

CONTENTS

Chapter 11. Publication Program

	Page
Introduction	110
General Information.	110
The Composition Systems	110
Quantity of 1987 Statistics Published	110
Publication Media	110
General Information	110
Printed Reports	111
<i>Advance Reports</i>	111
Volume 1, <i>Geographic Areas Series</i>	111
Volume 2, <i>Subject Series</i>	111
Volume 3, <i>Related Surveys</i>	111
Volume 4, <i>Census of Horticultural Specialties (1988)</i>	112
Other Publishing Media	112
Public-use computer tape	112
Compact disc-read only memory (CD-ROM)	112
Online access	112
Publication Process	112
General Information	112
Preliminary Preparation	112
Text and graphics components	112
Statistical tables	113
Final Production Processing	113
Electronic Media Products	113
Pricing and Distributing Reports	114
Comparability of the Data	114

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

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.

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).