APPENDIX A. General Explanation

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DATA COLLECTION

Method of Enumeration

All agriculture censuses beginning with the 1969 census primarily have used mailout/mailback data collection. Direct enumeration methods, however, continue to be used for the agriculture census in Puerto Rico, Guam, the U.S. Virgin Islands, American Samoa, and the Commonwealth of the Northern Mariana Islands.

Mail List

The mail list for the 1987 census was comprised of individuals, businesses, and organizations that could be readily identified as being associated with agriculture. The list was assembled from the records of the 1982 census. administrative records of the Internal Revenue Service (IRS), and the statistical records of the U.S. Department of Agriculture (USDA), In addition, lists of large or specialized operations, such as nurseries and greenhouses, specialty crop farms, poultry farms, fish farms, livestock farms, and cattle feedlot operations, were obtained from State and Federal agencies, trade associations, and similar organizations. Lists of companies having one or more establishments (or locations) producing agricultural products were obtained from the 1982 census and updated using the information from the Standard Statistical Establishment List maintained by the Census Bureau. Exhaustive record linkage, unduplication, and mathematical modeling vielded a final mail list of 4.1 million names and addresses that had a substantial probability of being a farm operation.

Report Forms

In 1987, three different report forms were used—a two-page, a four-page, and a six-page form to minimize the reporting burden, particularly for small farms and places less likely to be farms. The six-page sample form and the four-page nonsample form are the same, except sections 23 through 28 have been added to the sample form to obtain supplemental information from a sample of farms.

The information collected in these sections will give the Bureau of the Census a good basis for making estimates of these data for other farms included in the census. The two-page form does not have as many questions or as much detail as the four-page and six-page forms. The four-page form has 11 regional versions and the six-page form has 13 regional versions. Both forms have different crops prelisted. Appendix D contains copies of both the two-page and six-page forms.

The six-page form was mailed to 1,104,000 addressees on the mail list, including all those expected to be large (based on expected sales or acreage) or unique (farms operated by multiestablishment companies or nonprofit organizations), all those in Alaska and Hawaii, and a sample of other addressees. The two-page form was mailed to 906,000 addressees. These were expected to be small farms or less likely to be farms. The four-page form was mailed to the remaining 2,079,000 addressees. Further discussion of the criteria used to determine which form was mailed to an addressee is provided in the Census Sample Design section of appendix C.

Initial Mailing

The report forms were mailed in mid-December 1987 to the approximately 4,089,000 individuals, businesses, and organizations on the mail list. The mail packages included a report form, a cover letter with a description of the purposes and uses of the census on the reverse side, an information sheet containing instructions for completing the form, and a postage-paid return envelope. Additional special instructions were included with report forms sent to grazing associations; feedlot operations; institutional organizations; Indian reservations; firms with multiple farm or ranch operations; and producers of poultry under contract, bees and honey, fish, laboratory animals, and nursery and greenhouse crops.

To provide additional help to farmers in completing their reports, copies of an Agriculture Census Guide booklet were sent to vocational agriculture instructors, USDA county offices of the Agriculture Stabilization and Conservation Service, and the Cooperative Extension Service. The Guide contained descriptions and definitions of various items in more detail than the instructions included with each report form. Representatives of the above agencies graciously consented to assist farmers in completing their report forms.

Followup Procedures

A thank you/reminder card was mailed to those on the mail list in mid-January 1988. Five followup letters, three of which were accompanied by a report form, were sent to nonrespondents at 4-week intervals starting in mid-February and continuing until early June 1988.

Telephone calls were made to all large farms who had not responded. In addition, telephone calls were made to a sample of other nonrespondents in counties that had a response rate of less than 75 percent. A nonresponse adjustment procedure was used to represent the final nonrespondent farms in the census results. A description of this procedure is included in the Census Estimation section of appendix C.

DATA PROCESSING

Selected report forms were reviewed prior to keying the data. These included reports with attached correspondence and reports with remarks or no positive data on the front page.

The data from each report form were subjected to a detailed item-by-item computer edit. The edit performed comprehensive checks for consistency and reasonableness, corrected erroneous or inconsistent data, supplied missing data based on similar farms within the same county, and assigned farm classification codes necessary for tabulating the data. Substantial computer-generated changes to the data were clerically reviewed and verified.

In the computer edit, farms with sales, acreage, or commodities exceeding specified levels were tested for historical comparability. Key items, such as acreage and sales, were compared for substantial changes between 1982 and 1987. Sizeable historical differences were resolved or verified by telephone, if necessary. Respondents who reported sales or acreage above specified levels on non-sample forms were sent correspondence requesting the additional sample data. Prior to publication, tabulated totals were reviewed by statisticians to identify inconsistencies and potential coverage problems. Comparisons were made with previous census data, estimates published by the USDA, and other available data.

MAJOR DATA CHANGES

Prior to each agriculture census, the Census Bureau reviews the content of the census forms to eliminate questions no longer needed and to identify new items necessary to meet user needs and to better describe the agricultural situation in our Nation. Data requests are solicited from farmers, farm organizations, land grant colleges and universities, State and federal agencies, and members of the Census Advisory Committee on Agricultural Statistics. Each agency and organization is asked to identify and justify its specific data needs. The following data inquiries were added to the 1987 report form:

Income from farm-related sources

Acres under the Conservation Reserve Program

Payments received for participation in federal farm programs

Grazing permits by source

Additional data on production expenses were added in 1987:

Repair and maintenance expenses

Cash rent

Property taxes paid

All other production expenses

The following separate data inquiries were eliminated from the 1987 form:

Storage capacity for petroleum products

Number of hired farm and ranch workers

Value of agricultural products sold directly to individuals for human consumption

Source of irrigation water

Tons of commercially mixed feed

Expenditures for coal, wood, and coke

Selected machinery items: automobiles, corn heads for combines, and field forage harvesters

Chinchillas

Worms

Tropical and baitfish

FOLLOW-ON SURVEYS, SPECIAL CENSUSES, AND RELATED PUBLICATIONS

In addition to the 1987 Census of Agriculture for the 50 States, Puerto Rico, Guam, the U.S. Virgin Islands, American Samoa, and the Commonwealth of the Northern Mariana Islands, the census of agriculture program includes the 1988 Farm and Ranch Irrigation Survey, the 1988 Agricultural Economics and Land Ownership Survey, and the 1988 Census of Horticultural Specialties.

The 1988 Farm and Ranch Irrigation Survey provides data on water use by irrigated farms and ranches. Data include: the amount of water applied by crop, method of water distribution, source of water, and energy costs for pumping water. Data from this survey will be published as volume 3, part 1.

The 1988 Agricultural Economics and Land Ownership Survey provides detailed data on debts, expenses, taxes, credits, assets, land ownership, and farm and off-farm income for farm operators. Many of these items, as well as detailed data on landlord characteristics, are being collected from the landlords of the farms involved in the survey. Data from this survey will be published as volume 3, part 2.

The 1988 Census of Horticultural Specialties covers operations growing and selling \$2,000 or more of horticultural products such as greenhouse products, outdoorgrown floricultural products, nursery products, mushrooms, and sod. These data will be published as volume 4.

Additional publications of the 1987 Census of Agriculture data include the Agricultural Atlas of the United States (previously called the Graphic Summary), Coverage Evaluation, Ranking of States and Counties, and Government Payments and Market Value of Agricultural Products Sold.

The Agricultural Atlas of the United States presents the Nation's agriculture graphically illustrated by dot and multicolor pattern maps. The maps provide displays on size and type of farm, land use, farm tenure, market value of products sold, crops harvested, livestock inventories, and other characteristics of farms. This report will be published as volume 2, part 1.

The Coverage Evaluation report provides estimates of the completeness of the 1987 Census of Agriculture for the United States, geographic regions, and selected States and groups of States. Estimates with their associated sample reliability are provided for farms not on the mail list, farms classified as nonfarms, duplicate farms, and nonfarms classified as farms. This report will be published as volume 2, part 2.

The Ranking of States and Counties report ranks the leading States and counties for selected items in the 1987 census and provides comparative data from the 1982 census. This report will be published as volume 2, part 3.

A new publication on Government Payments and Market Value of Agricultural Products Sold presents 1987 data for the United States and each State. The U.S. table has a format similar to volume 1, U.S. table 52 and presents summary data by size of farm. This report will be published as volume 2, part 5.

DEFINITIONS AND EXPLANATIONS

The following definitions and explanations provide a more detailed description of the terms used in this publication than are available in the tables or on the report form. For an exact wording of the questions on the 1987 census report forms and the information sheet which accompanied these forms, see appendix D. Most definitions of terms are the same as those used in earlier censuses. The more important exceptions are also noted here.

Farms or farms reporting—The term "farms" or "farms reporting" in the presentation of data denotes the number of farms reporting the item. For example, if there are 3,710 farms in a State and 842 of them had 28,594 cattle and calves, the data for those farms reporting cattle and calves would appear as:

Land in farms—The acreage designated in the tables as "land in farms" consists primarily of agricultural land used for crops, pasture, or grazing. It also includes woodland and wasteland not actually under cultivation or used for pasture or grazing, provided it was part of the farm operator's total operations. Large acreages of woodland or wasteland held for nonagricultural purposes were deleted from individual reports during the processing operations. Land in farms includes acres set aside under annual commodity acreage programs as well as acres in the Conservation Reserve Program for places meeting the farm definition.

Land in farms is an operating unit concept and includes land owned and operated as well as land rented from others. Land used rent free was to be reported as land rented from others. All grazing land, except land used under government permits on a per-head basis, was included as "land in farms" provided it was part of a farm or ranch. Land under the exclusive use of a grazing association was to be reported by the grazing association and included as land in farms. All land in Indian reservations used for growing crops or grazing livestock was to be included as land in farms. Land in reservations not reported by individual Indians or non-Indians was to be reported in the name of the cooperative group that used the land. In some instances, an entire Indian reservation was reported as one farm.

Land area—The approximate land area of counties and States represents the total land area as determined by records and calculations as of January 1, 1988. These data are updated periodically; however, the acreages shown for 1987 are essentially the same as for 1982. Any differences between the land area for 1987 and 1982 are due to annexations and other changes affecting county boundaries.

Land in two or more counties—With few exceptions, the land in each farm was tabulated as being in the operator's principal county. The principal county was defined as the one where the largest value of agricultural products was raised or produced. It was usually the county containing all or the largest proportion of the land in the farm or viewed by the respondent as his/her principal county. For a limited number of Midwest and Western States, this procedure has resulted in the allocation of more land in farms to a county than the total land area of the county. To minimize this distortion, separate reports were required for large farms identified from the 1982 census as having more than one farm unit. Other reports received showing land in more than one county were separated into two or more reports if the data would substantially affect the county totals.

Value of land and buildings—Respondents were asked to report their estimate of the current market value of land and buildings owned, rented or leased from others, and rented or leased to others. Market value refers to the value the land and buildings would sell for under current market conditions. If the value of land and buildings was not reported, it was estimated using the average value of land and buildings from a similar farm in the same geographic area.

Harvested cropland—This category includes land from which crops were harvested or hay was cut, and land in orchards, citrus groves, vineyards, nurseries, and greenhouses. Land from which two or more crops were harvested was counted only once, even though there was more than one use of the land.

Cropland used only for pasture or grazing—This category includes land used only for pasture or grazing that could have been used for crops without additional improvement. Included also was all cropland used for rotation pasture and land in government diversion programs that were pastured. However, cropland that was pastured before or after crops were harvested was to be included as harvested cropland rather than cropland for pasture or grazing.

Other cropland—This category includes cropland not harvested and not grazed which was used for cover crops, soil improvement crops, land on which all crops failed, cultivated summer fallow, idle cropland, and land planted in crops that were to be harvested after the census year.

Total woodland—This category includes natural or planted woodlots or timber tracts, cutover and deforested land with young growth which has or will have value for wood products, land planted for Christmas tree production, and woodland pastured. Land covered by sagebrush or mesquite was to be reported as other pastureland and rangeland or other land.

Woodland pastured—This category includes all woodland used for pasture or grazing during the census year. Woodland or forest land pastured under a per-head grazing permit was not counted as land in farms and therefore, was not included in woodland pastured.

Cropland in annual commodity acreage adjustment programs—This category includes land diverted or set aside under the provisions of the Federal Commodity Acreage Program. These data are for the acres of cropland taken out of production by growers of wheat, cotton, rice, corn, sorghum, barley, and oats, and devoted to conservation uses. Information was not obtained as to which crops would have been grown on the acres set aside.

Cropland in the Conservation Reserve Program (CRP)—This category includes acres of "highly erodible" cropland taken out of agricultural production and planted to protective cover crops or reforested. The CRP was established through the 1985 Food Security Act and provides for annual rental payments and shared costs of conservation practices through a 10-year contract with the USDA. Appendix B presents data on places with all their cropland enrolled in the Conservation Reserve Program and which were not counted as farms in the 1987 census.

Irrigated land—This category includes all land watered by any artificial or controlled means, such as sprinklers, furrows or ditches, and spreader dikes. Included are supplemental, partial, and preplant irrigation. Each acre was to be counted only once regardless of the number of times it was irrigated or harvested.

Operator—The term "operator" designates a person who operates a farm, either doing the work or making day-to-day decisions about such things as planting, harvesting, feeding, and marketing. The operator may be the owner, a member of the owner's household, a hired manager, a tenant, a renter, or a sharecropper. If a person rents land to others or has land worked on shares by others, he/she is considered the operator only of the land which is retained for his/her own operation. For partnerships, only one partner is counted as the operator. If it is not clear which partner is in charge, then the senior or oldest active partner is considered the operator. For census purposes, the number of operators is the same as the number of farms. In some cases, the operator was not the individual named on the address label of the report form, but another family member, a partner, or a hired manager who was actually in charge of the farm operation.

Operator characteristics—All operators were asked to report place of residence, principal occupation, days of off-farm work, year in which his/her operation of the farm began, age, race, sex, and Spanish origin. If race, age, sex, and principal occupation were not reported, they were imputed based on information reported by farms with similar acreage, tenure, and value of sales. No imputations were made for nonresponse to place of residence, Spanish origin, off-farm work, or year began operation. Operators of Spanish origin were tabulated by reported race.

Farm production expenses—In 1987, additional specific expense items and a category for all other farm production expenses were added to the selected farm production expenses collected in 1982. Consequently, we are publishing total farm production expenses in 1987. The expenses are limited to those incurred in the operation of the farm business. Expenses include the share of the expenditures provided by landlords, contractors, and partners in the operation of the farm business. Property taxes paid by landlords are excluded. Expenditures for nonfarm activities; farm-related activities such as providing customwork for others, the production and harvest of forest products, and recreational services; and household expenses are excluded. In 1987, as in other recent censuses, operators producing crops, livestock, or poultry under contract often were unable or unwilling to estimate the cost of production inputs furnished by the contractors. As a consequence, extensive estimation was required for contract producers.

Commercial fertilizer—The expense for commercial fertilizer is the amount spent on fertilizer during 1987

including the cost of custom application. The cost of custom application was excluded from the 1982 and 1978 data.

Agricultural chemicals—These expenses include the cost of all insecticides, herbicides, fungicides, and other pesticides, including the cost of custom application. Data exclude commercial fertilizer purchased. The cost of custom application was excluded from the 1982 and 1978 data. The cost of lime was excluded from the 1987 and 1982 data, but included in 1978.

Customwork, machine hire, and rental of machinery and equipment—These expenses include costs incurred for having customwork done on the place and for renting machines to perform agricultural operations. The cost of cotton ginning is excluded. The cost of labor involved in the customwork service is included in the customwork expense. The cost of custom application of fertilizer and chemicals was included in the 1982 and 1978 customwork data, but is included in expenditures for these items in 1987. The cost of hired labor for operating rented or hired machinery is included as a hired farm and ranch labor expense.

Interest—In 1987, separate data were collected for interest paid on debts secured by real estate and interest paid on debts not secured by real estate. In 1982, only total interest expenses were collected.

Market value of agricultural products sold—This category represents the gross market value before taxes and production expenses of all agricultural products sold or removed from the place in 1987 regardless of who received the payment. It includes sales by the operator as well as the value of any shares received by partners, landlords, contractors, or others associated with the operation. In addition, it includes receipts from placing commodities in the Commodity Credit Corporation (CCC) loan program in 1987. It does not include payments received for participation in federal farm programs nor does it include income from farm-related sources such as customwork and other agricultural services, or income from nonfarm sources.

The value of crops sold in 1987 does not necessarily represent the sales from crops harvested in 1987. Data may include sales from crops produced in earlier years and exclude some crops produced in 1987, but held in storage and not sold. For commodities, such as sugar beets and wool, sold through a co-op which made payments in several installments, respondents were requested to report the total value received in 1987.

The value of agricultural products sold was requested of all operators. If the operator failed to report this information, estimates were made based on the amount of crops harvested, livestock or poultry inventory or number sold. Extensive estimation was required for operators growing crops or livestock under contract.

Caution should be used when comparing sales in 1987 with sales reported in earlier censuses. Sales figures are expressed in current dollars and have not been adjusted for inflation or deflation.

Government payments—This category is limited to direct cash or generic commodity certificate (PIK) payments received by the farm operator in 1987. It includes deficiency and diversion payments; wool payments; payments from the Dairy Termination Program, the Conservation Reserve Program, other conservation programs, and all other federal farm programs under which payments were made directly to farm operators.

Other farm-related income—The 1987 report form included a new inquiry on income from farm-related sources. These data consist of gross income in 1987 before taxes and expenses from the sales of farm by-products and other sales and services closely related to the principal functions of the farm business. These data are for income producing activities that are primarily a by-product or supplemental to the farm operation. They exclude income from business activities that are separate from the farm business.

Customwork and other agricultural services—This income includes gross receipts received by farm operators for providing services for others such as planting, plowing, spraying, and harvesting. Income from customwork and other agricultural services is generally included in the agriculture census if it is closely related to the farming operation. However, it is excluded if it constitutes a separate business or is conducted from another location.

Rental of farmland—This income includes gross cash rent or share payments received from renting out farmland; payments received from the lease or sale of allotments for crops such as tobacco; and payments received for livestock pastured on a per-head, permonth, or per-pound basis. It excludes rental income from nonfarm property.

Sales of forest products—This income includes gross receipts from the sales of Christmas trees, standing timber, maple products, gum for naval stores, firewood, and other forest products from the farm business. It excludes income from nonfarm timber tracts and sawmill businesses.

Other farm-related income sources—This income includes gross receipts from hunting leases, fishing fees, camping, other recreational services, patronage dividends of cooperatives, sales of farm by-products, and other sales and services closely related to the farm business. It excludes income from nonfarm businesses.

Commodity Credit Corporations loans—This category includes loans for corn, wheat, soybeans, sorghum, barley, oats, cotton, peanuts, rye, rice, tobacco, and honey.

Agricultural chemicals used, including fertilizer and lime—For each type of agricultural chemical, the acres treated were to be reported only once even if the acres were fertilized or limed more than once. If multipurpose chemicals were used, the acres treated for each purpose were to be reported.

Fish and other aquacultural products—The raising of fish and other aquacultural products in captivity is included in the agriculture census. Production in salt water is considered not to be in captivity and is excluded from the census.

Bees and honey—Bee and honey production was enumerated and tabulated in the county in which the home farm was located even though hives are often moved from farm to farm over a wide geographic area.

Citrus enumeration-In the 1987 census, reports for selected citrus caretakers in Arizona, Florida, and Texas were obtained by direct enumeration. A citrus caretaker is an organization or person caring for or managing citrus groves for others. This special enumeration has been used in recent censuses because of the difficulty in identifying and enumerating absentee grove owners who often do not know the information that is needed to adequately complete the census report. Each citrus caretaker was enumerated as a farm operator and requested to complete one report form for all groves cared for and to furnish a list of grove owners' names, addresses, and acres of citrus. The names on the lists were matched to completed grove owners' report forms to eliminate duplication. The caretaker also was requested to inform the grove owner that he had already reported for the citrus under his care and that the grove owner was not to report the citrus again. In the 1987 census, 7 caretakers in Arizona reported 175 grove owners having 12,000 acres of citrus; the 65 caretakers in Florida reported 3,000 grove owners having 170,000 acres of citrus; and 20 caretakers in Texas reported 800 grove owners having 14,500 acres of citrus.

Crop year or season covered—Acres and quantity harvested are for the calendar year 1987 except for citrus fruits, avocados, olives; vegetables in Florida; sugarcane in Florida and Texas; and pineapples and coffee in Hawaii.

Citrus fruits—The data for Florida relate to the quantity harvested in the September 1986 through July 1987 harvest season, except limes that were harvested in the April 1987 through March 1988 harvest season. The data for Texas relate to the quantity harvested in the September 1986 through May 1987 harvest season. The data for States, other than Florida and Texas, relate to the quantity harvested in the 1986-87 harvest season.

Avocados—The data for California relate to the quantity harvested in the November 1986 through November 1987 harvest season and for Florida the April 1987 through March 1988 harvest season.

Olives—The data for California relate to the quantity harvested in the September 1986 through March 1987 harvest season.

Vegetables—The data for Florida relate to the crop harvested in the September 1986 through August 1987 harvest season.

Sugarcane for sugar—The data for Florida relate to the cuttings from November 1986 through April 1987, and for Texas the cuttings from October 1986 through April 1987.

Pineapples—The data for Hawaii relate to the quantity harvested in the year ending May 31, 1987.

Coffee—The data for Hawaii relate to the 1986-87 crop.

Acres and quantity harvested—Crops were reported in whole acres, except for the following crops which were reported in 10ths of acres: Irish potatoes, sweetpotatoes, tobacco, fruit and nut crops including land in orchards, berries, vegetables, and nursery and greenhouse crops; and in Hawaii, taro, ginger root, and lotus root. Totals for crops reported in 10ths of acres were rounded to whole acres at the aggregate level during the tabulation process.

If two or more crops were harvested from the same land during the year, the acres would be counted for each crop. Therefore, the total acres of all crops harvested generally exceeds the acres of cropland harvested. An exception to this procedure is hay crops. When more than one cutting of hay was taken from the same acres, the acres are counted only once but the quantity harvested includes all cuttings. However, hay cut for both dry hay and green chop or silage would be reported for each applicable crop. For interplanted crops or "skip-row" crops, acres were to be reported according to the portion of the field occupied by each crop.

If a crop was planted but not harvested, the acres were not to be reported as harvested. These acres were to be reported in the "land use" section under the appropriate cropland items—cropland used only for pasture or grazing, cropland used for cover crops, cropland on which all crops failed, or cropland idle.

Corn and sorghum hogged or grazed were to be reported as "cropland harvested" and not as "cropland used only for pasture or grazing." Crop residue left in fields and later hogged or grazed was not reported as cropland pasture.

Quantity harvested was not obtained for crops such as vegetables; nursery and greenhouse crops; corn cut for dry fodder, hogged or grazed; and sorghum, hogged or grazed.

Acres of land in bearing and nonbearing fruit orchards, citrus or other groves, vineyards, and nut trees were to be reported as harvested cropland regardless of whether the crop was harvested or failed. However, abandoned orchards were to be reported as cropland idle, not as harvested cropland and the individual abandoned orchard crop acres were not to be reported.

Land in orchards—This category includes land in bearing and nonbearing fruit trees, citrus or other groves, vineyards, and nut trees of all ages, including land on which all fruit crops failed. Respondents were instructed not to report abandoned plantings and plantings of less than 20 total fruit, citrus, or nut trees, or grapevines.

Crop units of measure—The regional report forms allowed the operator to report the quantity of field crops harvested in a unit of measure commonly used in the region. When the operator reported in a unit of measure different than the unit of measure published, the quantity harvested was converted to the published unit of measure.

Grapes could be reported in dry weight or fresh weight; plums and prunes in fresh weight, or prunes in dry weight; and in Hawaii, coffee in pounds parchment or pounds cherry, and macadamia nuts in pounds husked, unshelled or pounds shelled. For other fruit and nut crops and citrus, the operator was given a choice of units of measure of pounds, tons, or boxes. The quantity harvested for these crops is published in pounds.

Write-in crops—To reduce the length of the report form, only the major crops for the region were prelisted. For other crops, the respondent was requested to look at a list of crops in each section and write in the crop name and its code. For crops that had no individual code listed on the report form, the respondent was to write in the crop name and code the crop into the appropriate "all other" category for that section. Write-in crops coded as "all other" were reviewed and assigned a specific code when possible. Crops not assigned a specific code were left in the appropriate "all other" category.

In some cases, the reviewers were unable to determine the specific crop reported by the respondent because of incomplete or generalized crop names. To ensure proper coding, most of these respondents were telephoned. Reports for those not telephoned were changed on the basis of other reports for the area.

Misreported or miscoded crops—In a few instances, tabulated data may be inaccurate because respondents misunderstood or misinterpreted questions on the report form. Data may have been reported on the wrong line or in the wrong section, or the wrong crop code may have been placed beside the name of a write-in crop. Some of these errors as well as some keying errors may not have been identified during processing and therefore, were not corrected. Reports with significant acres of unusual crops for the area were examined to minimize the possibility that they were in error.

"See text" References

Items in the tables which carry the note "See text" are explained or defined in this section.

Data are based on a sample of farms—For 1987, 1982, and 1978, selected data were collected from only a sample of farms. These data are subject to sampling error. For 1987, the six-page sample form was mailed to all large and specialized farms (based on expected sales, acres, or standard industrial classification), all farms in Alaska and Hawaii, and approximately 17 percent of all other farms. Sample sections 23 through 28 of the 1987 census forms included inquiries on production expenses, commercial fertilizer and lime, chemicals, machinery and equipment, value of land and buildings, and income from farm-related sources. Estimates of the reliability of county totals for selected items are shown in table F of appendix C.

Operators of Spanish origin—No imputation was made for those not responding to the question on Spanish origin.

Farms operated by Black and other races—This category includes Blacks, American Indians, Asian and Pacific Islanders, and all other racial groups other than White.

All other races—This category is primarily limited to persons native to or of ancestry from Mexico, the Caribbean, and Central and South America.

Total sales—This item represents the gross market value of all agricultural products sold before taxes and expenses in the census year including livestock, poultry, and their products; and crops, including nursery crops and hay. Respondents were asked to include landlords' and contractors' shares. The value of commodities placed in CCC loans are included as sold. In 1987, all farms including abnormal farms were tabulated by size based on reported sales. In 1982 and 1978, abnormal farms were included in the total sales figure, but excluded from the detailed size breakdowns. Abnormal farms include institutional farms, experimental and research farms, and Indian reservations.

Farms with sales of less than \$1,000—This category includes all farms with actual sales of less than \$1,000, but having the production potential for sales of \$1,000 or more. These farms normally could be expected to sell \$1,000 or more of agricultural products.

Net cash return from agricultural sales for the farm unit—This category is derived by subtracting total operating expenditures from the gross market value of agricultural products sold. Depreciation and the change in inventory values are excluded from expenditures. Production expenditures may be understated on part owner and tenant farms because property taxes paid by landlords are excluded. Other landlord expenditures, such as insurance or rent paid, which are not readily known to renters may also be omitted or understated. Gross sales include sales by the operator as well as the share of sales received by

partners, landlords, and contractors. Consequently, the net cash return is that of the farm unit rather than the net farm income of the operator.

Other livestock and livestock products—This category includes all livestock and livestock products not listed separately.

Value of livestock and poultry on farms—Data for the value of livestock and poultry on farms were obtained by multiplying the inventory of each major age and sex group by State average prices. The State average prices for cattle, hogs, sheep, Angora goats, hens and pullets of laying age, and turkeys were obtained primarily from data published by the National Agricultural Statistics Service, USDA. Prices applied to other livestock and poultry were census-derived averages based primarily on reported value of sales in the census.

Poultry hatched—This category includes all poultry hatched on the place during the year and placed or sold. Incubator egg capacity on December 31, 1987, is tabulated under the column heading "Inventory" and the number of poultry hatched and placed or sold is under the heading "Sales."

Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc.—Data shown for hay represent all hay crops, including grass silage, haylage, and hay crops cut and fed green (green chop). In production data, dry tons represent dry tonnage for the various hay categories and dry weight equivalents for grass silage and hay cut and fed green. The conversion used was 3 tons of green weight to 1 ton of dry weight.

Tame hay other than alfalfa, small grain, and wild hay—Data shown represent dry tons of hay harvested from clover, lespedeza, timothy, Bermuda grass, Sudan grass, and other types of legume and tame grasses.

Grapes—Farm operators were given the option of reporting the quantity of grapes harvested in dry weight or fresh weight. For publication purposes, all quantities of grapes harvested have been converted to pounds of fresh weight. The conversion used was 4 pounds fresh weight to 1 pound dry weight.

Plums and prunes—Farm operators were given the option of reporting the quantity of plums and prunes harvested in dry weight or fresh weight. For publication purposes, all quantities of plums and prunes harvested have been converted to pounds of fresh weight. The conversion used was 3 pounds fresh weight to 1 pound dry weight.

Cherries—For 1987, cherries were reported as "sweet cherries," "tart cherries," or "cherries" depending on the regional form the respondent completed. On regional

forms for States where cherries are an important fruit crop, "sweet cherries" and "tart cherries" were listed separately. On the other regional forms, either "cherries" were listed or could be written in. For publication purposes, "cherries, total" could be shown along with the individual breakdown of "sweet cherries," "tart cherries," or "cherries, not specified." "Cherries, not specified" is used to account for cherries where the "sweet" and "tart" breakdown was not asked or where respondents wrote in "cherries" but did not specify or code the kind of cherry. All the individual cherry items may not be shown. Data for "sweet cherries," "tart cherries," and "cherries, not specified" are not available for 1982.

Other fruits and nuts—Data shown for other fruits and nuts relate to any fruits and nuts not having a specific code on the 1987 report form.

Land used for vegetables—Data are for the total land used for vegetable crops. The acres are reported only once, even though two or more harvests of a vegetable or more than one vegetable were harvested from the same acres.

Vegetables harvested for sale—The acres of vegetables harvested is the summation of the acres of individual vegetables harvested. All of the individual vegetable items may not be shown.

Nursery and greenhouse crops grown for sale—These data are a summation of the individual items reported. All of the individual items may not be shown.

Nursery, floriculture, vegetable and flower seed crops, sod, etc., grown in the open, irrigated—Data refer to farms reporting irrigated nursery, floriculture, vegetable and flower seeds, sod, bedding plants, etc., grown in the open.

Other grains—These data are for the total market value of other grains sold including dry edible beans, dry lima beans, buckwheat, dry southern peas (cowpeas), emmer and spelt, flaxseed, mixed grains, lentils, mustard seed, dry edible peas, popcorn, proso millet, rice, rye for grain, safflower, sunflower seed, triticale, and wild rice.

Value of crop production—This item represents the estimated value of all crops harvested during the 1987 crop year. Data for the value of crops harvested were obtained by multiplying the average estimated value per unit by the reported acres or quantity harvested. Generally, harvested units of production (pounds, bushels, bales, etc.) were multiplied by State estimates of prices per unit. If only acres harvested were reported, State estimates for value of production per acre were used. The State average production price and production value per acre used in these calculations were obtained usually from publications of the National Agricultural Statistics Service, USDA. When

USDA estimates were not available, Bureau of the Census statisticians made estimates using available sources such as data from adjacent States, respondent report forms, county extension agents, and other persons knowledgeable about specific crops.

FARMS CLASSIFIED BY SPECIFIED CHARACTERISTICS

State tables 48 through 53 present detailed 1987 data for all farms classified by specified characteristics—tenure of operator, type of organization, age and principal occupation of operator, size of farm (acres), value of agricultural products sold, and standard industrial classification. Other tables include data classified by value of sales groups or other characteristics of the farm or the operator.

Farms by value of agricultural products sold or value of sales— In 1987, all farms were tabulated by size based on reported sales. In 1982 and earlier censuses, abnormal farms were not tabulated based on sales size. In the tables on market value of agricultural products sold, the sales of abnormal farms in 1982 and earlier censuses were included in the total sales figure, but excluded from the detailed size categories. Abnormal farms included institutional farms, experimental and research farms, and Indian reservations. The category "farms with sales of less than \$1,000" included all farms with actual sales of less than \$1,000 but having the production potential for sales of \$1,000 or more. These farms normally could be expected to sell \$1,000 or more of agricultural products.

The sales size categories used in this report are consistent with the standard business size categories issued by Office of Management and Budget (OMB) in 1982. In State table 52, data are presented for four sales size categories between \$10,000 and \$49,999. This provides users with bridge data under both the OMB and the 1978 census classifications. For the 1992 census, data will be presented only for the OMB sales size categories of \$10,000 to \$24,999 and \$25,000 to \$49,999.

Abnormal farms—This category includes institutional farms, experimental and research farms, and Indian reservations. Institutional farms include those operated by hospitals, penitentiaries, churches, schools, grazing associations, and government agencies. In 1987 and 1982, nongovernmental units such as church farms and Future Farmers of America camps were classified as abnormal farms only when 50 percent or more of their products produced and intended for human consumption were utilized by the organization.

Farms by tenure of operator—The classifications of tenure used in the 1987 census were:

Full owners, who operate only land they own.

Part owners, who operate land they own and also land they rent from others.

Tenants, who operate only land they rent from others or work on shares for others.

Farms by type of organization—All farms were classified by type of organization in the 1987 census. The classifications used were:

Individual or family (sole proprietorship), excluding partnership and corporation.

Partnership, including family partnership.

Corporation, including family corporation.

Other, cooperative, estate or trust, institutional, etc.

Corporations were subclassified by two additional characteristics into:

- Family held
 Other than family held
- 2. More than 10 stockholders 10 or less stockholders

Farms by age and principal occupation of operator—Data on age and principal occupation were requested from all operators in 1987. The principal occupation classifications used were:

Farming—The operator spent 50 percent or more of his/her worktime in 1987 in farming or ranching.

Other—The operator spent more than 50 percent of his/her worktime in 1987 in occupations other than farming or ranching.

Farms by size—All farms were classified into selected size groups according to the total land area in the farm. The land area of a farm is an operating unit concept and includes land owned and operated as well as land rented from others. Land rented to or assigned to a tenant was considered the tenant's farm and not the owner's.

Farms by standard industrial classification—In 1987, all agricultural production establishments (farms, ranches, nurseries, greenhouses, etc.) were classified by type of activity using the standard industrial classification (SIC) system. These classifications, found in the 1987 SIC Manual¹, are used to promote uniformity and comparability in the presentation of statistical data collected by various agencies.

¹Standard Industrial Classification Manual: 1987. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-003-14-2.

An establishment primarily engaged in crop production (major group 01) or production of livestock and animal specialties (major group 02) is classified in the four-digit industry and three-digit industry group which accounts for 50 percent or more of the total value of sales of its agricultural products. If the total value of sales of agricultural products of an establishment is less than 50 percent from a single four-digit industry, but 50 percent or more from the products of two or more four-digit industries within the same three-digit industry group, the establishment is classified in the miscellaneous industry of that industry group. Otherwise, it is classified as a general crop farm in industry 0191 or a general livestock farm in industry 0291. Establishments that derive 50 percent or more of the value of sales from horticultural specialties of industry group 018 are classified in industry 0181 or 0182 according to their primary activity.

Characteristics of all farms by selected SIC groupings are shown in State tables 18 and 53. The SIC groupings shown in State table 53, together with the associated products (value of sales representing 50 percent or more of the value of agricultural products sold during the year) on which the classification is based, are as follows:

Cash grains (011)—Wheat, rice, corn, soybeans, barley, buckwheat, cowpeas, dry field and seed beans and peas, flaxseed, lentils, milo, mustard seed, oats, popcorn, rye, safflower, sorghum, sunflowers, and other small grains.

Cotton (0131)—Cotton and cottonseed.

Tobacco (0132)—Tobacco.

Sugarcane, sugar beets, Irish potatoes, hay, peanuts, and other field crops (0133, 0134, 0139)—Sugarcane, sugar beets, Irish potatoes, alfalfa, broomcorn, clover, grass seed, hay, hops, mint, peanuts, sweetpotatoes, timothy, and yams.

Vegetables and melons (016)—Vegetables and melons grown in the open.

Fruits and tree nuts (017)—Berries, grapes, tree nuts, citrus fruits, deciduous tree fruits, avocados, bananas, coffee, dates, figs, olives, pineapples, and tropical fruit.

Horticultural specialties (018)—Bedding plants, bulbs, florists' greens, flower and vegetable seeds, flowers, foliage, fruit stocks, nursery stock, ornamental plants, shrubberies, sod, mushrooms, and vegetables grown under cover.

General farms, primarily crops (019)—Crops, including horticultural specialties, but less than 50 percent of sales from any single three-digit industry group.

Livestock, except dairy, poultry, and animal specialties (021)—Cattle, calves, hogs, sheep, goats, goat's milk, mohair, and wool.

Beef cattle, except feedlots (0212)—Production or feeding of beef cattle, except feedlots.

Dairy farms (024)—Production of cows' milk and other dairy products and raising of dairy heifer replacements.

Poultry and eggs (025)—Chickens, chicken eggs, turkeys, ducks, geese, pheasants, pigeons, quail, and squab.

Animal specialties (027)—Fur-bearing animals, rabbits, horses, ponies, bees, fish in captivity except fish hatcheries, worms, and laboratory animals.

General farms, primarily livestock and animal specialties (029)— Livestock and animal specialties and their products, but less than 50 percent of sales from any single three-digit industry group.

The SIC manual was revised for 1987. Animal aquaculture (0273) was established as a new industry and horticultural specialties, not elsewhere classified (0189) was deleted.

APPENDIX B. Places With All Cropland in the Conservation Reserve Program

The Food Security Act of 1985 established the Conservation Reserve Program (CRP). This program provides annual payments for highly erodible cropland enrolled in the program and meeting its conservation requirements. It also requires that the land be taken out of agricultural production for 10 years.

The 1987 Census of Agriculture includes Conservation Reserve acreage as land in farms on operations that meet the census farm definition. For census purposes, a farm is any place from which agricultural products of \$1,000 or more were produced and sold or normally would have been sold during the census year. Operations which placed all of their cropland in the CRP and did not otherwise meet the farm definition based upon sales, livestock inventories, planted crops, or other criteria for potential sales were not included as farms in the census tabulations.

The following table provides CRP data for places not meeting the census farm definition ("whole farm" CRP places). It also contains separate but corresponding CRP data for farms included in the census tabulations. In addition to State data, detailed county data are presented for counties with three or more whole farm CRP places reported. For counties with less than three whole farm CRP places reported, their data are combined and reported in all other counties.

The data for "whole farm" CRP places are not complete for all counties. The census mail list was developed from sources which indicated the farm had agricultural production activity. It was not designed to cover all "whole farm" CRP places. Therefore, the data for these places are limited to what was reported in the census and have not been adjusted to account for nonresponse, incomplete coverage, and reporting errors.

Land in Conservation Reserve Program: 1987

[For meaning of abbreviations and symbols, see introductory text]

Number Land in JCRP Cacres Number Land in farms Land in farms Cacres Cacres Number Cacres Cacres	Geographic area	Agricultural places	cultural places excluded by farm definition with acres in the CRP				
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Ashland	Adams	6					644
Ashtabula		1 3					
Brown		၂ ႏ					52/
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Clark		ا ۾					
Clinton 6 746 365 22 10 741 1 08 Columbiana 4 328 153 7 2 659 7 Coshocton 6 1 193 610 14 5 403 63 Carker 3 295 275 14 3 457 53 Darke 8 527 333 11 1 854 49 Fairfield 11 1 99 359 25 5 572 93 Fayette 6 446 348 16 9 500 74 Fulton 3 111 98 5 5 1439 8 6 148 16 9 580 74 Heirlin 3 1 059 825 26 4 966 1 69 14 14 2 22 1 49 8 1 69 1 69 1 4 1 4 2 2 2 4 4 2 2 2 4 4 2 2 2 4 4 2 2 2 4 10<		1 4					
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Darke		<u>ă</u>					539
Fairfield	Darke	81					491
Fayette		11					937
Fulfon		6			16		744
Hardin		3					81
Henry	Hardin	13	1 059	825	26	4 966	1 699
Highland 34 3 773 2 446 77 20 595 4 10 Hornes 5 460 97 4 850 21 Huron 4 226 104 14 4 831 76 Knox 5 442 317 13 3 332 51 Licking 6 656 257 29 8 264 1 08 Logan 34 3 869 2 325 50 14 235 3 54 Madison 5 445 313 12 6 030 2 50 Marion 3 303 112 17 5 514 39 Mercer 4 175 104 11 2 389 39 Morrow 3 77 76 8 1 860 35 Muskingum 3 369 135 7 1 739 19 Pickaway 6 423 270 24 9 648 87 Pickaway 6 423 270 24 9 648 87 Picka 7 1 008 401 16 6 118 51 Richland 23 2 886 1 036 29 7 538 82		4	809	505			23
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APPENDIX C. Statistical Methodology

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MAIL LIST MODEL	C-1
CENSUS SAMPLE DESIGN	
CENSUS ESTIMATION	C-1
CENSUS SAMPLING ERROR	C-3
CENSUS NONSAMPLING ERROR	C-5
EDITING DATA AND IMPUTATION FOR ITEM	
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TABLES:

- A. PERCENT OF STATE TOTALS CONTRIBUTED BY WHOLE FARM NONRESPONSE ESTIMATION: 1987
- B. RELIABILITY ESTIMATES FOR NUMBER OF FARMS IN A COUNTY REPORTING A COMPLETE COUNT ITEM: 1987
- C. RELIABILITY ESTIMATES FOR NUMBER OF FARMS IN A COUNTY REPORTING A SAMPLE ITEM: 1987
- D. RELIABILITY ESTIMATES OF STATE TOTALS: 1987
- E. RELIABILITY ESTIMATES OF PERCENT CHANGE IN STATE TOTALS: 1982 TO 1987
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MAIL LIST MODEL

A statistical discriminant model was developed to predict the probability that a mail list addressee operated a farm. The model was used to identify the 4.1 million records from the preliminary census mail list of 6.0 million records that would receive a census of agriculture report form. Records from the 1982 census mail list were used to build the model. Record characteristics such as the source of the mail list record (see appendix A for a description of record sources), number of source lists on which the record appeared, expected value of agricultural sales, and geographic location were used to separate mail list records into model groups. The proportion of 1982 census farm records in each group was calculated to provide an estimate of the probability that an addressee in the group operated a farm.

Using these same group definitions, the 1987 census mail list records were separated into groups, each with an associated estimate of farm probability from the model. The 4.1 million mail list records in groups with the largest estimate of farm probability were selected to receive the census report form. A large percentage of the 1.9 million records that were dropped from the 6.0 million preliminary census mail list were nonfarm records from the previous census. This procedure was used to obtain a more complete census enumeration without excessive respondent burden and data collection cost.

CENSUS SAMPLE DESIGN

Each of the 4.1 million name and address records on the census mail list was designated to receive one of three different types of census report forms. The three forms were the nonsample census form (a four-page form), the sample form (a six-page form), and the short form (a two-page form). Sections 1 through 22 of the sample form were identical to sections on the nonsample census form. However, the sample form contained additional sections on farm production expenditures, usage of fertilizers and insecticides, value of machinery and equipment, value of land and buildings, and farm-related income. The short form contained abbreviated versions of the sections on the nonsample census form. These three different forms were used to reduce the response burden of the census, while providing quality information on a large number of data items at the county level.

The sample form was mailed to all mail list records in Alaska and Hawaii and to a sample of records in other States identified when the mail list was constructed. Addresses were selected into the sample with certainty if they were expected to have large total values of agricultural products sold or large acreage, if they were firms with two or more farms, or if they had other special characteristics. When a nonsample large farm was identified during processing, a supplemental form that contained the additional data inquiries was mailed. All farms in counties with less than 100 farms in 1982 were included in the sample with certainty; counties containing 100 to 199 farms in 1982 were systematically sampled at a rate of 1 in 2; and counties containing 200 or more farms in 1982 were systematically sampled at a rate of 1 in 6. This differential sample scheme was used to provide reliable data for sections 23 through 28 of the report form for all counties.

To determine which mail list records would receive the short form, all mail list records not designated for the sample were sorted into model groups according to farm probability as specified by the mail list model. The 906,000 mail list records in the model groups with the lowest probability of being farms and with an expected total value of agricultural product sales less than \$20,000 were designated to receive the short form. The remaining mail list records were selected to receive the nonsample census form.

CENSUS ESTIMATION

The 1987 Census of Agriculture used two types of statistical estimation procedures. These estimation

procedures accounted both for nonresponse to the data collection and for the sample data collection. These procedures are used because some farm operators never respond to the census despite numerous attempts to contact them, and not all farm operators are requested to provide the sample data items.

Whole Farm Nonresponse Estimation

A statistical estimation procedure was used to account for the census farms among mail list nonrespondents that were not designated for telephone followup. A stratified systematic sample of eligible census nonrespondents were mailed a simplified report form. Five sample strata were defined based on form type, expected value of sales, and previous census status. The report form was designed to provide sufficient information to determine farm status. Additional mail and telephone contacts were made to survey nonrespondents to obtain sufficient response for survey estimates.

Estimates of the proportion of census nonrespondents that operated farms were made for each stratum in the State using survey results and applied to the total number of census nonrespondents in that stratum. A synthetic estimation procedure was used to estimate the number of census nonrespondents that operated farms for each county by stratum. This estimation procedure is based on the assumption that the distribution of farms in a stratum by county is the same for census nonrespondents as for census respondents.

Within each stratum in a county, a noninteger nonresponse weight was calculated and assigned to each eligible respondent farm record. The procedure used for calculating the nonresponse weight assumed the eligible census respondents and the nonrespondent farm operations in a county had similar characteristics within each stratum. The noninteger nonresponse weight was the ratio of the sum of the estimated number of nonrespondent farms (using nonresponse survey results) and the number of eligible census respondent farms to the number of eligible census respondent farms. Stratum controls were established to ensure that this weight was never greater than 2.0. The noninteger nonresponse weight was used in the estimation of the final weight for the sample items. It was randomly rounded to an integer weight of either 1 or 2 for each record for tabulating the complete count items.

The procedure assumed that we obtain complete response from large and unique farm operations because these cases received intensive telephone followup during census processing. In situations where addressees could not be contacted by telephone or refused to cooperate, secondary sources such as Agricultural Stabilization and Conservation Service offices or county extension agents were asked to provide information as to whether or not the addressee had agricultural activities. Data from previous census reports for the specific addressee, in conjunction with other information, were used to complete the census report form.

Table A quantifies the effect of the nonresponse estimation procedure on selected census data items. The percentage of the census value contributed by nonresponse estimation as provided in this table indicates the potential for bias in published figures resulting from this procedure. The estimates provided in these tables do not reflect the effect of nonresponse to individual data items on respondents' census report forms. The effect of this item nonresponse is discussed further under Census Nonsampling Error.

Table A. Percent of State Totals Contributed by Whole Farm Nonresponse Estimation: 1987

Item	Percent of total
Farmsnumber	14.0
Land in farmsacres	10.5
Value of land and buildings\$1,000	10.4
Market value of agricultural products sold\$1,000	7.1
Harvested croplandacres	9.8
Corn for grain or seedacres	8.9
Wheat for grainacres	10.2
Livestock and poultry inventory:	
Cattle and calvesnumber	10.0
Hogs and pigsnumber	7.9
Hens and pullets of laying agenumber	.7

Sample Estimation

All respondent sample records received a sample weight. The sample data estimates the actual figures that would have resulted from a complete census of the items in sections 23 through 28 of the report form. The estimates were obtained from an iterative ratio estimation procedure that resulted in the assignment of a weight to each record containing sample items. For any given county, a sample item total was estimated by multiplying the data items for each farm in the county by the corresponding sample weight and summing overall sample records in the county.

Each sample farm was assigned one sample weight to be used to produce estimates for all sample items. For example, if the weight given to a sample farm had the value 5, all sample data items reported by that farm would be multiplied by 5. The weight assigned a certainty farm was 1. The estimation procedure used to assign weights was performed for each county.

Within a county, the ratio estimation procedure for farms was performed in three steps using three variables. The first variable contained eight 1987 total value of agricultural production (TVP) groups. Both the second and third variables, Standard Industrial Classification (SIC) code and farm acreage, contained two groups. The variable groups were as follows:

TVP	SIC	Acres
\$1 to \$999	01 All crops	0 to 69
\$1,000 to \$ 2,499	02 All live- stock	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

The first step in the estimation procedure was to partition the sample records into 32 mutually exclusive initial post strata formed by combining the three variable groups. This produced a three dimensional array where the cells of the array corresponded to the initial post strata groups. Each sample farm record was assigned an initial weight equal to the ratio of the total farm count to the sample farm count, expanded for nonresponse estimation, for the cell containing the sample farm. This weight was approximately equal to the inverse of the probability of selecting a farm for the census sample.

The second step in the estimation procedure was to combine, if necessary, the cells of the array (prior to the repeated ratio estimation) to increase the reliability of the ratio estimation procedure. Any cell within the array that either contained less than 10 sample farms or had a ratio of total farms to sample farms that was more than 2 times the mail sample rate was collapsed with another cell (in the same variable) according to a specified collapsing pattern. New total farm counts and sample farm counts were computed for each of the collapsed cells (final post strata) and were used in the ratio estimation procedure to calculate final sample weights.

In the third step in the ratio estimation procedure, complete counts for the three variables (TVP, SIC, acreage) were used to compute the marginals of the array defined by the final post strata. Factors were then applied to expanded sample totals in each cell of the array to obtain agreement with the row marginal (TVP) complete counts. The sample totals then had factors applied to obtain agreement with the column marginal (SIC) complete counts. Lastly, the sample totals had factors applied to obtain agreement with the depth marginal (acreage) complete counts. This procedure that requires the row totals, then the column totals, and then the depth totals to agree with the complete counts for the rows, columns, and depths, respectively, is continued iteratively until the process converges (the marginal totals agree with the complete count totals).

The ratio of the adjusted total farm count to the sample farm count obtained from the second iteration of the estimation procedure was the noninteger final post stratum sample weight assigned to the sample farm records in that post stratum. The noninteger sample weight, the product of the noninteger final post stratum sample weight and the nonresponse weight, was randomly rounded to an integer weight for tabulation. If, for example, the final weight for the

farms in a particular group was 7.2, then one-fifth of the sample farms in this group were randomly assigned a weight of 8 and the remaining four-fifths received a weight of 7.

CENSUS SAMPLING ERROR

Sampling error in the census data results from the nonresponse sample and the census sample data collection. Census items were classified as either complete count or sample data items. The complete count items were asked of all farm operators. The complete count data items included land in farms, harvested cropland, livestock inventory and sales, crop acreages, quantities harvested and crop sales, land use, irrigation, government loans and payments, conservation acreage, type of organization, and operator characteristics (sections 1 through 22 of the census report form). Variability in the complete count data items is considerably smaller than in the sample items as the variation is due only to the nonresponse sample estimation procedure. The sample items were asked of approximately 25 percent of the total census farm operators. The sample data items included farm production expenditures, fertilizer and chemical usage, farm machinery and equipment, value of land and buildings, and farm-related income (sections 23 through 28 of the census report form). Variability in the estimates of sample items is due both to the census sample selection and estimation procedure and the nonresponse sample estimation proce-

The sample for the 1987 Census of Agriculture is one of a large number of possible samples of the same size that could have been selected using the same sample design. Estimates derived from the different samples would differ from each other. The difference between a sample estimate and the average of all possible sample estimates is called the sampling deviation. The standard error or sampling error of a survey estimate is a measure of the variation among the estimates from all possible samples, and thus is a measure of the precision with which an estimate from a particular sample approximates the average result of all possible samples. The percent relative standard error of estimate is defined as the standard error of the estimate divided by the value being estimated multiplied by 100. If all possible samples were selected, each of the samples were surveyed under essentially the same conditions, and an estimate and its standard error were calculated from each sample, then:

- 1. Approximately 67 percent of the intervals from one standard error below the estimate to one standard error above the estimate would include the average value of all possible samples.
- Approximately 90 percent of the intervals from 1.65 standard errors below the estimate to 1.65 standard errors above the estimate would include the average value of all possible samples.

The computations involved to define the above confidence statements are illustrated in the following example. Assume that the estimate of number of farms for the State is 94,382 and the relative standard error of the estimate (percent) is .1 percent (0.001). Multiplying 94,382 by 0.001 yields 94, the standard error. Therefore, a 67-percent confidence interval is 94,288 to 94,476 (i.e., 94,382 plus or minus 94). If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 2 out of 3 (67 percent) of these intervals would contain the figure obtained from a complete enumeration. Similarly, a 90 percent confidence interval is 94,227 to 94,538 (i.e., 94,382 plus or minus 1.65 x 94).

Tables B and C provide the reliability estimates of the estimated number of farms in a county reporting complete count and sample items, respectively. Both tables show the percent relative standard errors for selected estimated number of farms in a county reporting an item. These are derived from a regression equation. The parameters of the regression equation were estimated using the estimated number of farms in a county reporting the complete count or sample item as the independent variable and the standard error of that estimate as the dependent variable for all counties in the State.

Table B. Reliability Estimates for Number of Farms in a County Reporting a Complete Count Item: 1987

Farms	Relative standard error of estimate (percent)
Number of farms reporting:	
25	7.5
50	5.4
75	4.5
100	4.0
150	3.3
200	3.0
300	2.6
500	2.2
750	2.0
1,000	1.9
1,500	1.8
2,000	1.7

Note: Complete count items are items in sections 1 to 22 of the report form.

To illustrate the use of these tables, assume that the estimate of the number of farms reporting hogs and pigs for a particular county, as given in county table 12, is 89. Since hogs and pigs is a complete count data item, refer to table B and select the estimated relative standard error of the estimate from the row whose value is equal to or just less than the estimated number of farms, 89. For this example, the relative standard error of the estimate comes from the row for 75 farms reporting. For sample data items, follow the same procedure using table C. In counties that had less than 100 farms in the 1982 Census of Agriculture, table C does not apply because the farms in these

counties were sampled with certainty (1 in 1), and thus, the reliability estimates for the number of farms in these counties are smaller than for counties that were sampled at lower rates (1 in 2 or 1 in 6).

Table C. Reliability Estimates for Number of Farms in a County Reporting a Sample Item: 1987

Farms	Relative standard error of estimate (percent)
Number of farms reporting:	
25	38.1
50	26.7
75	21.6
100	18.5
150	14.9
200	12.6
300	9.9
500	7.0
750	5.0
1,000	3.5
1,500	.2
2,000	.2

Note: Sample items are items in sections 23 to 28 of the report form.

Table D presents the relative standard error of selected State data items for all farms and for all farms with sales of \$10,000 or more. The percent relative standard error of the estimate for complete count data measures the variation associated with the sample-based adjustment for whole farm nonresponse. The percent relative standard error of the estimate for sample items measures both the sampling error due to the nonresponse sample estimation procedure and the census sample selection and estimation procedure. The reliability of State estimates may vary substantially from State to State. Generally, State estimates for a given data item are less reliable than the corresponding U.S. estimate.

Table E presents the standard error (not relative standard error) for percent change in State totals from 1982 to 1987. The general purpose of the percent change estimate is to provide a relative measure of the difference in a characteristic between censuses. The relative change for a given characteristic is defined as the ratio of the difference of the 1987 and the 1982 estimate for that characteristic to the 1982 estimate. This ratio is multiplied by 100 to obtain the percent change. The percent standard error of a percent change estimate, then, is the standard error of the ratio multiplied by 100.

Table F presents the relative standard error for county totals for 10 major complete count items and 7 sample items. The relative standard error of the estimate (percent) for the same item differs among counties in a State. Reasons for this are differences among counties in (1) the total number of farms, (2) the number of large farms included with certainty, (3) the size classifications of the farms sampled, (4) the amount of nonresponse, (5) the general agricultural characteristics, and (6) the specific characteristic being measured.

CENSUS NONSAMPLING ERROR

The accuracy of the census counts are affected by the joint effects of the sampling errors described in the previous section and nonsampling errors. Extensive efforts were made to compile a complete and accurate mail list for the census, to design an understandable report form and instructions, and to minimize processing errors through the use of quality control, verification, and check measures on specific operations. Nonsampling errors arise from incompleteness of the census mail list, duplication in the mail list, incorrect data reporting, errors in editing of reported data, and errors in imputation for missing data. These specific nonsampling errors are further discussed in this section. Evaluation studies will be conducted to measure the extent of certain nonsampling errors such as coverage error, classification error, and item imputation.

Census Coverage

The main objective of the census of agriculture is to obtain a complete and accurate enumeration of U.S. farms with accurate data on all aspects of the agricultural operation. However, the cost and availability of resources for this enumeration place restrictions on operationally feasible data collection methodologies. The past five agriculture censuses have been conducted by mail enumeration with telephone contact for selected nonrespondents. The completeness of such an enumeration thus depends to a large extent on the coverage of farm operations by the census mail list.

Historically, the census of agriculture has included approximately 90 percent of the farms in the United States and over 96 percent of the agricultural production. Complete enumeration of agricultural operations satisfying the farm definition of \$1,000 or more in agricultural sales is complicated by fluctuations in agricultural operations qualifying for enumeration, the variety of arrangements under which farms are operated, the multiplicity of names used by an operation, the number of operations in which an operator participates, the accuracy of data reporting, etc. A new mail list is compiled for each census because no current single list of agricultural operations is comprehensive.

An evaluation of census coverage has been conducted for each census of agriculture since 1945. The evaluation provides estimates of the completeness of census farm count and major census data items. In addition, the evaluation helps to identify problems in the census enumeration and provide information that can form the basis for improvements. The results of the 1987 Coverage Evaluation program will be published in volume 2, part 2.

The evaluation of coverage conducted in 1987 was designed to measure errors in the census mail list and in farm classification. Mail list error includes a measurement of farms not on the census mail list (undercount), and a measurement of farms enumerated more than once in the

census (overcount). Classification error includes a measurement of farms classified as nonfarms in the census (undercount) and of nonfarms classified as farms in the census (overcount). Classification error arises from reporting and processing errors. Mail list undercount dominates all coverage errors. Net coverage error is defined as the difference of undercounted and overcounted farms. Measurements of these errors, as well as a description of the complete coverage program, will be available in the Coverage Evaluation report.

Mail List Coverage

A major problem with the use of a mail list for the census of agriculture enumeration is the difficulties that are encountered in compiling a complete list. The percentage of farms on the census mail list varies considerably by State. Several reasons have contributed to farm operators' names not being included on the census mail list—the operation may have been started after the mail list was developed, the operation may be so small as not to appear in agricultural related source lists used in compiling the census list, or the operation may have been falsely classified as a nonfarm prior to mailout. A large proportion of the farms not included on the mail list were small in both acres and sales of agricultural products.

The 1987 Census of Agriculture Coverage Evaluation used the area segment sample of the 1987 June Enumerative Survey (JES) of the National Agricultural Statistical Service (NASS) to estimate farms not on the census mail list. The Census Bureau contracted with the NASS to augment the JES data collection and receive survey data under the confidentiality protection afforded by Title 13, U.S. Code, from all residents of area sample segments with agricultural activity. These survey records were matched to the census mail list. Records that did not match were mailed a census of agriculture report form to estimate mail list coverage. Estimates of farms not on the census mail list used the capture-recapture dual frame estimator that will be described in the Coverage Evaluation report.

Table G provides coverage evaluation estimates of the number of farms not on the mail list and selected characteristics of those farms with their percent relative standard error. The table also provides an estimate of characteristics of farms not on the mail list as a percentage of total farms in the State. The estimate of total farms in the State is based on census farm count and the estimated number of farms not on the census mail list. This estimate of total farms in the State was not adjusted for classification and list duplication errors. Estimates of these errors will be made at the regional rather than the State level and will be available in the Coverage Evaluation report. The table provides the standard error (not relative standard error) of this percent estimate.

Respondent and Enumerator Error

Incorrect or incomplete responses to the mailed census report form or to the questions posed by a telephone

enumerator introduce error into the census data. Such incorrect information can lead, in some cases, to incorrect enumeration of farms. This type of reporting error is measured by the Classification Error Study discussed later in this section. To reduce all types of reporting error, questions were phrased as clearly as possible based on tests of the census report form, and detailed instructions for completing the report form were provided to each addressee. In addition, each respondent's answers were checked for completeness and consistency.

Item Nonresponse

Nonresponse to particular questions on the census report that we would logically or statistically expect to be present may create a type of nonsampling error in both complete count and sample data. When information reported for another farm with similar characteristics is used to edit or impute for item nonresponse, the data may be biased because the characteristics of the nonrespondents have not been observed and may differ from those reported by respondents. Any attempt to correct the data for nonresponse may not completely reflect this difference either at the element level (individual farm operation) or on the average.

Processing Error

The many steps of processing of each census report form are sources for the introduction of nonsampling error. The processing of the census report forms includes clerical screening for farm activity, computerized check-in of report forms and followup of nonrespondents, keying and transmittal of completed report forms, computerized editing of inconsistent and missing data, review and correction of individual records referred from the computer edit, review and correction of tabulated data, and electronic data processing. These operations undergo a number of quality control checks to ensure as accurate an application as possible, yet some errors are not detected and corrected.

Classification Error

An evaluation study of classification errors was conducted in the 1987 Census of Agriculture as part of the census coverage evaluation program. A sample of mail list respondents was selected, and these addresses reenumerated to determine whether they were a farm or nonfarm. A farm status determination was made based on the evaluation questionnaire and compared with the status based on the data reported on the census form. Differences in status were reconciled.

In past censuses, the proportion of farms undercounted due to classification errors was higher for farms with small values of sales. The classification error rate was higher for (1) livestock farms than crop farms, (2) farms with a small number of acres than larger farms, or (3) tenant farms than full or part-owner farms. Results from the 1987 classification error study will be published in the Coverage Evaluation report.

EDITING DATA AND IMPUTATION FOR ITEM NONRESPONSE

For the 1987 Census of Agriculture, as in previous censuses, all reported data were keyed and then edited by computer. The edits were used to determine whether the reports met the minimum criteria to be counted as farms in the census. Computer edits also performed a series of complex, logical checks of consistency and completeness of item responses. They provided the basis for deciding to accept, impute (supply), delete, or alter the reported value for each data record item.

Whenever possible, edit imputations, deletions, and changes were based on component or related data on the respondent's report form. For some items, such as operator characteristics, data from the previous census were used when available. Values for other missing or unacceptable reported data items were calculated based on reported quantities and known price parameters.

When these and similar methods were not available and values had to be supplied, the imputation process used information reported for another farm operation in a geographically adjacent area with characteristics similar to those of the farm operation with incomplete data. For example, a farm operation that reported acres of corn harvested, but did not report quantity of corn harvested, was assigned the same bushels of corn per acre harvested as that of the last nearby farm with similar characteristics that reported acceptable yields during that particular execution of the computer edit. The imputation for missing items in each section of the report form was conducted separately; thus, assigned values for one operation could come from more than one respondent.

Prior to the imputation operation, a set of default values and relationships were assigned to the possible imputation variables. The relationships and values varied depending on the item being imputed. For example, different default values were assigned for several standard industrial classification and total value of sales categories when imputing hired farm labor expenses. These values and item relationships for the possible imputation variables were stored in the computer in a series of matrices. The computer records were sorted by reported State and county, where the county sequence was based on similar types of farms and agricultural practices.

Each execution of the computer edit consisted of records from only one State. For a given execution of the edit, the stored entries in the various matrices were retained in the computer only until a succeeding record having acceptable characteristics for some sections of the report form was processed by the computer. Then the acceptable responses

of the succeeding operation replaced those previously stored. When a record processed through the edit had unreported or unacceptable data, the record was assigned the last acceptable ratio or response from an operation with a similar set of characteristics. Once each execution of the computer edit for a State was completed, the possible imputation variables were reset to the default values and relationships for subsequent executions.

After the initial computer edit, keyed reports not meeting the census farm definition were reviewed to ensure that the data were keyed correctly. Edit referrals were generated for about 30 percent of the reports included as farms, and they were also reviewed for keying accuracy and to ensure that the computer edit actions were correct. If the results of the computer edit were not acceptable, corrections were made and the record was reedited. More extensive discussions of the edit and item imputation methodology with measures of the extent of imputation in the census estimates will be provided in a separate research report.

Tables D through G follow.

Table D. Reliability Estimates of State Totals: 1987

		All fam	ns	Farms with sales of \$10,000 or more		
ltem		Total (number)	Relative standard error of estimate (percent)	Total (number)	Relative standard error of estimate (percent)	
Farms	number	79 277 14 997 381	(Z)	39 861 12 141 597	:	
Average size of farm		189	.i	305	:	
Value of land and buildings1	dollars	18 022 668 227 341 1 199	.5 .6 1.3	14 375 933 360 326 1 187	 1.8	
Estimated market value of all machinery and equipment ¹ Average per farm		3 159 112 39 979	.6 .7	2 564 412 64 276	!.	
Farms by size:		6 007				
	acres	23 414	.5 .6	1 577 4 842	1.0 1.	
10 to 49 acres	acres	16 688 468 886	.3	1 981 56 196). 1.0	
50 to 179 acres	acres	32 074 3 308 059	.2	14 716 1 684 851		
180 to 499 acres	farms	17 718 5 153 439	.3	14 933	.: .:	
500 to 999 acres	farms	5 072	.3 .4	4 449 510 4 952	.4	
1,000 to 1,999 acres	acres farms	3 442 770 1 485	.4	3 366 458 1 470		
2,000 acres or more	acres	1 952 354 233	-	(D) 232	(D	
	acres	648 459	-	(D)	(D	
Total cropland	acres_	74 376 11 920 433	.1	38 613 10 339 816		
Harvested cropland		70 577 9 297 596	.i .i	38 099 8 415 609		
Acres harvested: 1 to 9 acres	farme	8 573	.4	1 133		
	acres	37 756	5	4 097	1.0	
10 to 49 acres	acres	24 234 634 798	.2 .2 .3	4 164 132 909		
50 to 99 acres	acres	13 551 948 186	.3 .3	9 051 660 995	.4 .4	
100 to 199 acres	farms	10 989 1 546 046	.3	10 550 1 494 057	.;	
200 to 499 acres	farms	9 299	.3	9 270		
500 to 999 acres		2 880 318 3 126	.3 .4	2 873 059 3 126		
1,000 acres or more	acres farms acres	2 101 595 805 1 148 897	.4	2 101 595 805 1 148 897		
Cropland used only for pasture or grazing	farms	26 471	.2	12 156	.3	
Other cropland	acres farms acres	942 002 35 671 1 680 835	.3 .2 .2	538 616 23 282 1 385 591		
rrigated land	farms	1 562	.7	1 118		
Acres irrigated: 1 to 9 acres	acres	32 472 1 140	1.0	29 352 775	1.0	
10 to 49 acres	acres	2 857	.8 1.3	1 930	1.4	
	acres	292 6 072	1.9 2.1	222 4 631	2. ⁻ 2. ⁻	
50 to 99 acres	acres_	57 3 969	4.4 5.1	3 547	4.3 5.1	
100 to 199 acres	farms acres	44 5 7 2 5	3.3	41 5 395	3.1 3.0	
200 to 499 acres	acres_	20 5 472	2.7 2.6	20 5 472	2.7	
500 to 999 acres	farms acres	6 4 622		6 4 622		
1,000 acres or more	farms acres	3 755	-	3 755	<u>.</u> -	
Market value of agricultural products sold Average per farm	\$1,000	3 434 064 43 317	.1	3 294 035 82 638	.1	
Value of sales:				52 030	-!	
Less than \$2,500	\$1,000	17 263 18 446	.3 .3	-		
\$2,500 to \$4,999	farms \$1,000	10 489 37 787	.4	-	•	
\$5,000 to \$9,999	farms \$1,000	11 664 83 796	.4	-		
\$10,000 to \$24,999	farms	14 689	.3	14 689	.5	
\$25,000 to \$49,999	\$1,000 farms	237 245 8 953	.3 .4	237 245 8 953		
\$50,000 to \$99,999	\$1,000 farms	319 280 7 678	.4	319 280 7 678	.3 3 4 4 4 2	
\$100,000 or more	\$1,000 farms \$1,000	546 584 8 541 2 190 926	.4 .3 .1	546 584 8 541 2 190 926	.4 .3 .1	
Sales by commodity or commodity group:		:	.'			
Crops, including nursery and greenhouse crops	\$1,000	58 063 1 750 783	.1	34 617 1 669 315	.1 -1	
GrainsCorn for grain	\$1,000	1 346 926 555 237	.1	1 288 214 535 234	.1 .2 .2 .2	
WheatSoybeans	\$1,000	105 660 667 540	.1 .2 .2 .2	100 035 635 942	.2	
Sorghum for grain	\$1,000	103	11.3 3.7	95 79	12. 3.6 1.3	
Oats		9 371	.6	8 077	J.C.	

See footnotes at end of table.

Table D. Reliability Estimates of State Totals: 1987—Con.

	_	All far	ms	Farms with sales	of \$10,000 or more
Item		Total (number)	Relative standard error of estimate (percent)	Total (number)	Relative standard error of estimate (percent
Sales by commodity or commodity group—Con. Crops, including nursery and greenhouse crops—Con. Cotton and cottonseed	\$1,000				
Tobacco	\$1,000	17 462	1.0	11 565	1.3
Hay, silage, and field seedsVegetables, sweet corn, and melons	\$1,000 \$1,000	47 733 84 072	.6 .5	36 662 82 322	
Fruits, nuts, and berries	\$1,000]	28 354	1.3	26 335	1.4
Nursery and greenhouse cropsOther crops	\$1,000	209 031 17 206	.7	207 157 17 060	
Livestock, poultry, and their products	farms	44 916	.1	23 903	
Poultry and poultry products	\$1,000 \$1,000	1 683 281 281 232	.1	1 624 720 280 490	1.2
Dairy products Cattle and calves	\$1,000 {	534 691 426 114	.2 .3 .2 .3	533 274 385 489	
Hogs and pigs	\$1.000	383 227		377 009	•
Sheep, lambs, and woolOther livestock and livestock products (see text)	\$1,000 \$1,000	15 201 42 816	.9	10 831 37 628	1.2
Farms by standard industrial classification:		1.2 0.0	"	0, 020	ŀ
Cash grains (011)	acres	32 997 8 431 837	.2	20 452 7 602 077	
Field crops, except cash grains (013)	farms	5 856	.2 .2 .5 .7	932	1.3
Vegetables and melons (016)	acres	596 946 933	.7 1.3	198 563 526	1.4 1.6
	acres	133 424	.8	117 344	
Fruits and tree nuts (017)		1 063 65 902	1.3 1.8	339 38 600	2. ⁻ 2.0
Horticultural specialties (018)	acres farms	1 341	1.0	899	2.0
General farms, primarily crop (019)	acres	61 420 2 331	.8	50 657 638	1.5
Constantialities, printality or op (010)	acres	342 770	1.0	209 721	1.3
Livestock, except dairy, poultry, and animal specialties (021)		23 392	.2 .3	8 277	.4
Dairy farms (024)	acres farms	3 266 398 6 508	.4	1 987 585 6 251	
Poultry and eggs (025)	acres	1 612 476 838	.4 1.2	1 596 283 573	,, 1.7
, outdy dita oggo (020)	acres	91 953	1.0	80 649	.9
Animal specialties (027)	acres	3 055 132 680	.8 1.3	355 31 356	2.3 3.0
General farms, primarily livestock and animal specialties (029)		963 261 575	1.3	619 228 762	1.5 1.5
Farms by type of organization: Individual or family (sole proprietorship)		68 547	.1	32 322	
	acres	11 569 887	.1]	8 968 888	
Partnership	acres	8 757 2 558 467	.4	5 988 2 339 779	.6
Corporation	acres	1 690 793 664	.4 .8 .5	1 408 770 178	
Other-cooperative, estate or trust, institutional, etc.		283 75 363	2.3	143 62 752	3.0 1.9
Fenure of operator:		47 166	.1	15 969	
	acres	5 028 844		2 848 827	.3
Part owners	acres	23 363 8 237 169	.2 .2 .2	18 131 7 730 893	.4
Tenants	acres	8 748 1 731 368	.4 .5	5 761 1 561 877	
Operators by principal occupation: Farming		39 569		27 534	
· ·	acres	11 001 789	.1	9 923 773	
Other	acres_	39 708 3 995 592	.1	12 327 2 217 824	
Operators by sex:		75 404		00.704	
Male	acres	75 424 14 567 576	,1 , <u>1</u>	38 704 11 908 431	
Female	acres	3 853 429 805	.7 .9	1 157 233 166	1.2 1.4
Average age of operator	years	51.1	.1	49.4]
Oropland under federal acreage reduction programs: Annual commodity acreage adjustment programs	farme	25 013	9	20 606	
, , , ,	acres	1 039 537	.2	1 001 410	
Conservation reserve program	acres	1 201 52 908	1.2 1.6	590 28 870	1.5 2.1
Government payments: Amount received in cash	£4.000	141 225	9	135 369	.2
Value of certificates received	\$1,000	145 090	.2	137 917	.2
Net cash return from agricultural sales1:		70.070	,	00.007	i ,
Net cash return from agricultural sales for the farm unit (see text)	\$1,000	79 276 685 358	1.0	39 897 745 064	.2
Average per farm	1	8 645	1.1	18 675	1.3
Farms with net gains ²	number \$1,000	44 692 858 732	.2	30 978 1 833 032	.2 j
Farms with net losses	number	34 584	.1	8 919	1.8
Total form production evenence!	\$1,000	173 374	1.3	87 968 39 896	
Total farm production expenses 1	\$1,000	79 275 2 730 026	.1	2 529 839	.2
Livestock and poultry purchased		24 324 285 542	1.2 1.1	15 185 273 202	1.4 1.5
Feed for livestock and poultry	farms	39 163	.8	21 657	.9
Goods by the selected and trace	\$1,000	422 319	.7	406 268	
Seeds, bulbs, plants, and trees	\$1,000	57 794 1 141 698	.5	36 452 133 249	.4 .6
Commercial fertilizer	, 1	59 427	.5 \	36 032	.4

See footnotes at end of table.

Table D. Reliability Estimates of State Totals: 1987—Con.

	All fa	ırms	Farms with sales of \$10,000 or more		
Item	Total (number)	Relative standard error of estimate (percent)	Total (number)	Relative standar error of estimat (percen	
otal farm production expenses—Con.		_			
Agricultural chemicals	56 738 152 953	.5 .7	35 897 143 187		
Petroleum productsfarms	75 271	.? .2 .6	39 259		
\$1,000_ Electricity	150 404 58 514	.6 .5	133 923 34 190		
\$1,000	53 309	.6	46 791	:	
Hired farm labor	25 629	1.1	17 826	1.	
Contract laborfarms_	218 106 5 854	.7 2.8	213 687 3 586	3.	
Repair and maintenancefarms	18 685	2.1	17 165	2.	
\$1,000	65 334 197 764	.4 .7	36 254 172 794		
Customwork, machine hire, and rental of machinery and equipment farms	30 387	1.1	18 820	1. 1.	
\$1,000_ Interest	42 575 36 836	1.5	36 968 24 858	1	
\$1,000	239 733	.9 .9	212 107	1	
Cash rent farms	21 020	1.3	17 224	1	
\$1,000	181 1 1 9	1.2	177 225	l	
Property taxesfarms	71 580 90 263	.3 .7 .3	35 044 64 005		
All other farm production expenses	72 649 259 284	.3 .6	39 868 240 172		
vestock and poultry: Cattle and calves inventory farms	35 123	.2	18 093		
number_ Beef cows farms_	1 469 662	.2	1 213 472		
number	19 417 284 646	.2 .2 .2 .3	6 600 161 861		
Milk cowsfarms number	9 144 347 305	.4	7 821 342 136		
Cattle and calves sold farms	33 250	2	18 161		
number Hogs and pigs inventory	899 517 11 421	.2 .2 .3	786 500 8 481		
number	2 059 174	.4	2 001 789		
Hogs and pigs sold farms number	11 752 3 810 492	.3 .3	8 927 3 731 029		
Sheep and lambs inventory farms	5 491	.5	2 454		
Sheep and lambs sold farms	239 519 5 365	.5 .9 .5 .9	151 931 2 420	1	
number 1	198 751	.9 .9	135 395	1	
Hens and pullets of laying age inventory farms number_	5 889 17 203 261	.5 .2	2 383 17 087 286		
Broilers and other meat-type chickens sold farms	525	1.8	291		
number	8 967 735	2.9	8 940 608	2	
Horses and ponies inventory farms number	12 973 75 379	.3 .6	4 191 28 179		
elected crops harvested:			:		
Corn for grain or seed farms	45 702	.1	32 417		
acres	3 107 822	.1	2 933 571		
bushels	355 339 490	.1	339 865 937		
Corn for silage or green chop farms	7 263	.4	6 703		
acres tons, green	163 614 2 691 928	.4 .5	158 694 2 625 884		
Wheat for grain farms	26 086	.2	20 730		
acres	838 496	.2 .2	779 046		
bushels	42 452 489	.2	39 976 433		
Oats for grain farms	13 494	.3	9 754		
acres bushels	206 970 13 781 107	.4 .4	174 073 11 971 646		
Soybeans for beans farms acres	36 570 3 713 340	.1	26 585 3 477 907		
bushels_	132 974 160	.2	126 081 228		
Hay-alfalfa, other tame, small grain, wild, grass silage, green chop, etc.					
(see text) farms	37 730	.1	18 746		
acres tons, dry	1 271 206 3 236 378	.2 .2	892 517 2 548 626		
	·				
Vegetables harvested for sale (see text) farms acres	2 105 59 093	.8 .7	1 312 56 823		

¹Data are based on a sample of farms. ²Farms with total production expenses equal to market value of agricultural products sold are included as farms with gains.

Table E. Reliability Estimates of Percent Change in State Totals: 1982 to 1987

		All fa	rms	Farms with sales of \$10,000 or more		
Item		Percent change	Standard error of estimate (percent)	Percent change	Standard error of estimate (percent	
Farmsnu		-8.8	.1	-8.8		
Land in farms Value of land and buildings1:	cres	-2.6	.1	-1.5		
Average per farmdo	ollars	-15.1	.7	-17.2		
Total croplandf.		-9.4	.1	-9.3		
Harvested croplandf	cres	.8 -9.9	.2 .1	1.4 -9.6		
	cres	-10.6	.1	-9.6 -10.4		
Irrigated landf	arms	35.6	.9	40.1	1.1	
	cres	17.3	1.2	13.6	1	
Market value of agricultural products soldf. \$1	arms ,000	-8.8 1.4	.1 .1	-8.8 2.1	:	
Crops, including nursery and greenhouse cropsf	arms	-10.3	.1	-1 <u>1.1</u>		
Livestock poultry and their products	,000	-6.1 -11.0	.1 (.1)	-5.7 -10.2		
Livestock, poultry, and their products	,000	10.5	.2	11.5		
Poultry and poultry productsf	arms ,000	-29.6 52.4	.5 .4	-25.8 52.9		
Selected farm production expenses1:	ĺ					
Livestock and poultry purchased f	arms	-9.6	1.5 1.9	.6	2.1	
S1	,000 arms	16.8 -14.7	.9	18.1 -9.8	2.1 2.3 1.3 1.3 .3	
Seeds, bulbs, plants, and treesf	,000	7.6 -10.8	1.2	9.4 -10.1	1.:	
\$1	,000	1.3	.8	1.8		
Commercial fertilizer ² fi	arms	-9.0	.6	-7.7	,	
\$1 Agricultural chemicals ²	.000	-22.7	.6	-23.2		
<u> </u>	.000	6 9.3	.8 1.1	-4.4 8.4	1.	
Hired farm labor fa	arms	-6.8	1.5	-4.2	J 1,4	
\$1 Interest ³ fi	,000	31.2 -8.4	1.4 1.2	35.3 -10.5	1.0 1.7	
	,000	-32.2	.9	-34.9	'.;	
.ivestock and poultry inventory:	1		[
Cattle and caives fi	nber	-16.8 -9.3	.2	-12.5 6.0		
Hogs and pigs fi	arms	-17.1	.2 .2 .3	-10.4		
Hens and pullets of laying age fi	nber	8 -31.8	.4	.1 -27.1		
	nber	43.2	.4	-27.1 44.6		
Selected crops harvested: Corn for grain or seed		-13.2		-10.2		
	cres	-13.2 -19.5	.1	-10.2 -19.3		
Sorghum for grain or seed fi	arms	-12.7	4.6	_23.1	4.9	
Wheat for grain fi	cres	-23.3 -20.1	7.1	-27.1 -18.1	/:	
	cres	-27.2	.2	-26.5	4. 7.	
Soybeans for beansfs		-6.4	.2	-6.2		
Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc.	cres	2.2	.2	2.8	.:	
(see text) fa		-7.3	.2	-7.3	.:	
Vegetables harvested for sale (see text) fa	cres	2.4 -13.8	.2 .2 .7 .7	3.5 .5	 	
a i i	cres	10.3	.7	13.2		
Land in orchards fa	arms	-14.9 -9.2	.8 1.3	-7.5 -8.3	1,4 1.6	

¹Data are based on a sample of farms. ²Data for 1987 include cost of custom applications. ³Data for 1982 do not include imputation for item nonresponse.

Table F. Reliability Estimates of County Totals: 1987

	Farm	ns	Land in	farms	Average valuand buildings		Estimated machi of all machi equipm	nery and	Harvested	cropland	Irrigated	land
Geographic area	Total (number)	Relative standard error of estimate (percent)	Total (acres)	Relative standard error of estimate (percent)	Value (dollars)	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Total (acres)	Relative standard error of estimate (percent)	Total (acres)	Relative standard error of estimate (percent)
Adams	1 412	.3	214 863	1.0	114 081	6.5	31 699	6.8	60 892	1.4	55	16.3
Allen	1 148 1 078	.4 .4	201 190 179 361	1.1	267 510 180 400	5.9 5.2	45 485 46 702	4.8 5.7	158 826 106 798	1.2 1.0	54 23	24.9 15.9
Ashtabula	1 188	.4 .5	182 022	.8	158 627	4.0	39 370	4.7	83 410	1.0	607	17.3
Athens	564 1 119	.5 .3	92 708 216 855	1.2 .7	108 585 251 748	3.3 4.4	10 814 58 452	10.9 4.9	20 295 167 133	1.2	181 (D)	38.2 (D)
Belmont	668	.4	126 571	.9	116 356	4.2	15 601	7.6	36 267	1.2	8	(D) 4.0
Brown Butler	1 605 1 014	.3 .4	215 624 159 519	.9 1.1	141 297 281 547	4.4 5.8	44 082 36 469	6.9 5.3	96 560 89 658	1.3	31 362	28.1 6.5
Carroli	703	.4 .5	117 130	1.2	124 393	3.7	22 928	8.2	49 884	1.7	35 1 902	2.7
Champaign	948 812	.4 .4	221 854 193 669	.9 .8	263 458 286 298	5.5 3.0	42 782 40 901	4.7 5.8	151 459 136 297	.9	1 727	4.1 2.0
Clermont	951	.4 .5	115 999	1.3	203 414	5.3	27 172	6.9	61 861	1.8	109	5.4
Clinton Columbiana	870 1 093	.5	225 711 155 205	.9 .9	284 049 159 909	5.5 4.0	41 599 37 595	3.5 4.9	157 231 82 963	.9 1.0	122 490	25.8 8.5
Coshocton	884	.4	175 689	.7	163 535 271 383	3.4	32 854 51 007	7.4	62 197	.8	60	_ 15.7
Crawford Cuyahoga	877 150	.4 1.0	222 057 5 563	.8 i 5.1	190 685	3.6 6.3	5 293	5.4 4.7	172 671 1 953	.8 4.7	51 166	8.1
Darke	2 067 987	.3 .5	344 624 206 905	.6 1.2	268 263 241 246	3.6 5.4	100 202 39 848	3.2 4.2	270 431 154 082	.6	419 167	30.1 11.6
Defiance Delaware	799	.4	175 897	.9	336 949	4.9	33 574	6.0	125 815	1.4 1.0	442	16.2
Erie Fairfield	480 1 217	.6	90 106 214 316	1.4 1.0	300 284 223 266	3.2 4.4	32 067 45 843	10.2 3.8	67 683 129 283	1.5 1.1	254 85	7.1 12.3
Fayette	628	.4 .5 .6	244 193	.7	403 616	5.4	41 745	4.1	179 622	1.8	(D)	(D) 2.8
Franklin	581 1 043		121 999 219 992	1.3 .9	379 912 316 824	2.5 3.5	22 983 62 119	9.8 5.7	88 035 177 987	1.4	691 1 405	2.8 .9
Gallia	885	.4 .5 .5	116 735	1.3	88 805	5.0	16 778	12.6	22 384	1.6	109	22.5
Geauga	702 903	.5	72 766 195 070	1.5 1.0	190 453 316 384	5.9 4.6	19 771 39 907	9.4 4.4	31 732 136 062	2.1 1.1	102 711	13.5 1.3
Greene Guernsey	860	.4	137 708	1.1	115 148	3.5	20 639	10.3	35 215	1.5	130	32.6
Hamilton	350 1 203	.6 .4	28 318 288 175	1.8	223 120 328 966	5.8 5.3	8 561 59 648	7.3 3.5	12 986 226 772	2.1	676 172	2.2 16.7
Hancock Hardin	1 034	.4	264 054	.9 .7	238 953	4.4	49 846	6.4	201 814	.8	197	4.9
Harrison	465 1 125	.6	118 939 245 503	1.0 .8	146 060 347 067	2.3 3.5	11 701 56 821	7.5 5.1	29 159 198 527	1.4	(D) 221	(D) 5.2
Henry Highland	1 323	.3 .6 .3 .5	251 969	.9	160 077	3.5	39 558	4.6	131 694	1.0	74	15.3
Hocking	414 1 518	.6	63 178 186 018	1.9 .8	99 986 142 669	2.4 4.3	7 517 39 109	15.5 4.6	14 362 87 899	2.3 1.0	7 117	17.5 17.5
Holmes	934	.5	234 317	.9	293 156	3.4	53 678	5.6	169 225	1.0	3 471	1.4
Jackson	422 440	.6 .6	79 180 75 991	1.5 1.4	127 884 115 589	4.4 5.3	13 698 13 613	5.4 9.4	23 147 24 151	2.1 2.0	200 (D)	20.5 (D)
Jefferson Knox	1 185	.4	222 028	1.0	174 910	4.3	43 127	5.0	115 093	1.2	145	15.8
Lake	268 545	.7 .6	18 335 63 882	2.0 1.7	241 959 84 294	8.4 8.4	10 588 7 529	11.4 7.0	9 709 9 836	2.7 3.5	1 506 44	1.1 11.7
Lawrence Licking	1 402	.8	243 431	.8	257 477	2.7	52 728	6.6	132 121	1.0	201	15.4
Logan	979 985	.4	227 938 143 639	1.0 1.1	236 144 204 742	4.0 5.3	43 535 41 507	4.4 5.3	160 749 100 052	1.1 1.3	156 370	13.7 6.6
LorainLucas	492	.4 .5	83 205	1.5	294 441	4.5	25 276	6.4	70 202	1.5	1 903	.1
Madison	735 668	.5	267 249 81 001	.7 1.1	433 044 153 210	3.6 5.0	47 123 25 405	5.6 7.6	203 944 45 352	.8 1.4	79 426	14.4 5.1
Mahoning Marion	650	.4 .4	224 367	.6	327 200	3.4	35 282	4.1	170 006	.6	78	16.5
Medina	1 012 528	.4 .5	115 890 85 076	1.0 1.4	192 128 127 470	4.9 6.2	30 474 12 435	5.8 10.0	70 205 19 491	1.2 3.1	92 448	9.3 5.7
Meigs Mercer	1 562	.3	276 361	.6	301 729	3.4	91 054	4.8	215 719	.6	39	7.4
Miami	1 133 716	.4 .4	209 643 116 429	1.0	290 466 92 264	4.8 4.1	54 139 12 763	5.0 8.3	163 722 24 520	1.1 1.5	1 513 55	.6 16.8
Montgomery	940	.4	118 678	1.3	237 782	4.1	28 685	5.7	81 776	1.4	795	11.5
Morgan	590 864	.5 .5	112 208 165 764	1.2 1.0	106 526 182 795	4.1 4.5	13 669 30 980	12.8 5.3	24 333 107 785	1.3 1.2	(D) 19	(D) 41.4
Morrow Muskingum	1 094	.3	194 218	.9	131 269	5.6	30 632	5.8	60 569	1.0	75	8.2
NobleOttawa	567 573	.5 .5	104 307 105 390	1.1 1.3	100 667 271 822	3.9 4.4	8 339 28 772	12.2 7.5	21 051 84 184	1.6	65 227	32.5 3.7
Paulding	718	.4	227 830	.9	351 654	6.2	42 761	4.3	175 430	1.0	(D)	(D)
Perry Pickaway	641 783	.4	103 309 260 947	1.4 .8	112 639 346 633	4.4 7.2	16 299 38 654	6.5 4.1	41 395 180 178	1.6 .8	64 745	18.5 14.1
Pike	454	.5 .7	100 764	1.6	169 293	4.6	12 124	6.9	31 989	2.3	150	30.9
Portage	820 1 183	.4	102 483 211 432	1.0 .8	202 723 238 769	3.7 4.1	25 447 48 038	4.6 3.8	53 775 150 903	1.2	417 45	1.4 6.0
Putnam	1 584	.4 .4 .3 .4 .5	290 078	.6	282 756	3.9	75 232	4.0	243 525	.6	379	15.1
Richland	1 022 815	.4	168 992 252 889	.9 1.0	177 757 243 890	3.8 3.7	40 036 29 979	4.9 6.1	100 738 121 143	1.0 1.2	114 35	9.5 20.4
Sandusky	936	4	207 294	.9	289 038	4.3	50 071	3.4	164 007	1.0	1 051	9.6
SciotoSeneca	658 1 398	.6 3	103 646 299 433	1.5 .7	119 561 265 110	4.6 3.1	15 498 66 838	7.0 4.0	33 040 231 562	2.6	169 188	12.4 12.9
Shelby	1 113	.3 .3	216 287	.9	263 250	5.5	55 966	4.2	164 256	.9	37	32.3
Stark	1 306 297	.4 .8	153 302 19 808	1.0 2.7	190 769 256 943	5.3 11.1	48 721 6 768	4.5 11.2	96 779 10 018	1.2 3.0	1 112 354	3.7 1.8
Summit Trumbull	951	.4	122 492	1.0	148 632	5.0	31 417	5.7	58 589	1.2	126	14.0
Tuscarawas	1 022 907	.4 .5 .4	153 277 232 553	1.1 .8	158 326 252 894	6.2 3.9	35 354 43 717	5.5 3.3	61 670 172 816	1.3	334 449	2.7 9.4
Van Wert	922	.3 (245 681	.7	438 736	4.5	60 230	4.8	202 126	.7	(D)	(D)
Vinton Warren	217 920	1.0 .4	43 303 136 623	2.3 1.0	108 986 277 610	.8 4.4	4 424 30 097	14.4 5.5	10 913 75 138	3.7 1.2	7 448	26.7 2.4
Washington	955	A	146 000	1.0	116 186	4.0	23 597	6.1	37 656	1.0	562	6.1
Wayne	1 734 963	.3 .4 .3 .4	263 457 224 146	.6 .9	232 888 233 426	4.2 3.7	79 207 39 094	2.5 3.5	172 625 158 134	.6 .9	547 (D)	1.7 (D)
Williams Wood	1 279	.3	318 255	.8	348 377	3.8	71 218	5.5	256 170	.9	314	11.8
Wyandot	727	.4	216 518	.8	313 195	3.8	34 255	4.2	168 180	.9	172	27.7

See footnotes at end of table.

Table F. Reliability Estimates of County Totals: 1987—Con.

	Cattle and invent		Hogs and pigs	sinventory	Corn for grain	n or seed	Wheat for	r grain	grain Soybeans for beans			Market value of agricultural products sold	
Geographic area	Total (number)	Relative standard error of estimate (percent)	Total (number)	Relative standard error of estimate (percent)	Total (acres)	Relative standard error of estimate (percent)	Total (acres)	Relative standard error of estimate (percent)	Total (acres)	Relative standard error of estimate (percent)	Total (\$1,000)	Relativ standar error d estimat (percen	
damsshandshtabula	29 988 8 210 32 573 29 438 10 304 24 873	1.7 3.4 1.4 1.2 1.8 1.3	19 176 46 343 27 577 5 465 911 47 653	4.3 2.0 3.6 10.0 4.0 2.5	19 356 50 611 37 792 20 988 3 891 48 484	1.9 1.2 1.1 1.6 1.9	4 288 17 822 7 636 2 134 293 20 340	3.4 1.7 2.3 4.3 6.0	6 871 84 061 22 937 8 688 360 79 290	3.7 1.3 2.1 2.8 3.6 1.0	22 947 48 290 42 840 37 297 4 907 63 182	1. 1. 2.	
uglaizeelmont	18 813 20 450 18 822 19 509 20 182	1.3 1.8 1.9 1.5 2.1	1 208 8 956 31 718 4 254 25 800	6.6 6.1 4.1 12.9 3.7	3 228 28 072 39 747 12 596 69 550	2.4 1.9 1.6 2.6	159 3 606 7 315 1 573 9 535	8.8 3.0 2.4 4.5	(D) 45 744 25 951 1 372 56 617	(D) 2.0 2.0 8.5 1.4	10 021 25 829 31 125 17 733 48 991	1 1 1 1	
lariharyi arklermonti intonlolumbianaoshocton	28 324 8 744 11 281 30 948 26 194	.8 2.9 3.1 1.3 1.2	27 178 3 762 66 708 8 875 23 821	3.8 12.0 2.0 6.4 2.2	58 618 15 555 78 299 26 860 28 127	1.0 2.5 1.0 1.5	6 863 1 216 9 629 6 532 2 199	2.2 5.6 1.9 2.4 2.5	60 285 36 796 63 401 2 043 1 420	1.2 2.2 1.3 3.9 4.4	77 154 16 804 51 388 43 259 26 141	1	
rawford	12 041 263 34 514 10 141 9 372	1.9 19.3 1.1 2.4 2.4	28 395 80 126 332 27 103 20 083	2.3 33.1 1.3 2.9 1.9	55 997 576 87 881 29 394 42 102	.8 6.1 .8 1.7	22 663 27 25 501 22 895 8 118	1.2 31.9 1.2 2.2 1.9	86 190 (D) 133 898 89 528 64 883	1.0 (D) .8 1.6 1.1	49 750 14 502 156 742 33 860 33 294	1	
rie airfieldayetteayettin	5 597 19 425 11 574 4 988	3.3 2.2 2.8 3.2	5 004 26 682 48 208 7 905	8.3 3.6 2.0 5.3	25 696 65 038 74 053 34 319 80 180	2.2 1.3 .7 1.6	5 849 11 507 12 370 6 152 10 448	2.1 1.9 1.7 2.3	26 559 34 366 84 883 39 783 76 951	1.8 1.7 .9 1.9	25 829 39 188 51 881 31 831	1	
ulton allia eauga reene uernsey	22 902 17 916 11 329 13 095 20 936	1.3 1.8 2.0 2.4 1.8	99 969 4 087 2 905 58 362 3 457	2.1 11.3 6.3 2.2 12.1	3 631 8 056 63 721 5 302	1.0 3.8 3.7 1.1 4.0	339 530 7 428 227	1.5 8.6 7.9 2.2 7.7	504 408 54 479 405	1.2 5.7 16.8 1.5 12.7	9 381 15 433 48 584 8 940	1	
amiltonancockardinarrisonarrison	2 842 5 081 11 459 16 399 8 432	3.2 3.1 1.9 1.6 1.9	1 683 40 883 24 408 1 591 27 306	1.6 2.1 3.3 7.8 2.6	4 022 60 500 59 357 4 714 59 848	1.9 1.1 .9 2.3 1.1	461 33 958 24 564 413 26 452	3.9 1.1 1.2 6.8 1.2	4 769 126 031 106 298 691 98 749	4.8 1.0 1.0 4.5	13 922 55 693 49 211 8 459 51 796		
ighlandockingolmesuronoksonockson	23 564 5 450 48 855 10 724 10 871	1.9 3.5 1.0 2.5 2.6	29 132 1 646 54 389 24 010 3 091	3.2 13.1 2.6 4.3 5.3	58 006 4 239 27 581 52 347 5 739	1.2 3.8 1.4 1.1 3.8	11 486 538 5 313 16 858 831	1.9 8.7 1.9 1.7 10.0	44 407 1 426 1 625 79 561 2 111	1.5 11.8 13.5 1.1 9.6	35 318 2 909 61 536 63 201 13 034	\$	
offerson nox akeawrence cking	10 796 31 086 926 8 099 27 697	2.3 1.5 5.7 2.2 1.4	3 761 29 533 363 347 14 972	10.6 4.0 14.9 8.5 4.2	4 115 47 973 1 252 1 803 49 789	3.4 1.6 4.9 11.6 1.4	454 6 395 150 230 7 917	4.7 2.2 12.1 20.0 1.7	(D) 23 677 847 194 43 687	(D) 2.5 19.4 12.2 1.6	5 700 55 362 32 569 5 230 88 075	2	
gan	20 505 13 381 1 873 17 426 14 607	2.1 2.1 8.0 1.8 2.0	18 893 9 478 14 838 28 950 6 495	3.3 7.0 2.4 1.7 4.6	58 818 24 131 21 741 75 224 14 869	1.1 1.8 2.5 .8 2.1	13 117 6 836 5 204 11 015 3 611	2.2 2.8 2.5 1.6 2.2	70 503 46 701 37 588 108 763 2 765	1.6 1.7 1.4 .9 4.7	56 149 60 213 34 744 56 372 24 462		
arion edina	7 151 17 116 10 201 45 324 14 570	1.5 1.8 2.1 1.0 2.0	27 861 7 508 1 129 123 520 35 162	1.9 4.0 16.6 1.7	55 364 20 302 3 601 68 438 60 673	1.6 8.9 .7	15 399 4 824 250 25 530 12 057	1.0 2.7 11.2 1.0 1.7	95 013 18 713 740 87 377 79 438	.7 2.2 34.1 .9 1.2	42 880 28 691 7 325 143 073 55 136		
onroeontgomeryorganorrow	15 040 7 809 15 056 13 613 30 394	1.4 3.1 1.5 2.2	977 17 401 5 657 29 298 22 658	7.4 4.1 2.5 4.1 2.1	2 042 31 659 5 197 37 434 19 993	3.7 1.7 2.1 1.3 1.6	149 5 634 651 7 498 1 866	6.8 2.0 4.8 2.1 3.8	(D) 37 036 115 49 229 929	(D) 1.8 17.4 1.5 6.1	6 574 26 476 9 339 32 312 23 690		
skingum ble awa ulding rry	12 006 1 997 4 420 13 379	1.4 3.5 4.5 2.1	1 072 5 840 14 658 5 469	11.3 10.9 4.5 6.9	1 785 13 968 43 985 18 171	4.4 1.7 1.2 1.9	33 9 732 28 210 2 553	15.4 2.0 1.4 3.8	(D) 51 198 93 406 5 387	(D) 1.5 1.1 4.2	4 008 19 250 45 679 11 050		
kaway e rage bbie tnam	14 247 10 686 13 423 19 390 10 837	1.8 2.6 2.1 1.9 2.0	38 277 5 021 7 085 79 635 83 799	2.6 3.9 5.2 2.1 1.5	77 583 11 985 19 713 73 156 58 458	2.9 1.6 1.0	20 019 1 912 3 128 10 534 31 891	1.4 6.4 2.1 1.8 1.0	73 945 8 725 8 389 56 991 136 352	1.1 4.6 3.3 1.4 .7	46 602 9 537 25 157 53 958 73 104		
hlandssndusky	21 125 22 096 7 556 11 266 14 427	1.7 1.8 2.8 2.3 2.4	21 516 19 594 16 620 1 788 44 892	4.1 3.6 3.0 9.5 2.4	37 399 48 118 45 485 9 873 65 043	1.2 1.4 1.2 3.4	8 675 17 484 14 344 1 184 29 861	2.1 1.7 1.7 6.9 1.0	29 507 40 056 81 313 10 423 120 169	1.4 1.6 1.1 5.5	36 689 29 039 52 828 13 523 68 148		
elby rk mmit mmbuli scarawas	25 644 32 260 1 464 19 239 35 216	2.0 1.3 4.7 1.5	46 615 14 733 1 063 4 629 11 871	2.0 4.2 27.7 7.7 9.1	47 851 35 981 2 584 18 616 19 802	1.1 1.8 4.6 1.6 2.0	18 054 8 071 807 1 718 2 025	1.5 2.2 5.9 2.8 3.1	76 480 11 971 566 10 434 3 247	1.1 2.1 7.2 3.3 5.2	60 001 50 062 6 691 24 268 39 396		
n Wert	16 046 5 160 4 451 11 676 24 149	1.7 2.8 4.2 1.9	25 084 26 080 1 411 16 074 6 651	3.5 2.8 11.8 2.6 5.2	51 855 62 161 1 701 30 949 9 365	1.0 .7 5.0 1.4 2.2	12 587 24 135 164 4 166 1 680	1.8 1.0 3.4 2.4 3.8	95 265 105 218 522 30 363 927	1.1 .7 8.1 1.8 2.4	68 423 53 351 1 615 26 192 16 250		
ashingtonayne lilliams oodyandot	90 446 15 402 6 482 6 079	.6 1.8 2.1 3.6	64 755 36 292 14 011 29 722	1.6 2.4 3.2 1.3	64 796 49 632 81 032 48 284	.8 1.0 1.0	12 153 22 532 39 109 26 880	1.5 1.4 1.2 1.2	18 117 73 273 126 251 86 673	1.8 1.2 1.0 1.0	125 619 48 273 63 270		

See footnotes at end of table.

Table F. Reliability Estimates of County Totals: 1987—Con.

				Se	elected farm pro-	duction expenses1	1			
Geographic area	Livestock a purch		Commerci	al fertilizer	Hired fa	rm labor	Petroleum	products	Electricity for th	e farm business
Geographic area	Total (\$1,000)	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Adams	1 043	13.0	2 119	8.5	981	9.9	1 164	11.2	549	8.4
Allen	2 920 3 565	5.3 12.5	4 610 3 034	5.0 4.1	1 808 2 957	4.8 7.8	2 299 1 977	3.5 3.7	637 805	6.7 4.3
Ashtabula	2 437	16.9	2 063	5.7	2 654	6.4	1 452	3.9	909	5.7
Athens	272 5 053	20.8 7.7	364 5 272	9.0 2.5	332 1 929	28.0 2.3	364 2 355	10.6 2.7	132 984	11.8 4.0
Belmont	771	19.9	457	10.2	1 007	29.7	659	9.2	311	11.1
BrownButler	2 486 2 157	31.7 14.6	2 918 2 704	7.2 6.2	713 1 687	10.0 10.8	1 565 1 322	5.9 5.0	485 516	8.4 6.9
Carroll	1 372	15.9	918	8.5	983	14.9	887	6.8	434	6.6
Champaign	2 269 19 177	6.6 3.4	4 986 4 686	3.8 4.6	2 256 6 401	3.1 2.9	2 317 2 348	4.2 7.7	852 768	5.6 4.8
Clermont	238	25.5	2 187	8.9	861	11.2	885	5.9	199	8.0
ClintonColumbiana	3 515 2 679	20.7 6.9	5 581 2 459	4.3 5.7	2 167 4 376	11.8 4.1	2 234 1 900	3.1 3.5	696 966	6.1 4.5
Coshocton	3 331	6.0	2 140	5.1	1 046	4.5	1 414	4.5	460	5.9
Crawford	4 591 195	9.1 44.7	6 183 129	3.5 3.6	1 937 4 611	4.7 2.1	2 638 934	3.5 4.6	581 277	6.0 4.0
Darke	19 376	3.9	7 993	2.4	7 456	1.2	4 338	2.5	2 263	1.8
Defiance	4 222 1 893	1.9	3 035 3 533	5.1	873	2.1	1 703	3.6	441	5.8 5.7
Erie	724	8.4 4.8	2 865	4.6 6.4	1 718 : 2 529	3.7 8.5	1 820 1 546	4.3 7.8	518 500	8.8
Fairfield	2 367	4.0	4 527	3.9	1 734	6.3	2 047	3.2	645	4.9
Fayette	2 451 1 463	17.2 34.2	6 082 2 575	2.7 7.9	2 260 5 311	2.3 9.6	2 400 1 645	2.6 9.3	725 441	4.6 7.6
Fulton	16 458	3.9	7 012	3.1	3 049	1.4	3 003	3.2	1 070	5.1
Gallia Geauga	705 686	9.4 17.8	879 863	11.9 12.9	437 1 196	12.8 12.9	639 672	10.5 7.8	224 436	9.8 9.1
Greene	2 880	6.7	4 926	3.3	3 505	4.5	2 057	7.8 2.8	604	4.4
Guernsey	741	22.3	694	10.1	246	16.3	649	10.6	237	10.8
Hamilton	648 2 189	9.4 7.0	366 6 097	5.4 3.0	2 047 1 720	5.6 6.1	986 2 932	13.4 3.0	252 649	9.3 5.7
Hardin	3 637	21.9	5 633	6.1	1 819	1.9	2 593	3.9	597	7.8
Harrison	669 3 280	10.3 4.5	465 5 157	8.1 3.5	706 2 390	3.4 4.9	520 2 463	6.6 4.4	168 585	9.0 5.0
Highland	2 284	20.3	5 230	4.6	1 112	8.7	1 862	4.5	548	5.0
Hocking	143	44.5	334	29.7	136	19.6	293	13.7	82	16.1
Holmes	6 284 1 490	7.5 9.9	2 016 5 515	6.3 4.8	2 033 7 076	7.9 .6	1 739 2 625	6.4 3.2	1 089 852	5.7 3.1
Jackson)	621	29.3	777	12.4	(D)	(D)	681	6.8	426	3.4
Jefferson Knox	462 14 742	45.5 4.0	359 3 466	12.1 5.2	331 2 375	22.4 8.8	407 2 077	13.4 4.7	189 805	11.9 4.6
Lake	216	31.6	626	6.7	10 156	4.1	718	3.2	340	5.9
Lawrence	524 3 032	20.3 10.8	262 3 888	10.6 6.3	356 4 529	12.5 9.9	267 2 531	10.1	132	15.3 4.8
Licking	4 271	9.3	4 880	3.7	2 239	5.8	2 357	5.7 4.4	1 564 807	4.0
Lorain	1 308	7.8	2 732	5.9	9 171	1.2	3 716	9.0	879	4.2 3.5
Lucas Madison	1 453 5 266	17.7 4.9	2 552 5 747	4.1 3.6	4 871 3 113	1.3	2 186 : 2 451	2.8 3.5	511 754	3.5 6.9
Mahoning	1 166	11.3	1 392	7.9	3 968	5.2	1 110	3.6	722	10.3
Marion Medina	2 805 1 508	8.5 20.8	4 350 1 752	3.4 4.8	1 673 2 073	1.3 3.4	2 053 1 354	3.4 5.4	471 624	4.3 7.3
Meigs	466	16.3	408	9.8	831	16.7	539	17.5	213	19.7
Mercer	14 886 5 053	3.0 10.7	7 329 4 700	3.3 5.6	4 478 3 934	2.3 3.6	4 112 2 328	3.2 3.8	2 191 767	2.1 5.1
Monroe	260	21.5	326	11.3	185	10.6	411	6.4	198	9.2
Montgomery	1 265	7.6	2 534	4.3	2 856	2.4	1 254	3.8	384	6.1
Morgan	874 2 772	10.2 9.1	490 3 556	8.4 3.7	396 1 192	6.9 2.8	463 1 426	8.1 4.2	191 503	8.9 6.4
Muskingum	3 960	5.6	1 547	5.0	1 377	11.4	1 078	4.5	403	5.1
Noble	519 411	13.4 37.0	251 2 302	14.3 11.1	(D) 1 123	(D) 9.6	332 1 277	9.0 9.3	118 280	12.6 11.3
Paulding	2 188	14.1	3 627	3.6	2 326	2.4	2 010	3.0	448	3.7
Perry Pickaway	1 459 3 760	25.4 9.0	1 301 5 586	9.9 3.1	334 2 191	13.2 2.3	635 2 468	7.9 3.7	177 538	9.9 4.5
Pike	469	6.0	1 008	17.5	693	3.8	462	5.8	184	10.4
Portage	1 540 4 979	17.0	1 666 5 463	11.4	2 153	4.8	1 072	4.4 5.1	540 802	5.9
Portage Preble Putnam Richland	5 327	11.0 5.7	5 463 6 115	4.5 3.7	1 529 2 713	1.7 3.2	2 285 3 679	5.1 3.7	958	7.3 4.6
Richland	4 019	13.0	3 383	6.3	1 881	4.1	1 712	4.0	648	8.2
	1 748 1 419	12.3 8.7	3 489 5 562	5.8 7.2	1 394 4 369	3.8 10.9	1 635 1 2 408	3.7 3.9	409 787	6.3 4.4
Scioto	1 476	4.2	7 6 6	10.2	581	13.3	574	8.4	220	10.5
Sandusky Scioto Seneca Shelby Stark	4 678 4 343	15.3 8.2	7 157 4 766	4.0 3.6	3 992 1 752	2.7 4.9	3 134 2 568	3.2 2.5	827 1 099	5.5 5.4
Stark	2 490	9.7	2 811	5.2	6 186	3.4	2 120	4.1	1 136	3.6
ounne	115	37.0	325	21.6	1 356	16.9	601	27.7	154	22.9
TrumbullTrumbull	1 067 3 930	13.2 3.4	1 616 2 038	7.0 7.7	1 933 3 256	11.0 5.0	1 268 1 501	5.7 5.3	666 690	6.2 5.0
Union	5 949	6.0	4 696	3.8	5 243	3.2	2 266	3.3	711	4.2
Van Wert	3 019 74	14.3 44.1	5 802 1 166	2.8 15.5	1 707 ¹ 59	5.1 44.1	2 429 183	3.1 12.1	521 44	4.0 15.8
Warren[1 542	7.0	2 522	5.0	2 479	3.8	1 327	3.9	454	5.5
Washington	1 920 12 559	12.8	1 056	6.2	1 444	18.7	897 3 684	7.6 3.6	303 2 151	10.2
Wayne Williams	9 411	4.4 4.9	5 522 4 301	2.9 5.2	7 668 1 647	3.1 1.7	2 106	4.9	617	2.5 4.7
Wood	3 539	6.4	6 651	3.5	3 006	4.0	3 011	2.8	723	3.9
Wyandot	2 020	5.8	4 043	3.4	1 807	9.3	1 994	3.1	541	7.7

¹Data are based on a sample of farms.

Table G. State Coverage Evaluation Estimates of Farms Not on the Mail List: 1987

[Data are based on a sample of farms; see text. For meaning of abbreviations and symbols, see introductory text]

	Not on	mail list	Percent no	t on mail list
Item	Total number	Relative standard error of estimate (percent)	Total percent	Standard error of percent
Farmsnumber	10 471	3.7	11.7	.4
Land in farmsacres	506 847	21.4	3.3	.7
Farms by size: Less than 50 acres	7 259	4.8	24.2	1.2
	3 213	5.3	5.4	.3
Harvested cropland farms	10 471	3.7	12.9	.5
acres	147 406	28.0	1.6	.4
Farms by value of sales: farms_ Less than \$10,000	8 583	4.5	17.9	.8
	6 934	5.0	28.7	1.4
	1 649	2.8	6.9	.2
	1 888	3.1	4.5	.1
Market value of agricultural products sold \$1,000	56 174	22.4	1.6	.4
Farms by standard industrial classification: Crops (01)	5 964	5.0	11.8	.6
	4 508	4.9	11.5	.6
Farms by tenure of operator: Full owners	9 052	4.3	16.1	.7
	1 419	2.3	4.2	.1
Operators by principal occupation: Farming	1 596 8 876	2.4 4.2	3.9 18.3	.1 .8
Average age of operatoryears	42.1	(Z)	(X)	(X)

Note 1: Farms classified as nonfarms, nonfarms classified as farms, and farms appearing more than once in the census are not accounted for in these estimates, but will be provided in the 1987 Coverage Evaluation publication. See appendix C for futher explanation.

Note 2: Detail may not add to total due to rounding.

APPENDIX D. Report Form and Information Sheet

		BRUARY 1, 1988										омв	No. 0607-053	34: Approval Expire	s Septer	nber 30, 1989
	M 87-/	A0202		U.S. DEPARTM	ENT OF COMMERCE PREAU OF THE CENSUS	NOTICE - R	espons BURE	se to this inqu AU IS CONFI	iry is require DENTIAL. it	d by la	w (title 13, t e seen only	J.S. C	ode). By ti vorn Censu	he same law You us employees a ion, investigation	OUR R	EPORT TO
1	f		U	NITED ST	TATES	The law also p	provide	s that copies	retained in y	our file	s are immur	e fro	n legal pro	Cess.		regulation.
	1			CENS		In correspon	In correspondence pertaining to this report, please refer to your Census File Number (CFN)									
ł	L	G CENSUS USA	OF	AGRICU	LTURE		87-A0202									
32.20			BUDEA	U OF THE CEN		-	87-A0202									
io	ease co rm and	mplete this RETURN TO	1201 Ea	est Tenth Stree Snville, IN 47	t											
N	ote —	If your records are	not availabl	e, reasonable e	stimates may be	,										
S	ent to	ou cannot file by F the above addres	s. Include 1	your 12-charac	ter Census File											
U		(CFN) as shown in	your addres	s label in all co	errespondence to	' [
l re	port for	ved more than one rm, enter extra	A]										
ar	d return	e Number(s) here - extra copies with	A			1										
_	ENSUS	035 03		037	038	1										
U	SE NLY	039 04		041	042	Please co	rrect e	rrors in name	. address. an	d ZIP (Code. ENTE	Rstre	eet and nun	nber if not sho	wn.	
≨SI	CTION				ned, rented, or t	used								propriate se		
	s	organization	for which y	ou are reportii	ship, corporationg. Include ALL	n, or LAND,	Use	section 7 t	o report O	NLY t	hose CRO	PS!	OT liste	d in sections	2 th	rough 6
l				TION OR USE woodland, idl	 cropland, land, house lo 	ts, etc.		Section 8.						d rented to o	_	
	If the a	cres you operated t	in 1987 che	nged during th		·	107 U.S.		in 1987?	ı me ı	Acres	nor:				Acres
	,,,,,,		M SHEET, E	ocuon 1.		Number of acres	١.,	Com (field) f	or grain or	None	harveste 087		068	y harvested	ir: 069	rigated
1.	All land	l owned			□		1 :	seed (Report q dry shelled-wei	vantity on a			1		Bu.		
2.		rented or leased FR					2.6	Com (field) f	or silage	_	070		071	Tons,	072	
ļ	paymer	on shares, used rent at of taxes, etc. Incl	ude leased Fe	ederal, State, an	d railroad	044		or green cho	•		088		089	green	090	
	grazing	O NOT include land permit.) Also comp	used on a pe lete item 5 l	er-head basis und below				Soybeans fo			554		555	Bu.	558	
3.		rented or leased TO			rked on	048	1	Beans, dry e Wheat for g		_	073		074	Cwt.	075	
		by others and land s		•		046		Oats for grai			076		077	Bu.	078	
4.	Acres and ac	in "THIS PLAC res rented (item 2	E" — ADD), then SUB	acres owned TRACT acres	(item 1) rented		1	Barley for gra			079		080	Bu.	081	
	то от	HERS (item 3), an	d enter the	result in this s	pace		8.	Rye for grain			686		687	Bu.	688	
		s census report the ntry is zero please :					١.,	Sorghum for	a enim		082	7	 083	OR - Bu	084	
5.	if you re	ented land FROM OTH	IERS (item 2),	enter the followi	ng information for	each landlord.	•	or seed (incl	uding mile)		095		086	Cwt.	087	
		Name of landlord	Maili	ng address (Incl	ide ZIP Code)	Number of acres	1 ,	Sorghum for s green chop (D	o not include					Ton≇,		
l							ł	Popcorn			662		663	green Lbs., shelled	664	
	-						ł	Tobacco — :		\Box	094	/10	095	Lbs.	096	/10
	List addi	tional landlords on a se	parate sheet o	f paper.				Potatoes, Iri			097	/10	098	Cwt.	099	/10
6.		ented land TO OTHE					SEC	TION 37	Was any Di	RY HA	Y, GRASS	SILA	GE, HAYL	AGE, or GRE	EN C	IOP cut
		Name of renter	Mailir	ng address (Inclu	ide ZIP Code)	Number of acres	l	63 [include so	rghun	-sudan cro	***	and hay c	ut from pastu		
			\neg				١,		YES - c					lO — Go to se . or green chop	ction 4	#
İ							1 :	from the same HAY and also	fields, report	the ac	reage in the I	pproj	oriate items	under DRY		
		tional renters on a sepa ne land you rented or			None 053		1.	DRY HAY	(If two or m	ore cu	ttings of dry	-1,	Acres harvested	Quantity	d	Acres irrigated
		s did you own?				Acres	•	acres only on cuttings.)	ce, but repor	t totai	tons from a		ilai vesteu	(Report either or green weigi indicated)	dry ht as	migatos
7.		have any grazing per	mits on a per-				١,	a. Alfalfa an				- 1	03	104	ons,	105
	054	es — Mark (X) all bo			Forest Service Taylor Grazing			hay or de: b. Small grai	hydrating . n hav — oat				ОВ	107	ons.	108
			xes wnich a	`` }₅∟	Indian Land			barley, ry	e, etc				09	110	iry	111
	2 (N	o — Go to item 8		لاه الـا	Other — Spec	ify)	'		romegrass,	Suda	ngrass,	а,		}	ons.	
8.	LOCAT	ION OF AGRICULTU	IRAL ACTIVI	TY FOR "THIS I	PLACE"			•				1	12	113	ons,	114
	a.in wi	nat county was the st value of your		County n		Number of acres	1	d. Wild hay .				.			lry	
	agric	st value of your ultural products d or produced?	Principal county			058		GRASS SIL GREEN CH	OP (If two o	or mone	cuttings	1	15	118		117
ŀ						057	1.	were made fr acres only on all cuttings.)	ce, but repoi	rt total	tons from]	ons, reen	
1	opera	also had agricultural tions in any other	Other	/		058	3.1	HAY SOLI) — Did ye	ou sel	ll any hay	1	18	·		
L		ty(ies), enter the ty name(s), etc	counties			059		or grass sil of hay sold in	age in 198 section 9, ite	5 / ? (R em 4)	eport value		ı ∐ Ye	8 2 🗌 N	0	

SECTION 48 Were any VEGETABLES, SWEET CORN, MELONS, etc., harvested FOR SALE from "THIS PLACE" in 1987? (Do not include those grown for							SECTIO					HER BERRIES harvest include those grown f				
s4 home use.)								S6	IIIO PLA	we I	. 139/1 (<i>DU 1</i> 101		636.	'		
10		— Comp	lete th	is section					1 YES — Complete this section							
2 🗆	NO	- Go to s	ection	5						2	□ NO	-	Go to section 7			
				Acr			Acres irriga					1 4-	and handered		Acres irr	hateni
Land from which ve harvested in 1987	getable	es were		Whole acres	1	378	/hole acres		Cro	name	Code		res harvested	Quantity harvested	Whole acres	-
2. From the list below,				code for eac		10 narvest	ed in 1987.	/10	Strawbe	rries	536		/10	537 Lbs.	538	/10
If more than one ve each crop. Report o	getable	crop was h	arvest	ed from the s	same ac	res, rep	ort acres fo	r					1	610	511	
Crop nan	ne		Code	Acres he	ervested		Acres irriga	ted	Blackbe	rries	509	╂	1 /10	Lbs.	514	/10
Sweet com			461	ļ	1/	10 462		/10	Blueberr	ies, tame	512	<u></u>	/10	Lbs		/10
Tomatoes 463 1 /10 1 /10					/10	Raspber	ries	533		/10	534 Lbs.	535	/10			
/10 //10					Other be		539	1		540	541	1				
· · · · · · · · · · · · · · · · · · ·				 		10		/10	Specify				/10	Lbs.		/10
				 		10		1 /10			d, use a s	eparate	sheet of paper.			
If more space is needed, us									SECTIO					ed from "THIS PLACI eets, sunflowers, mint		DS.
Crop name Asparagus	Cod 379	Foonlent		41	5 Pe	oppers,	hot	Code 445	ľ					fruit in section 8.)	, 0. 02.0. 0. 0	-
Beans, snap (bush and pol Beets Broccoli	e) 381 383	Honeyde	. .	ons 42 42 naine 42	:5 ¹ Rε	adishes		451					Complete this	ection		
Cantaloups and	391	I Lima bea	ins, gr green	een 42	so so	rizeur		. 459					Go to section 8			
muskmelons Carrots Cauliflower	39	Onione	dry green	43	5 W	aterme	eens	. 467 . 473	Report q	e crops no uantity har	vested in	unit s	the crop name at specified with cro	nd code from the list l	oelow.	
				43	9 5	ther veg Specify	getables —	. 475	C	rop name		Code	Acres harvested	1		rigated
Collards	411	Peppers,	swee		3				Sugar beets for sugar 719 Ton							
SECTION 5 Were	any NU	JRSERY and	GRE	NHOUSE C	ROPS. I	MUSH	ROOMS, so	d.	Alfalfa s	eed		542		543 Lb:		
bulbs,	, flower	rs, flower se	eds, v	egetable see WN FOR SA	eds and	piants,	vegetables	under	Red clov	er seed		671		672 Lb:		
		Compi			LL UII		EROL III I		Sorghum forage o	n cut for di		698	1	899 Toi dry		
2 🗆	NO	- Gotos	ection	6			irrigated		Sunflow			734		735	736	
Nursery and greenh	MISE C	rane irrinate	d in 10	None None	Square 477	feet	Acres 478	Tenths	Proso m			665		866 Bu	867	
2. From the list below,				_ [h oron a		i	/10	Mint for			644		645 Lbs		
2. Front the insertion,	enter t	Square 1				liowii.										
Crop name	Code	under ele	ss or	Acres in th in 198	e open 37		Sales in 198	37						-		
		in 198		Whole acres	Tenths		Dollars	Cents								
				,	/10	\$		00								
				·	/10	\$		00	If more space is needed, use a separate sheet of paper.						-	
If more space is needed, us	2 2 5 6 7 1	acate choos of	22000	·	/10	\$		00	Crop nam Bromegra		ounds)			crop name ledtop seed (pounds)		Code . 674
Crop name		C	de	Crop name				Code						. 701		
Bedding plants (Include) Bulbs (Exclude bulb flow Cut flowers and cut flor	ering pl	lants) 4	82	Mushrooms	s		• • • • • • • • • • • • • • • • • • •	. 494	Cotton (b	d (report ac ales) id spelt (bus			091 T	iweetclover seed (pound) imothy seed (pounds) . riticale (bushels)		. 746
Nursery crops — orname and nut trees, and vine	entals. f	frait	1	Vegetable	and flow:	er seed:	s	. 500	Fescue se	ed (pounds ixed (bushe	:)		602 V	riticale (busiles) (etch seed (pounds) (ther crops (pounds) —	Specify	. 755 . 752
Foliage plants	· · · · · ·	7	07	Other - 5	pecify .			. 506	Lespedez	a seed (pou	ınds)		638			
SECTION 8 Was t					-KUIT II	REES,	meluding G	KAPEV	INES and r	AD I & KEES	s, on " !!	415 PI	LACE" in 1987?			
		- Compl					Tota	al acres		Acres irriga	ited					
1. TOTAL ACRES in I	bearing	and nonbea	ring fr	uit orchards,		rds,	Whole ad	res T	enths Wh	ole acres	Tenths					
and nut trees on this	s place.	. (Do not inc	lude al	bandoned ac	res.)		A abo at = 2 a f		/10		/10	_:_ 4-	207			
2. For those crops not Report the requeste												e in 15	10 <i>l</i> .			
		NU!	MBER	OF S OF		s in tre			- 1	nit of meas	ure					ļ
Crop name	Code	Nonbearing		Bearing		vines d l ages		Quantit harvest	ed	7 1	Lbs.	7				
	 	age	124	age	Whole a	cres T	enths 126		Lbs		box 128	4	Crop name Apricots .		Code	
Apples	123		226	i	227	- !	/10		1 228		230	4	Cherries .		047	
Peaches 225 /10					1 [] 2 🗆 3 [1182	_	Pears Persimmon		231 237					
Grapes 177 1/10					1 [] 2 🗆 3 [4	Plums and Pecans	prunes	243 339					
1 2 10					1 [2 3		4	Other fruit a	and nuts - Specify	309					
	1 2 3						1 [1 -1-	.5	4						
If more space is needed, us	D 2 SAC	arate chant - 5	03000			i	/10		1 [2 3 3	_ئـٰـــ	_				
If more space is needed, us FORM 87-A0202 (8-20-86)	e a sepa	erate sneet of	рар ег .													

Page 2

GROSS VALUE of CROPS SOLD from "THIS PLAN taxes and expenses (Refer to the INFORMATION SH	CE" in 1987, BEF	ORE	SECTION 13 Did you or anyone else have any CATTLE or CALVES on this place in 1987?
Report your best estimate of the value for each of the following	ng groups of cro	ps sold	1 YES — Complete this section
from this place in 1987. Include the value of the landlord's an estimating if necessary. Include value of Government CCC to	nd/or contractor'.	s share,	2 NO - Go to section 14 INVENTORY Number on this
1. Grains, soybeans and other beans sold in 1987 None	Dollars	Cents	DECEMBER 31, 1987 INVENTORY None place Dec. 31, 1987
	773 \$	00	1. CATTLE AND CALVES of all ages
b. Wheat	774 \$	00	(Total of a, b, c, and d below)
c. Soybeans	775 \$	00	had calved
·	776 \$	00	b. MILK COWS kept for production of milk or
	777	. 00	cream for sale or home use — include dry Milk milk cows and milk heifers that had caived
	778 \$	00	808 Heifers and
· · · · · · · · · · · · · · · · · · ·	779	30	c.HEIFERS AND HEIFER CALVES — (Do not include heifers that had calved.)
popcorn, proso millet, etc	\$ 780	00	d.STEERS, STEER CALVES, BULLS, BUILS, Steers and bulls of
2. Cotton and cottonseed	781	00	AND BULL CALVES
3. Tobacco	782	00	CATTLE AND CALVES SOLD
4. Hay, silage, field seeds, and grass seeds	\$	00	FROM THIS PLACE IN 1987 Include those fed on this place on a Number sold Gross value of sales
5. Vegetables, sweet corn, and melons— (Do not include Irish potatoes and sweetpotatoes, report them in item 7 below.)	783 \$	00	contract or custom basis. Also report as sold cattle moved from this place None in 1987 Dollars ICents
6. Fruits, nuts, and berries — apples, peaches,	784		to a feedlot for further feeding.
	785	00	2, Calves weighing less than 500 pounds \$ 00 810 811
(Do not include nursery and greenhouse crops.) —		i l	3. Cattle, including calves weighing 500 pounds or more
Specify	5	i 00	a . Of the total cattle sold, how many were
SECTION How were the ACRES in this place USED in 1987?	•		FATTENED on this place on GRAIN or 812 813 CONCENTRATES for 30 days or more
1. Copy acres in "THIS PLACE" from section 1, item 4, page 1_		cres	and SOLD for SLAUGHTER? 5 00
NOTE: For items 2 to 5 below, if land was used for more than one pureport it in the FIRST land use listed below that applies. For example,	rpose in 1987 report cropland		DAIRY PRODUCTS SOLD FROM DAIRY PRODUCTS Consultant of the second s
harvested and also pastured, only as "Cropland harvested." 2. CROPLAND	None Number	of acres	THIS PLACE IN 1987 Contain Gross value of sales None Dollars Cents
a. Cropland harvested - Include all land from which crops	787		4. Gross value of sales of DAIRY PRODUCTS from this place in 1987 — Include milk, creem,
were harvested or hav was cut, and all land in orchards, citrus	. 🗆 📗		butter, etc
b. Cropland used only for pasture or grazing — Include rotation pasture and grazing land that could have been used for crops without	788		SECTION: 144 Did you or anyone else have any HOGS or PIGS on this place in 1987?
additional improvements	789		1 YES — Complete this section INVENTORY
 Cropland used for cover crops, legumes, and soil- improvement grasses, but NOT harvested and NOT 			2 NO - Go to section 15 Number on this
pastured	790		DECEMBER 31, 1987 INVENTORY B15
report here land in orchards and vineyards on which the crop failed. Such acreage is to be reported in item 2a.)	. 🗖 📗		1. HOGS and PIGS of all ages (Total of a and b below)
e. Cropland in cultivated summer fallow	791		a. HOGS and PIGS used or to be used for BREEDING Breeding
f. Cropland idle	793		b. OTHER HOGS and PIGS Other
3. Woodland - include all	794		LITTERS FARROWED
woodlots and timber tracts and cutover and deforested land	795		2. LITTERS FARROWED on this place between — None Number of litters
with young timber growth. D. Woodland not pastured	.		a. December 1, 1986 and May 31, 1987
4. Other pastureland and rangeland — Include any pastureland other than cropland and woodland pasture.	. 🗆		b. June 1, 1987 and November 30, 1987
 All other land — Land in house lots, ponds, roads, wasteland etc. — Include any land not reported in items 2 through 4 above 			Number Gross value of sales
6. TOTAL ACRES — Add the scres reported in items 2 through 5 (Should be the same as item 1 above.)			HOGS AND PIGS SOLD None in 1987 Dollars Cents
(Should be the same as item 1 above.) SECTIONAL: Was any LAND in this place IRRIGATED at any time			3. HOGS and PIGS SOLD from this place in 1987
Irrigated land is all land watered by any artificial or controlled means -	- sprinklers, furrow	vs	4. Of the hogs and pigs sold, how many were
or ditches, spreader dikes, etc. Include supplemental, partial, and prep	olant irrigation.		sold as FEEDER PIGS for further feeding? \$\ 100
1 YES — Complete this section	Number		SECTION (155) Did you or anyone else have any SHEEP or LAMBS on this place in 1987?
	None irriga	rted	1 U YES — Complete this section
How many acres of harvested land were irrigated? Include land from which hay was cut and land in bearing and			2 NO — Go to section 18
nonbearing trust and nut crops reported in section 10, item 28	581		Number on this Number SOLD Number on this in 1987
2. How many acres of pastureland, rangeland, and any other lands not included in item 1 above were irrigated?			824 825
SECTION 12 Were any ACRES in this place SET ASIDE, DIVERT			1. SHEEP and LAMBS of all ages
under FEDERAL acreage reduction programs in 19 s12	877		a. EWES 1 year old or older
1 YES — Complete this section			Number shorn Pounds of wool in 1987 shorn in 1987
2 NO — Go to section 13	None Number of	of acres	2. SHEEP and LAMBS SHORN
1. How many acres were set aside (or diverted) under ANNUAL	682		Z. SITCEF 8NB LANDS SHOW
commodity acreage adjustment programs?	683		None Dollars Cents
2. How many acres were under the CONSERVATION RESERVE PROGRAM (10 year, CRP)?			3. What was the gross value of sales of SHEEP, LAMBS, and WOOL from this place in 1987?

Page 3

SECTION 16% Did you or anyone else have any HORSES, BEES, FISH, GOATS, OTHER LIVESTOCK, or ANIMAL SPECIALTIES on this place in 1987?								SECTION 18% GOVERNMENT CCC LOANS					
	S16	Complete this sec		2 🔲 NO	•		17	1. Amount received in 1987 from Government CCC loans for - None Dollars Cents					
		INVENTORY Number on	Total ou	antity sold	Gros	s value of a	sales	Include regular and reserve loans, even if redeemed or forfeited. a.Corn					
	None	this place Dec. 31, 1987	in	1987		ollars	Cents	b. Wheat					
1.		830	831	Number	832		00	c.Soybeans					
		839	840	Number)		1	d. Sorghum, barley, and oats					
,	Colonies of bees	1	841	Pounds	1)	:	00	_ 890					
-	Colonies of Dees	843	844	honey			!	891					
l		4	845	Number Gallons	846	i	00	f. Tobacco, rye, and honey					
3.	Milk goats		848	milk	*		00	In 1987 (DO NOT INCLUDE CCC loans.) Refer to INFORMATION SHEET, section 19.					
		847	849	Number	850			S19 NORTH DOINGS CORN.					
4.	Angora goats	851	852	Pounds mahair	8		00	1. Amount received in cash					
5	Other goats	861	852		853		1	2. Value of certificates received — payment-in-kind (PIK) or commodity certificates					
	Mules, burros, and	833	834	Number	835		00	SECTION 20 TYPE OF ORGANIZATION					
-	donkeys	836		Number			00	szo Mark (X) the one item which best describes the type of organization for					
7.	Mink and their pelts	836	837		838		00	this place in 1987. Refer to the INFORMATION SHEET, section 20.					
8.	• • • • • • • • • • • • • • • • • • • •	854	855	Number	858		00	FAMILY or INDIVIDUAL operation — (Do not include partnership and corporation.)					
}	pelts			Number	8		00	PARTNERSHIP operation — Include family Go to section 22					
9.	All other livestock and livestock products	867	858		859			pertnerships					
	Specify		<u></u>	Number	\$		00	OTHER, such as estate or trust, prison farm, grazing					
10.	Fish and other aquaculture	Total quantity in 1987	sold Gr	oss value of Dollars	f sales Cents	}		association, Indian reservation, etc					
	products (Enter name and code from list below.)		12	Donais	Cerits	1		Specify					
	Name Code	1ORPC	mber \$		00			SECTION 218 CORPORATE STRUCTURE (for incorporated operations only)					
		Code	Name			Code		Refer to the INFORMATION SHEET, section 21. \$21					
	Catfish	860 863	Other aq	h — <i>Specify</i> uaculture				1. Is this a family-held corporation?					
	If more space is needed, use a sepa			ts - Specify				2. Are there more than 10 stockholders?					
EC1-	TURKEYS, DUÇ	KS, etc., on this pl	ace in 19	87?— <i>Incl</i>	lude por	s, stry growi	7	SECTION 22 CHARACTERISTICS AND OCCUPATION OF OPERATOR (Senior partner					
	for others on a c			INVENT		Total nur	mhar	or person in charge) Refer to the INFORMATION SHEET, section 22.					
		Complete this se Go to section 18		this pl	ace (sold in 1	987	1. RESIDENCE — Does the operator (senior partner or person in charge) live on this place?					
1.	HENS and PULLETS of laying			892		893		2. PRINCIPAL OCCUPATION — At which occupation					
ł	PULLETS for laying flock repl		_	894		895		did the operator spend the majority (50 percent or 928 more) of his/her worktime in 1987? For partnerships consider all members of the partnership together					
,	 PULLETS 3 months old or old PULLET CHICKS and PULLET 		-	896		}		consider all members of the partnership together					
	(Do not include commercial bro	oilers.)	Ц			<u> </u>		3. OFF- FARM WORK — How many days did the operator 1 None					
3.	BROILERS, fryers, and other including capons and roaster	meat-type chicker	ns 🗆	898	ļ	899		4 hours per day off this place in 1987? — Include work at a nonfarm job, business, or on someone else's farm for 3 50—99 days					
4.	TURKEYS			900		901		pay. (Do not include exchange farmwork.)					
1	Turkeys for slaughter (Do no			902		903		s 🔲 150—199 days					
i	b.Turkey HENS kept for bree OTHER POULTRY raised in ca		· · · · · ⊔					↓ c ☐ 200 days or more 4. In what YEAR did the operator (or senior partner) begin oso					
	geese, pigeons or squab, phe (Enter poultry name and code fro	asants, quail, etc.			-			to operate any part of this place? Year					
	Poultry name	Code			1	1		925					
	Poultry name	Code				1		5. AGE of operator (senior partner or person in charge) Years old					
1	Name Code	Name	Code	Name		Cod	•	∫ 1					
	Ducks	Pigeons or squab Pheasants	908 810		er poultr			3 American Indian					
6.	POULTRY HATCHED on this pla	ace in 1987 and	None		Numbe	914		6. RACE of operator (senior partner or person in charge)					
1	olaced or sold — chickens, turk			916	.10.1106	<u>-</u>		9 ☐ Other — Specify					
	Specify kind of pouttry			917		 		,					
7.1	ncubator egg capacity on De	ecember 31, 198	7 ∐ [7. SEX of operator (senior partner or person in charge) 1 Male 2 Female					
				ross value o		-		8. SPANISH ORIGIN — Is the operator (senior partner					
	What was the gross value of sa coultry and poultry products (e	ggs,	918	Dollars	i	Cents		or person in charge) of Spanish origin or descent (Mexican, Puerto Rican, Cuban, or other Spanish)? 1 Yes 2 No					
	etc.) from this place in 1987? .	Page 4	\$			00		Page 5					

1987 CENSUS OF AGRICULTURE

SE	PRODUCTION EXPENSES peid by you and other place in 1987	ters for	this	-	SECTION 25% Were any INSECTICIDES, HERBICIDES, FUNGICIDES, NEMATICIDES, OTHER PESTICIDES, or OTHER CHEMICALS used on this place in 1987	7						
Inc	clude your best estimates of expenses paid by you, your landlo yers, and others for production of crops, livestock, and other a	rd, cor	tractors,		1 YES - Complete this section 2 NO - Go to section 26							
in '	yers, and others for production of cops, livestock, and others 1987. (DO NOT INCLUDE expenses connected with perform hers; operation of nonfarm activities, businesses, or services; penses not related to the farm business.)	ina cus	tomwork for		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,	None	Dollars 971	Cents	Sprays, dusts, granules, fumigants, etc., (fungicide, herbicide, insecticide, nematicide) to control Acres on whit used	ich						
2	started pullets, etc	ш	972	00	a. Insects on crops, including hay							
	hay, silage, mixed feeds, concentrates, etc		8 1	00	b - Nematodes in crops							
	 Commercially mixed formula feeds purchased — complete, supplement, concentrates, premixes. 				smuts, rusts, etc.)							
		Cents			d. Weeds, grass, or brush in crops and pasture — Include both pre-emergence and post emergence.							
	soybean meal, cottonseed meal, and urea.)	00			2. Chemicals for defoliation or for growth control							
з.	Seed cost — for corn, other grains, soybeans, tobacco,		974		of crops or thinning of fruit							
	cotton, etc. — Include plants and trees purchased		\$ 1	00	sae include only equipment used for agricultural operations in 1986 or 1987.							
4.	Commercial fertilizer purchased — all forms, including rock phosphate and gypsum. Include cost of custom applications		. I	00	 Value of ALL machinery and equipment on this place, December 31, 1987 							
5.	Agricultural chemicals purchased — insecticides,		976		1. What is the estimated market value of ALL machinery, Estimated market value	ue						
	herbicides, fungicides, other pesticides, etc. — Include cost of custom applications. (Do not include lime.)		8	00	and used for the faint of failch business? — include cars,	ents						
6.	Gasoline and other petroleum fuel and oil purchased for the farm business —		977		pumps, motors, irrigation equipment, dairy equipment including							
	a - Gasoline and gasohol		\$	00	milkers and bulk tanks, fivestock feeders, grinding and mixing equipment, etc.	00						
	b. Diesel fuel		978 \$	00	SELECTED mechinery and equipment on Total number Of the total, HO the view Parameter 21 1927 (Parameter on this place on MANY were many	w						
	c. Natural gas		979 \$	00	only if ward in 1987 or 1987 I	vears						
	d. LP gas, fuel oil, kerosene, motor oil, grease, etc		980 \$	00	844 945	-						
7.	Electricity for the farm business (Do not		981		Motortrucks — Include pickups	_						
2	include household expenses.) Hired farm and ranch labor — also include employer's cost		\$	00	and motor tillers — 946 947 a. Less than 40 horsepower (PTO)							
٥.	for social security, workman's compensation, insurance		982		b. 40 horsepower (PTO) or more							
_	premiums, pension plans, etc. (See INFORMATION SHEET)		\$	00	4. Grain and bean combines, all types							
9.	Contract labor — Include expenditures for labor, such as harvesting of fruit, vegetables, berries, etc.,		983		5. Cotton pickers and strippers							
	performed on a contract basis by a contractor, crew leader, a cooperative, etc.		8	00	6. Mower conditioners	\dashv						
10.	Repair and maintenance expenses for the upkeep of buildings, motor vehicles, and farm		984		and round balers	_						
	equipment		\$:	_00	SECTION 27% ESTIMATED CURRENT MARKET VALUE OF LAND and S27 BUILDINGS							
• • •	Gustomwork, machine hire and rental of machinery and equipment — include expenditures for use of equipment and for customwork such as grinding		1		Please give your best ESTIMATE of the CURRENT MARKET VALUE of land and buildings for all acres reported in Estimated market va of land and building	lue 38						
	and mixing feed, plowing, combining, com picking, drying, silo filling, spraying, dusting, fertilizing, etc. (Do		985 I		section 1, items 1, 2, and 3, page 1. None Dollars C	ents						
	not include cost of cotton ginning and application of fertilizer and chemicals.)		\$ 1	.00	1. All land owned	00						
12.	Interest paid on debts (See INFORMATION SHEET)		986	22	2. All land rented or leased FROM OTHERS	00						
	a. Secured by real estate		987	00	998							
	b. Not secured by real estate		ş İ	00		00						
13.	Cash rent paid for land and buildings in 1987— (Do not include grazing fees.)		988	00	SECTION 262 INCOME FROM FARM - RELATED SOURCES IN 1987 Report amount received before taxes and expenses.							
14	Property taxes paid include farm real estate,	_	989		Farm-related inco	-						
- **	machinery, fivestock, etc. for the ferm business. (Do not include taxes paid by landlords.)		s 1	00	farmers and others - plowing, planting, spraying,	ents						
					harvesting, preparation of products for market, etc. (If customwork is a separate business, refer to INFORMATION SHEET: section 28).	00						
	All other production expenses —Include insurance, water, animal health costs, grazing fees, marketing charges, miscellaneous farm supplies, etc. (Do not include depreciation.		990 1	1	SHEET, section 28)	~						
	nuscellarisous farm supplies, etc. (Do not include depreciation, household expenses, and expenses not associated with the farm business.)		\$ 1	00	out farmland or payments received from lease or sale of							
SE	CTION 245 Was any COMMERCIAL FERTILIZER, Includin	g ROC			allotments — Include payments for livestock pastured on a per-head basis, per-month basis, per-pound basis, etc	00						
	S24 LIME used on this place during 1987?	-	·		3. Sales of forest products and Christmas trees - include -							
	1 L YES — Complete this section 2 L I		Go to section 25	$\overline{}$	4. Recreational services, patronage dividends of cooperatives,							
1. /	Acres of cropland fertilized in 1987 — (Do not include cropler		932	1KA0	and other income which is CLOSELY RELATED to the agricultural operation on this place -							
1	for pastures reported in section 10, Item 2b.)	L	933			00						
/	reported in section 10, items 2b and 4	[J [SECTION 29 PERSON COMPLETING THIS REPORT — Please print							
3. 1		of lim		ned	Name 999 Date							
•	which applied — (Do not include lend plaster or gypsum or lime for sanitation.)		935		Telephone number Area Code Number	\dashv						
	87-A0202 (8-20-88)											

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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, seles, 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:

- Owned land rented to others for cash or a share of crops or livestock
- Land you rented from someone and then subleased to someone else
- 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:

- 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.
- e. 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 "THIS PLA	re any of the following CROPS harvested from HIS PLACE" in 1987?										
None	Acres harvested	Quantity hervested	Acres irrigated								
1. Cotton	091	092 Bales	093								
2. Soybeans for beans	⁰⁸⁸ 40	089/,550 Bu.	090 40								
3. Wheat for grain	073 40	1,230 Bu.	075								
4. Oats for grain	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 \times 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.

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➤ 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 quertered 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. 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 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

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.

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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

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. explanations.

Livestock and Poultry Purchased — Report the cost of cattle, calves, hogs, pigs, sheep, lambs, horses, goats, chicks, pullets, poults, 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 feed 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 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 similiar 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. - Include the the cost of additions to existing buildings.

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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
- 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 28 ~ 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
- 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.

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DUE BY FEBRUARY 1, 1988				OMB No. 0607-0534: Approval Ex	ires September 30, 1989
FORM 87-A0400 U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS	NOTICE - R	esponse to this inquiry is require BUREAU IS CONFIDENTIAL. It ics! purposes. Your report CAN	ed by law (title 13, U may be seen only b	S. Code). By the same law y swom Census employee	YOUR REPORT TO a and may be used
A UNITED STATES	i ne iaw also p	rovides that copies retained in	your files are immune	from legal process.	
UNITED STATES CENSUS	In correspond	ience pertaining to this repor	rt, piezse refer to y	our Consus File Number (CFN)
OF AGRICULTURE				87-A0400	
AG CENSUS USA		-			
Please complete this BUREAU OF THE CENSUS				•.	
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				į	
report form, enter extra A					
and return extra copies with A	4 4 4			•	
CENSUS USE 039 040 041 042		The second secon	and the case of the fact that the case of the fact that th	anganggan angan manggan manggan ng magan aganggan n	
SECTION 1	Pleas	correct errors in name, address	s, and ZIP Code. EN	TER street and number if n	ot shown.
1. At any time during 1987, did you plant, grow, or have any:		PART A — CROPS			in 1987.
Hay or tobacco? Com, wheat, or other grains? Other crops? Tother crops? Greenhouse or nursery crops?		(Do not include crops gro	Acres		Gross value of crops sold
Yes No		1.Hay crops — a. Alfalfa and alfalfa	None harvester		Dollars Cents
2. At any time during 1987, did you raise, sell, or keep any:		mixtures	103	104 Tons, dry	782 \$ 00
Cattle, hogs, sheep, or goats? Horses or ponies? Chickens or other poultry? Fish in captivity? Bees? Other animal specialties?		b. Small grain hay	112	107 Tons, dry	\$ 00
Yes No		c.Wild hayd.Other hav	109	110 dry	782
If you answered YES to EITHER of these questions, go to SECTION if you answered NO to BOTH of these questions, go to SECTION	ON 2.	Specify kind		Tons, dry	\$ 00
SECTION 2: ACREAGE IN 1987. Report land owned, rented, or us		2. Corn for grain or seed		089 Bu.	\$ 00
your spouse, or by the partnership, corporation, or orga which you are reporting, include ALL LAND, REGARDL	enization for ESS OF	3. Soybeans for beans	073	074 Bu.	\$ 00 774 \$ 00
LOCATION OR USE — cropland, pastureland, rangeland	d, umber of acres	4. Wheat for grain 5. Tobacco — all types	094	8u. 095 10 Lbs.	8 00
		6. Potatoes, Irish -/Do	097	098	785
2. All land rented or leased FROM OTHERS, including land		not include those grown for home use.)		10 Cwt.	\$ 00
worked by you on shares, used rent free, in exchange for services, payment of taxes, etc. include leased Federal, State,	4	7. All vegetables for sale		acres Dollars Cents	
and railroad land. (DO NOT include land used on a per-head basis under a grazing permit.)		(Do not include those grow)	7 🗆 376	/10 \$ 00	
3. All land rented or leased TO OTHERS, including land worked on shares by others and land subleased. Also complete item 5 below.	·5	Specify kind(s)		/10	
4. Acres in "THIS PLACE" — ADD acres owned (item 1)	048		None Total	acres Quantity hervested	Dollars Cents
and acres rented (item 2), then SUBTRACT acres rented TO OTHERS (item 3), and enter the result in this space.		8. All fruit and nut orchar vineyards, and berries	ds,	/10	784 \$ 00
If the entry is zero please refer to the information Sheet, section 2.		Specify {		/10 3 Lbs.	
5. Of the land you rented or leased to others, how many None 053		9. Other crops — For addition	fanal since and ada	/10 Lbs.	list bolows
acres did you own?	Acres State	Report quantity harvested	in the unit specified w	ith crop name.	Gross value of
6. In what county was the largest value of your agricultural products raised or produced?	O. O. C.	Crop name	Code Acres	Quantity harvested	crops sold Dollars Cents
SECTION 3. LAND USE and IRRIGATION				1	2 \$ 00
PART A — How were the ACRES in this place used in 1987? None N.	umber of acres			1	\$ 00
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.	7	If more space is needed, use a se Crop πame	Code		Code
2. Cropland on which all crops failed — (Exception: Do not report here land in orchards and vineyards on which the crop failed.)	0	Barley for grain (bushels) Corn for silage or green chop (s	tons, green) 070	Oats for grain (bushels) Sorghum for grain-mile (b Other crops (pounds) — S	ushels) 082
3 - Cropland idle, cropland used for cover crops, 29	3	• PART B - NURSERY	and GREENHOUS		
or cropland in cultivated summer fallow	8	From the list below, enter	PLACE" in 1987 the crop name an	d code for each crop gro	wn.
and other pastureland and rangeland	7	Crop name Co	Square feet under glass or	11 1967	Sales in 1987
reported in items 1 through 4 above	umber of core		other protection	Whole acres Tenths 2	Dollars Cents
1. How many acres of harvested land were irrigated? Include	umber of acres irrigated	If more space is needed, use a se		/10 \$ -	i 00
land from which hay was cut and land in bearing and nonbearing fruit and nut crops.		Crop name Bedding plants (include vegets Cut flowers and cut florist gree	Code ble plants) 479	Potted flowering plants .	707
2. How many acres of pastureland, rangeland, and any other lands not included in item 1 above were irrigated?	•	Nursery crops — ornamentals, and nut trees, and vines	fruit	Greenhouse vegetables Other — Specify	503
PENALTY FOR FAILURE TO REPORT			CONTIN	UE ON REVERSE SIDE -	

SECTION:58 LIVESTOCK and POULTRY		• PART E - HORSES, OT	HER LIVESTOC	K, ANIMAL SPE	CIALTIES, and FISH
PART A — CATTLE and CALVES	INVENTORY	None	INVENTORY Number on this place Dec. 31, 1887	Total quantity	Gross value of sales
None		1. Horses and ponies	place Dec. 31, 1987	sold in 1987	Dollars Cent
	663	of all ages		Numbe	r * 00
1. CATTLE and CALVES of all ages	804 Total		sse }	840 Numbe	
a. BEEF COWS — include beef helfers that had calved.	Beef cows	2. Colonies of bees \Box		841 Pounds honey	00
b. MILK COWS kept for production of milk or	805		143	844 Numbe	\$48
cream for sale or home use — include dry milk cows and milk helfers that had calved	Milk	3. Milk gosts	1	845 Gallons	
	55415	3 3 3 3 3 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	847	848) 850 I
	ross value of sales		\$	849 Pounds	
2. Value of DAIRY PRODUCTS sold in 1987 - 514	Dollars Cents	4- Angora goats	<u> </u>	mehair	00
Include milk, cream, butter, etc	. 00	animal products. (Enter name/code from below.)			
CATTLE and CALVES SOLD	,	Liner Herre/Code from Delow./		1	2
	er sold Gross value of sales	Name	Name/code	Quantit	
this place to a feedlot for further None in sos	1987 Dollars Cents	Mules, burros, donkeys 823	Rabbits and their pe	elts SB4 Oth	er livestock, fish.
3. Calves less than 500 pounds	• 00	Mink and their pelts 836		the second second second second	their products 897
910	811		ENT CCC LOAN from Governm		. Include regular
4. Cattle - Include calves 500 pounds or more a. Of ALL cattle sold, how many were	\$ 00	Amount received in 1987 and reserve loans, even if re	deerned or forten	(40119	DUNEIS , COILLE
FATTENED on this place on GRAIN or		Specify crop(s)		🗆 🖟	00
CONCENTRATES for 30 days or more and SOLD for SLAUGHTER?	9 00	SECTION // Payments re	ceived for parti	elpation in FED	ERAL FARM
PART B — HOGS and PIGS	INVENTORY	PROGRAM	3 in 1987 <i>(DO N</i>	_	
None	Number on this place Dec. 31, 1987			None	Dollars Cents
None	815	1 . Amount received in cash	1	🔲 🛭 🛊	00
1. HOGS and PIGS of all ages	Total	2. Value of certificates rece (PIK) or commodity certif	lved — payment- licates	in-kind 🗆 🖨	•
0 11000 17100 1 1 1 1	818				, or IDLED under
a. HOGS and PIGS used or to be used for breeding	Breeding	FEDERAL at	creage reduction	n programs in 1	1987
Numb	er sold Gross value of sales	4 Ua maa aa-aaaa-	4		None Number of acres
None In 1	987 Dollars Cents	 How many acres were se ANNUAL commodity acr 			
2. HOGS and PIGS SOLD from this place in 1987	\$.00	2. How many acres were ur	der the CONSER	VATION	563
3. Of the hogs and pigs sold, how many were	823	RESERVE PROGRAM (10			
sold as FEEDER PIGS for further feeding?	. 00		RISTICS and O		FOPERATOR
PART C — SHEEP and LAMBS INVEN Number	On this NUMBER SOLD	1. RESIDENCE - Does the	operator live or	n this 923	
None place Dec.	31, 1987 In 1987	place?			Yes 2 No
1. SHEEP and LAMBS of all ages	B25	2. PRINCIPAL OCCUPATION		928	
826		occupation did the oper majority (50 percent or	more) of his/her	_	
a. EWES 1 year old or older		worktime in 1987? For p	ertnerships conside hip together	pr 11	Farming 2 L. Other or ranching
2. SHEEP and LAMBS SHORN None 827	628	3. OFF-FARM WORK - He		920 /	
in 1987	Pounds wool	operator work at least 4	hours per day o	ff this	None 1-49 days
	ross value of sales	place in 1987? — Include business, or on someone els include exchange farmwork	work at a nonfarm e's farm for pay. (D	Job, So not	50-99 days
3. What was the gross value of sales of SHEEP, LAMBS, and WOOL from this	Dollars Cents	include exchange tarmwork.	.)	·····\ ` ;⊟	100-149 days
place in 1987?	00				150-199 days
	NVENTORY Number on Number			•	200 days or more
	this place sold in 1987	4. In what YEAR did the or	erator begin to o	operate ^{oso}	V ores
16 TIENS GROUPOELETS	ec. 31, 1987	any part of this place?	• • • • • • • • • • • • • • • • • • • •	925	Year
a. HENS and PULLETS of laying age	4 698	5. AGE of operator			Years old
b. PULLETS 3 months old or older not yet of laying age for layer replacement			•	924 (₁□ ¹	White
c. PULLETS under 3 months old for layer	8				Negro or Black
replacement	8 899	8. RACE of operator			American Indian
2. BROILERS, fryers, other meat-type chickens					Asien or Pecific Islander
3. TURKEYS for slaughter (Do not include breeders.)	0 901			(.□.	Other — Specify)
4. OTHER POULTRY (Enter name/code from below.)				•	×
		7 CEV at a		926 · · · · · · · · · · · · · · · · · · ·	Male 2 Female
Poultry name Code	1 11	7.SEX of operator		927	viale 2 LJ remale
Name/code Name/code Turkey hens kept Geese	Name/code Quali	8. SPANISH ORIGIN — Is t origin or descent (Mexic	he operator of S an. Puerto Ricar	ipanish n	
for breeding 902 Pigeons or squab 908 Ducks 904 Pheasants 910	All other poultry — Specify 914	Cuban, or other Spanis	h)?	1 <u></u>	
	oss value of sales	SECTION TO PERSON CO	MPLETING TH	IS REPORT —	
5. Value of POULTRY and POULTRY None PRODUCTS (engs. etc.) sold from this place	Dollars Cents				·
PRODUCTS (eggs, etc.) sold from this place in 1987?	00	Telephone number	Number		
ORM 87-A0400 (3-13-87)	Page				

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.

- 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
- 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, su as section 3 of the Taylor Grazing Act, National Forest, or Indian reservation permit land.

Itom 3 — All Land Rented or Leased TO OTHERS — Include all land rented out for any purpose if it was part of the acreage reports 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:

- 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
- and worked for you by someone for a share of crops or lvestock
- 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 "O" and:

- You raised any crops or had any livestock or poultry on "THIS PLACE" in 1987, complete the report.
- All your land was operated by a renter or sharecropper, skip to and complete section 10, and explain briefly, "All land rented out," etc. Mall form in return envelope.
- You did not have any agricultural activity on owned or rented land in 1987, complete section 10 and explain briefly, such a "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 (Acrea 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.

DO NOT INCLUDE:

- 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 texes. 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 abendoned 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 besis 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" enimals 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, besswax, 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 1 987.

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.

FORM 87-A04(I) (3-31-87)