deductions for Social Security, taxes, insurance premiums, etc. See information sheet.)</p>			<p>None</p>		
<p>6. Purchases of gasoline, diesel fuel, LP gas, other fuel, motor oil, and grease for farm use only</p>			<p>1. What was the total market value of farm products (crops, livestock, poultry, and products, etc.) sold from this place in 1988? INCLUDE THE VALUE OF THE LANDLORD'S AND/OR CONTRACTOR'S SHARE, estimating if necessary. Also include value of government CCC loans, but exclude sales of forest products.</p>		
<p>7. Interest and service charges on: a. Farm real estate debt b. Farm operating debt</p>			<p>2. If you rented or leased land from others on a share basis, what was the value of the landlord's share of the total sales reported in item 1 above?</p>		
<p>8. Personal property taxes on livestock, machinery, and other farm production items (Report real estate taxes in section 9)</p>			<p>None</p>		
<p>9. Insurance premiums for all types of crops, livestock, machinery, and buildings. (Include farm share for auto and truck insurance)</p>			<p>106</p>		
<p>10. All other agricultural OPERATING expenditures such as machine hire, customwork, seeds, containers, water, transportation and marketing charges, utilities, upkeep of farm buildings, machinery and fences, drains and irrigation systems, feed drying and grinding, veterinary services and supplies, storage charges, lime and soil conditioners, and general business expenses.</p>			<p>107</p>		

SECTION 6 PRODUCTION CONTRACTS									
Did you have any contract to produce any crop, poultry, or livestock products in 1988? Do not include marketing only contracts. (See enclosed information sheet for definitions).									
108 1 <input type="checkbox"/> YES — Complete this section 2 <input type="checkbox"/> NO — Go to section 7									
1. Estimate the total market value of your production under contract (Report only for production moved off this place in 1988). Specify items under contract <input checked="" type="checkbox"/>	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>109 \$</td> <td>00</td> </tr> <tr> <td>110 \$</td> <td>00</td> </tr> <tr> <td>111 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	109 \$	00	110 \$	00	111 \$	00
Dollars	Cents								
109 \$	00								
110 \$	00								
111 \$	00								
2. How much did you receive for your production under contract? (Include any management fees received.)	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>110 \$</td> <td>00</td> </tr> <tr> <td>111 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	110 \$	00	111 \$	00		
Dollars	Cents								
110 \$	00								
111 \$	00								
3. What is your estimate of the cost of items and services provided to you under these production contracts?	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>110 \$</td> <td>00</td> </tr> <tr> <td>111 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	110 \$	00	111 \$	00		
Dollars	Cents								
110 \$	00								
111 \$	00								
SECTION 7 INCOME AND EXPENSES FROM OTHER FARM-RELATED SOURCES IN 1988. Do not include income reported in section 5 and expenses reported in section 3. (See enclosed information sheet.)									
Report amount received before taxes									
1. INCOME	None Dollars Cents								
a. Payments received by this operation for participation in FEDERAL FARM PROGRAMS and any DIRECT federal or state payment received in 1988. (Include deficiency payments, conservation reserve payments, disaster payments, etc. Exclude CCC loans.)	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>112 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	112 \$	00				
Dollars	Cents								
112 \$	00								
b. Gross income from ALL OTHER farm-related sources, customwork, machine hire, recreational services, boarding, lodging, lease of allotments, sale of forestry products, Christmas trees, gum for naval stores, and all other businesses or sources of income closely related to this agricultural operation. (Exclude gross cash rent and share payments.)	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>113 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	113 \$	00				
Dollars	Cents								
113 \$	00								
2. EXPENSES	None Dollars Cents								
From ALL OTHER farm-related sources reported in items 1a and 1b above, enter the total estimated expenses paid by you and others in 1988. (Include all cash operating expenses, taxes, interest, insurances, etc. DO NOT include any expenses already reported in sections 3A and B.)	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>114 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	114 \$	00				
Dollars	Cents								
114 \$	00								
SECTION 8 NET CASH FARM INCOME OF PARTNERSHIPS ON THIS PLACE (See enclosed information sheet under general information, item 2 for definition of operator within a partnership.)									
1. Was this place operated as a partnership in 1988?									
115 1 <input type="checkbox"/> YES — Complete this section 2 <input type="checkbox"/> NO — Go to section 9									
2. How many total partners were involved in this partnership operation in 1988 (including yourself)?	<table border="1"> <thead> <tr> <th>Number</th> </tr> </thead> <tbody> <tr> <td>116</td> </tr> </tbody> </table>	Number	116						
Number									
116									
3. What percent of the net farm income/losses (from sales and farm-related sources) was received by the OPERATOR as defined for this partnership? (See information sheet)	<table border="1"> <thead> <tr> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>117 1 <input type="checkbox"/> Less than 10 percent</td> </tr> <tr> <td>2 <input type="checkbox"/> 10 to 29 percent</td> </tr> <tr> <td>3 <input type="checkbox"/> 30 to 49 percent</td> </tr> <tr> <td>4 <input type="checkbox"/> 50 to 69 percent</td> </tr> <tr> <td>5 <input type="checkbox"/> 70 percent and over</td> </tr> </tbody> </table>	Percent	117 1 <input type="checkbox"/> Less than 10 percent	2 <input type="checkbox"/> 10 to 29 percent	3 <input type="checkbox"/> 30 to 49 percent	4 <input type="checkbox"/> 50 to 69 percent	5 <input type="checkbox"/> 70 percent and over		
Percent									
117 1 <input type="checkbox"/> Less than 10 percent									
2 <input type="checkbox"/> 10 to 29 percent									
3 <input type="checkbox"/> 30 to 49 percent									
4 <input type="checkbox"/> 50 to 69 percent									
5 <input type="checkbox"/> 70 percent and over									
SECTION 9 REAL ESTATE TAXES									
Did you report owning any farm or ranch land in 1988? (Section 1, item 1)									
268 1 <input type="checkbox"/> YES — Complete this section (See enclosed information sheet.) 2 <input type="checkbox"/> NO — Go to section 10									
1. Report the number of acres of farm or ranch land shown on your 1988 Real Estate tax bill(s).	<table border="1"> <thead> <tr> <th>Acres</th> </tr> </thead> <tbody> <tr> <td>118</td> </tr> </tbody> </table>	Acres	118						
Acres									
118									
2. What was the assessed value of farm and ranch land and buildings, and other improvements shown on your real estate tax bill(s) for 1988?	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>119 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	119 \$	00				
Dollars	Cents								
119 \$	00								
3. What was the total amount of farm and ranch real estate taxes (land, buildings, and other improvements) payable by you as shown on your real estate tax bill(s) for 1988?	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>120 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	120 \$	00				
Dollars	Cents								
120 \$	00								

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SECTION 10A BUSINESS ASSETS OWNED BY THE FARM OPERATION							
(See enclosed information sheet.)							
Current market value of assets owned as of December 31, 1988							
1. Farm share of autos and trucks (percent farm use × total market value)	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>121 \$</td> <td>00</td> </tr> <tr> <td>122 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	121 \$	00	122 \$	00
Dollars	Cents						
121 \$	00						
122 \$	00						
2. Tractors, farm machinery, tools, and equipment	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>123 \$</td> <td>00</td> </tr> <tr> <td>124 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	123 \$	00	124 \$	00
Dollars	Cents						
123 \$	00						
124 \$	00						
3. Crops produced and stored and still owned on December 31, 1988. (Exclude crops under government CCC loans.)	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>125 \$</td> <td>00</td> </tr> <tr> <td>126 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	125 \$	00	126 \$	00
Dollars	Cents						
125 \$	00						
126 \$	00						
a. On-farm	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>127 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	127 \$	00		
Dollars	Cents						
127 \$	00						
b. Off-farm	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>128 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	128 \$	00		
Dollars	Cents						
128 \$	00						
4. Beef, dairy, hogs, sheep, poultry, and other livestock (horses, mink, bees, fish, rabbits, etc.)	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>129 \$</td> <td>00</td> </tr> <tr> <td>130 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	129 \$	00	130 \$	00
Dollars	Cents						
129 \$	00						
130 \$	00						
5. Purchased feed, seed, fertilizer, fuel, chemicals and other inputs on hand	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>131 \$</td> <td>00</td> </tr> <tr> <td>132 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	131 \$	00	132 \$	00
Dollars	Cents						
131 \$	00						
132 \$	00						
6. Stock in Federal land banks, production credit associations, and other farmer cooperatives	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>133 \$</td> <td>00</td> </tr> <tr> <td>134 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	133 \$	00	134 \$	00
Dollars	Cents						
133 \$	00						
134 \$	00						
7. All other assets of this FARM OPERATION (cash, bonds, certificates of deposit, savings and checking accounts, and money owed to this operation, including crops and livestock sold for future payment.)	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>135 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	135 \$	00		
Dollars	Cents						
135 \$	00						
SECTION 10B HOUSEHOLD ASSETS							
Report for the farm operator, senior partner, or hired manager's household. (Do not include assets reported in section 10A above; see enclosed information sheet.)							
Current market value of assets owned as of December 31, 1988							
1. Total value of cash; checking, savings, and money market accounts; Certificates of Deposit; U.S. Savings Bonds and other bonds; and money owed to you	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>136 \$</td> <td>00</td> </tr> <tr> <td>137 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	136 \$	00	137 \$	00
Dollars	Cents						
136 \$	00						
137 \$	00						
2. Corporate stock, cash surrender value of life insurance, and all other financial assets	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>138 \$</td> <td>00</td> </tr> <tr> <td>139 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	138 \$	00	139 \$	00
Dollars	Cents						
138 \$	00						
139 \$	00						
3. Off-farm operator dwelling, if owned (Do not include value reported in section 2, item 2b.)	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>140 \$</td> <td>00</td> </tr> <tr> <td>141 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	140 \$	00	141 \$	00
Dollars	Cents						
140 \$	00						
141 \$	00						
a. What was the estimated market value of this dwelling as of December 31, 1988?	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>142 \$</td> <td>00</td> </tr> <tr> <td>143 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	142 \$	00	143 \$	00
Dollars	Cents						
142 \$	00						
143 \$	00						
b. What were the debts owed on this dwelling as of December 31, 1988?	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>144 \$</td> <td>00</td> </tr> <tr> <td>145 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	144 \$	00	145 \$	00
Dollars	Cents						
144 \$	00						
145 \$	00						
4. Other assets owned and debts — Include real estate and businesses not part of this operation, such as farm input and processing enterprises, beauty shops, etc.; second/vacation homes and recreational vehicles; the household share of autos and trucks; and machinery and equipment for nonfarm uses, etc.	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>146 \$</td> <td>00</td> </tr> <tr> <td>147 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	146 \$	00	147 \$	00
Dollars	Cents						
146 \$	00						
147 \$	00						
a. Estimated market value of these assets, as of December 31, 1988	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>148 \$</td> <td>00</td> </tr> <tr> <td>149 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	148 \$	00	149 \$	00
Dollars	Cents						
148 \$	00						
149 \$	00						
b. Debts owed on these assets, as of December 31, 1988	<table border="1"> <thead> <tr> <th>Dollars</th> <th>Cents</th> </tr> </thead> <tbody> <tr> <td>150 \$</td> <td>00</td> </tr> <tr> <td>151 \$</td> <td>00</td> </tr> </tbody> </table>	Dollars	Cents	150 \$	00	151 \$	00
Dollars	Cents						
150 \$	00						
151 \$	00						

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SECTION 11 OFF-FARM INCOME DURING 1988 AND HOUSEHOLD SIZE (See enclosed information sheet.) Report for the farm operator, senior partner, or hired manager's household.
1. How much did you and persons living in your household receive in 1988 from each of the following sources?

a. Cash wages, salaries, tips, military pay, commissions, piece-rate payments, and cash bonuses (report amount before deducting income taxes and other withholding items.)

(1) Nonfarm jobs

(2) Other farm and ranch work — Exclude customwork reported in section 7, item 1b.

(3) Wages paid to household members for work on this place

b. Operation of self-employment business (not reported in section 7) or professional practice. Report net after cash expenses (Net Cash Income)

c. Retirement and/or disability

(1) Social Security

(2) Other public retirement or disability payments (government, military, or railroad).

(3) Private pensions

d. Public assistance, Supplemental Security Income, and unemployment compensation

e. Interest and dividends

f. Net income from estates or trusts, rental income from nonfarm properties, royalties for mineral leases. (Exclude one-time settlements.)

g. Annuities, alimony, regular contributions from persons not living in the household, and money income from any other source

h. Gifts or inheritance

i. Net gain from sales of items such as real estate, machinery, stocks, allotments, and bonds (not included as part of this place)

None	Dollars	Cents
206	\$	00
207	\$	00
208	\$	00
209	\$	00
210	\$	00
211	\$	00
212	\$	00
213	\$	00
214	\$	00
215	\$	00
216	\$	00
217	\$	00
218	\$	00
219	\$	00

• SIZE OF HOUSEHOLD
2a. How many persons were in your household on December 31, 1988? Include yourself (operator or senior partner) spouse, children, and others living in your household

b. How many were under 16 years of age?

Number
219
220

SECTION 12 OFF-FARM WORK AND EDUCATION (See enclosed information sheet.)
NOTE: Answer column 1 for operator.
Answer column 2 for spouse; if no spouse mark (X) box top of column 2.

1. Education — What was the highest grade (or year) of school ever completed? Mark (X) applicable box

2. Off-farm work — Did you or your spouse work for pay at an off-farm job during 1988? (Include self-employment business or professional work. Exclude exchange farm work.) If more than one off-farm job, describe the one at which the most hours were worked.

a. For whom did you or your spouse work? (Name of company, business, organization, or other employer.)

b. What kind of business or industry is this? (Public school, road construction, auto repair, State Labor Dept., farm, etc.)

c. What kind of work were you (or your spouse) doing? (Electrical engineering, stock clerk, typist, farm or ranch worker, etc.)

d. What were your (or your spouse's) most important activities or duties on the job? (Types, sell cars, operates a truck, finishes concrete, keeps accounts, etc.)

e. Were you (or was your spouse):

- Employee of another farm or ranch?
- Employee of a private company, business or individual, for wage, salary, or commission?
- Federal, State, local government, or school district employee?
- Self employed — operating an incorporated farm related business?
- Self employed — operating a nonincorporated farm related business?
- Self employed — operating an incorporated nonfarm related business or professional practice?
- Self employed — operating a nonincorporated nonfarm related business or professional practice?

3. How many hours per week were normally worked for pay at this off-farm job?

4. How many weeks per year were normally worked at this off-farm job?

5. How many miles were traveled one way to work at this off-farm job?

Column 1 REPORT FOR OPERATOR		Column 2 REPORT FOR SPOUSE	
254	1 <input type="checkbox"/> Less than 8 4 <input type="checkbox"/> 13–14 2 <input type="checkbox"/> 9–11 5 <input type="checkbox"/> 15–16 3 <input type="checkbox"/> 12 6 <input type="checkbox"/> 17 or more	261	1 <input type="checkbox"/> Less than 8 4 <input type="checkbox"/> 13–14 2 <input type="checkbox"/> 9–11 5 <input type="checkbox"/> 15–16 3 <input type="checkbox"/> 12 6 <input type="checkbox"/> 17 or more
255	1 <input type="checkbox"/> YES — Complete this column 2 <input type="checkbox"/> NO — If no for both, skip to section 13. If spouse is Yes, complete column 2	311	<input type="checkbox"/> Spouse did not work off-farm
256	Specify _____	262	Specify _____
257	Specify _____	263	Specify _____
258	Specify _____	264	Specify _____
259	Specify _____	265	Specify _____
260	Specify _____	266	Specify _____
267	1 <input type="checkbox"/> } 2 <input type="checkbox"/> } 3 <input type="checkbox"/> } 4 <input type="checkbox"/> } Mark (X) ONE box 5 <input type="checkbox"/> } 6 <input type="checkbox"/> } 7 <input type="checkbox"/> }	268	1 <input type="checkbox"/> } 2 <input type="checkbox"/> } 3 <input type="checkbox"/> } 4 <input type="checkbox"/> } Mark (X) ONE box 5 <input type="checkbox"/> } 6 <input type="checkbox"/> } 7 <input type="checkbox"/> }
268	_____ Hours	269	_____ Hours
269	_____ Weeks	270	_____ Weeks
270	_____ Miles	271	_____ Miles

COMPLETE COLUMN 2

SECTION 13 REMARKS AND EXPLANATIONS
SECTION 14 PERSON COMPLETING THIS REPORT — Please print

Name	267 Date	Telephone	Area code	Number
		()		

INFORMATION SHEET

1988 AGRICULTURAL ECONOMICS AND LAND OWNERSHIP SURVEY

General Information

Changes in the agriculture sector have created a demand for current data on farm assets and liabilities, farm debt, land ownership, etc. Your name has been selected as a sample of farm operators from the 1987 Census of Agriculture to provide additional data on land ownership, farm income, assets, debt, production costs, and nonfarm income from farm households.

To make record keeping more economical, every report form mailed in the 1988 Agricultural Economic and Land Ownership Survey has a separate Census File Number (CFN). **We need a reply from everyone** receiving the report form as soon as possible, whether agricultural operations were conducted in 1988 or not. Please follow the instructions given below before completing section 1. You will then be able to determine what additional information is to be provided.

1. More Than One Report Form

If you received more than one report form and you DID NOT have multiple farming operations, complete only ONE report form for your operation. Near the address label of each extra report form, write "Extra" and the 11-digit (CFN) from the label of the report form you completed. Return the extra report(s) in the same envelope with your completed report form, so that we can remove the extra addresses from our mail register.

If you had multiple farming operations, several of them might have been selected for this survey. If you get multiple report forms, you are requested to complete a report form for EACH SEPARATE and DISTINCT production unit (farm, ranch, feedlot, greenhouse, etc.) for which you receive a form if you maintained SEPARATE records of operating expenses and sales, livestock and other inventories, crop acreages, and production. If you have more operations than you received forms, please do not combine them into any of the forms received. Report only for those operations for which data are requested.

2. Partnership Operations

Complete only ONE report form for the entire partnership farm and ranch operations, including all partners' shares on the same report. If two or more report forms were received for the partnership operation, follow the instructions in item 1 above.

A partnership is an association of two or more persons who have agreed (informally or under legal contract) on the amount of their contributions or profits.

Co-ownership of land by husband and wife, or joint filing of income tax forms, does not constitute a partnership unless an agreement to share contributions, decision-making, profits, and liabilities exists. Consider the operator to be the "Senior Partner" and who functions as the person mainly in charge of the agricultural operations on this place as defined in section 1, item 4. If partners share the work equally, consider the oldest individual as the "Senior Partner" and the "Operator" for reporting purposes on this partnership.

3. Sections Which Do Not Apply

The enclosed report form may contain sections and inquiries which do not apply to you. If a section or item does not apply, you may simply mark the "None" or "No" box and go on to the next item or section as directed.

4. How To Respond

Please record your answers in the proper spaces, on the correct lines, and in the units requested, i.e., dollars, acres, etc. Write any explanation outside the answer spaces, in the remarks section, or on a separate piece of paper. Remember to write the 11-digit CFN on any correspondence.

If you do not recall exact figures, please give your best estimates. You may indicate "Est." (for estimated) beside the answers, if you like. For all dollar items, report whole dollars. The "Cents" columns have been preprinted with zeros.

Information for Specified Sections

► Section 1 — ACREAGE IN 1988 AND CURRENT MARKET VALUE OF LAND AND BUILDINGS

Section 1 determines the land for which you should report agricultural activities. It also provides space for reporting value of land and buildings, names and addresses of landlords, and other land-related items.

Changes in the Acres Operated in 1988

Report all land associated with your agricultural operation in 1988 even if some or all of it was no longer a part of your operation on December 31, 1988.

If you had agricultural operations at any time during 1988, but quit farming before December 31, 1988, report your 1988 operations and sales, for that land, during the portion of the year that you operated. If you have quit farming, you would not normally have inventory values for poultry, livestock, machinery, and equipment to report. Please explain in section 13 that you quit farming or ranching during 1988 and give the approximate date. If the land you previously operated is currently being operated as an agricultural operation by someone else, please give the name and address of the current operator.

If you acquired land for agricultural operations, but did not use it for livestock or crop production, it should still be included in section 1, item 1.

Completing Items 1, 2, 3, and 4 of Section 1 — Use items 1, 2, and 3 to determine the total acres of land you own and operate. These data will determine the sections to be completed on the survey report form. Include all land you were associated with in 1988, regardless of location or use. Do not include holdings of residential or investment property located off "this place" (the farm land you operate). Report all land in whole acres. If you operate less than one acre, report it as one acre.

Item 1 — Land Owned — Report all land owned and associated with agriculture in 1988 whether held under title, purchase contract or mortgage, homestead law, or as heir or trustee of an undivided estate, by you and/or your spouse, or by the partnership, corporation, or organization for which you are reporting. Exclude residential property not located on this operation.

Item 2 — Land Rented or Leased FROM OTHERS — Report all land rented by you from all landlords even though the landlord may have supplied equipment, fertilizer, or other materials and/or some supervision of the work.

INCLUDE in item 2:

- Land (for agricultural uses) that you rented FROM others for cash payments
- Land worked on a share basis
- Land owned by someone else which you used rent-free
- Federal, State, Indian, or railroad land rented or leased by the acre

The names of all landlords are needed. Landlords will be contacted to provide their financial information on costs and returns for land leased to each operator.

DO NOT INCLUDE in item 2:

Public land used on a per-head or animal unit license or permit basis. For example, land used under section 3 of the Taylor Grazing Act, national forest land, and certain Indian reservation permit land.

Item 3 — Land Rented TO OTHERS —

INCLUDE in item 3:

- Owned land rented TO others for cash or a share of the crops or livestock
- Land which you rented from others and then subleased to others in 1988
- Land rented out for residential or other nonfarm purposes, if it was part of the land reported in items 1 or 2
- Land worked for you by someone else on a share-of-crop or livestock basis
- Land which you allowed others to use rent-free

Note: Do not include land enrolled in the Conservation Reserve Program (10 year CRP land) as rented to others.

Item 4 — Acres in This Place — This is the total acres you owned in 1988 (item 1), PLUS the land you rented FROM others (item 2), MINUS the land you rented TO others (item 3). It is very important that you report this figure correctly (even if "0" acres), since much of the form applies to the resulting net figure — the "Acres in This Place."

"Zero Acres in This Place" — Should you complete the rest of this form?

If you had crop or livestock activities on the land for any portion of 1988, you should complete the rest of the form. See "Changes in Acres Operated in 1988" above.

If all your land was operated by a cash or share tenant for all of 1988, skip to section 13 and:

- a. Explain in section 13 that "All land was rented out," and **give the name and address of the cash or share tenant in 1988.**
- b. Complete section 14 with name, date, and telephone number. If you had no agricultural operation during 1988:
- a. Explain briefly in section 13, "sold farm," "retired," etc., and give the approximate date that you quit operating. If you sold your farm, please **give the name and address of the current owner(s) or operator(s), if known.**
- b. Complete section 14 with name, date, and telephone number. Mail the form in the return envelope provided.

Value of Land and Buildings — Current Market Value is defined as the value at which the farm or ranch could be sold within a reasonable length of time. The full market value of land and buildings should include the influence of nonagricultural factors such as being near an urban area, market interest rates, as well as agricultural factors affecting market value. Please give your best estimate of the current market value of the land and permanent buildings, including permanently attached or built-in equipment. Include the value of the dwelling(s) **on this place** and of all farm buildings such as barns, poultry houses, fruit packing sheds, vegetable sheds, etc. Include the value of attached or built-in machinery and equipment which would normally be included with the sale of the farm or ranch such as:

- a. Crop drying equipment (not portable)
- b. Tobacco curing equipment
- c. Stationary feed grinding and mixing equipment
- d. Automatic feeding and watering equipment
- e. Cages and pens, used for confinement of livestock and poultry
- f. Cold storage facilities for fruit, vegetables, etc.
- g. Stationary hatchery equipment
- h. Stationary greenhouse heating and watering equipment

EXCLUDE the value of portable equipment and machinery such as portable irrigation systems and portable crop dryers.

DO NOT INCLUDE the value of major agricultural manufacturing or processing plants, such as cotton gins or sugar mills, located on this place, nor the value of other buildings used for nonagricultural purposes, such as retail stores, filling stations, factories, motels, etc.

Item 9 — Farm Manager — A hired farm manager is a person who is paid a salary or wage (and sometimes a commission) to operate a farm or ranch for an individual or family, a corporation, an institution, or other organization. The farm manager is often responsible for purchases, sales, making day-to-day operating decisions involving the crop or livestock operations for the farm or ranch, and most frequently supervises others in performing these operations. Do not confuse a farm manager with a hired person(s) who merely carries out the employer's instructions, or with a foreman or a share operator.

Item 10 — Services from a professional farm management firm might include accounting and financial planning, (once a year tax preparation does not constitute financial planning), record keeping, production and input information, crop and livestock marketing, rent collecting, tenant finding, etc. These services would be performed by a person or firm other than the farm or ranch operator, landlord, or tenant.

► Section 2 — AGRICULTURAL LAND OWNERSHIP

Section 2 refers to all of the **land owned on December 31, 1988**. The acres owned as reported in section 1, item 1, were all the acres owned and operated anytime during 1988. If there was no land owned on December 31, 1988, skip to section 3. If any land was acquired, sold, or disposed of during 1988, the response to land owned on December 31, 1988 may differ from land operated during 1988, by the amount of acres involved in these transactions. If no land transactions took place during 1988, the entries in (1a) land owned during 1988 and in (1b) land owned on December 31, 1988, will be the same.

The market value for land, dwellings, and other buildings is the value of these items on acres owned December 31, 1988, reported in item 1b. The value of farm and ranch land and all buildings owned on December 31, 1988, may vary from the total market value reported in section 1, item 1 by the value of land sold in 1988. The operator's dwelling and dwellings for hired labor must be located on the land owned to be reported in item 1b. Your best estimate is requested when reporting these values. The sum of land and all buildings reported in item 2 (a—d) should equal the total market value reported in item 1b.

Item 2 — All Other Buildings and Structures includes barns, cribs, silos, equipment shops, grain bins, storage sheds, etc.

Item 4 — Land Use Definitions

- a. **Cropland** is land that is cultivatable and normally used for crops.
- b. **Orchard/vineyard** are permanent crops such as tree crops and vineyards.
- c. **Cropland used for permanent pasture** is cultivatable cropland that is being used for permanent pasture but could be cropped.
- d. **All other pasture or rangeland** is all land owned where livestock are permitted to graze (exclude any non-owned public grazing land).
- e. **Forest/woodland not pastured** is forest and woodland on which livestock is fenced out.
- f. **Other (farmstead, wasteland, roads, ditches, etc.)** is wasteland, roads, driveways, ditches, building sites, houses, barns, wind breaks, ponds, lakes, personal gardens, etc.

Item 5 — Land Acquired, Sold, or Disposed of and Owned on Specific Years — Report acres owned as of December 31 for the specified year in column 1. Report acres acquired and/or sold for the period shown in columns 2 and 3.

Item 7a — Leases — Item 7 requests the number of leases, acres leased, market value of acres leased and value of rent received, by type of lease on the land **you owned** on December 31, 1988. Do not include land you rent from others, and in turn, subleased to someone else. The market value of acres leased should be your estimate of the value for all land and buildings leased, if sold on the current market. The value of rent received should be the cash value of rent paid to you, or if the rent payment was received as a share of the crop or livestock, estimate the cash value of such items if they were sold on the current market. Any combination of cash and share payment should be summed together for total value of rent received during 1988.

Item 8 — Cash Leases Adjusted — Unusual conditions could be considered drought, hail, tornado, hurricane, adverse weather damage, etc. Exceptional conditions could be growing conditions where yields are above normal.

► Section 3 — PURCHASES AND EXPENDITURES DURING 1988 FOR THE AGRICULTURAL OPERATION

DO NOT INCLUDE:

- a. Expenditures on farm property rented to others
- b. Expenditures on nonfarm property
- c. Expenditures made by landlord(s) (such as taxes)
- d. Expenditures related to nonfarm activities (trading and speculation or livestock dealer activities)

► **Section 3A** — Report all capital purchases or expenditures made for the agricultural operation during 1988. Include sales taxes, but exclude finance charges. Finance charges will be recorded in section 3B, item 7. Report the costs of items minus trade-in values allowed. If you had no expenditures for the items, mark (X) in the "None" box.

► **Section 3B** — Report all agricultural operating expenses you, the partnership, or organization incurred for the "acres in this place" as reported in section 1, item 4. Do not include estimates of expenditures for items provided or paid for by landlords. The value of items or inputs furnished by contractor on a production contract are to be reported in section 6, not as operating expense in this section.

Item 5 — Hired and Contract Labor — Include gross salaries and wages, commissions, dismissal pay, vacation pay, and paid bonuses paid to hired workers, family members, hired managers, administrative and clerical employees, and salaried corporate officers. Also, include supplemental cost for benefits such as employer's social security contributions, unemployment compensation, workmen's compensation insurance, life and medical insurance, pension plans, etc.

Include as contract labor costs of workers furnished on a contract basis by a labor contractor, crew leader, or cooperative for harvesting vegetables or fruit, shearing sheep, or similar farm activities. Do not include costs for building or repair work done by a construction contractor. Include the cost of customwork or machine hire in item 10.

Item 7 — Do not include interest on owner/operator dwelling where amount is separated from interest on other land and buildings on "this place." Include interest paid on CCC loans in item 7b. If during the year you borrowed funds for general farming or ranching operations and cannot readily state the specific purpose for which the funds were used, report the interest expense on the amount borrowed in item 7b.

► **Section 4 — DEBTS AS OF DECEMBER 31, 1988**

Report all debts owed as of December 31, 1988 on the assets owned by the farm operation, partnership or corporation, and associated with the agricultural operations on "this place." If you cannot allocate debt between owned land reported in section 1, item 1, and owned land rented to others in item 3, report the total debt for owned land and explain in "Remarks" in section 13.

For debts covering land in addition to acres "in this place," report your estimate for that part of the debt that applies only to "this place." The share to be reported should be estimated in proportion to the market values of the properties. Other debts should also be prorated if they relate only in part to the agricultural operations "on this place."

DO NOT INCLUDE:

- a. Debts on farm property rented to others
- b. Debts on nonagricultural property such as cotton gins, canning factories, sugar mills, motels, stores, etc.
- c. Your landlord(s) share of any debts
- d. Charge accounts that are usually paid in full each month (debts owed for less than 30 days should not be reported)

INCLUDE:

- a. Debt on accounts you do not expect to pay in 30 days

For each of the specified lending sources to which no debt was owed on December 31, 1988, mark (X) in the "None" box.

► **Section 5 — MARKET VALUE OF AGRICULTURAL PRODUCTS**

Report the gross value of all crops, livestock, and poultry, and their products sold from "this place" in 1988. Reasonable estimates are acceptable. Use the following definitions to determine whether to include or exclude data:

Calendar Year — Report all sales in calendar year 1988 regardless of the year produced.

Shares — If you rented land on a share basis or worked on shares for others, **include the value of the landlord's share of any products removed from this place** in both item 1 and item 2. Estimate the equivalent market value, if necessary.

Partnership — If the farm or ranch is operated as a partnership, report the total value of all products sold from this place for all partners.

Government Loans — Consider the value of a crop placed under government loan or seal in 1988 as sold.

Co-op and Pool-Type Arrangements — If a crop was sold through an organization which makes payments in several installments over a period of time, report the total value received in 1988 regardless of the year the crop was produced.

Contract Production — For products produced under a contract or agreement, report an estimate of the market value of the product at the time it was removed from "this place," even though you may have received only a portion of the value.

Sales by Other Household Members — Include the sales of products made from this place by other household members, such as 4H projects, etc.

Nonfarm Activities — Exclude sales of nonfarm-related businesses or activities such as livestock dealer activities. For example, do not include the value of animals purchased and resold within 30 days. The income and expenses from these kinds of activities are reported in section 7.

Home Use — Do not include the value of home use.

Forest Products — Exclude the value of forest products sold. They are to be reported in section 7, item 1b.

Sales From Other Places — Exclude farm sales from land rented to others or from livestock held on or sold from someone else's farm or ranch. If livestock were placed in a feedlot for finishing, report as market value your estimated value of the livestock when they were removed from "this place."

The sum value of all sales, shares, loans, co-op, and contract arrangements make up the total market value of farm products sold. If you rented or leased land from others on a share basis, the value of the landlord's share should be included in item 1 and is also reported in item 2 as the value of the landlord's share.

► **Section 6 — CONTRACTS**

Many farm products are produced and marketed under a contract or binding agreement between the farm operator (producer) and the person who buys or uses the farm product. It may be a production contract, a marketing contract, or a combination of both.

Production contracts require the contractor to provide an input usually in the form of livestock, poultry, seed, feed, machine work, or labor. If the agreement establishes only a market for the product and does not provide any input from the contractor, it is considered a sales or marketing contract and does not apply to this section.

Report in item 1 your estimate of the market value of the commodity produced under a production contract. The market value will be your estimate of the value of the commodity when taken from "this place," (including the landlord's share).

In item 2 report all **cash** value, including management fees received for producing the commodity under contract, (also include landlord's share). Report in item 3 your estimate of the value of inputs provided to you under the production contract. This would be the value of labor provided, your estimate of any livestock or poultry provided by the contractor (your estimate of their market value when brought onto "this place"), and any service such as spraying, tilling, harvesting, etc., provided by the contractor.

Marketing contracts usually specify the kind and/or amount of farm products to be delivered, but do not furnish inputs such as feed, seed, labor, or equipment.

Do not include contracts made by you for services (customwork, hauling, etc.) or to produce farm items for you where you are the purchaser rather than the supplier of the products.

► **Section 7 — INCOME AND EXPENSES FROM OTHER FARM-RELATED SOURCES IN 1988**

Item 1a — Report payments you received in 1988 from all State or federal government farm programs. For example: conservation reserve, acreage reduction, disaster relief or wool incentive programs. (Exclude CCC loans, the value of CCC loans are reported in section 5.)

Item 1b — These data are other income from farm-related sources not reported in section 5. Report only those income producing activities for which you used part of the land, buildings, machinery, equipment, labor, or capital normally used on "this place," and which you do not consider as entirely separate from your farming activities. Report **gross amount** received before taxes and expenses. Do not report income or expenses for customwork or agricultural services you provided for others **if operated as an entirely separate business** from your agricultural operations. The net income from a separate business should be reported in section 11, item 1b.

Item 2 — Include any expenses incurred from producing income from farm-related sources that have not been reported in sections 3a and 3b. (For example, if you leased a lot to sell Christmas trees produced on your farm and the cost was not reported in section 3, it should be reported here.)

► **Section 8 — NET CASH FARM INCOME OF PARTNERSHIPS**

Report the proportion of the total net cash farm income received from "this place" by the senior partner. (See definition of operator in Partnership Operations, item 2, General Information on the information sheet.)

Report the total number of partners in the partnership including the operator (senior partner) and estimate what percent of the net farm income was received by this operator (senior partner).

The net cash farm income is calculated by taking the gross sales of agricultural products of the farm, plus gross income from farm-related sources, minus the cash farm operating expenses and the cash operating expenses for farm-related income sources.

Form 88-A9A(I)

► Section 9 — REAL ESTATE TAXES

Report in this section taxes levied on farm and ranch land, buildings, and other improvements, reported on your tax bill(s) for the year 1988.

If you have more than one tax bill (example, county, State, school district, etc.) for the same acres:

- Include the **acreage** only once in item 1
- For one parcel, report in item 2 the largest assessed value from one of the individual tax bills
- For multiple parcels, report the **sum** of the taxes paid by you from **all bills** in item 3

Do not include taxes on nonfarm property, such as land and buildings used for cotton gins, sugar mills, canning factories, motels, stores, etc. For taxes that are levied on both agricultural and nonagricultural property, estimate and report only that portion of the taxes applying to your farm or ranch. Also exclude personal property taxes (personal property taxes are reported in section 3b, item 8). Do not include real estate taxes on operator dwellings not located on "this place."

► Section 10 — ASSETS OWNED BY THE FARM OPERATION AND HOUSEHOLD

Report all assets owned on December 31, 1988. Estimates are acceptable.

- **Section 10a** — Report assets owned by the farm operation, partnership, or corporation and associated with "this place" as defined in section 1. Item 3 includes crops produced and stored whether to be sold or not. Also included in item 3 could be crops produced and intended to be fed to livestock or poultry. Item 5 contains feed that was purchased and intended for use on "this place."

- **Section 10b** — Report assets owned and belonging to the operator, (senior partner in a partnership) or farm manager, and his/her household. The household is defined as anyone residing in the operator's residence (the operator, spouse, children, other relatives, and any other persons living with the operator in his/her household).

If household and business accounts are not kept separately, allocate the financial items between section 10a, items 6 and 7, and section 10b, items 1 and 2, according to whether you feel these assets are owned by the business or members of the household.

► Section 11 — OFF-FARM INCOME DURING 1988 AND SIZE OF HOUSEHOLD

Report in this section the income of all members of the operator's household. If the report is for a partnership, include payments received by the senior partner and persons living in his/her household.

Include income received between January 1, and December 31, 1988. Be sure to include wages, salaries, pensions, interest, and other payments, etc. received by you, your spouse, your children, other relatives, and other persons living in your household. This includes persons who usually live there but are temporarily away for reasons such as visiting, traveling, attending school or college, or in hospitals or nursing homes, etc.

If a member lived in your household for only a part of 1988, include the income of that member only for the time that he/she was in your household. Do not include payments received by persons (such as hired workers, etc.) not living in the operator's household.

If you are not certain of the exact figures, please give your best estimate. Mark (X) in the "None" box if you have no off-farm income to report.

Managed Farms Including Large Corporations — For a farm or ranch operated by a farm manager or by one family, relate all income items to the farm manager and the persons living in his/her household. In item 1a(3), include the salary, wages, or commissions received by the manager from the employer. Do not include any nonfarm income received by the corporation or employer.

Losses — If your household had net losses from the rental of nonfarm properties (item 1f), the sale of items such as real estate, machinery, stocks, etc. (item 1i), the operation of a self-employment business (item 1b) in 1988, report those losses by writing "LOSS" to the right of your entry.

Item 2 — Size of Household — Include persons whose usual place of residence is in your household, as of December 31, 1988. As mentioned above, this includes persons who usually live there but are temporarily away for reasons such as visiting, traveling, attending school or college, or in hospitals or nursing homes, etc. Exclude persons who are temporarily in your household, for example, visiting you for the holidays.

► Section 12 — OFF-FARM WORK AND EDUCATION

Please complete this section for both the operator and spouse. No legal status between the operator and spouse are required, but usually the spouse is either the wife or husband of the operator.

Off-farm work by the operator or his/her spouse is defined as work off "this place" in section 1. This off-farm work may be farmwork on another farm or ranch, but farmwork on another farm in exchange for like work is to be excluded. If the operator or spouse worked more than one off-farm job in 1988, describe the one at which the most hours were worked between January 1 and December 31, 1988. Do not include hours worked but not paid.

Based on tests with farmers and ranchers, it takes about 45 to 90 minutes to complete this form with most operators completing the form in 60 minutes. If you have any questions regarding these estimates or any other aspect of this survey, please call or write the Associate Director for Management Services, Room 2027, Bureau of the Census, Washington, DC 20233; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

1988 Agricultural Economics and Land Ownership Survey, Report Form 88-A9B, Landlord's Report

DUE DATE: 30 DAYS AFTER RECEIPT OF FORM

OMB No. 0607-0630: Approval Expires 09/30/90

FORM **88-A9B**
(9-12-88) U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

1988 AGRICULTURAL ECONOMICS AND LAND OWNERSHIP SURVEY

LANDLORD'S REPORT

Please complete this
form and RETURN TO

BUREAU OF THE CENSUS
1201 East Tenth Street
Jeffersonville, IN 47133

**The financial needs of the American farmers are changing.
It is important to know facts such as:**

- The relative debt burden of farmers
- The capital investment, operating expenditures, and
the amount and sources of income of farmers

These and many other financial problems can be examined only by obtaining
information from you and the other survey respondents. Please give the
best answers you can, making estimates when you do not have exact
figures. Your answers will be combined with others so that confidentiality is
maintained. Please answer each question that applies to you.

CENSUS USE ONLY	035	036	037	038
	039	040	041	042

NOTICE — Response to this inquiry is required by law (title 13, U.S. Code). By the same law YOUR REPORT
TO THE CENSUS BUREAU IS CONFIDENTIAL. It may be seen only by sworn Census employees and may be
used only for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or
regulation. The law also provides that copies retained in your files are immune from legal process.

In correspondence pertaining to this report, please refer to your Census File Number (CFN)

88-A9B

Please correct errors in name, address, and ZIP Code. ENTER street and number if not shown.

SECTION 1 ACREAGE IN 1988 AND CURRENT MARKET VALUE of land and buildings

1. How many acres owned by you were used in 1988 by the farm or
ranch operator listed on the top line of the address label?

Acres
049

	Estimated market value	
	Dollars	Cents
None	050	00
<input type="checkbox"/> \$	056	00
<input type="checkbox"/> \$	057	00
<input type="checkbox"/> \$	058	00
<input type="checkbox"/> \$	059	00
<input type="checkbox"/> \$	060	00

2. What is your estimate of the market value of all land and buildings included in item 1?

3. Of the total market value reported in item 2, what was the estimated values of the following:

- a. Tenant dwelling (If on acres reported in item 1 above)
- b. Dwelling for hired labor (If on acres reported in item 1 above)
- c. Other dwellings on acres reported in item 1 above including landlord's residence
- d. All other buildings and structures (on acres in item 1 above)
- e. Land (Excluding buildings)

- 4a. Did you operate a farm or ranch in 1988? —

149 ☐ YES ☐ NO — SKIP to section 2A

- b. If yes, how many of the acres operated in 1988 were
owned by you? Also, give farm or ranch name and
address if different than shown in the label.

Owned acres
operated in 1988

150

Name

Number and street

City

State

ZIP Code

SECTION 2A PURCHASES AND EXPENDITURES DURING 1988 in connection with the acreage reported in section 1, item 1 —

The items in this section concern the kinds of purchases and expenditures
made during 1988 for the agricultural operations. Report the total cost of the
purchases or expenditures. Do not include your tenant's share of any expenses.

• Capital expenditures related to the acreage reported in section 1, item 1, during 1988

1. Expenditures for improvements on land: such as irrigation
improvement, land preparation, well drilling, ponds,
drainage, roads, feedlots, fences, trench silos, lagoons, etc.
(Exclude moveable equipment.)

2. Expenditures for buildings and structures — Include
new or additions to dwellings, barns, shelters, milking
parlors, hog houses, poultry houses, crop storage,
silos, etc. (Exclude repairs.)

3. Purchases of tractors and farm machinery —
Report total cost minus trade-in values.

- a. New
- b. Used

4. Purchases of all trucks and autos — Report total
cost minus trade-in values.

5. Purchases of breeding livestock and dairy cattle — Report all
other livestock purchases in section 2B, item 2.

6. All other agricultural capital purchases — Include moveable
irrigation equipment and machinery such as pipes, siphons,
nozzles, pumps, and engines; other motor driven vehicles
and equipment such as airplanes, or other special use
vehicles that were used on this place. (Exclude capital
purchases covered above)

	Total cost of purchases or expenditures in 1988	
	Dollars	Cents
None	073	00
<input type="checkbox"/> \$	074	00
<input type="checkbox"/> \$	075	00
<input type="checkbox"/> \$	076	00
<input type="checkbox"/> \$	077	00
<input type="checkbox"/> \$	078	00
<input type="checkbox"/> \$	079	00

SECTION 2B AGRICULTURAL OPERATING EXPENSES AND OTHER PURCHASES related to the acreage in section 1, item 1, during 1988.

Do not include expenses paid by tenant, depreciation, income taxes,
expenditures for the purchase of land, buildings, or machinery, expenditures for
the landlord dwelling including repairs, real estate taxes, insurance, etc.

• Operating expenditures

1. Expenditures for feed — grain, hay, silage, mixed feeds,
concentrates, etc.
2. Purchases of livestock and poultry other than breeding
stock and dairy cattle — Report breeding stock and
dairy cattle purchases in section 2A, item 5.
3. Purchases of fertilizer
4. Purchases of herbicides and pesticides
5. Expenditures for hired and contract labor — Report gross cash
payments to employees including paid family members, before
deductions for social security, taxes, insurance premiums, etc.
6. Purchases of gasoline, diesel fuel, LP gas, other fuel,
motor oil, and grease for farm use only
7. Interest and service charges on:
- a. Farm real estate debt
 - b. Farm operating debt
8. Personal property taxes on livestock, machinery, and other
farm production items — Report real estate taxes in section 7.
9. Insurance premiums for all types of crops, livestock, and
property insurance on farm buildings (Include farm share of
autos and truck insurance.)
10. All other agricultural operating expenditures such as machine
hire, customwork, seeds, containers, water transportation and
marketing charges, utilities, upkeep of farm buildings
(including tenant's dwelling), machinery and fences, drains
and irrigation systems, feed drying and grinding, veterinary
services and supplies, storage charges, lime and soil
conditioners, and general business expenses.

	Total expenditures	
	Dollars	Cents
None	080	00
<input type="checkbox"/> \$	081	00
<input type="checkbox"/> \$	082	00
<input type="checkbox"/> \$	080	00
<input type="checkbox"/> \$	083	00
<input type="checkbox"/> \$	084	00
<input type="checkbox"/> \$	085	00
<input type="checkbox"/> \$	086	00
<input type="checkbox"/> \$	087	00
<input type="checkbox"/> \$	088	00
<input type="checkbox"/> \$	089	00

SECTION 3 DEBTS AS OF DECEMBER 31, 1988
(See enclosed information sheet.)

The debts to be reported are those owed by the landlord as of December 31, 1988 arising from the operation of the acres reported in section 1, item 1.

	None	Total amount owed by landlord on December 31, 1988 (Exclude interest unless past due)	
		Dollars	Cents
1. Federal Land Banks (or Federal Land Bank Associations)	<input type="checkbox"/>	091	00
2. The Farmers Home Administration	<input type="checkbox"/>	092	00
3. Commodity Credit Corporation loans:		093	
a. On crops	<input type="checkbox"/>	094	00
b. For crop storage facilities	<input type="checkbox"/>	095	00
4. Insurance companies (Exclude premiums due)	<input type="checkbox"/>	096	00
5. Commercial banks and savings banks (National or State banks, trust companies, etc.)	<input type="checkbox"/>	097	00
6. Individuals from whom you bought part or all of this acreage —		098	
a. Under a mortgage or deed of trust	<input type="checkbox"/>	099	00
b. Under a land purchase contract	<input type="checkbox"/>	100	00
7. Production credit associations	<input type="checkbox"/>	101	00
8. Other lenders:		102	
a. State and county lending agencies	<input type="checkbox"/>	103	00
b. Mortgage companies, real estate agents or dealers, savings and loan associations, agricultural credit corporations, credit unions, livestock loan companies, small business administration, etc.	<input type="checkbox"/>	104	00
9. Merchants and dealers, including cooperatives, mail order companies, farm machinery companies, and other manufacturers (exclude debts on 30-day accounts) for purchase of —		105	
a. Tractors and farm machinery, including repairs	<input type="checkbox"/>	106	00
b. Autos and trucks (including repairs), gasoline, oil, other fuel, feed, seed, fertilizer, livestock, poultry, and other purchases for the operation of this acreage from merchants and dealers, including building supplies, fencing, hardware, customwork, and similar purchases	<input type="checkbox"/>	107	00
10. Any other individuals, relatives, friends, landlords, estates, etc. (Exclude debts on 30-day accounts.)	<input type="checkbox"/>	108	00
11. Unpaid bills for veterinary services, utilities, past due taxes or insurance premiums, and debts for other purposes relating to this acreage (Include all debts on accounts not expected to be paid in 30-days.)	<input type="checkbox"/>	109	00

SECTION 4 ASSETS OWNED BY THE LANDLORD
(See enclosed information sheet)

The assets to be reported are those owned as of December 31, 1988, involved with the ownership of the acres in section 1, item 1. Do not include your tenant's share of any assets.

	None	Current market value of assets owned as of December 31, 1988	
		Dollars	Cents
1. Farm share of autos and trucks (Percent of farm use x total market value)	<input type="checkbox"/>	121	00
2. Tractors, farm machinery, tools, and equipment	<input type="checkbox"/>	122	00
3. Crops produced and stored and still owned on December 31, 1988. (Exclude crops under government CCC loans.)		123	
a. On-farm	<input type="checkbox"/>	124	00
b. Off-farm	<input type="checkbox"/>	125	00
4. Beef, dairy, hogs, sheep, poultry, and other livestock (horses, mink, bees, fish, rabbits, etc.)	<input type="checkbox"/>	126	00
5. Purchased feed, seed, fertilizer, and other inputs on hand.	<input type="checkbox"/>	127	00
6. Stock in Federal Land Banks, Production Credit Associations, and other farm cooperatives	<input type="checkbox"/>	128	00
7. All other assets of this farm operation (cash, bonds, certificates of deposit, saving and checking accounts, and money owed to this operation, including crops and livestock sold for future payment)	<input type="checkbox"/>	129	00

SECTION 5 PARTICIPATION IN MANAGEMENT DECISIONS TO BE REPORTED FOR THE ACRES IN SECTION 1, ITEM 1

	Management decisions determined by — Mark (X) only ONE box for each item		
	Landlord only	Tenant only	Landlord and tenant jointly
1. Selection of fertilizer and chemicals	135 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
2. Cultivation practices	136 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
3. Selection of crop varieties or livestock breeds	137 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
4. Harvesting decisions	138 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
5. Marketing agricultural products	139 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>

SECTION 6 AGRICULTURAL LAND OWNERSHIP

1. Report for all farm land owned on December 31, 1988. (Include all cropland, pastureland, rangeland, woodland, wasteland, idleland, and farm residences.) (Include land reported in section 1, item 1, plus any other farm and ranch land you had an ownership interest in, and report the current market value.)

Total acres owned	Estimated market value	
	Dollars	Cents
141	143	00

2. Of the land you owned on December 31, 1988, how many acres were obtained by:

	Acres
a. Purchase from non-relative	144
b. Purchase from relative	145
c. Inheritance or gift	146
d. Other — Specify	147
e. TOTAL (Should equal acres in item 1)	148

3. Of the farm and ranch land you owned on December 31, 1988, how many acres were enrolled in the Federal Conservation Reserve Program?

	Acres
149	

4. For all farm and ranch land owned on December 31, 1988 (Reported in item 1 above), please report the number of acres in the following land use categories:

	Acres
a. Cropland	171
b. Orchard/vineyard	172
c. Cropland used for permanent pasture	173
d. All other pasture or rangeland	174
e. Forest/woodland not pastured	175
f. Other (farmstead, wasteland, roads, ditches, etc.)	176

5. Please report land ACQUIRED and/or SOLD or DISPOSED OF during each specified time period and total acreage OWNED at the end of each specified time period (December 31).

Land owned on December 31 of year below	Land owned (Acres) (1)	Date	Land acquired (Acres) (2)	Land sold or disposed of (Acres) (3)
1988	178	During 1988	184	189
1987	179	1983–1987	185	190
1982	180	1979–1982	186	191
1978	181	1975–1978	187	192
1974	182	1970–1974	188	193
1969	183			

IF NO LAND ACQUIRED IN 1988 — SKIP TO ITEM 7.

6a. If you acquired land in 1988, PLEASE report estimated market value of land, buildings acquired, and amount financed.

Market value December 31, 1988		Amount financed	
Dollars	Cents	Dollars	Cents
196	00	197	00
		198	00
		199	00
		200	00
		201	00
		202	00
		203	00

b. If you financed land purchased in 1988 (item 6a), please enter the amount financed from the following sources:

	Amount financed
1. Federal land bank	198 \$ 00
2. Farmers Home Administration	199 \$ 00
3. Insurance companies	200 \$ 00
4. Commercial banks/savings & loan companies	201 \$ 00
5. Other (Include seller financing)	202 \$ 00

7. Report the following information for land you owned on December 31, 1988, and leased to others.

Type of lease	None	Number of leases	Total acres leased to others	Market value of acres leased		Value of rent received in 1988	
				Dollars	Cents	Dollars	Cents
a. Cash	<input type="checkbox"/>	151	155	159	00	163	00
b. Share	<input type="checkbox"/>	152	156	160	00	164	00
c. Cash/share	<input type="checkbox"/>	153	157	161	00	165	00
d. Other	<input type="checkbox"/>	154	158	162	00	166	00

8. For CASH LEASES reported in item 7, how many allow for adjustment of rental payment in the event of unusual or exceptional conditions?

	Number cash leases	Acres
167		168

9. In 1988, did you purchase any professional farm management services such as recordkeeping, farm practices advice, financial planning, rent collection, etc.?

204 1 ☐ YES 2 ☐ NO

SECTION 7 REAL ESTATE TAXES (See enclosed information sheet) <p>1. Report the number of acres of farm and ranch land shown on your 1988 real estate tax bill(s)</p> <p>2. What was the assessed value of farm and ranch land, buildings, and other improvements shown on your tax bill(s) for 1988?</p> <p>3. What was the total amount of farm and ranch real estate taxes (land, buildings, and other improvements) payable by you as shown on your tax bill(s) for 1988?</p>	SECTION 10A CHARACTERISTICS AND OCCUPATION OF LANDLORD — Continued <p>3. SPANISH ORIGIN — Is the landlord (senior partner or person in charge) of Spanish origin or descent (Mexican, Puerto Rican, Cuban, or other Spanish)?</p> <p>4. AGE OF LANDLORD Years old</p> <p>5. OCCUPATION OF LANDLORD — At which occupation did the landlord spend the majority of his/her worktime in 1988?</p> <p>6. What proportion of total business income (farm and nonfarm) you and your family received was from the sale of agricultural products and/or rental income from all agricultural lands you owned in 1988?</p>
SECTION 8 NET CASH INCOME FOR 1988 <p>What was your net cash income from land you operated, plus your net income from farm and ranch land you owned and rented to others in 1988? (Section 6, item 1) Mark the range that matched your net cash income for 1988.</p> <p>Mark (X) ONE</p>	<p>234 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO</p> <p>235</p> <p>236 1 <input type="checkbox"/> Operating a farm or ranch 2 <input type="checkbox"/> Employed by a private business for wages, salary, or commission 3 <input type="checkbox"/> Employed by a Federal, State, or local government 4 <input type="checkbox"/> Self-employed — operating farm related business 5 <input type="checkbox"/> Self-employed — operating nonfarm related business or professional practice 6 <input type="checkbox"/> Retired — previously farming or farm related business 7 <input type="checkbox"/> Retired — previously nonfarm related occupation 8 <input type="checkbox"/> Other — Specify <u> </u></p> <p>237 1 <input type="checkbox"/> Less than 1% 2 <input type="checkbox"/> 1% to 25% 3 <input type="checkbox"/> 26% to 50% 4 <input type="checkbox"/> 51% to 75% 5 <input type="checkbox"/> 76% or more</p>
SECTION 9 TYPE OF OWNERSHIP <p>Please indicate the type of ownership on the acres you owned or had an ownership interest as of December 31, 1988, reported in section 6, item 1.</p> <p>Type of owner (Check those applicable)</p> <p>1 <input type="checkbox"/> SOLE OWNERSHIP</p> <p>2 <input type="checkbox"/> HUSBAND/WIFE: <input type="checkbox"/> Land held jointly <input type="checkbox"/> Land held by husband <input type="checkbox"/> Land held by wife</p> <p>3 <input type="checkbox"/> FAMILY PARTNERSHIP — At least half the partners are related, include husband/wife as two partners when owned with at least one other owner.</p> <p>4 <input type="checkbox"/> OTHER (non-family) PARTNERSHIP — Less than half the partners are related.</p> <p>5 <input type="checkbox"/> FAMILY CORPORATION — At least half of stockholders are related.</p> <p>6 <input type="checkbox"/> NON-FAMILY CORPORATION — Fewer than half of stockholders are related.</p> <p>7 <input type="checkbox"/> OTHER such as cooperative, prison farm, grazing association, Indian reservation (Include unsettled estates)</p> <p>8 <input type="checkbox"/> TOTAL should equal acres in section 6, item 1.</p>	<p>OWNERSHIP TYPE ON ACRES OWNED (Section 6, item 1)</p> <p>OWNERSHIP TYPE ON ACRES LEASED TO INDIVIDUAL ON LABEL (Section 1, item 1) Mark (X) in appropriate box</p> <p>221 <input type="checkbox"/> 222 <input type="checkbox"/> 223 <input type="checkbox"/> 224 <input type="checkbox"/> 225 <input type="checkbox"/> 226 <input type="checkbox"/> 227 <input type="checkbox"/> 228 <input type="checkbox"/> 229 <input type="checkbox"/> 230 <input type="checkbox"/></p> <p>Complete section 10A</p> <p>Complete section 10B</p> <p>Skip to section 11</p>
SECTION 10A CHARACTERISTICS AND OCCUPATION OF LANDLORD FOR INDIVIDUAL AND PARTNERSHIP LANDLORDS (The following characteristics reported on a partnership should be for the senior partner.) <p>1. RESIDENCE</p> <p>a. Where does the landlord live?</p> <p>b. Distance of residence from land reported in section 1, item 1</p> <p>2. RACE of landlord</p>	
SECTION 10B CORPORATION LANDLORDS <p>In 1988, did the corporation have any business activities or interests other than that of a landlord? (Example, own or manage a nonfarm business or operate another farm or ranch?)</p> <p>238 1 <input type="checkbox"/> NO — Skip to section 11 2 <input type="checkbox"/> YES — If "YES" — Did the corporation engage in any of the following activities?</p> <p>1. RELATED TO AGRICULTURE</p> <p>a. Operate a farm or ranch</p> <p>b. Manufacture or distribute farm supplies (feed, fertilizer, farm machinery, etc.)</p> <p>c. Processing of crops, poultry, livestock (slaughter plant, meat packing, processing, canning, milling)</p> <p>d. Wholesaling, retailing of farm products (grain elevators, livestock auctions, produce markets, other food stores including supermarkets, etc.)</p> <p>e. Other activities related to farm products</p> <p>2. NONAGRICULTURAL ACTIVITIES</p> <p>a. Manufacture of nonagricultural products</p> <p>b. Wholesaling, retailing of nonagricultural products</p> <p>c. Real estate</p> <p>d. Banking and finance</p> <p>e. Life insurance</p> <p>f. Other business activities</p> <p>3. Mark (X) one box to indicate the appropriate size of total business receipts (farm and nonfarm) of the corporation in 1988.</p> <p>4. Of the total receipts from all sources, what proportion from the corporation was from the sale of agricultural products and/or rental income from all agricultural lands owned and/or operated?</p>	
SECTION 11 PERSON COMPLETING THIS REPORT — PLEASE PRINT <p>Mark (X) one</p> <p>312 1 <input type="checkbox"/> Owner of land 2 <input type="checkbox"/> Agent</p> <p>Name Date</p> <p>Telephone Area code Number</p>	

SECTION 12	REMARKS

INFORMATION SHEET

1988 AGRICULTURAL ECONOMICS AND LAND OWNERSHIP SURVEY

General Information

You have been identified as a landlord of the farm operator whose name appears on the address label. The questions in sections 1 through 5 refer to the land you leased to this tenant.

The enclosed report form was designed to collect data from landlords of farm and ranch land but may contain sections and inquiries which do not apply to you. Where this is the case, you may simply mark the "None" or "No" box and go on to the next item or section.

Please begin with section 1 and read the items and instructions to see what information you should provide. Give the best answers you can. Please estimate for information on which you do not keep records.

To make recordkeeping more economical, every report form in the Agricultural Economics and Land Ownership Survey has a separate Census File Number (CFN). **We need a reply from everyone** receiving the report form, whether agricultural operations were conducted in 1988 or not. Please complete and return your report as soon as you can, preferably within the next 2 weeks. Use the enclosed self-addressed envelope.

Please put your answers in the answer spaces (unshaded areas). You may write explanations and comments in the shaded areas to the left of the answer spaces or in the "Remarks" section on page 4.

Please mark answers of "Yes," "No," or "None" by placing an (X) in the small answer box. If the answer is "No" or "None" and a small answer box is not provided, leave the answer space blank.

If you do not recall exact figures, please give your best estimates. You may indicate "Est." (for estimated) beside the answer, if you like. All dollar items may be entered in whole dollars. Cents are not required.

If you are the **caretaker, executor, administrator**, or act as **agent** for the actual landlord, please answer all the questions you can for the landlord, estimating if necessary. When reporting section 1, item 1, "acres owned by you," include in the total the parcel of land used by the farm operator listed on the top line of the address label.

Section 3 — Debt — If you have knowledge of the amount and source of debt owed on the property in section 1, item 1, please complete section 3. Answer all other questions in reference to the actual owner if possible, i.e., does the actual owner live over 150 miles from the land reported in section 1, item 1; if a corporation owned the land, how is it related to agriculture; etc. For items which you cannot respond — please write "unknown" or "unk." Write in the remarks section, completed by "caretaker," "executor," "administrator," etc.

Instructions For Specified Sections

► Section 1 — ACREAGE IN 1988 AND CURRENT MARKET VALUE OF LAND AND BUILDINGS

Item 1 — Report all of the land you own that was used (rented, leased, used rent-free, etc.) by the farm operator listed on the label. Include cropland, pastureland, woodland, and wasteland.

Item 2 — Please give your best estimate of the market value of the land, including all permanent buildings and permanently attached equipment. Include the value of dwelling(s) **on the place** and all farm buildings such as barns, poultry houses, fruit packing sheds, vegetable sheds, etc.

Item 3 — All Other Buildings and Structures — Using the market value reported in item 2 as the total value, please estimate the value of the land and buildings separately. Include barns, cribs, silos, equipment shops, grain bins, storage sheds, etc.

► Section 2 — PURCHASES AND EXPENDITURES DURING 1988 FOR THE AGRICULTURE OPERATION

Report all purchases or expenditures made by you for the agricultural operation on the acres reported in section 1, item 1, during 1988. On individual items, include sales taxes, but exclude finance charges. Finance charges should be reported in section 2b, item 7. Report the costs of items minus trade-in values allowed. Mark (X) in the "None" box if you have no purchases or expenditures to report.

DO NOT INCLUDE THE FOLLOWING EXPENDITURES IN THIS SECTION:

- a. Expenditures made by the tenant or the tenant's share of any costs.
- b. Expenditures on nonfarm property.
- c. Expenditures related to nonfarm activities (trading and speculation or livestock dealer activities).

► **Section 2A** — Report all capital purchases or expenditures made for the agricultural operation during 1988. Include sales taxes, but exclude finance charges. Finance charges will be recorded in section 2B, item 7. Report the costs of items minus trade-in values allowed. If you had no expenditures for the items, mark (X) in the "None" box.

► **Section 2B** — Report all agricultural operating expenses you, the partnership, or organization incurred for the acres reported in section 1, item 1. Do not include estimates of expenditures for items provided or paid for by tenants.

Item 5 — Hired and Contract Labor — Include gross salaries and wages, commissions, dismissal pay, vacation pay, and paid bonuses paid to hired workers, family members, hired managers, administrative and clerical employees, and salaried corporate officers. Also, include supplemental cost for benefits such as employer's social security contributions, unemployment compensation, workmen's compensation insurance, life and medical insurance, pension plans, etc.

Include as contract labor costs of workers furnished on a contract basis by a labor contractor, crew leader, or cooperative for harvesting vegetables or fruit, shearing sheep, or similar farm activities. Do not include costs for building or repair work done by a construction contractor. Include the cost of customwork or machine hire in item 10.

Item 7 — Include all interest paid on land and buildings in section 1, item 1. Include interest paid on CCC loans in item 7b.

► Section 3 — DEBTS AS OF DECEMBER 31, 1988

The debts to be reported are those owed as of December 31, 1988, **arising from the ownership of the acres in section 1, item 1**, which were leased to the farm operator whose name appears on the label.

For debts covering land areas which include, but are not limited to the acres in section 1, item 1, report only your estimate of that part of the debt that applies to these, section 1, item 1, acres. The share to be reported should be estimated in proportion to the market value of the properties. If you cannot allocate debt between owned land reported in section 1, item 1, and total owned land, report the total debt for the total owned land and the total owned acreage involved, and explain in "Remarks" on page 4. Other debts should also be prorated if they relate only in part to the agricultural operations reported for the acreage in section 1, item 1.

DO NOT INCLUDE THE FOLLOWING KINDS OF DEBTS:

- a. Debts on nonagricultural property such as cotton gins, canning factories, sugar mills, motels, stores, etc.
- b. Your tenant's share of any debts
- c. Charge accounts that are paid in full monthly (debts owed for less than 30 days should not be reported).

INCLUDE:

- a. Debts not expected to be paid in 30 days should be reported.

For each source to which no debt was owed on December 31, 1988, mark (X) in the "None" box.

► **Section 4 — ASSETS OWNED BY THE LANDLORD**

The assets to be reported are those owned as of December 31, 1988 that are part of, or related to, the acres reported in section 1, item 1.

Estimates are acceptable. For each item owned, enter the estimated market value. If owned assets are used on more owned acreage than that reported in section 1, item 1, and leased to the tenant on the label, prorate the value of the asset to this property based on the percent it is used or located on this property. Mark (X) in the "None" box for items that do not apply.

DO NOT INCLUDE:

- a. Your tenant's share of any assets.
- b. Poultry, livestock, and other assets owned by contractors, investors, etc.
- c. Machinery, equipment, and other assets rented from others.

► **Section 6 — AGRICULTURAL LAND OWNERSHIP**

Section 6 refers to **all** of the farm and ranch land owned by you on December 31, 1988 including the acres leased to the tenant's name(s) on the label. If you have other tenants or operate owned land yourself, these should be combined into a total of all land owned by you, and recorded in section 6, item 1.

The market value for land, dwellings, and other buildings is the value of all these items on all acres owned December 31, 1988.

Item 4 — Land Use Definitions

- a. **Cropland** is land that is cultivatable and normally used for crops.
- b. **Orchard/vineyard** are permanent crops such as tree crops and vineyards.
- c. **Cropland used for permanent pasture** is cultivatable cropland that is being used for permanent pasture but could be cropped.
- d. **All other pasture or rangeland** is all land owned where livestock are permitted to graze (exclude any non-owned public grazing land).
- e. **Forest/woodland not pastured** is forest and woodland on which livestock is fenced out.
- f. **Other (farmstead, wasteland, roads, ditches, etc.)** is wasteland, roads, driveways, ditches, building sites, houses, barns, wind breaks, ponds, lakes, personal gardens, etc.

Item 5 — Land Acquired, Sold or Disposed of, and Owned on Specific Years — Report acres owned as of December 31 for the specified year in column 1. Report acres acquired and/or sold for the period shown in columns 2 and 3.

Item 7 — Leases — Item 7 requests the number of leases, acres leased, market value of acres leased, and value of rent received, by type of lease on the land **you owned** on December 31, 1988. Do not include land you rent from others, and in turn, subleased to someone else. The market value of acres leased should be your estimate of the value for all land and buildings leased, if sold on the current market. The value of rent received should be the cash value of rent paid to you, or if the rent payment was received as a share of the crop or livestock, estimate the cash value of such items if they were sold on the current market. Any combination of cash and share payment should be summed together for total value of rent received during 1988.

Item 8 — Cash Leases Adjusted — Unusual conditions could be considered drought, hail, tornado, hurricane, adverse weather damage, etc. Exceptional conditions could be growing conditions where yields are above normal.

Item 9 — Services from a professional farm management firm might include accounting and financial planning, (once a year tax preparation does not constitute financial planning), record keeping, production and input information, crop and livestock marketing, rent collecting, tenant finding, etc. These services would be performed by a person or firm other than the farm or ranch operator, landlord, or tenant.

► **Section 7 — REAL ESTATE TAXES**

The taxes which are to be reported in this section are those levied on farm and ranch land, buildings, and other improvements, as reported on your tax bill(s) for the year 1988, for all the farm and ranch land and buildings you own as reported in section 6, item 1. If you have more than one tax bill (example, county, State, school district, etc.) for the same acres:

- a. Include the acreage only once in item 1.
- b. For one parcel, report in item 2 the largest assessed value for one of the individual tax bills.
- c. For multiple parcels, report the sum of the taxes paid by you from all bills in item 3.

Do not include taxes on nonfarm property, such as land and buildings used for cotton gins, sugar mills, canning factories, motels, stores, etc. For taxes that are levied on both agricultural and nonagricultural property, estimate and report only that portion of the taxes applying to your farm or ranch. Exclude personal property taxes (personal property taxes are reported in section 2b, item 8).

► **Section 8 — NET CASH INCOME FOR 1988**

Mark (X) in the box that best reports your net cash income from farming and ranching in 1988. As a landlord, this would be your net cash income for the land you operate as a farm operator, partner, or corporation, plus net income from rents (cash/share, etc.), from farm or ranch land leased to others during 1988. Net cash farm income is the gross sales of agricultural products off the farm, plus gross income from farm-related sources (customwork, etc.), minus the cash farm operating expenses and cash operating expenses from farm-related income sources.

► **Section 9 — TYPE OF OWNERSHIP**

Use the following definitions to assist you in determining the type of organization for your land ownership. You should report in column 1, the type of organization for the land ownership on the total acres of farm and ranch land you owned and, in column 2, the type of organization for the land leased to the farm operator named on the label. They may or may not be the same.

Individual or Family (Sole Proprietorship) — Defined as a farm or business organization controlled and operated by an individual. This includes family operations that are not incorporated and not operated under a partnership agreement.

Partnership — Defined as two or more persons who have agreed on the amount of their contribution (capital and effort) and the distribution of profits. Co-ownership of land by husband and wife or joint filing of income tax forms by husband and wife does not necessarily mean that a partnership exists unless there is some agreement as to sharing contributions, decision-making, profits, and liabilities.

Corporation, Including Family Corporations — Defined as a legal entity or artificial person created under the laws of a State to carry on a business. This definition does not include cooperatives. These types of operations are often managed.

Other — Such as a cooperative (defined as an incorporated or unincorporated enterprise or association created and formed jointly by the members), estate or trust (defined as a fund of money or property administered for the benefit of another individual or organization), prison farm, grazing association, Indian reservation, etc.

► **Section 10 — CHARACTERISTICS AND OCCUPATION OF LANDLORD**

Individual and partnership landlords should complete part A of this section and leave part B blank. Corporation landlords should complete part B and leave part A blank. Other types of landlords, such as cooperative, estate or trust, prison farm, grazing association, or Indian reservation, should skip section 10.

Based on tests with farmers and ranchers, it takes about 40 to 60 minutes to complete this form with most landlords completing the form in 50 minutes. If you have any questions regarding these estimates or any other aspect of this survey, please call or write the Associate Director for Management Services, Room 2027, Bureau of the Census, Washington DC 20233; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington DC 20503.

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