

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 yielded 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, outdoor-grown 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 non-farms 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:

Cattle and calves-----farms-- 842
number-- 28,594

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 custom-work 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, per-month, 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:

1. 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]

Geographic area	Agricultural places excluded by farm definition with acres in the CRP			Farms with acres in the CRP		
	Number	Land in places (acres)	Land in CRP (acres)	Number	Land in farms (acres)	Land in CRP (acres)
Michigan	237	22 285	11 068	851	307 456	38 874
Allegan	7	581	240	22	9 722	1 717
Arenac	4	487	165	11	5 762	398
Barry	23	2 431	1 186	52	18 854	3 402
Bay	6	576	204	12	2 067	422
Berrien	5	312	220	9	2 885	223
Branch	8	640	428	29	13 135	1 494
Calhoun	24	2 787	1 321	55	18 800	2 792
Cass	6	421	117	15	4 837	775
Clinton	5	535	352	39	10 511	1 292
Eaton	4	277	124	24	8 212	1 136
Genesee	7	627	476	26	9 899	1 102
Hillsdale	35	2 495	1 634	79	23 889	4 240
Huron	5	624	432	10	8 073	428
Isabella	3	133	115	20	7 645	1 041
Jackson	4	426	237	18	5 614	623
Kalamazoo	4	261	211	8	2 822	205
Kent	4	179	82	14	8 980	916
Lapeer	4	389	253	14	6 192	670
Lenawee	6	459	216	27	8 455	1 019
Midland	3	355	58	7	4 258	(D)
Montcalm	3	346	118	34	14 294	1 203
Saginaw	8	729	294	6	1 699	(D)
St. Clair	5	470	303	10	3 817	220
St. Joseph	7	728	465	13	3 986	298
Sanilac	11	1 056	581	54	18 839	2 212
Shiawassee	6	384	193	11	4 324	521
Tuscola	3	227	97	24	7 474	727
Washtenaw	4	402	85	18	3 334	359
All other counties	23	2 948	861	190	69 077	8 746

APPENDIX C.

Statistical Methodology

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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 Non-sampling Error.

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

Item	Percent of total
Farms -----number--	9.4
Land in farms -----acres--	6.9
Value of land and buildings ------\$1,000--	6.9
Market value of agricultural products sold ------\$1,000--	4.1
Harvested cropland -----acres--	6.4
Corn for grain or seed -----acres--	5.8
Wheat for grain -----acres--	6.5
Livestock and poultry inventory:	
Cattle and calves -----number--	5.8
Hogs and pigs -----number--	4.5
Hens and pullets of laying age -----number--	.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 procedure.

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.
2. 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-----	6.2
50-----	3.9
75-----	2.7
100-----	1.9
150-----	1.6
200-----	1.4
300-----	1.1
500-----	.9
750-----	.7
1,000-----	.6
1,500-----	.5
2,000-----	.4

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-----	26.9
50-----	19.1
75-----	15.7
100-----	13.7
150-----	11.3
200-----	9.8
300-----	8.2
500-----	6.6
750-----	5.6
1,000-----	5.0
1,500-----	4.4
2,000-----	4.0

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 non-farm. 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

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

Item	All farms		Farms with sales of \$10,000 or more	
	Total (number)	Relative standard error of estimate (percent)	Total (number)	Relative standard error of estimate (percent)
Farms.....number.....	51 172	(Z)	24 180	.1
Land in farms.....acres.....	10 316 861	.1	8 230 453	.1
Average size of farm.....acres.....	202	.2	340	.3
Value of land and buildings ¹\$1,000.....	10 033 617	.6	7 682 766	.6
Average per farm.....dollars.....	196 065	.6	318 259	.8
Average per acre.....dollars.....	971	1.0	933	1.1
Estimated market value of all machinery and equipment ¹\$1,000.....	2 347 585	.7	1 900 241	.7
Average per farm.....dollars.....	45 954	.8	78 789	1.0
Farms by size:				
1 to 9 acres.....farms.....	2 866	.6	744	1.1
.....acres.....	11 310	.7	2 440	1.3
10 to 49 acres.....farms.....	12 174	.2	1 694	.8
.....acres.....	341 440	.3	48 150	.9
50 to 179 acres.....farms.....	19 779	.2	7 596	.3
.....acres.....	2 037 550	.2	880 010	.4
180 to 499 acres.....farms.....	11 329	.3	9 249	.3
.....acres.....	3 313 518	.3	2 785 803	.3
500 to 999 acres.....farms.....	3 667	.4	3 559	.4
.....acres.....	2 494 662	.4	2 426 246	.4
1,000 to 1,999 acres.....farms.....	1 134	-	1 118	-
.....acres.....	1 477 808	-	1 456 783	-
2,000 acres or more.....farms.....	223	-	220	-
.....acres.....	640 573	-	631 021	-
Total cropland.....farms.....	48 653	.1	23 530	.1
.....acres.....	8 181 320	.1	6 892 225	.1
Harvested cropland.....farms.....	46 017	.1	23 175	.1
.....acres.....	6 172 468	.1	5 457 771	.1
Acres harvested:				
1 to 9 acres.....farms.....	5 544	.4	833	.7
.....acres.....	26 770	.5	3 009	1.0
10 to 49 acres.....farms.....	16 172	.2	2 769	.6
.....acres.....	414 377	.2	80 827	.7
50 to 99 acres.....farms.....	8 682	.3	4 682	.5
.....acres.....	608 503	.4	345 031	.5
100 to 199 acres.....farms.....	6 866	.4	6 183	.4
.....acres.....	958 964	.4	875 790	.4
200 to 499 acres.....farms.....	6 088	.4	6 043	.4
.....acres.....	1 881 195	.4	1 870 455	.4
500 to 999 acres.....farms.....	2 075	.3	2 075	.3
.....acres.....	1 395 779	.3	1 395 779	.3
1,000 acres or more.....farms.....	590	-	590	-
.....acres.....	886 880	-	886 880	-
Cropland used only for pasture or grazing.....farms.....	16 096	.2	7 009	.3
.....acres.....	518 589	.4	310 215	.5
Other cropland.....farms.....	27 660	.1	15 545	.2
.....acres.....	1 490 263	.2	1 124 239	.2
Irrigated land.....farms.....	3 755	.4	2 897	.4
.....acres.....	314 953	.4	308 029	.4
Acres irrigated:				
1 to 9 acres.....farms.....	1 495	.6	828	.7
.....acres.....	4 441	.9	2 536	1.0
10 to 49 acres.....farms.....	938	1.0	768	1.1
.....acres.....	22 448	1.1	18 932	1.2
50 to 99 acres.....farms.....	484	1.3	465	1.4
.....acres.....	33 777	1.4	(D)	(D)
100 to 199 acres.....farms.....	399	1.3	397	1.3
.....acres.....	54 797	1.3	(D)	(D)
200 to 499 acres.....farms.....	329	.8	329	.8
.....acres.....	97 691	.8	97 691	.8
500 to 999 acres.....farms.....	92	.5	92	.5
.....acres.....	62 310	.7	62 310	.7
1,000 acres or more.....farms.....	18	-	18	-
.....acres.....	39 489	-	39 489	-
Market value of agricultural products sold.....\$1,000.....	2 545 078	.1	2 454 599	.1
Average per farm.....dollars.....	49 736	.2	101 514	.2
Value of sales:				
Less than \$2,500.....farms.....	12 670	.2	-	-
.....\$1,000.....	12 162	.3	-	-
\$2,500 to \$4,999.....farms.....	6 774	.4	-	-
.....\$1,000.....	24 414	.4	-	-
\$5,000 to \$9,999.....farms.....	7 548	.4	-	-
.....\$1,000.....	53 904	.4	-	-
\$10,000 to \$24,999.....farms.....	8 460	.3	8 460	.3
.....\$1,000.....	135 085	.3	135 085	.3
\$25,000 to \$49,999.....farms.....	5 002	.5	5 002	.5
.....\$1,000.....	177 359	.5	177 359	.5
\$50,000 to \$99,999.....farms.....	4 322	.5	4 322	.5
.....\$1,000.....	310 133	.5	310 133	.5
\$100,000 or more.....farms.....	6 396	.2	6 396	.2
.....\$1,000.....	1 832 021	.1	1 832 021	.1
Sales by commodity or commodity group:				
Crops, including nursery and greenhouse crops.....farms.....	36 875	.1	19 793	.1
.....\$1,000.....	1 272 802	.1	1 214 834	.1
Grains.....\$1,000.....	578 016	.2	543 794	.2
Corn for grain.....\$1,000.....	284 853	.2	269 871	.2
Wheat.....\$1,000.....	42 448	.3	39 358	.3
Soybeans.....\$1,000.....	172 993	.3	160 825	.3
Sorghum for grain.....\$1,000.....	40	4.7	34	4.8
Barley.....\$1,000.....	2 527	1.2	2 386	1.2
Oats.....\$1,000.....	12 767	.5	10 807	.6
Other grains.....\$1,000.....	62 389	.4	60 514	.5

See footnotes at end of table.

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

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

Item	All farms		Farms with sales of \$10,000 or more	
	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 ..	-	-	-
Hay, silage, and field seeds	\$1,000 ..	53 956	40 478	.6
Vegetables, sweet corn, and melons	\$1,000 ..	136 925	133 613	.3
Fruits, nuts, and berries	\$1,000 ..	163 847	159 029	.4
Nursery and greenhouse crops	\$1,000 ..	215 912	214 180	-
Other crops	\$1,000 ..	124 146	123 741	.3
Livestock, poultry, and their products	farms ..	25 616	13 680	.2
.....	\$1,000 ..	1 272 276	1 239 765	.1
Poultry and poultry products	\$1,000 ..	116 432	115 848	.2
Dairy products	\$1,000 ..	568 249	567 653	.2
Cattle and calves	\$1,000 ..	320 270	300 282	.2
Hogs and pigs	\$1,000 ..	226 148	221 776	.3
Sheep, lambs, and wool	\$1,000 ..	5 632	3 719	2.1
Other livestock and livestock products (see text)	\$1,000 ..	35 546	30 488	.9
Farms by standard industrial classification:				
Cash grains (011)	farms ..	15 745	7 903	.3
.....	acres ..	3 960 728	3 285 018	.3
Field crops, except cash grains (013)	farms ..	5 654	1 499	.8
.....	acres ..	948 433	567 800	.6
Vegetables and melons (016)	farms ..	1 758	991	.9
.....	acres ..	247 069	213 710	.7
Fruits and tree nuts (017)	farms ..	3 307	1 724	.6
.....	acres ..	383 998	312 399	.5
Horticultural specialties (018)	farms ..	1 311	900	-
.....	acres ..	84 998	72 980	-
General farms, primarily crop (019)	farms ..	2 184	637	1.3
.....	acres ..	399 316	280 254	1.0
Livestock, except dairy, poultry, and animal specialties (021)	farms ..	12 124	4 516	.5
.....	acres ..	1 945 455	1 293 877	.4
Dairy farms (024)	farms ..	5 199	5 083	.4
.....	acres ..	1 963 269	1 955 461	.3
Poultry and eggs (025)	farms ..	455	204	1.8
.....	acres ..	53 672	43 339	1.6
Animal specialties (027)	farms ..	2 931	410	1.8
.....	acres ..	139 629	36 232	1.8
General farms, primarily livestock and animal specialties (029)	farms ..	504	313	1.8
.....	acres ..	190 294	169 383	1.2
Farms by type of organization:				
Individual or family (sole proprietorship)	farms ..	45 166	19 824	.1
.....	acres ..	7 848 652	5 918 327	.2
Partnership	farms ..	4 662	3 356	.5
.....	acres ..	1 851 919	1 735 591	.4
Corporation	farms ..	1 167	923	.7
.....	acres ..	557 706	530 748	.5
Other—cooperative, estate or trust, institutional, etc.	farms ..	177	77	3.5
.....	acres ..	58 584	45 787	1.8
Tenure of operator:				
Full owners	farms ..	31 186	9 853	.3
.....	acres ..	3 461 112	1 900 101	.3
Part owners	farms ..	16 903	12 606	.2
.....	acres ..	6 298 444	5 853 682	.2
Tenants	farms ..	3 083	1 721	.9
.....	acres ..	557 305	476 670	.8
Operators by principal occupation:				
Farming	farms ..	26 112	17 769	.1
.....	acres ..	7 810 930	7 002 681	.1
Other	farms ..	25 060	6 411	.4
.....	acres ..	2 505 931	1 227 772	.5
Operators by sex:				
Male	farms ..	48 458	23 401	.1
.....	acres ..	10 026 658	8 057 422	.1
Female	farms ..	2 714	779	1.2
.....	acres ..	290 203	173 031	1.4
Average age of operator	years ..	50.9	49.6	.2
Cropland under federal acreage reduction programs:				
Annual commodity acreage adjustment programs	farms ..	16 012	12 105	.2
.....	acres ..	751 325	701 409	.2
Conservation reserve program	farms ..	851	428	1.5
.....	acres ..	38 874	23 015	1.5
Government payments:				
Amount received in cash	\$1,000 ..	110 533	104 237	.3
Value of certificates received	\$1,000 ..	112 937	105 098	.2
Net cash return from agricultural sales ¹ :				
Net cash return from agricultural sales for the farm unit (see text)	farms ..	51 175	24 140	.1
.....	\$1,000 ..	319 953	399 363	1.3
Average per farm	dollars ..	6 252	16 544	1.8
Farms with net gains ²	number ..	21 623	16 210	.2
.....	\$1,000 ..	507 956	498 843	.7
Farms with net losses	number ..	29 552	7 930	.4
.....	\$1,000 ..	188 003	99 480	1.8
Total farm production expenses ¹	farms ..	51 175	24 140	.1
.....	\$1,000 ..	2 211 823	2 042 052	.3
Livestock and poultry purchased	farms ..	15 088	8 461	1.7
.....	\$1,000 ..	190 386	180 306	1.0
Feed for livestock and poultry	farms ..	23 220	12 579	1.1
.....	\$1,000 ..	273 192	263 136	.7
Seeds, bulbs, plants, and trees	farms ..	35 507	21 170	.5
.....	\$1,000 ..	111 895	105 482	.6
Commercial fertilizer	farms ..	37 298	21 591	.5
.....	\$1,000 ..	194 526	182 585	.7

See footnotes at end of table.

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

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

Item	All farms		Farms with sales of \$10,000 or more	
	Total (number)	Relative standard error of estimate (percent)	Total (number)	Relative standard error of estimate (percent)
Total farm production expenses—Con.				
Agricultural chemicals..... farms..	35 505	.6	21 167	.5
..... \$1,000..	119 993	.8	112 523	.8
Petroleum products..... farms..	48 558	.2	23 778	.2
..... \$1,000..	120 621	.5	107 628	.6
Electricity..... farms..	38 590	.6	21 456	.5
..... \$1,000..	47 789	.6	42 935	.6
Hired farm labor..... farms..	18 134	1.2	12 914	1.2
..... \$1,000..	242 445	.7	239 077	.7
Contract labor..... farms..	4 652	2.8	2 974	3.2
..... \$1,000..	27 733	2.1	26 327	2.1
Repair and maintenance..... farms..	43 440	.4	22 485	.4
..... \$1,000..	152 652	.6	133 994	.6
Customwork, machine hire, and rental of machinery and equipment..... farms..	17 732	1.3	10 837	1.5
..... \$1,000..	34 043	1.4	30 636	1.5
Interest..... farms..	25 197	1.0	16 357	1.0
..... \$1,000..	197 966	.8	179 736	.8
Cash rent..... farms..	15 070	1.3	11 926	1.3
..... \$1,000..	101 910	1.3	98 728	1.3
Property taxes..... farms..	48 191	.3	22 580	.4
..... \$1,000..	157 280	.6	114 879	.7
All other farm production expenses..... farms..	46 587	.3	24 126	.1
..... \$1,000..	239 391	.6	224 079	.6
Livestock and poultry:				
Cattle and calves inventory..... farms..	19 436	.2	10 722	.2
..... number..	1 163 352	.2	1 043 744	.2
Beef cows..... farms..	8 163	.3	2 692	.6
..... number..	110 156	.6	64 299	.9
Milk cows..... farms..	6 499	.4	5 759	.4
..... number..	344 550	.3	341 758	.3
Cattle and calves sold..... farms..	18 164	.2	10 741	.2
..... number..	653 806	.2	602 829	.2
Hogs and pigs inventory..... farms..	5 577	.4	3 527	.5
..... number..	1 227 069	.4	1 184 269	.4
Hogs and pigs sold..... farms..	5 603	.4	3 677	.5
..... number..	2 215 872	.4	2 160 538	.4
Sheep and lambs inventory..... farms..	2 057	.7	720	1.3
..... number..	101 330	1.3	60 443	2.0
Sheep and lambs sold..... farms..	1 979	.8	709	1.3
..... number..	77 152	1.4	49 391	2.0
Hens and pullets of laying age inventory..... farms..	3 490	.6	1 052	1.0
..... number..	7 152 993	.3	7 079 146	.3
Broilers and other meat-type chickens sold..... farms..	495	1.6	178	2.8
..... number..	702 431	7.3	664 443	7.6
Horses and ponies inventory..... farms..	9 065	.3	2 314	.7
..... number..	56 836	.6	15 138	1.3
Selected crops harvested:				
Corn for grain or seed..... farms..	25 140	.1	16 442	.1
..... acres..	1 982 401	.2	1 827 118	.2
..... bushels..	189 779 819	.2	178 509 320	.2
Wheat for grain..... farms..	10 327	.3	7 688	.3
..... acres..	356 073	.3	320 410	.3
..... bushels..	16 465 394	.3	15 130 595	.3
Soybeans for beans..... farms..	12 734	.2	8 667	.2
..... acres..	1 023 599	.3	924 718	.3
..... bushels..	36 267 622	.3	33 517 222	.3
Dry edible beans, excluding dry limas..... farms..	4 098	.4	3 395	.4
..... acres..	383 687	.4	368 232	.4
..... cwt..	4 931 689	.5	4 774 078	.5
Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text)..... farms..	25 983	.1	12 331	.2
..... acres..	1 436 630	.2	1 103 207	.2
..... tons, dry..	3 323 175	.2	2 778 521	.3
Vegetables harvested for sale (see text)..... farms..	3 267	.5	2 097	.6
..... acres..	139 145	.4	133 359	.4
Land in orchards..... farms..	3 791	.5	1 922	.6
..... acres..	161 567	.5	145 743	.5

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

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

Item	All farms		Farms with sales of \$10,000 or more	
	Percent change	Standard error of estimate (percent)	Percent change	Standard error of estimate (percent)
Farms..... number.....	-12.8	.1	-15.0	.2
Land in farms..... acres.....	-5.7	.1	-5.6	.1
Value of land and buildings ¹ : Average per farm..... dollars.....	-14.1	.8	-15.9	.9
Total cropland..... farms.....	-13.6	.1	-15.8	.2
Harvested cropland..... acres.....	-3.3	.1	-3.6	.1
..... farms.....	-14.4	.1	-16.1	.2
..... acres.....	-14.9	.1	-15.1	.1
Irrigated land..... farms.....	18.1	.5	18.0	.5
..... acres.....	10.1	.4	9.5	.4
Market value of agricultural products sold..... farms.....	-12.8	.1	-15.0	.2
..... \$1,000.....	-1.7	.1	-1.0	.1
Crops, including nursery and greenhouse crops..... farms.....	-16.3	.1	-18.8	.2
..... \$1,000.....	-6.7	.1	-6.3	.1
Livestock, poultry, and their products..... farms.....	-16.7	.2	-15.7	.2
..... \$1,000.....	4.0	.2	4.7	.2
Poultry and poultry products..... farms.....	-33.5	.5	-33.4	.8
..... \$1,000.....	14.9	.3	15.3	.3
Selected farm production expenses ¹ : Livestock and poultry purchased..... farms.....	-10.5	1.9	.3	2.6
..... \$1,000.....	12.0	1.9	12.4	2.0
Feed for livestock and poultry..... farms.....	-14.6	1.2	-10.1	1.6
..... \$1,000.....	7.1	1.3	9.1	1.4
Seeds, bulbs, plants, and trees..... farms.....	-15.1	.7	-16.2	.7
..... \$1,000.....	6.4	1.0	7.2	1.0
Commercial fertilizer ² farms.....	-13.3	.7	-14.7	.7
..... \$1,000.....	-19.6	.8	-20.0	.8
Agricultural chemicals ² farms.....	-5.3	.9	-12.2	.8
..... \$1,000.....	5.1	1.2	4.1	1.2
Hired farm labor..... farms.....	-15.9	1.4	-13.0	1.5
..... \$1,000.....	30.1	1.4	33.2	1.4
Interest ³ farms.....	-7.3	1.3	-12.4	1.2
..... \$1,000.....	-27.7	.9	-29.7	.9
Livestock and poultry inventory: Cattle and calves..... farms.....	-24.2	.2	-19.3	.2
..... number.....	-13.6	.2	-10.6	.2
Hogs and pigs..... farms.....	-25.0	.3	-15.4	.5
..... number.....	15.3	.5	17.5	.5
Hens and pullets of laying age..... farms.....	-38.9	.3	-39.3	.6
..... number.....	8.3	.3	9.5	.3
Selected crops harvested: Corn for grain or seed..... farms.....	-18.4	.1	-18.8	.2
..... acres.....	-22.8	.1	-23.4	.1
Sorghum for grain or seed..... farms.....	3.3	5.3	-8.0	5.3
..... acres.....	-23.0	3.0	-27.4	3.0
Wheat for grain..... farms.....	-33.0	.2	-31.0	.2
..... acres.....	-30.7	.2	-29.4	.2
Soybeans for beans..... farms.....	-14.6	.3	-13.1	.3
..... acres.....	-8.8	.3	-7.7	.3
Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text)..... farms.....	-8.9	.2	-12.5	.2
..... acres.....	5.2	.2	6.4	.3
Vegetables harvested for sale (see text)..... farms.....	-10.1	.5	-2	.6
..... acres.....	10.2	.4	12.2	.5
Land in orchards..... farms.....	-11.4	.4	-8.2	.6
..... acres.....	-2.2	.5	-1.5	.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

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

Geographic area	Farms		Land in farms		Average value of land and buildings per farm ¹		Estimated market value of all machinery and equipment ¹		Harvested cropland		Irrigated land	
	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)
Alcona	229	.6	43 436	2.1	90 751	4.4	7 268	28.1	14 390	2.2	(D)	(D)
Alger	63	1.4	16 140	3.3	104 095	(Z)	2 223	(Z)	6 209	6.2	17	14.0
Allegan	1 634	.2	253 646	.5	184 433	3.8	82 030	3.5	147 135	.5	9 965	2.7
Alpena	424	.5	82 201	1.3	131 278	3.6	15 610	7.1	34 589	1.7	131	10.4
Antrim	248	.5	55 114	1.1	182 698	4.7	12 157	7.6	24 329	1.1	3 997	1.1
Arenac	332	.5	89 470	1.1	203 569	5.7	16 225	4.7	52 407	1.5	1 143	1.4
Baraga	57	1.4	13 902	2.9	95 070	(Z)	1 602	(Z)	4 360	3.5	(D)	(D)
Barry	908	.3	168 493	.8	167 471	3.3	32 234	4.3	83 610	1.0	2 716	1.5
Bay	922	.3	177 185	.6	233 235	6.9	54 405	6.0	136 207	.6	6 630	1.4
Benzie	149	.5	23 966	1.7	133 966	4.0	3 798	3.3	7 778	1.9	602	6.8
Berrien	1 479	.2	179 660	.7	148 279	4.8	57 607	3.3	114 106	.7	9 208	1.2
Branch	1 034	.4	227 375	.8	171 692	3.7	45 186	4.8	127 157	1.0	22 965	2.1
Calhoun	1 166	.3	253 383	.8	151 013	3.9	44 221	4.1	132 224	.9	8 453	2.5
Cass	839	.3	194 464	.7	225 368	5.2	41 354	3.3	108 530	.8	12 406	2.4
Charlevoix	232	.6	41 812	1.9	130 552	3.5	6 353	16.2	15 537	2.6	63	22.8
Cheboygan	171	.8	42 363	2.4	140 436	4.9	6 929	8.9	15 973	3.0	31	19.7
Chippewa	338	.4	89 168	1.0	92 444	3.9	10 813	13.8	41 351	1.3	51	19.6
Clare	298	.6	67 824	1.7	154 661	6.4	7 565	12.1	28 462	1.4	(D)	(D)
Clinton	1 333	.3	256 811	.5	183 236	3.8	60 277	4.0	175 630	.6	3 615	.6
Crawford	20	3.2	1 450	5.6	90 400	(Z)	(D)	(D)	(D)	(D)	3	18.3
Delta	271	.6	73 981	1.4	116 852	5.5	10 671	11.4	25 500	1.8	335	10.0
Dickinson	109	.9	28 967	2.7	153 064	5.4	6 921	10.7	10 132	3.8	542	12.1
Eaton	1 219	.3	233 517	.8	161 762	3.4	45 889	4.3	139 369	.9	1 286	4.6
Emmet	211	.5	44 850	1.3	156 156	6.7	6 782	10.0	16 124	1.6	349	3.0
Genesee	851	.3	145 269	.7	198 105	3.7	34 158	7.8	96 319	.7	1 713	.6
Gladwin	411	.6	68 285	1.6	112 221	3.7	10 484	9.3	30 587	2.1	17	31.2
Gogebic	58	.9	5 936	2.1	(D)	(D)	1 234	(Z)	2 233	3.5	3	14.9
Grand Traverse	447	.4	69 954	1.1	197 706	4.1	17 563	7.1	36 179	1.2	2 584	5.1
Gratiot	1 011	.4	282 467	.7	248 593	3.9	64 287	4.4	205 688	.7	1 648	6.3
Hillsdale	1 142	.3	242 353	.7	183 752	4.6	45 289	4.3	143 798	.8	4 316	.4
Houghton	147	.5	31 751	1.6	104 411	5.0	3 223	5.8	10 017	2.3	37	8.7
Huron	1 390	.3	424 427	.6	314 577	6.5	111 006	3.6	322 799	.7	1 585	7.5
Ingham	960	.3	207 726	.7	243 025	4.0	47 672	4.8	130 575	.7	1 844	2.7
Ionia	1 089	.3	253 500	.6	196 633	3.5	57 921	3.2	156 360	.6	3 792	3.2
Iosco	215	.7	47 988	1.2	136 259	3.8	6 968	8.3	17 051	1.6	(D)	(D)
Iron	95	.9	26 714	1.7	120 916	(Z)	2 840	(Z)	7 251	1.6	340	-
Isabella	912	.4	194 928	.9	157 111	7.4	34 981	3.1	122 657	1.0	1 443	6.3
Jackson	1 103	.3	218 375	.8	174 618	4.3	46 587	4.4	112 986	.9	4 720	3.9
Kalamazoo	842	.3	168 310	.7	234 532	3.4	35 347	3.5	94 047	.9	15 162	1.8
Kalkaska	89	1.5	16 318	3.1	127 281	(Z)	2 863	(Z)	5 801	4.3	1 149	5.8
Kent	1 368	.2	203 842	.6	202 820	4.5	58 717	3.6	121 233	.6	7 445	.9
Keweenaw	2	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	-	-
Lake	111	1.4	18 555	2.6	117 613	5.1	2 460	10.5	6 030	4.3	-	-
Lapeer	1 228	.3	218 779	.8	212 324	8.1	55 583	3.7	126 110	.8	3 869	3.1
Leelanau	394	.4	65 482	.8	274 972	5.3	23 260	10.2	27 130	1.0	2 292	3.5
Lenawee	1 387	.2	344 801	.5	297 357	7.0	76 501	2.7	254 847	.5	3 131	1.6
Livingston	789	.3	128 511	.7	221 727	5.2	28 611	5.3	71 499	.9	1 768	1.7
Luce	34	2.3	10 637	4.5	138 735	(Z)	1 037	(Z)	3 115	6.4	(D)	(D)
Mackinac	80	1.2	24 583	2.1	119 413	(Z)	2 343	(Z)	9 248	2.4	(D)	(D)
Macomb	667	.4	79 683	1.2	232 754	4.3	28 463	7.4	54 241	1.6	2 054	1.8
Manistee	280	.5	46 747	1.1	133 804	3.4	9 167	10.1	18 203	1.3	3 676	1.8
Marquette	101	.8	24 484	2.3	114 109	4.4	3 210	11.3	6 026	3.3	5	21.0
Mason	426	.5	76 193	1.1	135 915	5.2	16 816	6.9	38 968	1.2	2 266	2.9
Mecosta	639	.4	127 078	.9	114 324	3.3	21 045	10.9	59 270	1.1	4 046	1.8
Menominee	374	.4	118 338	.9	142 543	4.9	16 583	7.6	50 188	1.0	(D)	(D)
Midland	459	.4	94 465	1.2	183 545	2.4	20 323	8.5	59 020	1.3	603	2.0
Missaukee	304	.5	87 314	.8	181 482	3.2	19 206	3.7	49 400	.9	2 018	3.0
Monroe	1 258	.3	220 274	.7	231 708	4.5	57 134	4.1	177 632	.7	2 181	1.6
Montcalm	980	.3	238 387	.8	174 925	4.0	43 849	4.0	133 416	.9	28 987	.8
Montmorency	108	1.2	24 040	3.0	140 841	5.0	3 720	7.9	9 482	4.9	(D)	(D)
Muskegon	460	.4	82 224	.9	185 757	3.9	23 340	9.5	44 267	1.0	6 094	1.1
Newaygo	687	.3	115 937	.9	142 818	5.5	35 694	9.6	60 726	1.0	4 767	1.9
Oakland	596	.4	60 358	1.8	211 653	4.8	22 346	12.8	32 533	2.5	1 002	3.0
Oceana	686	.4	133 115	.9	199 690	4.7	31 515	4.7	61 720	.9	3 927	2.5
Ogemaw	288	.7	78 200	1.1	193 406	4.1	15 360	10.3	39 659	1.6	44	11.5
Ontonagon	117	1.0	36 507	1.9	111 590	3.5	2 704	6.4	11 950	2.8	(D)	(D)
Osceola	503	.4	111 662	1.0	156 950	16.1	18 884	7.1	51 682	1.3	739	.9
Oscoda	84	.8	17 167	2.2	145 048	(Z)	2 081	(Z)	6 250	3.5	(D)	(D)
Otsego	133	1.1	39 788	2.0	163 812	4.3	4 715	6.5	12 121	2.4	580	4.7
Ottawa	1 471	.2	177 894	.6	207 266	4.4	76 939	3.1	112 721	.6	10 537	1.4
Presque Isle	293	.6	81 681	1.5	138 939	4.6	14 529	6.8	37 031	1.7	1 112	4.7
Roscommon	31	2.5	4 159	4.2	110 548	(Z)	480	(Z)	1 396	3.3	(D)	(D)
Saginaw	1 424	.2	308 269	.5	230 051	3.9	70 332	4.1	246 217	.5	2 042	2.8
St. Clair	1 092	.3	177 068	.9	174 973	4.8	43 288	4.8	107 002	1.0	343	8.2
St. Joseph	880	.4	213 857	.7	248 265	5.2	49 071	4.7	136 100	.8	58 989	1.2
Sanilac	1 559	.3	431 199	.5	213 511	4.2	94 820	2.8	303 733	.6	1 997	3.3
Schoolcraft	52	2.1	(D)	(D)	109 731	(Z)	1 430	(Z)	5 499	6.5	(D)	(D)
Shiawassee	1 180	.3	240 357	.9	177 809	5.0	51 033	5.1	165 476	.5	1 241	12.9
Tuscola	1 207	.3	328 705	.5	278 930	3.6	72 360	3.0	243 649	.5	2 781	1.9
Van Buren	1 278	.2	190 251	.6	164 920	3.7	56 920	2.7	103 657	.8	23 763	.7
Washtenaw	1 222	.3	204 272	.8	253 187	4.3	56 582	6.3	131 246	.9	4 181	4.0
Wayne	334	.6	22 196	2.1	211 171	5.2	9 932	7.3	14 654	2.8	734	2.5
Wexford	178	.6	31 103	1.6	97 118	3.0	4 303	11.6	12 263	2.0	106	3.8

See footnotes at end of table.

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

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

Geographic area	Cattle and calves inventory		Hogs and pigs inventory		Corn for grain or seed		Wheat for grain		Soybeans for beans		Market value of agricultural products sold	
	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)	Relative standard error of estimate (percent)
Alcona	5 559	4.3	(D)	(D)	1 537	2.6	468	5.1	(D)	(D)	3 860	2.5
Alger	2 119	4.9	(D)	(D)	1 138	29.7	—	—	—	—	1 533	6.6
Allegan	42 989	.9	106 994	1.0	69 009	.7	6 329	1.6	5 452	2.2	120 484	.3
Alpena	10 740	2.7	702	22.4	3 373	4.0	803	6.2	487	13.4	9 935	2.4
Antrim	6 022	2.0	2 570	13.5	4 439	2.9	1 031	2.7	—	—	11 491	1.1
Arenac	7 621	3.3	5 661	6.1	11 538	1.7	3 559	3.2	4 476	3.0	16 412	1.2
Baraga	1 355	2.7	(D)	(D)	53	.6	—	—	—	—	785	2.6
Barry	24 470	1.3	18 377	3.8	31 050	1.3	7 953	1.8	9 086	2.6	30 445	.9
Bay	4 683	1.7	1 843	11.4	35 358	.8	4 179	1.9	20 318	1.5	43 769	.5
Benzie	1 562	5.7	954	6.6	705	5.7	25	25.6	—	—	3 833	1.4
Berrien	7 424	2.2	21 656	2.6	38 166	1.1	5 524	1.9	26 110	1.3	63 420	.5
Branch	20 883	1.3	56 792	2.3	68 339	1.1	7 210	2.1	33 447	1.4	49 257	.6
Calhoun	25 732	1.8	35 064	1.9	64 654	1.1	13 774	1.4	20 783	1.9	42 304	.7
Cass	10 140	2.4	168 766	.6	58 818	1.0	5 783	1.8	20 888	1.6	59 320	.4
Charlevoix	4 513	2.6	1 045	17.7	2 563	3.1	67	9.7	—	—	4 220	1.6
Cheboygan	6 404	3.6	598	10.8	724	10.2	236	14.6	—	—	4 568	2.6
Chippewa	8 462	2.4	446	10.6	161	13.7	178	11.1	—	—	6 725	1.9
Clare	10 628	2.3	7 479	5.1	3 639	2.6	845	4.4	81	16.5	8 683	1.8
Clinton	39 306	1.0	31 191	1.5	50 452	.7	15 533	1.2	51 849	1.0	62 190	.6
Crawford	(D)	(D)	(D)	(D)	(D)	(D)	—	—	—	—	(D)	(D)
Delta	8 309	2.0	1 846	7.3	1 159	3.2	—	—	(D)	(D)	8 330	1.6
Dickinson	2 817	5.4	389	25.2	443	12.9	—	—	—	—	4 426	3.6
Eaton	19 266	1.7	25 265	5.0	50 111	1.0	19 606	1.3	26 357	1.9	38 658	.8
Emmet	6 062	1.6	310	9.9	2 186	2.4	129	7.6	—	—	4 655	1.9
Genesee	14 423	.8	14 203	2.2	36 725	1.0	5 450	1.5	26 676	1.3	29 481	.4
Gladwin	8 922	2.3	2 709	7.5	6 303	3.5	1 519	4.3	1 433	13.6	6 929	2.3
Gogebic	554	5.2	(D)	(D)	—	—	—	—	—	—	936	2.6
Grand Traverse	4 592	2.5	3 996	7.1	6 404	2.6	1 446	3.4	—	—	12 967	1.2
Graziot	29 895	1.1	21 543	2.6	61 687	.9	9 273	1.8	54 987	1.4	66 273	.5
Hillsdale	26 296	1.5	43 153	2.3	69 648	1.0	8 098	1.5	34 700	1.5	53 208	.6
Houghton	2 229	3.7	24	9.8	309	12.9	—	—	—	—	2 252	3.7
Huron	74 370	.8	44 207	2.3	95 978	1.0	23 356	1.4	5 097	3.4	145 602	.4
Ingham	25 973	1.3	27 422	2.5	55 236	1.1	13 538	1.2	21 620	1.4	48 181	.6
Ionia	38 642	.9	35 059	1.8	54 841	.8	16 262	1.1	22 178	1.2	69 853	.5
Iosco	8 937	1.5	1 423	3.9	2 641	2.1	385	5.7	135	—	6 596	1.1
Iron	2 097	2.2	127	27.6	—	—	(D)	(D)	—	—	1 633	1.1
Isabella	31 312	1.5	18 774	5.2	33 545	1.6	8 281	2.9	11 526	3.6	39 467	.9
Jackson	28 835	1.2	58 450	1.9	55 799	1.0	9 052	1.6	5 209	3.0	45 984	.6
Kalamazoo	13 178	1.4	25 702	2.7	43 636	1.0	10 528	1.6	20 673	1.7	64 511	.3
Kalkaska	1 052	10.3	1 166	29.7	1 343	6.7	511	3.0	(D)	(D)	2 306	5.2
Kent	34 672	.9	17 065	3.1	39 847	1.1	5 565	1.6	2 520	2.4	82 983	.4
Keweenaw	(D)	(D)	—	—	—	—	—	—	—	—	—	—
Lake	1 909	6.2	329	15.1	256	6.7	(D)	(D)	—	—	1 283	6.8
Lapeer	30 285	1.6	9 591	5.7	46 631	1.1	4 966	1.9	7 665	2.9	55 582	.7
Leelanau	3 862	2.1	1 112	12.1	3 121	2.7	207	1.7	(D)	(D)	15 151	1.0
Lenawee	29 033	1.2	37 611	1.8	92 890	.6	19 552	1.0	106 999	.7	78 772	.4
Livingston	18 903	1.2	5 553	3.7	28 864	1.1	5 449	1.6	4 428	2.6	30 418	.7
Luce	1 365	6.1	(D)	(D)	(D)	(D)	(D)	(D)	—	—	861	3.8
Mackinac	3 597	3.1	(D)	(D)	(D)	(D)	154	6.1	—	—	2 653	2.4
Macomb	5 508	2.7	3 885	4.1	15 496	1.9	1 926	2.4	17 103	3.0	30 471	.7
Manistee	2 999	3.5	670	8.0	1 496	2.8	460	5.8	—	—	9 370	1.3
Marquette	1 569	3.1	(D)	(D)	(D)	(D)	—	—	—	—	1 783	2.6
Mason	7 897	2.2	4 196	8.7	7 959	2.0	1 550	4.9	206	14.2	15 715	1.1
Mecosta	17 567	1.4	8 959	3.9	11 825	1.6	1 867	5.3	125	28.3	19 039	1.2
Menominee	18 636	1.1	875	2.4	6 524	1.6	(D)	(D)	(D)	(D)	17 869	1.0
Midland	6 910	1.6	5 777	5.7	19 602	1.4	2 168	3.3	15 769	2.5	15 328	1.2
Missaukee	21 621	1.0	3 242	2.7	4 236	2.3	361	8.2	—	—	22 751	.8
Monroe	8 842	1.6	14 842	2.1	56 040	.9	8 510	1.8	95 473	.9	58 894	.4
Montcalm	22 355	1.7	10 716	5.8	41 000	1.2	12 634	2.0	6 639	3.9	48 704	.7
Montmorency	2 607	4.5	387	15.4	1 561	15.5	441	16.0	—	—	2 544	4.1
Muskegon	11 658	1.5	6 682	6.4	15 968	1.9	805	3.3	1 129	1.9	26 506	.6
Newaygo	19 977	1.1	6 696	8.8	17 133	1.4	1 039	5.8	(D)	(D)	31 697	.7
Oakland	5 119	4.1	1 870	23.8	14 268	3.4	1 707	4.4	1 277	24.0	22 154	.9
Oceana	12 490	1.6	10 435	4.1	8 599	2.0	1 003	2.4	(D)	(D)	35 442	.7
Ogemaw	14 074	1.9	1 362	16.4	6 848	2.3	1 090	6.1	(D)	(D)	12 011	1.8
Ontonagon	3 255	3.6	(D)	(D)	(D)	(D)	(D)	(D)	—	—	2 093	4.0
Osceola	18 264	1.6	2 904	4.5	4 509	3.1	458	5.8	260	37.2	15 922	1.3
Oscoda	2 740	3.5	278	14.0	290	11.0	—	—	—	—	2 599	3.6
Otsego	3 183	3.6	215	21.0	814	5.7	248	7.5	—	—	2 935	2.7
Ottawa	40 843	.9	90 617	1.5	42 328	1.1	2 011	2.0	1 148	6.9	182 959	.2
Presque Isle	9 669	2.0	(D)	(D)	2 839	3.4	1 194	4.6	—	—	11 562	1.5
Roscommon	326	7.4	(D)	(D)	(D)	(D)	—	—	—	—	189	4.3
Saginaw	14 622	1.2	7 252	5.5	61 461	.8	12 071	1.0	110 340	.7	63 362	.4
St. Clair	16 422	1.5	4 890	7.5	29 812	1.6	2 962	3.0	33 349	1.8	36 495	.8
St. Joseph	14 045	1.8	48 628	2.2	79 798	1.0	5 841	2.4	30 299	1.5	48 042	.7
Sanilac	65 275	.8	17 321	6.9	85 554	.8	13 372	1.6	38 961	1.9	97 533	.5
Schoolcraft	1 895	8.3	590	18.1	100	23.7	(D)	(D)	—	—	936	7.5
Shiawassee	20 691	1.7	14 626	4.8	41 765	1.2	10 916	1.8	68 441	1.5	38 425	.9
Tuscola	19 906	1.5	17 979	2.5	75 513	.6	16 309	.9	22 526	1.6	75 112	.4
Van Buren	10 700	1.5	56 167	1.2	35 282	1.0	4 209	1.5	9 684	4.0	69 624	.4
Washtenaw	26 113	1.4	24 052	3.2	53 481	1.2	13 052	1.4	18 349	2.4	47 697	.7
Wayne	353	8.6	614	4.6	4 127	3.8	422	13.5	6 610	4.9	16 798	.6
Wexford	3 152	3.0	544	5.4	1 733	6.5	347	10.8	—	—	3 156	2.4

See footnotes at end of table.

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

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

Geographic area	Selected farm production expenses ¹									
	Livestock and poultry purchased		Commercial fertilizer		Hired farm labor		Petroleum products		Electricity for the farm business	
	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)
Alcona	543	37.8	120	19.0	138	10.0	198	12.4	89	18.2
Alger	123	(Z)	45	(Z)	263	(Z)	74	(Z)	57	(Z)
Allegan	11 437	3.4	5 487	3.9	15 971	1.6	4 315	2.1	2 618	2.5
Alpena	679	48.4	684	12.3	825	12.5	624	8.3	248	12.4
Antrim	667	7.5	791	11.9	1 183	10.4	450	8.1	203	7.5
Arenac	710	14.9	1 765	9.2	1 168	3.9	910	5.6	325	8.2
Baraga	70	(Z)	30	(Z)	42	-	58	(Z)	33	(Z)
Barry	2 163	16.1	2 319	5.0	2 030	6.8	1 511	3.5	678	4.1
Bay	387	16.2	6 628	3.1	2 778	3.9	2 810	4.5	551	5.9
Benzie	241	26.3	197	5.7	632	7.0	236	4.8	77	9.4
Berrien	1 818	10.9	4 016	5.4	12 181	3.5	3 045	2.6	1 062	3.0
Branch	5 300	1.9	3 850	3.7	3 198	1.1	2 259	3.0	843	3.8
Calhoun	4 122	7.2	3 643	4.5	3 565	3.5	2 371	3.4	837	4.4
Cass	3 823	8.7	3 402	4.6	4 767	3.9	2 286	3.4	907	2.9
Charlevoix	261	32.3	212	13.8	216	4.6	213	9.7	101	14.3
Cheboygan	172	5.9	270	10.2	395	2.7	243	5.3	113	7.9
Chippewa	483	22.7	149	14.6	336	12.0	290	9.9	164	17.2
Clare	1 004	38.3	437	19.5	424	6.9	407	12.2	237	9.8
Clinton	2 725	10.7	5 067	3.4	4 565	3.1	2 909	3.5	1 378	3.8
Crawford	(D)	(D)	4	-	(D)	(D)	(D)	(D)	(D)	(D)
Delta	225	27.0	528	16.1	627	9.3	561	15.9	247	8.3
Dickinson	59	17.4	280	10.8	542	6.0	223	8.0	102	9.8
Eaton	2 475	13.9	3 992	3.5	2 527	12.6	2 281	3.0	648	5.0
Emmet	233	24.4	278	11.2	314	16.9	248	14.5	111	15.9
Genesee	4 700	2.4	2 949	4.1	2 160	5.4	1 534	3.1	533	5.0
Gladwin	489	17.8	601	9.8	286	10.3	429	9.6	132	9.3
Gogebic	16	(Z)	11	-	110	-	40	-	16	(Z)
Grand Traverse	655	20.7	856	13.3	2 249	11.1	764	5.5	271	6.2
Gratiot	6 070	1.9	7 541	4.0	4 109	4.2	3 305	2.7	870	3.3
Hillsdale	6 999	5.6	4 893	7.6	3 132	5.3	2 399	4.2	960	4.4
Houghton	62	24.0	118	9.3	180	15.0	147	7.8	49	7.1
Huron	27 475	1.3	14 206	2.7	7 253	1.9	5 890	3.1	2 018	2.9
Ingham	2 940	6.4	4 238	4.8	4 422	3.4	2 485	3.9	1 101	5.7
Ionia	3 963	10.6	5 106	2.7	6 217	5.5	2 642	2.5	1 485	2.6
Iosco	(D)	(D)	310	20.2	290	6.2	279	15.7	140	10.7
Iron	55	(Z)	136	(Z)	239	-	112	(Z)	36	(Z)
Isabella	3 335	19.3	3 538	8.1	2 278	7.2	2 027	4.1	808	3.6
Jackson	6 057	4.8	2 906	4.3	3 787	4.6	1 916	3.3	951	2.9
Kalamazoo	3 761	4.4	2 808	3.8	8 224	.7	3 032	1.8	1 285	2.6
Kalkaska	55	(Z)	245	(Z)	192	(Z)	162	(Z)	69	(Z)
Kent	3 129	16.1	3 911	5.3	13 477	2.3	3 949	2.4	1 560	2.3
Keweenaw	-	-	-	-	-	-	(D)	(D)	(D)	(D)
Lake	109	30.4	54	17.8	55	19.9	91	10.1	45	18.1
Lapeer	4 199	3.4	4 303	4.5	5 858	2.7	2 821	1.9	1 428	3.5
Leelanau	904	20.6	1 043	11.4	2 566	10.5	868	11.0	266	7.4
Lenawee	7 564	5.3	8 308	1.9	4 199	1.1	3 659	2.1	1 077	3.3
Livingston	2 113	7.5	2 258	7.1	2 883	13.4	1 553	10.7	752	9.2
Luce	186	(Z)	35	(Z)	40	(Z)	80	(Z)	23	(Z)
Mackinac	127	(Z)	80	(Z)	207	(Z)	118	(Z)	72	(Z)
Macomb	516	26.1	1 721	6.4	4 086	4.1	2 300	4.0	612	6.6
Manistee	125	20.8	452	5.9	1 566	3.5	388	6.4	197	4.1
Marquette	50	23.2	84	8.9	120	12.7	135	9.7	57	9.2
Mason	854	27.4	1 014	10.9	1 671	12.8	700	7.5	273	7.1
Mecosta	888	21.8	1 030	7.4	1 011	9.6	868	4.7	432	6.8
Menominee	659	18.7	924	5.3	1 128	4.3	678	5.0	463	6.2
Midland	2 063	2.8	1 708	7.1	662	2.4	791	6.3	191	9.6
Missaukee	1 290	9.0	1 052	3.7	1 528	1.5	760	4.6	581	4.2
Monroe	5 010	5.9	5 711	4.3	6 411	9.0	3 266	4.7	778	3.4
Montcalm	1 585	7.8	4 453	3.9	5 036	3.0	2 450	3.5	1 130	3.7
Montmorency	179	33.9	181	11.4	170	13.3	150	6.0	66	13.4
Muskegon	1 838	3.6	1 287	8.2	3 612	6.2	1 325	5.7	598	10.4
Newaygo	1 400	13.0	1 794	6.4	2 913	7.9	1 442	7.0	801	3.6
Oakland	351	23.8	886	13.3	3 017	7.5	1 501	8.0	540	11.2
Oceana	1 542	5.5	2 225	3.5	6 477	7.1	1 440	3.1	511	4.2
Ogemaw	890	13.7	655	8.6	804	13.6	609	7.7	359	12.6
Ontonagon	99	26.4	51	11.8	112	15.4	112	8.5	71	9.6
Osceola	449	13.9	752	4.8	960	3.1	749	6.6	395	5.0
Oscoda	192	(Z)	113	(Z)	178	(Z)	110	(Z)	62	(Z)
Otsego	441	13.0	151	11.4	193	26.8	174	6.8	56	10.7
Ottawa	16 188	2.4	4 408	5.2	24 745	1.8	4 929	3.4	2 654	2.1
Presque Isle	688	21.2	1 000	11.4	1 039	6.0	671	9.1	217	12.9
Roscommon	3	(Z)	6	-	(D)	(D)	(D)	(D)	7	-
Saginaw	2 413	7.8	8 195	3.3	2 828	3.5	3 553	2.7	794	3.5
St. Clair	4 565	6.1	2 670	5.5	2 419	3.5	2 176	3.5	721	6.1
St. Joseph	2 232	9.2	4 518	2.7	3 071	6.5	2 431	3.1	1 009	2.8
Sanilac	5 584	6.0	10 156	2.1	5 829	3.4	4 795	2.6	2 054	2.9
Schoolcraft	68	(Z)	76	(Z)	42	(Z)	90	(Z)	29	(Z)
Shiawassee	1 723	7.8	4 129	5.7	1 881	8.9	2 344	3.6	854	4.7
Tuscola	2 408	8.1	9 813	2.6	4 776	2.4	4 137	2.9	1 118	4.0
Van Buren	2 176	11.9	3 557	3.5	12 614	3.3	2 805	2.0	1 130	2.4
Washtenaw	5 121	11.0	4 373	7.2	4 374	4.1	2 565	3.9	976	5.2
Wayne	72	44.8	582	7.5	3 891	3.6	1 138	1.9	363	5.4
Wexford	102	15.7	151	9.4	176	1.6	182	11.4	113	22.4

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]

Item	Not on mail list		Percent not on mail list	
	Total number	Relative standard error of estimate (percent)	Total percent	Standard error of percent
Farms number ..	8 711	4.2	14.5	.6
Land in farms acres ..	442 047	27.8	4.1	1.1
Farms by size:				
Less than 50 acres farms ..	6 340	4.2	29.7	1.2
50 acres or more farms ..	2 371	10.4	6.2	.6
Harvested cropland farms ..	6 159	12.2	11.8	1.4
..... acres ..	175 467	47.0	2.8	1.3
Farms by value of sales:				
Less than \$2,500 farms ..	7 382	3.9	36.8	1.4
\$2,500 or more farms ..	1 329	16.8	3.3	.6
\$2,500 to \$9,999 farms ..	(S)	(S)	(S)	(S)
\$10,000 or more farms ..	(S)	(S)	(S)	(S)
Market value of agricultural products sold \$1,000 ..	15 193	43.0	.6	.3
Farms by standard industrial classification:				
Crops (01) farms ..	3 167	3.1	9.6	.3
Livestock (02) farms ..	5 544	6.0	20.7	1.2
Farms by tenure of operator:				
Full owners farms ..	7 346	4.8	19.1	.9
Part owners and tenants farms ..	1 365	3.1	6.4	.2
Operators by principal occupation:				
Farming farms ..	1 929	7.7	6.9	.5
Other farms ..	6 782	4.5	21.3	1.0
Average age of operator years ..	48.1	(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 further explanation.

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

APPENDIX D D-1

SECTION 4: Were any **VEGETABLES, SWEET CORN, MELONS, etc.,** harvested FOR SALE from "THIS PLACE" in 1987? (Do not include those grown for home use.)

S4 1 ☐ YES — Complete this section
2 ☐ NO — Go to section 5

	Acres		Acres irrigated	
	Whole acres	Tenths	Whole acres	Tenths
1. Land from which vegetables were harvested in 1987	375	/10	376	/10

2. From the list below, enter the crop name and code for each crop harvested in 1987. If more than one vegetable crop was harvested from the same acres, report acres for each crop. Report crops grown under protection in section 5.

Crop name	Code	Acres harvested	Acres irrigated
Snap beans (bush and pole)	381	/10	382 /10
Peas, green	441	/10	442 /10
Sweet corn	461	/10	462 /10
		/10	/10
		/10	/10
		/10	/10
		/10	/10

If more space is needed, use a separate sheet of paper.

Crop name	Code	Crop name	Code
Asparagus	379	Cucumbers and pickles	411
Beets	383	Eggplant	415
Broccoli	385	Honeydew melons	423
Cabbage, head	391	Lettuce and romaine	427
Cantaloupes and muskmelons	395	Lima beans, green	429
Carrots	397	Mustard greens	431
Cauliflower	399	Onions, dry	433
Celery	401	Onions, green	435
Collards	407	Peppers, sweet	443
		Peppers, hot	445
		Specify	475

SECTION 6: Were any **STRAWBERRIES, CRANBERRIES, or OTHER BERRIES** harvested FOR SALE from "THIS PLACE" in 1987? (Do not include those grown for home use.)

S6 1 ☐ YES — Complete this section
2 ☐ NO — Go to section 7

Crop name	Code	Acres harvested		Quantity harvested	Acres irrigated	
		Whole acres	Tenths		Whole acres	Tenths
Strawberries	536		/10	537 Lbs.	538	/10
Blackberries and dewberries	509		/10	510 Lbs.	511	/10
Blueberries, tame	512		/10	513 Lbs.	514	/10
Cranberries	521		/10	522 100-lb. barrels	523	/10
Raspberries	533		/10	534 Lbs.	535	/10
Other berries — Specify	539		/10	540 Lbs.	541	/10

If more space is needed, use a separate sheet of paper.

SECTION 5: Were any **NURSERY and GREENHOUSE CROPS, MUSHROOMS, sod, bulbs, flowers, flower seeds, vegetable seeds and plants, vegetables under glass or other protection, GROWN FOR SALE** on "THIS PLACE" in 1987?

S5 1 ☐ YES — Complete this section
2 ☐ NO — Go to section 6

Crop name	Code	Area irrigated		Sales in 1987
		Square feet	Acres	
1. Nursery and greenhouse crops irrigated in 1987		477	478	/10

2. From the list below, enter the crop name and code for each crop grown.

Crop name	Code	Square feet under glass or other protection in 1987	Acres in the open in 1987		Sales in 1987	
			Whole acres	Tenths	Dollars	Cents

If more space is needed, use a separate sheet of paper.

Crop name	Code	Crop name	Code
Bedding plants (Include vegetable plants)	479	Potted flowering plants	710
Bulbs (Exclude bulb flowering plants)	482	Mushrooms	494
Cut flowers and cut florist greens	485	Sod harvested	497
Nursery crops — ornamentals, fruit and nut trees, and vines	488	Vegetable and flower seeds	500
Foliage plants	407	Greenhouse vegetables	503
		Other — Specify	506

SECTION 7: Were any **OTHER CROPS** harvested from "THIS PLACE" in 1987 — small grains, field seeds, sorghum, mint, or other crops not previously reported? (Report fruit in section 8.)

S7 1 ☐ YES — Complete this section
2 ☐ NO — Go to section 8

For those crops not listed enter the crop name and code from the list below. Report quantity harvested in unit specified with crop name.

Crop name	Code	Acres harvested	Quantity harvested	Acres irrigated
Buckwheat	575		576 Bu.	577
Red clover seed	671		672 Lbs.	673
Timothy seed	746		747 Lbs.	748
Mint for oil	644		645 Lbs. of oil	646
Sorghum for grain or seed (Do not include sorghum-sudan crosses)	082		083 Bu.	084
Sorghum for silage or green chop	085		086 Tons, green	087

If more space is needed, use a separate sheet of paper.

Crop name	Code	Crop name	Code
Alfalfa seed (pounds)	542	Dry edible peas (hundredweight)	659
Birdsfoot trefoil seed (pounds)	566	Popcorn (pounds, shelled)	662
Corn cut for dry fodder, hogged or grazed (report acres only)	581	Proso millet (bushels)	665
Emmer and spelt (bushels)	598	Rapeseed (pounds)	688
Herbs, including ginseng (pounds)	620	Ryegrass seed (pounds)	689
Kentucky bluegrass seed (pounds)	629	Sweetclover seed (pounds)	737
Mixed grains (bushels)	614	Triticale (bushels)	749
Mustard seed (pounds)	650	Wild rice (pounds)	764
		Other crops (pounds) — Specify	752

SECTION 8: Was there a combined total of 20 or more **FRUIT TREES, including GRAPEVINES and NUT TREES**, on "THIS PLACE" in 1987?

S8 1 ☐ YES — Complete this section
2 ☐ NO — Go to section 9

1. **TOTAL ACRES** in bearing and nonbearing fruit orchards, vineyards, and nut trees on this place. (Do not include abandoned acres.)

Total acres		Acres irrigated	
Whole acres	Tenths	Whole acres	Tenths
121	/10	122	/10

2. For those crops not listed below, enter the name and code from the list at the right for other fruit and nut trees on this place in 1987. Report the requested information for each crop even if not harvested because of low prices, damage from hail, frost, etc.

Crop name	Code	NUMBER OF TREES OR VINES OF —		Acres in trees and vines of all ages		Quantity harvested	Unit of measure Mark one				
		Nonbearing age	Bearing age	Whole acres	Tenths		Lbs.	Tons	Boxes	Lbs. per box	
Apples	123		124	125	/10	126	127	1	2	3	128
Grapes	177		178	179	/10	180	181	1	2	3	182
Sweet cherries	345		346	347	/10	348	349	1	2	3	350
Tart cherries	587		588	589	/10	590	591	1	2	3	592
Peaches	225		226	227	/10	228	229	1	2	3	230
			1	2	/10	3	4	1	2	3	5
			1	2	/10	3	4	1	2	3	5

If more space is needed, use a separate sheet of paper.

Crop name	Code
Apricots	129
Nectarines	201
Pears	231
Plums and prunes	243
Other fruit and nuts — Specify	369

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SECTION 9 **GROSS VALUE OF CROPS SOLD from "THIS PLACE" in 1987, BEFORE taxes and expenses** (Refer to the INFORMATION SHEET, section 9.)

Report your best estimate of the value for each of the following groups of crops sold from this place in 1987. Include the value of the landlord's and/or contractor's share, estimating if necessary. Include value of Government CCC loans.

	None	Dollars	Cents
1. Grains, soybeans and other beans sold in 1987		773	00
a. Corn for grain		774	00
b. Wheat		775	00
c. Soybeans		776	00
d. Sorghum for grain		777	00
e. Barley		778	00
f. Oats		779	00
g. Other — rye, dry edible beans, sunflower seed, flaxseed, buckwheat, etc.		781	00
2. Tobacco		782	00
3. Hay, silage, field seeds, and grass seeds		783	00
4. Vegetables, sweet corn, and melons — (Do not include Irish potatoes and sweet potatoes, report them in item 6 below.)		784	00
5. Fruits, nuts, and berries — apples, cherries, grapes, peaches, pears, plums, strawberries, blueberries, cranberries, etc.		785	00
6. Other crops — potatoes, mint for oil, sugar beets, etc. (Do not include nursery and greenhouse crops.)		786	00
Specify			00

SECTION 10 **How were the ACRES in this place USED in 1987?**

1. Copy acres in "THIS PLACE" from section 1, item 4, page 1 _____ Acres

NOTE: For items 2 to 5 below, if land was used for more than one purpose in 1987 report it in the FIRST land use listed below that applies. For example, report cropland harvested and also pastured, only as "Cropland harvested."

	None	Number of acres
2. CROPLAND		787
a. Cropland harvested — Include all land from which crops were harvested or hay was cut, and all land in orchards, citrus groves, vineyards, and nursery and greenhouse crops.		788
b. Cropland used only for pasture or grazing — Include rotation pasture and grazing land that could have been used for crops without additional improvements.		789
c. Cropland used for cover crops, legumes, and soil-improvement grasses, but NOT harvested and NOT pastured		790
d. Cropland on which all crops failed — (Exception: Do not report here land in orchards and vineyards on which the crop failed. Such acreage is to be reported in item 2a.)		791
e. Cropland in cultivated summer fallow		793
f. Cropland idle		794
3. Woodland — Include all woodlots and timber tracts and cutover and deforested land with young timber growth.		795
a. Woodland pastured		796
b. Woodland not pastured		797
4. Other pastureland and rangeland — Include any pastureland other than cropland and woodland pasture.		798
5. All other land — Land in house lots, ponds, roads, wasteland, etc. — Include any land not reported in items 2 through 4 above.		799
6. TOTAL ACRES — Add the acres reported in items 2 through 5 (Should be the same as item 1 above.)		

SECTION 11 **Was any LAND in this place IRRIGATED at any time in 1987?**

Irrigated land is all land watered by any artificial or controlled means — sprinklers, furrows or ditches, spreader dikes, etc. Include supplemental, partial, and preplant irrigation.

1 ☐ YES — Complete this section
2 ☐ NO — Go to section 12

	None	Number of acres irrigated
1. How many acres of harvested land were irrigated? Include land from which hay was cut and land in bearing and nonbearing fruit and nut crops reported in section 10, item 2a.		880
2. How many acres of pastureland, rangeland, and any other lands not included in item 1 above were irrigated?		881

SECTION 12 **Were any ACRES in this place SET ASIDE, DIVERTED, OR IDLED under FEDERAL acreage reduction programs in 1987?**

1 ☐ YES — Complete this section
2 ☐ NO — Go to section 13

	None	Number of acres
1. How many acres were set aside (or diverted) under ANNUAL commodity acreage adjustment programs?		882
2. How many acres were under the CONSERVATION RESERVE PROGRAM (10 year, CRP)?		883

SECTION 13 **Did you or anyone else have any CATTLE or CALVES on this place in 1987?**

1 ☐ YES — Complete this section
2 ☐ NO — Go to section 14

• DECEMBER 31, 1987 INVENTORY

1. **CATTLE AND CALVES of all ages** (Total of a, b, c, and d below)

	None	INVENTORY Number on this place Dec. 31, 1987
a. BEEF COWS — Include beef heifers that had calved.		803
b. MILK COWS kept for production of milk or cream for sale or home use — Include dry milk cows and milk heifers that had calved.		804
c. HEIFERS AND HEIFER CALVES — (Do not include heifers that had calved.)		805
d. STEERS, STEER CALVES, BULLS, AND BULL CALVES		806
		807

• CATTLE AND CALVES SOLD FROM THIS PLACE IN 1987 Include those fed on this place on a contract or custom basis. Also report as sold cattle moved from this place to a feedlot for further feeding.

	None	Number sold in 1987	Gross value of sales
			Dollars Cents
2. Calves weighing less than 500 pounds		808	809
3. Cattle, including calves weighing 500 pounds or more		810	811
a. Of the total cattle sold, how many were FATTENED on this place on GRAIN or CONCENTRATES for 30 days or more and SOLD for SLAUGHTER?		812	813
			00

• DAIRY PRODUCTS SOLD FROM THIS PLACE IN 1987

	None	DAIRY PRODUCTS Gross value of sales
		Dollars Cents
4. Gross value of sales of DAIRY PRODUCTS from this place in 1987 — Include milk, cream, butter, etc.		814
		00

SECTION 14 **Did you or anyone else have any HOGS or PIGS on this place in 1987?**

1 ☐ YES — Complete this section
2 ☐ NO — Go to section 15

• DECEMBER 31, 1987 INVENTORY

1. **HOGS and PIGS of all ages** (Total of a and b below)

	None	INVENTORY Number on this place Dec. 31, 1987
a. HOGS and PIGS used or to be used for BREEDING		815
b. OTHER HOGS and PIGS		816
		817

• LITTERS FARROWED

2. **LITTERS FARROWED** on this place between —

	None	Number of litters
a. December 1, 1986 and May 31, 1987		818
b. June 1, 1987 and November 30, 1987		819

• HOGS AND PIGS SOLD

	None	Number sold in 1987	Gross value of sales
			Dollars Cents
3. HOGS and PIGS SOLD from this place in 1987		820	821
4. Of the hogs and pigs sold, how many were sold as FEEDER PIGS for further feeding?		822	823
			00

SECTION 15 **Did you or anyone else have any SHEEP or LAMBS on this place in 1987?**

1 ☐ YES — Complete this section
2 ☐ NO — Go to section 16

INVENTORY Number on this place Dec. 31, 1987

	None	NUMBER SOLD in 1987
1. SHEEP and LAMBS of all ages		824
a. EWES 1 year old or older		825
		826

NUMBER SHORN in 1987

	None	Pounds of wool shorn in 1987
2. SHEEP and LAMBS SHORN		827
		828

Gross value of sales

	None	Dollars Cents
3. What was the gross value of sales of SHEEP, LAMBS, and WOOL from this place in 1987		829
		00

SECTION 16 Did you or anyone else have any HORSES, BEES, FISH, GOATS, OTHER LIVESTOCK, or ANIMAL SPECIALTIES on this place in 1987?

S16 1 ☐ YES — Complete this section 2 ☐ NO — Go to section 17

	None	INVENTORY Number on this place Dec. 31, 1987	Total quantity sold in 1987	Gross value of sales	
				Dollars	Cents
1. Horses and ponies of all ages	<input type="checkbox"/>	830	831	832	00
2. Colonies of bees	<input type="checkbox"/>	839	840	842	00
3. Milk goats	<input type="checkbox"/>	843	844	846	00
4. Angora goats	<input type="checkbox"/>	847	848	850	00
5. Other goats	<input type="checkbox"/>	851	852	853	00
6. Mules, burros, and donkeys	<input type="checkbox"/>	833	834	836	00
7. Mink and their pelts	<input type="checkbox"/>	836	837	838	00
8. Rabbits and their pelts	<input type="checkbox"/>	854	855	856	00
9. All other livestock and livestock products	<input type="checkbox"/>	857	858	859	00

Specify _____

10. Fish and other aquaculture products (Enter name and code from list below.)

Name	Code	Name	Code
Catfish	860	Other fish — Specify	866
Trout	863	Other aquaculture products — Specify	869

If more space is needed, use a separate sheet of paper.

SECTION 17 Did you or anyone else have any POULTRY, such as CHICKENS, TURKEYS, DUCKS, etc., on this place in 1987? — Include poultry grown for others on a contract basis.

S17 1 ☐ YES — Complete this section 2 ☐ NO — Go to section 18

	None	INVENTORY Number on this place Dec. 31, 1987	Total number sold in 1987
2. PULLETS for laying flock replacement	<input type="checkbox"/>	894	895
a. PULLETS 3 months old or older not yet of laying age	<input type="checkbox"/>	896	
b. PULLET CHICKS and PULLETS under 3 months old (Do not include commercial broilers.)	<input type="checkbox"/>	898	899
3. BROILERS, fryers, and other meat-type chickens including capons and roasters	<input type="checkbox"/>	900	901
4. TURKEYS	<input type="checkbox"/>	902	903
a. Turkeys for slaughter (Do not include breeders.)	<input type="checkbox"/>		
b. Turkey HENS kept for breeding	<input type="checkbox"/>		
5. OTHER POULTRY raised in captivity — ducks, geese, pigeons or squab, pheasants, quail, etc. (Enter poultry name and code from the list below.)	<input type="checkbox"/>		

Poultry name _____ Code _____

Poultry name _____ Code _____

Name	Code	Name	Code	Name	Code
Ducks	904	Pigeons or squab	908	Quail	912
Geese	906	Pheasants	910	All other poultry — Specify	914

6. POULTRY HATCHED on this place in 1987 and placed or sold — chickens, turkeys, ducks, etc. — Specify kind of poultry ☐

7. Incubator egg capacity on December 31, 1987 ☐

	None	Gross value of sales	
		Dollars	Cents
8. What was the gross value of sales of poultry and poultry products (eggs, etc.) from this place in 1987?	<input type="checkbox"/>	916	00

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SECTION 18 GOVERNMENT CCC LOANS

S18

1. Amount received in 1987 from Government CCC loans for — Include regular and reserve loans, even if redeemed or forfeited.

	None	Dollars	Cents
a. Corn	<input type="checkbox"/>	886	00
b. Wheat	<input type="checkbox"/>	887	00
c. Soybeans	<input type="checkbox"/>	888	00
d. Sorghum, barley, and oats	<input type="checkbox"/>	889	00
e. Tobacco, rye, and honey	<input type="checkbox"/>	891	00

SECTION 19 Payments received for participation in FEDERAL FARM PROGRAMS in 1987 (DO NOT INCLUDE CCC loans.) Refer to INFORMATION SHEET, section 19.

S19

1. Amount received in cash ☐

2. Value of certificates received — payment-in-kind (PIK) or commodity certificates ☐

SECTION 20 TYPE OF ORGANIZATION

S20

Mark (X) the one item which best describes the type of organization for this place in 1987. Refer to the INFORMATION SHEET, section 20.

- ☐ FAMILY or INDIVIDUAL operation — (Do not include partnership and corporation.) 921
- ☐ PARTNERSHIP operation — Include family partnerships. 922
- ☐ INCORPORATED UNDER STATE LAW 923
- ☒ OTHER, such as estate or trust, prison farm, grazing association, Indian reservation, etc. 924

Specify _____

SECTION 21 CORPORATE STRUCTURE (for incorporated operations only) Refer to the INFORMATION SHEET, section 21.

S21

1. Is this a family-held corporation? 922 1 ☐ Yes 2 ☐ No

2. Are there more than 10 stockholders? 923 3 ☐ Yes 4 ☐ No

SECTION 22 CHARACTERISTICS AND OCCUPATION OF OPERATOR (Senior partner or person in charge) Refer to the INFORMATION SHEET, section 22.

S22

1. RESIDENCE — Does the operator (senior partner or person in charge) live on this place? 923 1 ☐ Yes 2 ☐ No

2. PRINCIPAL OCCUPATION — At which occupation did the operator spend the majority (50 percent or more) of his/her worktime in 1987? For partnerships consider all members of the partnership together. 928

1 ☐ Farming 2 ☐ Other or ranching

3. OFF-FARM WORK — How many days did the operator (senior partner or person in charge) work at least 4 hours per day off this place in 1987? — Include work at a nonfarm job, business, or on someone else's farm for pay. (Do not include exchange farmwork.) 929

1 ☐ None 2 ☐ 1–49 days 3 ☐ 50–99 days 4 ☐ 100–149 days 5 ☐ 150–199 days 6 ☐ 200 days or more

4. In what YEAR did the operator (or senior partner) begin to operate any part of this place? 960 _____ Year

5. AGE of operator (senior partner or person in charge) 925 _____ Years old

6. RACE of operator (senior partner or person in charge) 924

1 ☐ White 2 ☐ Negro or Black 3 ☐ American Indian 4 ☐ Asian or Pacific Islander 5 ☐ Other — Specify _____

7. SEX of operator (senior partner or person in charge) 926 1 ☐ Male 2 ☐ Female

8. SPANISH ORIGIN — Is the operator (senior partner or person in charge) of Spanish origin or descent (Mexican, Puerto Rican, Cuban, or other Spanish)? 927 1 ☐ Yes 2 ☐ No

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SECTION 23 **PRODUCTION EXPENSES** paid by you and others for this place in 1987

Include your best estimates of expenses paid by you, your landlord, contractors, buyers, and others for production of crops, livestock, and other agricultural products in 1987. (DO NOT INCLUDE expenses connected with performing customwork for others; operation of nonfarm activities, businesses, or services; or household expenses not related to the farm business.)

	None	Dollars	Cents
1. Livestock and poultry purchased — cattle, calves, hogs, pigs, sheep, lambs, goats, horses, chicks, poults, started pullets, etc.	<input type="checkbox"/>	971	00
2. Feed purchased for livestock and poultry — grain, hay, silage, mixed feeds, concentrates, etc.	<input type="checkbox"/>	972	00
a. Commercially mixed formula feeds purchased — complete, supplement, concentrates, premixes. (Do not include ingredients purchased separately, such as soybean meal, cottonseed meal, and urea.)	<input type="checkbox"/>	973	00
3. Seed cost — for corn, other grains, soybeans, tobacco, cotton, etc. — Include plants and trees purchased.	<input type="checkbox"/>	974	00
4. Commercial fertilizer purchased — all forms, including rock phosphate and gypsum. Include cost of custom applications.	<input type="checkbox"/>	975	00
5. Agricultural chemicals purchased — Insecticides, herbicides, fungicides, other pesticides, etc. — Include cost of custom applications. (Do not include lime.)	<input type="checkbox"/>	976	00
6. Gasoline and other petroleum fuel and oil purchased for the farm business — a. Gasoline and gasohol	<input type="checkbox"/>	977	00
b. Diesel fuel	<input type="checkbox"/>	978	00
c. Natural gas	<input type="checkbox"/>	979	00
d. LP gas, fuel oil, kerosene, motor oil, grease, etc.	<input type="checkbox"/>	980	00
7. Electricity for the farm business — (Do not include household expenses.)	<input type="checkbox"/>	981	00
8. Hired farm and ranch labor — also include employer's cost for social security, workman's compensation, insurance premiums, pension plans, etc. (See INFORMATION SHEET)	<input type="checkbox"/>	982	00
9. Contract labor — Include expenditures for labor, such as harvesting of fruit, vegetables, berries, etc., performed on a contract basis by a contractor, crew leader, a cooperative, etc.	<input type="checkbox"/>	983	00
10. Repair and maintenance expenses for the upkeep of buildings, motor vehicles, and farm equipment	<input type="checkbox"/>	984	00
11. Customwork, machine hire and rental of machinery and equipment — Include expenditures for use of equipment and for customwork such as grinding and mixing feed, plowing, combining, corn picking, drying, silo filling, spraying, dusting, fertilizing, etc. (Do not include cost of cotton ginning and application of fertilizer and chemicals.)	<input type="checkbox"/>	985	00
12. Interest paid on debts — (See INFORMATION SHEET) a. Secured by real estate	<input type="checkbox"/>	986	00
b. Not secured by real estate	<input type="checkbox"/>	987	00
13. Cash rent paid for land and buildings in 1987 — (Do not include grazing fees.)	<input type="checkbox"/>	988	00
14. Property taxes paid — Include farm real estate, machinery, livestock, etc. for the farm business. (Do not include taxes paid by landlords.)	<input type="checkbox"/>	989	00
15. All other production expenses — Include insurance, water, animal health costs, grazing fees, marketing charges, miscellaneous farm supplies, etc. (Do not include depreciation, household expenses, and expenses not associated with the farm business.)	<input type="checkbox"/>	990	00

SECTION 24 Was any **COMMERCIAL FERTILIZER**, including **ROCK PHOSPHATE**, or **LIME** used on this place during 1987?

1 ☐ YES — Complete this section 2 ☐ NO — Go to section 25

	None	Acres fertilized
1. Acres of cropland fertilized in 1987 — (Do not include cropland for pastures reported in section 10, item 2b.)	<input type="checkbox"/>	932
2. Acres of pastureland and rangeland fertilized in 1987 reported in section 10, items 2b and 4	<input type="checkbox"/>	933
3. LIME — tons of lime used and acres on which applied — (Do not include land plaster or gypsum or lime for sanitation.)	<input type="checkbox"/>	934

SECTION 25 Were any **INSECTICIDES**, **HERBICIDES**, **FUNGICIDES**, **NEMATOCIDES**, **OTHER PESTICIDES**, or **OTHER CHEMICALS** used on this place in 1987?

925 1 ☐ YES — Complete this section 2 ☐ NO — Go to section 26

Include any materials provided by you, your landlords, or contractors. For each item listed, report acres only once. If multipurpose chemicals were used, report acreage treated for each purpose.

	None	Acres on which used
1. Sprays, dusts, granules, fumigants, etc., (fungicide, herbicide, insecticide, nematocide) to control — a. Insects on crops, including hay	<input type="checkbox"/>	936
b. Nematodes in crops	<input type="checkbox"/>	937
c. Diseases in crops and orchards (blights, smuts, rusts, etc.)	<input type="checkbox"/>	938
d. Weeds, grass, or brush in crops and pasture — Include both pre-emergence and post emergence.	<input type="checkbox"/>	939
2. Chemicals for defoliation or for growth control of crops or thinning of fruit	<input type="checkbox"/>	940

SECTION 26 **MACHINERY AND EQUIPMENT** on this place on December 31, 1987 — Include only equipment used for agricultural operations in 1986 or 1987.

926 • Value of ALL machinery and equipment on this place, December 31, 1987

1. What is the estimated market value of ALL machinery, equipment, and implements usually kept on this place and used for the farm or ranch business? — Include cars, trucks, tractors, combines, plows, disks, harrows, dryers, pumps, motors, irrigation equipment, dairy equipment including milkers and bulk tanks, livestock feeders, grinding and mixing equipment, etc.

Estimated market value	
Dollars	Cents
943	00

• **SELECTED machinery and equipment on this place, December 31, 1987. (Report only if used in 1986 or 1987.)**

	None	Total number on this place on December 31, 1987	Of the total, HOW MANY were manufactured in the last 5 years (1983 - 1987)?
2. Motortrucks — Include pickups	<input type="checkbox"/>	944	945
3. Wheel tractors other than garden tractors and motor tillers — a. Less than 40 horsepower (PTO)	<input type="checkbox"/>	946	947
b. 40 horsepower (PTO) or more	<input type="checkbox"/>	948	949
4. Grain and bean combines, all types	<input type="checkbox"/>	950	951
5. Cotton pickers and strippers	<input type="checkbox"/>	956	957
6. Mower conditioners	<input type="checkbox"/>	958	959
7. Pickup balers — Include rectangle and round balers	<input type="checkbox"/>	960	961

SECTION 27 **ESTIMATED CURRENT MARKET VALUE OF LAND and BUILDINGS**

Please give your best ESTIMATE of the CURRENT MARKET VALUE of land and buildings for all acres reported in section 1, items 1, 2, and 3, page 1.

	None	Estimated market value of land and buildings
		Dollars Cents
1. All land owned	<input type="checkbox"/>	996 00
2. All land rented or leased FROM OTHERS	<input type="checkbox"/>	997 00
3. All land rented or leased TO OTHERS	<input type="checkbox"/>	998 00

SECTION 28 **INCOME FROM FARM - RELATED SOURCES IN 1987**

928 Report amount received before taxes and expenses.

	None	Farm-related income
		Dollars Cents
1. Customwork and other agricultural services provided for farmers and others — plowing, planting, spraying, harvesting, preparation of products for market, etc. (If customwork is a separate business, refer to INFORMATION SHEET, section 28)	<input type="checkbox"/>	992 00
2. Gross cash rent or share payments received from renting out farmland or payments received from lease or sale of allotments — Include payments for livestock pastured on a per-head basis, per-month basis, per-pound basis, etc.	<input type="checkbox"/>	993 00
3. Sales of forest products and Christmas trees — Include maple products, naval stores, firewood, etc.	<input type="checkbox"/>	994 00
4. Recreational services, patronage dividends of cooperatives, and other income which is CLOSELY RELATED to the agricultural operation on this place — Specify	<input type="checkbox"/>	995 00

SECTION 29 **PERSON COMPLETING THIS REPORT — Please print**

Name _____ Date _____

Telephone number _____ Area Code _____ Number _____

INFORMATION SHEET

1987 UNITED STATES CENSUS OF AGRICULTURE

Special Reporting Instructions

1. Who Should Report

WE NEED A REPLY FROM EVERYONE RECEIVING A REPORT FORM, INCLUDING individuals, landlords, tenants, partnerships, corporations, institutions, and THOSE NOT CONDUCTING AGRICULTURAL OPERATIONS. Each case included in the census has a unique Census File Number (CFN). In order to make the census results as complete and accurate as possible, we need to obtain information about every CFN.

2. If You Received More Than One Report Form for an Operation

Complete only ONE report form for an operation. Write "Duplicate" near the address label of each extra report form. Also, write the 11-digit census file number(s) of the DUPLICATE report(s) ON THE COMPLETED REPORT in the space provided to the left of the address label. Return the extra report(s) in the same envelope with your completed report form so that we can correct our records.

3. If You No Longer Farm

If you had agricultural operations at any time during 1987, please report all agricultural activity during the year. Report all land on your census form that you owned or rented. Also, report your 1987 crop and livestock production and 1987 sales.

Explain on the first page of the report form (or on a separate sheet of paper) that you quit farming or ranching and give the approximate date and the name and address of the present operator, if known.

4. If You Never Farmed or Have No Association With Agriculture

Please write a note on the report form near the address label explaining this and return the form so that we can correct our records. In our efforts to make the census as complete as possible, we obtained lists from various sources. We tried to eliminate duplicate and nonfarm addresses, however, it was not always possible to do so.

5. If You Have More Than One Agricultural Operation

Complete a report form for EACH SEPARATE and DISTINCT production unit, i.e., each individual farm, ranch, feedlot, greenhouse, etc., or combination of farms, etc., for which you maintain SEPARATE records of operating expenses and sales, livestock and other inventories, crop acreages, and production.

6. If You Have a Partnership Operation

Complete only ONE report for the entire partnership's agricultural operation and include all partners' shares on the one report. If members of the partnership also operate separate farms or ranches in addition to the partnership farming operation, separate report forms should be completed for each individual operation.

If two or more report forms were received for the same operation, mark each additional form as a "Duplicate." Return the duplicate report(s) in the same envelope with the completed partnership report, where possible, or write a note on the duplicate report, such as, "(Name of partner) has completed a report for the partnership (provide name and CFN of partnership.)"

7. Landlord's or Contractor's Share

If you rented or leased land from others or had a contract for the production of agricultural products, include both your share and the landlord's or contractor's share of the production, sales, and expenses so your census report form will be complete for "THIS PLACE."

If you do not know the landlord's or contractor's share, include your BEST ESTIMATE. If you do not have records available for all data items, use your best estimate.

How to Enter Your Response

Enter your replies in the proper spaces, on the correct lines, and in the units requested, i.e., dollars, bushels, tons, etc. Write any explanation outside the answer spaces or on a separate sheet of paper.

All dollar figures may be entered in whole dollars. CENTS ARE NOT REQUIRED.

Enter whole numbers except where tenths are requested, such as acres of potatoes harvested. If you have 1/2, 1/3, or 1/4 of an acre, convert to tenths. For example, convert 1/2 to 5/10, 1/3 to 3/10, 1/4 to 2/10.

The census report form will contain sections and questions which do not apply to you. When this occurs, mark the "None" or "No" box and go on to the next item or section.

Instructions For Specified Sections

► Section 1 — ACREAGE IN 1987

Your answers to this section will determine the land (Acres in "THIS PLACE") referred to in the rest of the report form.

When answering the acreage questions, include the land associated with your agricultural operations in 1987 whether in production or not. Include all land that you owned or rented during 1987 even if only for part of the year. Do not include any unrelated residential or commercial land.

IF YOU QUIT FARMING DURING 1987 — Complete the report form for the portion of the year that you did farm. Explain on the report form in the space to the left of the address label (or on another sheet of paper) when you stopped farming and include the name and address of the person now using the land.

Report all land in section 1 in whole acres.

Item 1 — All Land Owned — Report all land owned in 1987 whether held under title, purchase contract or mortgage, homestead law, or as heir or trustee of an undivided estate. Include all land owned by you and/or your spouse, or by the partnership, corporation, or organization for which you are reporting.

Item 2 — All Land Rented or Leased FROM OTHERS — Report all land rented by you or your operation even though the landlord may have supplied materials or supervision.

INCLUDE in item 2:

- a. Land for agricultural use that you rented from others for cash
- b. Land you worked on a share basis (crop or livestock)
- c. Land owned by someone else that you used rent-free
- d. Federal, State, Indian reservation, or railroad land rented or leased by the acre

DO NOT INCLUDE in item 2:

Land used on a per-head or animal unit license or permit basis, such as section 3 of the Taylor Grazing Act, National Forest, or Indian reservation permit land. If you had any of these permits, mark "yes" to item 7.

Item 3 — All Land Rented or Leased TO OTHERS — Include all land rented out for any purpose if it was part of the acreage reported in items 1 and 2. A report form will be obtained from each of your tenants to cover the operations on that land.

INCLUDE in item 3:

- a. Owned land rented to others for cash or a share of crops or livestock
- b. Land you rented from someone and then subleased to someone else
- c. Land worked for you by someone for a share of crops or livestock
- d. Land which you allowed others to use rent-free

Item 4 — Acres in "THIS PLACE" — This figure will show the total of all land you operated at any time in 1987.

If item 4, Acres in "THIS PLACE" is "0" and:

- a. You raised any crops or had any livestock or poultry on "THIS PLACE" in 1987, complete the report.
- b. All your land was operated by a renter or sharecropper, complete item 6 (name and address of renters), skip to and complete section 29, and explain briefly, "all land rented out," etc. Mail form in return envelope.
- c. You did not have any agricultural activity on owned or rented land in 1987, complete section 29 and explain briefly, such as "retired," "sold farm," and date. Give name and address of current operator if known and return form.

► Sections 2 through 8 — CROPS

Sections 2 through 8 provide space for reporting crops harvested during the 1987 crop year from the land shown in section 1, item 4 (Acres in "THIS PLACE") of your report. Please report your crops in the appropriate sections. Do NOT include any crops grown on land rented or leased TO OTHERS, or worked by others on shares during 1987.

Acres harvested — Enter the acres harvested in 1987. Round fractions to whole acres except where tenths are requested by "/10" in the reporting box, such as for potatoes.

Quantity harvested — If your unit of measure is different than the unit on the report form, please convert your figure for the quantity harvested to the unit requested. If the harvest was incomplete by December 31, 1987, please report the quantity harvested and estimated quantity to be harvested.

Acres irrigated — For each crop irrigated, report number of acres irrigated. Irrigation is defined as land watered by artificial or controlled means — sprinklers, furrows or ditches, spreader dikes, purposeful flooding, etc. Include acres that received supplemental, partial, and/or preplant irrigation. Do not report water applied in transplanting tobacco plants, trees, or vegetables as irrigation. Leave "Acres irrigated" blank for crops that are not irrigated.

How to Report Crops Harvested

► **Sections 2 and 3** — Report only for the listed crops.

► **Sections 4 through 8** — To report: (1) find the crop name and the code number from the list in the section; (2) enter crop name and code in the first two columns of the first available answer line in the section; (3) enter the information that is requested in the remaining columns. If you harvested a crop not listed in sections 4 through 8, use the "Other" code in the appropriate section and specify the crop name.

Double Cropping — If two or more crops were harvested from the same land (double cropping) report the total acres and production of each harvested crop in the appropriate section(s) of the report form.

Example: In 1987 you harvested 1,230 bushels of wheat from 40 acres, then on the same 40 acres planted soybeans, from which you harvested 1,550 bushels. You irrigated the soybeans but not the wheat.

Section 2: Were any of the following CROPS harvested from "THIS PLACE" in 1987?				
S2	None	Acres harvested	Quantity harvested	Acres irrigated
1. Cotton	<input type="checkbox"/>	091	092 Sales	093
2. Soybeans for beans	<input type="checkbox"/>	088 40	089 1,550 Bu.	090 40
3. Wheat for grain	<input type="checkbox"/>	073 40	074 1,230 Bu.	075
4. Oats for grain	<input type="checkbox"/>	076	077 Bu.	078

Interplanted Crops — If two crops were grown at the same time in alternating strips in the same field, report the portion of the field used for each crop.

Example: A 60 acre field was planted in cotton and soybeans, with two rows of cotton followed by an area of the same width planted in soybeans. No irrigation was used. Thirty acres of soybeans and 30 acres of cotton would be reported in the appropriate section(s).

Skip Row Planting — If a crop is planted in an alternating pattern of planted and non-planted rows, such as two rows planted and two rows skipped (2 X 2), report the portion of the field occupied by the crop in the appropriate section for that crop, and report the skipped portion as "Cropland idle" in section 10, item 2f.

► **Section 4 — VEGETABLES** — Report acres of vegetables harvested FOR SALE or commercial processing. Do not include vegetables grown for home use. Report the total acreage of each vegetable crop harvested.

Example: In 1987 you harvested 10 acres of lettuce from a field, then replanted the field in lettuce and harvested the 10 acres again. Both crops of lettuce were irrigated. Enter only 10 acres of land from which vegetables were harvested and 10 acres irrigated in item 1 of section 4, but write in 20 acres of lettuce harvested and 20 acres of lettuce irrigated in item 2 of section 4.

► **Section 8 — FRUITS and NUTS** — In counting the combined total of 20 or more trees and vines, include those for home use as well as those maintained for sale of the production. Acres in trees or vines that have been abandoned should not be included; these acres should be included in section 10, item 2f "Cropland idle."

If crops other than fruit and nut trees and vines were interplanted with trees or vines, report the total acres for the orchard crop in section 8 and the total acres of the interplanted crop in the appropriate section.

► **Section 9 — GROSS VALUE OF CROPS SOLD**

Report the value of all crops sold from "THIS PLACE" in 1987, regardless of the year they were harvested or who owned the land. Be sure to report gross values before deducting expenses and taxes. Include Government CCC loans received for "THIS PLACE" in 1987. Include payments received in 1987 from cooperatives or marketing organizations for crops produced on "THIS PLACE" regardless of the year in which the crops were harvested.

Also include as sales, your estimate of the value of any crop removed from "THIS PLACE" in trade for services, such as hay cut in exchange for fence repair, clearing, or other services. If the sale price or market value is not known, give your best estimate of the crop's market value when removed from "THIS PLACE."

DO NOT INCLUDE crops or crop products purchased from others and later sold.

► Section 10 — USE OF ACRES IN "THIS PLACE"

This section is used to classify the acres in "THIS PLACE" reported in section 1, item 4. (Do not include any acres you rented to others reported in section 1, item 3). The sum of the acres entered in various categories should equal total acres in "THIS PLACE."

Land Used for More Than One Purpose — Do not report the same acreage for more than one of the listed purposes. If part or all of your land was used for more than one listed purpose in 1987, report that land only in the first category listed. For example, if you plowed under a cover crop, and planted and harvested a grain crop, report the land in item 2a, "Cropland harvested," but do NOT report as "Cropland used for cover crops, legumes, etc." (item 2c).

Double Cropping — When more than one crop was harvested from the same land in 1987, report that land only ONCE as "Cropland harvested," in item 2a.

Interplanted Crops — If you interplanted crops, such as cotton in an orchard, report the total land used for both crops only ONCE, as "Cropland harvested," in item 2a.

Skip Row Planted Crops — Report the acres that represent the total nonplanted or skipped rows as "Cropland idle," item 2f. The acres that represent the planted rows should be reported as "Cropland harvested," in item 2a.

► Section 12 — ACRES SET ASIDE, DIVERTED, OR IDLED UNDER FEDERAL ACREAGE REDUCTION PROGRAMS IN 1987

Include in item 2 all acres in "THIS PLACE" retired from production and placed, by long-term contract, into the Conservation Reserve Program. Acres placed into the program during and prior to 1987 should be included.

► Sections 13 through 17 — LIVESTOCK, POULTRY, OTHER LIVESTOCK, OR ANIMAL SPECIALTIES

Animals and Poultry to Include in the Report — Report all animals, poultry, and animal specialties on "this place" (section 1, item 4) on December 31, 1987. Include all owned by you and any kept by you for others. Include animals on unfenced lands, National Forest land, district land, cooperative grazing association land, or rangeland administered by the Bureau of Land Management on a per-head or lease basis. Animals in transit on December 31, 1987, or animals on a short-term pasture (such as wheat pasture or crop residue) on a per-head or lease basis should be reported by the person who had control of the animals.

Animals and Poultry to Exclude from the Report — Do not report animals or poultry kept on land rented to others or kept under a share arrangement on land rented to others. Do not include animals quartered in feedlots which are not a part of "this place." Animals kept on a place not operated by you are to be included on the report for that place.

Animals Bought and Sold — DO NOT REPORT ANY ANIMALS BOUGHT AND THEN RESOLD WITHIN 30 DAYS. Such purchases and sales are considered "dealer" transactions, and are not included in this census.

Number Sold — Report all animals and poultry sold or removed from "this place" in 1987, without regard to ownership or who shared in the receipts. Include animals sold for a landlord or given to a landlord or others in trade or in payment for goods or services. Do NOT report number sold for any livestock or poultry kept on another place.

Dairy Termination Program or "Whole-Herd Dairy Buy-Out Program" — The amount received in 1987 from the Government under the dairy termination program should be included in section 19, item 1. Dairy animals and products sold in 1987 should be reported in section 13.

Animals Moved to Another Place — For animals moved from "this place" to another place, such as for further feeding, report animals as "sold" and give your best estimate of their market value when they left "this place."

Fat Cattle Sold — Cattle fattened on grain or concentrates for 30 days or more and sold for slaughter are reported in section 13, item 3a.

DO NOT INCLUDE WITH FATTENED CATTLE SOLD:

- Cattle and calves sold for further feeding
- Veal calves, or any calves weighing less than 500 pounds
- Dairy cows fed only the usual dairy ration before being sold

Value of Sales — Report the total gross value of animals and poultry sold or removed from "this place" in 1987 without deducting production or marketing expenses (cost of feed, cost of livestock purchased, cost of hauling and selling, etc.). If the sale price or market value is not known, give your best estimate of their market value when they left "this place." Do NOT report the value of sales of any livestock and poultry owned by you but kept and sold from a place you did not operate.

Contract and Custom Feeding Operations — Livestock or poultry kept by you on "this place" on a contract or custom basis should be included on this report REGARDLESS OF OWNERSHIP. Report as "INVENTORY" numbers of animals or poultry on the place on December 31, 1987. Report as "SOLD" animals and poultry kept on a contract or custom basis and removed or sold from the place in 1987. If the sale price or market value is not known, give your best estimate of the market value of the animals or poultry when they left the place.

► **Section 16 — HORSES, BEES, FISH, GOATS, OTHER LIVESTOCK, OR ANIMAL SPECIALTIES**

Item 2 — If you owned BEES — Report all colonies or hives of bees and honey operations conducted by you, regardless of where the hives were kept most of the year. Report hives or colonies, pounds of honey sold, and value of sales.

Items 7 and 8 — Mink pelts and rabbit pelts should be included in number sold and value of sales, but not in inventory.

Item 9 — Other Livestock and Livestock Products — Include in all other livestock and livestock products manure, beeswax, and any other animal products sold from "this place" in 1987. Please indicate units used in reporting.

Item 10 — Fish and Other Aquaculture Products — Report number of pounds sold and gross value of sales for each. Enter name and code from list.

► **Section 17 — POULTRY**

The person who furnished the housing and labor should report the poultry operation on his/her report form regardless of who owns the birds. Report as sold poultry that were taken or moved from the place in 1987.

► **Section 18 — AMOUNT RECEIVED FROM GOVERNMENT CCC LOANS**

Item 1 — Report the amount received under the regular or reserve program for commodities placed under CCC loan during 1987. Include amount received even if commodity was redeemed or forfeited prior to December 31, 1987.

Do not include CCC loans received to build crop storage facilities or amount received for storage payments in the reserve program.

► **Section 19 — FEDERAL PAYMENTS RECEIVED**

Report all payments received from Federal Farm Programs in 1987 regardless of whether payment was made in cash or commodity certificates. Include cash payments in item 1. In item 2, include the value of any certificates held or the value received from sale or redemption of any certificates in 1987.

Federal payments include receipts from Federal programs such as deficiency payments, "Whole-herd dairy buy-out," support price payments, indemnity programs, disaster payments, paid land diversion, inventory reduction payments, payments received for approved soil and water conservation projects, etc.

► **Section 20 — TYPE OF ORGANIZATION**

Use the following definitions to determine the type of organization for your operation:

Family or Individual Operation — Defined as farm or business organization controlled and operated by an individual (sole proprietor). Include family operations that are not incorporated and not operated under a partnership agreement.

Partnership Operation — Defined as two or more persons who have agreed on the amount of their contribution (capital and effort) and the distribution of profits. Co-ownership of land by husband and wife or joint filing of income tax forms by husband and wife DOES NOT constitute a partnership, unless a specific agreement to share contributions, decisionmaking, profits, and liabilities exists. Production under contract or under a share rental agreement DOES NOT constitute a partnership.

Incorporated Under State Law — A corporation is defined as a legal entity or artificial person created under the laws of a State to carry on a business. This definition does not include cooperatives. Information on type of corporation should be reported in section 21.

Other — Such as cooperatives (defined as an incorporated or unincorporated enterprise or an association created and formed jointly by the members), estate or trust (defined as a fund of money or property administered for the benefit of another individual or organization), prison farm, grazing association, Indian reservation, institution run by a government or religious entity, etc.

► **Section 21 — CORPORATE STRUCTURE**

This section is to be answered by corporations only. Answer both items. A family-held corporation has more than 50 percent of its stock owned by persons related by blood or marriage.

► **Section 22 — CHARACTERISTICS AND OCCUPATION OF OPERATOR**

This section collects information about the operator of "this place" defined as the individual owner, the operator, the senior partner, or person in charge for the type of organization reported in section 20.

For Family or Individual Operation — Complete this section for the operator.

For Partnership Operations — Answer all items, except item 2, for the "Senior Partner." The "Senior Partner" is the individual who is mainly responsible for the agricultural operations on "this place," not necessarily the person senior in age. If each partner shares equally in the day-to-day management decisions, consider the oldest as the "Senior Partner." For item 2 (Principal Occupation) consider all members of the partnership together. Please include as "farming" worktime at all types of agricultural enterprises, including work at greenhouses, nurseries, mushroom production, ranching, feedlots, broiler feeding, etc.

For Corporations and Other Operations (Cooperatives, Estates, etc.) — Complete section 22 for the person in charge, such as a hired manager, business manager, or other person primarily responsible for the on-site, day-to-day operation of the farm or ranch business.

Item 4 — Year Began Operation — Report the first year the operator or senior partner began to operate any part of "this place" on a continuous basis. If the operator returned to a place previously operated, report the year operations were resumed.

► **Section 23 — PRODUCTION EXPENSES paid by you and others for "this place" in 1987**

Include farm production expenses paid by you, your landlord, contractors, or anyone else for crops, livestock, or poultry produced on "this place." Include expenses incurred in 1987 even if they were not paid for in 1987. Please estimate if exact figures are not known. Refer to the individual expenditure items below for further explanations.

Livestock and Poultry Purchased — Report the cost of cattle, calves, hogs, pigs, sheep, lambs, horses, goats, chicks, pullets, 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 fed even if the owners of the cattle were billed for the feed. Feed raised on "this place" should not be reported as purchased.

Cost of Hired Farm and Ranch Labor — Include gross salaries and wages, commissions, dismissal pay, vacation pay, and paid bonuses paid to hired workers, family members, hired managers, administrative and clerical employees, and salaried corporate officers. Also, include supplemental cost for benefits such as employer's social security contributions, unemployment compensation, workmen's compensation insurance, life and medical insurance, pension plans, etc.

Contract Labor — Includes the labor costs of workers furnished on a contract basis by a labor contractor, crew leader, or cooperative for harvesting vegetables or fruit, shearing sheep, or similar farm activities. Do not include costs for building or repair work done by a construction contractor. Include the cost of customwork or machine hire in item 11.

Repair and Maintenance Expenses for the Upkeep of Buildings, Motor Vehicles, and Farm Equipment — Include the cost of repairs and upkeep of farm machinery, vehicles, buildings, fences, and other equipment used in the farm business. Do not include repairs to vehicles not used in the farm business or for equipment used only for performing customwork for others. Do not include expenditures for the construction of new buildings or the cost of additions to existing buildings.

Interest Expense Paid on Debts — Report all interest expenses paid in 1987 for the farm business. Include interest on loans secured by land and buildings (real estate) in item 12a. Include all loans not secured by real estate such as for fertilizer, feed, and seed in item 12b. Include interest paid on CCC loans. Do not include interest associated with activities not related to production of crops or livestock on "this place" such as land or buildings rented to others, packing sheds, or feed mills that provide services to others. Do not include interest on owner/operator dwelling where amount is separated from interest on other land and buildings on "this place."

Cash Rent Paid for Land and Buildings in 1987 — Report rent paid in cash during 1987 for land and buildings in "this place." Do not include rent paid for operator dwelling or other nonfarm property. Do not include the value of shares of crops or livestock paid to landlords.

Property Taxes Paid — Include real estate property taxes you paid on the acres and buildings you operated and used in the farm business.

Do not include:

- a. Property taxes on land or buildings rented to someone else
- b. Taxes paid by landlords
- c. Property taxes paid on other property not associated with the farm business
- d. Income and excise taxes

All Other Production Expenses — Farm production costs not previously listed should be reported here. In addition to items listed on the report form, include bookkeeping charges, tax preparation fees, postage, advertising, commission for sale of cattle, and fees paid for farm-related advice or for farm consultants. Do not include depreciation or expenditures for the purchase of land and buildings or new or used machinery.

► **Section 24 — COMMERCIAL FERTILIZER AND LIME**

Report acres on which commercial fertilizer (items 1 and 2) or lime (item 3) was applied during 1987. If any acreage was fertilized or limed more than once, report acres ONLY ONCE in each item. Report expense for commercial fertilizer purchased, excluding lime, in section 23, item 4.

► **Section 26 — MACHINERY AND EQUIPMENT**

The estimated market value in item 1 refers to ALL machinery and equipment kept primarily on "this place" and used for the farm business. Report the value in its present condition, not the replacement or depreciated value. Specialized equipment, which is an integral part of a building, should be included as a part of the value of land and buildings.

► **Section 27 — ESTIMATED CURRENT MARKET VALUE OF LAND AND BUILDINGS**

The value for each of the three listed categories should be your estimate of the value of the land and buildings if they were sold in the current market. The real estate tax assessment value should not be used unless that value represents a full market value assessment and the land and buildings could reasonably be assumed to be sold at that price. Do not deduct real estate marketing charges from your estimate. Report the total value, not the value on a per acre basis.

► **Section 28 — INCOME FROM FARM—RELATED SOURCES IN 1987**

Item 1 through 4 refer only to those income producing activities for which you use part of the land, machinery, equipment, labor, or capital normally used on "this place," and which you do not consider as entirely separate from your farming activities. Report gross amounts received before taxes and expenses.

Item 1 — Customwork — Do not report income for customwork or agricultural services provided to others if operated as an entirely separate business from your agricultural operations.

Item 2 — Rental Income — Do not include rental income from nonfarm property.

Item 3 — Forest Products — Include only those forest products or Christmas trees cut from "this place," not items cut from other nonfarm timber acreage. Do not include income from saw mill business.

Item 4 — Other Farm-Related Income — Include income from hunting leases, fishing fees, and other recreational services, sales of farm by-products, and other business or income closely related to the agricultural operation on "this place." Include dividends for business done with farmer-owned cooperatives. Do not enter previously reported farm sales or income from investments not associated with the farm. Do not include retirement pensions or social security benefits received.



BUREAU OF THE CENSUS
1201 East Tenth Street
Jeffersonville, IN 47133

If you received more than one report form, enter extra Census File Number(s) here and return extra copies with your completed report.

A					-					
A					-					

CENSUS USE ONLY	035	036	037	038
	039	040	041	042

In correspondence pertaining to this report, please refer to your Census File Number (CFN)

87-A0400

Please correct errors in name, address, and ZIP Code. ENTER street and number if not shown.

SECTION 4

1. At any time during 1987, did you plant, grow, or have any:
- Hay or tobacco?
 - Corn, wheat, or other grains?
 - Other crops?
 - Fruit, nut, or citrus trees; grapevines?
 - Vegetables, melons, or berries?
 - Greenhouse or nursery crops?

☐ Yes ☐ No

- 2. At any time during 1987, did you raise, sell, or keep any:**
- Cattle, hogs, sheep, or goats?
 - Chickens or other poultry?
 - Bees?
 - Horses or ponies?
 - Fish in captivity?
 - Other animal specialties?

☐ Yes ☐ No

If you answered YES to EITHER of these questions, go to SECTION 2.
If you answered NO to BOTH of these questions, go to SECTION 10.

ACREAGE IN 1987 Report land owned, rented, or used by you, your spouse, or by the partnership, corporation, or organization for which you are reporting. Include ALL LAND, REGARDLESS OF LOCATION OR USE — cropland, pastureland, rangeland, woodland, idle land, house lots, etc.

woodland, idle land, house lots, etc.

None

Number of acres
043
044
045
046

1. All land owned ☐

2. All land rented or leased FROM OTHERS, including land worked by you on shares, used rent free, in exchange for services, payment of taxes, etc. Include leased Federal, State, and railroad land. (DO NOT include land used on a per-head basis under a grazing permit.) ☐

3. All land rented or leased TO OTHERS, including land worked on shares by others and land subleased. Also complete item 5 below. ☐

4. Acres in "THIS PLACE" — ADD acres owned (item 1) and acres rented (item 2), then SUBTRACT acres rented TO OTHERS (item 3), and enter the result in this space.

If the entry is zero please refer to the Information Sheet, section 2.

5. Of the land you rented or leased to others, how many acres did you own? ☐ 053 Acres

6. In what county was the largest value of your agricultural products raised or produced?

County name	State

• **PART A** — How were the ACRES in this place used in 1987?

- | | None | Number of acres |
|---|--------------------------|-----------------|
| 1. Cropland harvested — <i>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.</i> | <input type="checkbox"/> | 787 |
| 2. Cropland on which all crops failed — <i>(Exception: Do not report here land in orchards and vineyards on which the crop failed.)</i> | <input type="checkbox"/> | 790 |
| 3. Cropland idle, cropland used for cover crops, or cropland in cultivated summer fallow | <input type="checkbox"/> | 793 |
| 4. Cropland used only for pasture, woodland pastured, and other pastureland and rangeland | <input type="checkbox"/> | 796 |
| 5. All other woodland, wasteland, houselots, etc. not reported in items 1 through 4 above | <input type="checkbox"/> | 797 |

	None	Irrigated
1. How many acres of harvested land were irrigated? <i>Include land from which hay was cut and land in bearing and nonbearing fruit and nut crops.</i>	<input type="checkbox"/>	890
2. How many acres of pastureland, rangeland, and any other lands not included in item 1 above were irrigated?	<input type="checkbox"/>	891

- **PART A — CROPS HARVESTED from "THIS PLACE" in 1987.**
(Do not include crops grown on land rented to others.)

1. Hay crops —	None	Acres harvested	Quantity harvested	Gross value of crops sold	
				Dollars	Cents
a. Alfalfa and alfalfa mixtures	<input type="checkbox"/>	103	104 Tons, dry	782	00
b. Small grain hay	<input type="checkbox"/>	106	107 Tons, dry	782	00
c. Wild hay	<input type="checkbox"/>	112	113 Tons, dry	782	00
d. Other hay — Specify kind	<input type="checkbox"/>	108	110 Tons, dry	782	00
2. Corn for grain or seed	<input type="checkbox"/>	087	088 Bu.	773	00
3. Soybeans for beans	<input type="checkbox"/>	088	089 Bu.	776	00
4. Wheat for grain	<input type="checkbox"/>	073	074 Bu.	774	00
5. Tobacco — all types	<input type="checkbox"/>	084	085 Lbs.	781	00
6. Potatoes, Irish — (Do not include those grown for home use.)	<input type="checkbox"/>	087	088 Cwt.	788	00

- 7. All vegetables for sale**
(Do not include those grown for home use.)

7. All vegetables for sale (Do not include those grown for home use.)		None	Total acres	Dollars	Cent
	<input type="checkbox"/>	375	10	783	00
Specify kind(s)			10	\$	
			10		

8. All fruit and nut orchards, vineyards, and berries . . .

		None	Total acres	Quantity harvested	Dollars	Cents
8. All fruit and nut orchards, vineyards, and berries . . .		<input type="checkbox"/>	121		784	00
Specify kind(s) {			/10			
			/10	Lbs.		
			/10	Lbs.		

- 9. Other crops** — For additional crops, enter the crop name and code from the list below. Report quantity harvested in the unit specified with crop name.

Crop name	Code	Acres harvested	Quantity harvested	Gross value of crops sold	
				Dollars	Cents
			1	2	
			1	2	00
			1	2	00

If more space is needed, use a separate sheet of paper.

Crop name	Code	Crop name	Code
Barley for grain (bushels)	079	Oats for grain (bushels)	076
Corn for silage or green chop (tons, green)	070	Sorghum for grain-milo (bushels)	082
Cotton (bales)	081	Other crops (pounds) — Specify	752

• **PART B — NURSERY and GREENHOUSE CROPS GROWN FOR SALE**
on "THIS PLACE" in 1987

From the list below, enter the crop name and code for each crop grown.

Crop name	Code	Square feet under glass or other protection	Acres in the open in 1987		Sales in 1987	
			Whole acres	Tenths	Dollars	Cents
			1		2	
				10	\$	00

If more space is needed, use a separate sheet of paper.

Crop name	Code	Crop name	Code
Bedding plants (include vegetable plants)	479	Potted flowering plants	710
Cut flowers and cut florist greens	485	Foliage plants	707
Nursery crops — ornamentals, fruit and nut trees, and vines	488	Greenhouse vegetables	803
		Other — Specify	806

PENALTY FOR FAILURE TO REPORT

CONTINUE ON REVERSE SIDE

SECTION 1 LIVESTOCK and POULTRY

• PART A — CATTLE and CALVES

1. CATTLE and CALVES of all ages

- a. BEEF COWS — Include beef heifers that had calved. ☐
- b. MILK COWS kept for production of milk or cream for sale or home use — Include dry milk cows and milk heifers that had calved. ☐

INVENTORY Number on this place Dec. 31, 1987	
803	Total
804	Beef cows
805	Milk cows

2. Value of DAIRY PRODUCTS sold in 1987 — Include milk, cream, butter, etc.

Gross value of sales	
Dollars	Cents
814	00

• CATTLE and CALVES SOLD FROM THIS PLACE IN 1987 Include as sold cattle moved from this place to a feedlot for further feeding.

3. Calves less than 500 pounds

4. Cattle — Include calves 500 pounds or more
- a. Of ALL cattle sold, how many were FATTENED on this place on GRAIN or CONCENTRATES for 30 days or more and SOLD for SLAUGHTER? ☐

Number sold in 1987		Gross value of sales	
		Dollars	Cents
808	809	\$	00
810	811	\$	00
812	813	\$	00

• PART B — HOGS and PIGS

1. HOGS and PIGS of all ages

- a. HOGS and PIGS used or to be used for breeding ☐

INVENTORY Number on this place Dec. 31, 1987	
815	Total
816	Breeding

2. HOGS and PIGS SOLD from this place in 1987

3. Of the hogs and pigs sold, how many were sold as FEEDER PIGS for further feeding? ☐

Number sold in 1987		Gross value of sales	
		Dollars	Cents
820	821	\$	00
822	823	\$	00

• PART C — SHEEP and LAMBS

1. SHEEP and LAMBS of all ages

- a. EWES 1 year old or older. ☐

INVENTORY Number on this place Dec. 31, 1987		NUMBER SOLD in 1987	
824	825		
826			

2. SHEEP and LAMBS SHORN in 1987

Number	Pounds wool
827	828

3. What was the gross value of sales of SHEEP, LAMBS, and WOOL from this place in 1987?

Gross value of sales	
Dollars	Cents
829	00

• PART D — POULTRY

1. HENS and PULLETS

- a. HENS and PULLETS of laying age ☐
- b. PULLETS 3 months old or older not yet of laying age for layer replacement ☐
- c. PULLETS under 3 months old for layer replacement ☐

2. BROILERS, fryers, other meat-type chickens

3. TURKEYS for slaughter (Do not include breeders.)

4. OTHER POULTRY (Enter name/code from below.)

INVENTORY Number on this place Dec. 31, 1987		NUMBER SOLD in 1987	
892	893		
894	895		
896			
898	899		
900	901		

Poultry name _____ Code _____

Name/code	Name/code	Name/code
Turkey hens kept for breeding 902	Geese 906	Quail 912
Ducks 904	Pigeons or squabs 908	All other poultry — Specify 914
	Preferents 910	

5. Value of POULTRY and POULTRY PRODUCTS (eggs, etc.) sold from this place in 1987?

Gross value of sales	
Dollars	Cents
915	00

• PART E — HORSES, OTHER LIVESTOCK, ANIMAL SPECIALTIES, and FISH

1. Horses and ponies of all ages

2. Colonies of bees

3. Milk goats

4. Angora goats

5. Other livestock, fish, animal products. (Enter name/code from below.)

INVENTORY Number on this place Dec. 31, 1987		Total quantity sold in 1987	Gross value of sales	
			Dollars	Cents
830	831	Number	832	00
839	840	Number	842	
	841	Pounds honey		00
843	844	Number	846	
	845	Gallons milk		00
847	848	Number	850	
	849	Pounds mohair		00
		Quantity		00

Name _____ Code _____

Name/code	Name/code	Name/code
Mules, burros, donkeys 833	Rabbits and their pets 854	Other livestock, fish, and their products 857
Mink and their pets 836	Other goats 851	

SECTION 2 GOVERNMENT CCC LOANS

Amount received in 1987 from Government CCC loans. Include regular and reserve loans, even if redeemed or forfeited.

	Dollars	Cents
856		00

SECTION 3 PAYMENTS received for participation in FEDERAL FARM PROGRAMS in 1987 (DO NOT INCLUDE CCC loans.)

1. Amount received in cash

2. Value of certificates received — payment-in-kind (PIK) or commodity certificates

	Dollars	Cents
858		00
859		00

SECTION 4 Acres in this place SET ASIDE, DIVERTED, or IDLED under FEDERAL acreage reduction programs in 1987

1. How many acres were set aside (or diverted) under ANNUAL commodity acreage adjustment programs?

2. How many acres were under the CONSERVATION RESERVE PROGRAM (10 year, CRP)?

Number of acres
862
863

SECTION 5 CHARACTERISTICS and OCCUPATION of OPERATOR (Senior partner or person in charge)

1. RESIDENCE — Does the operator live on this place?

1 ☐ Yes 2 ☐ No

2. PRINCIPAL OCCUPATION — At which occupation did the operator spend the majority (50 percent or more) of his/her worktime in 1987? For partnerships consider all members of the partnership together.

1 ☐ Farming 2 ☐ Other or ranching

3. OFF-FARM WORK — How many days did the operator work at least 4 hours per day off this place in 1987? — Include work at a nonfarm job, business, or on someone else's farm for pay. (Do not include exchange farmwork.)

- 1 ☐ None
- 2 ☐ 1—49 days
- 3 ☐ 50—99 days
- 4 ☐ 100—149 days
- 5 ☐ 150—199 days
- 6 ☐ 200 days or more

4. In what YEAR did the operator begin to operate any part of this place?

_____ Year

5. AGE of operator

_____ Years old

6. RACE of operator

- 1 ☐ White
- 2 ☐ Negro or Black
- 3 ☐ American Indian
- 4 ☐ Asian or Pacific Islander
- 5 ☐ Other — Specify _____

7. SEX of operator

1 ☐ Male 2 ☐ Female

8. SPANISH ORIGIN — Is the operator of Spanish origin or descent (Mexican, Puerto Rican, Cuban, or other Spanish)?

1 ☐ Yes 2 ☐ No

SECTION 6 PERSON COMPLETING THIS REPORT — Please print

Name		999 Date	
Telephone number	Area code	Number	

INFORMATION SHEET

1987 UNITED STATES CENSUS OF AGRICULTURE

Special Reporting Instructions

1. Who Should Report

WE NEED A REPLY FROM EVERYONE RECEIVING A REPORT FORM, INCLUDING individuals, landlords, tenants, partnerships, corporations, institutions, and THOSE NOT CONDUCTING AGRICULTURAL OPERATIONS. Each case included in the census has a unique Census File Number (CFN). In order to make the census results as complete and accurate as possible, we need to obtain information about every CFN.

2. If You Received More Than One Report Form for an Operation

Complete only ONE report form for an operation. Write "Duplicate" near the address label of each extra report form. Also, write the 11-digit census file number(s) of the DUPLICATE report(s) ON THE COMPLETED REPORT in the space provided to the left of the address label. Return the extra report(s) in the same envelope with your completed report form so that we can correct our records.

3. If You No Longer Farm

If you had agricultural operations at any time during 1987, please report all agricultural activity during the year. Report all land on your census form that you owned or rented. Also, report your 1987 crop and livestock production and 1987 sales.

Explain on the first page of the report form (or on a separate sheet of paper) that you quit farming or ranching and give the approximate date and the name and address of the present operator, if known.

4. If You Never Farmed or Have No Association With Agriculture

Please write a note on the report form near the address label explaining this and return the form so that we can correct our records. In our efforts to make the census as complete as possible, we obtained lists from various sources. We tried to eliminate duplicate and nonfarm addresses, however, it was not always possible to do so.

5. If You Have More Than One Agricultural Operation

Complete a report form for EACH SEPARATE and DISTINCT production unit, i.e., each individual farm, ranch, feedlot, greenhouse, etc., or combination of farms, etc., for which you maintain SEPARATE records of operating expenses and sales, livestock and other inventories, crop acreages, and production.

6. If You Have a Partnership Operation

Complete only ONE report for the entire partnership's agricultural operation and include all partners' shares on the one report. If members of the partnership also operate separate farms or ranches in addition to the partnership farming operation, separate report forms should be completed for each individual operation.

If two or more report forms were received for the same operation, mark each additional form as a "Duplicate." Return the duplicate report(s) in the same envelope with the completed partnership report, where possible, or write a note on the duplicate report, such as, "(Name of partner) has completed a report for the partnership (provide name and CFN of partnership)."

7. Landlord's or Contractor's Share

If you rented or leased land from others or had a contract for the production of agricultural products, include both your share and the landlord's or contractor's share of the production, sales, and expenses so your census report form will be complete for "THIS PLACE."

If you do not know the landlord's or contractor's share, include your BEST ESTIMATE. If you do not have records available for all data items, use your best estimate.

8. How to Enter Your Response

Enter your replies in the proper spaces, on the correct lines, and in the units requested, i.e., dollars, bushels, tons, etc. Write any explanation outside the answer spaces or on a separate sheet of paper. All dollar figures may be entered in whole dollars. CENTS ARE NOT REQUIRED.

Enter whole numbers except where tenths are requested, such as acres of potatoes harvested. If you have 1/2, 1/3, or 1/4 of an acre, convert to tenths. For example, convert 1/2 to 5/10, 1/3 to 3/10, 1/4 to 2/10.

The census report form will contain sections and questions which do not apply to you. When this occurs, mark the "None" or "No" box and go on to the next item or section.

Instructions For Specified Sections

► Section 2 — ACREAGE IN 1987

Your answers to this section will determine the land (Acres in "THIS PLACE") referred to in the rest of the report form.

When answering the acreage questions, include the land associated with your agricultural operations in 1987 whether in production or not. Include all land that you owned or rented during 1987 even if only for part of the year. Do not include any unrelated residential or commercial land.

Report all land in section 2 in whole acres.

Item 1 — All Land Owned — Report all land owned in 1987 whether held under title, purchased contract or mortgage, homestead law, or as heir or trustee of an undivided estate. Include all land owned by you and/or your spouse, or by the partnership, corporation, or organization for which you are reporting.

Item 2 — All Land Rented or Leased FROM OTHERS — Report all land rented by you or your operation even though the landlord may have supplied materials or supervision.

INCLUDE in item 2:

- a. Land for agricultural use that you rented from others for cash
- b. Land you worked on a share basis (crop or livestock)
- c. Land owned by someone else that you used rent-free
- d. Federal, State, Indian reservation, or railroad land rented or leased by the acre

DO NOT INCLUDE in item 2:

Land used on a per-head or animal unit license or permit basis, such as section 3 of the Taylor Grazing Act, National Forest, or Indian reservation permit land.

Item 3 — All Land Rented or Leased TO OTHERS — Include all land rented out for any purpose if it was part of the acreage reported in items 1 and 2. A report form will be obtained from each of your tenants to cover the operations on that land.

INCLUDE in item 3:

- a. Owned land rented to others for cash or a share of crops or livestock
- b. Land you rented from someone and then subleased to someone else
- c. Land worked for you by someone for a share of crops or livestock
- d. Land which you allowed others to use rent-free

Item 4 — Acres in "THIS PLACE" — This figure will show the total of all land you operated at any time in 1987.

If item 4, Acres in "THIS PLACE" is "0" and:

- a. You raised any crops or had any livestock or poultry on "THIS PLACE" in 1987, complete the report.
- b. All your land was operated by a renter or sharecropper, skip to and complete section 10, and explain briefly, "All land rented out," etc. Mail form in return envelope.
- c. You did not have any agricultural activity on owned or rented land in 1987, complete section 10 and explain briefly, such as "retired," "sold farm," and date. Give name and address of current operator if known and return form.

► Section 3 — LAND USE AND IRRIGATION

This section is used to classify the acres in "THIS PLACE" reported in section 2, item 4. Do not include any acres you rented to others reported in section 2, item 3. The sum of the acres entered in various categories should equal total acres in "THIS PLACE."

Land Used for More Than One Purpose — Do not report the same acreage for more than one of the listed purposes. If part or all of your land was used for more than one listed purpose in 1987, report that land only in the first category listed. For example, if you harvested a crop and later used the same land for pasture, report the land in part A, item 1, "Cropland harvested."

Double Cropping — When more than one crop was harvested from the same land in 1987, report that land only ONCE as "Cropland harvested," in part A, item 1 of this section.

Interplanted Crops — If you interplanted crops, such as cotton in an orchard, report the total land used for both crops only ONCE, as "Cropland harvested," in part A, item 1.

Skip Row Planted Crops — Report the acres that represent the total nonplanted or skipped rows as "Cropland idle," part A, item 3, the acres that represent the planted rows should be reported as "Cropland harvested," part A, item 1.

Irrigation is defined as land watered by artificial or controlled means — sprinklers, furrows or ditches, spreader dikes, purposeful flooding, etc. Include acres that receive supplemental, partial, and/or preplant irrigation. Do not report water applied in transplanting tobacco plants, trees, or vegetables as irrigation.

► Section 4 — CROPS

This section provides space for reporting crops harvested during the 1987 crop year from the land shown in section 2, item 4 (Acres in "THIS PLACE") of your report. A few crops are already listed on the form. For these crops, just report acres harvested, quantity harvested, and value of sales. If you produced crops not listed, write the name of the crop and code from the list provided and report the acres harvested, quantity harvested, and the value of sales.

DO NOT INCLUDE:

- a. Any crops grown on land rented or leased TO OTHERS, or worked by others on shares during 1987.
- b. Crops or crop products purchased from others and later sold.

Acres Harvested — Enter the acres harvested in 1987. Round fractions to whole acres except where tenths are requested by "/10" in the reporting box, such as potatoes.

Quantity Harvested — If your unit of measure is different than the unit on the report form, please convert your figure for the quantity harvested to the unit requested. If the harvest was incomplete by December 31, 1987, please report the quantity harvested and the estimated quantity to be harvested.

Gross Value of Crops Sold — Report the value of all crops sold from "THIS PLACE" in 1987, regardless of the year they were harvested or who owned the land. Be sure to report gross value before deducting expenses and taxes. Include Government CCC loans received for "THIS PLACE" in 1987. Include payments received in 1987 from cooperatives or marketing organizations for crops produced on "THIS PLACE."

Item 7 — Vegetables — Report acres of vegetables harvested FOR SALE or commercial processing. Do not include vegetables grown for home use. Report the total acreage of each vegetable crop harvested.

Item 8 — Fruit Orchards, Citrus, Vineyards, and Nut Trees — Report only if total of 20 or more trees and vines. Include those for home use as well as those maintained for sale of their production. Acres in trees and vines that have been abandoned should not be included, these acres should be included in section 3, part A, item 3 "Cropland idle."

If crops other than fruit and nut trees and vines were interplanted with trees or vines, report the total acres for the orchard crop in item 8 and the total acres of the interplanted crop in the appropriate item.

Item 9 — Other Crops — To report: (1) find the crop name and the code number from the list under item 9; (2) enter crop name and code in the first two columns of the first available answer line under item 9; (3) enter the information that is requested in the remaining columns. If you harvested a crop not listed, use the "OTHER" code and specify the crop name. If you need additional space, use a separate sheet of paper to write the crop name(s), acres and quantity harvested, and gross value of crop(s) sold.

▶ Section 5 — LIVESTOCK, POULTRY, OTHER LIVESTOCK, OR ANIMAL SPECIALTIES

Parts A, B, C, and D — LIVESTOCK AND POULTRY

Animals and Poultry to Include in the Report — Report all animals, poultry, and animal specialties on "this place" (section 2, item 4) on December 31, 1987. Include all owned by you and any kept by you for others. Include animals on unfenced lands, National Forest land, district land, cooperative grazing association land, or rangeland administered by the Bureau of Land Management on a per-head or lease basis. Animals in transit on December 31, 1987, or animals on a short-term pasture (such as wheat pasture or crop residue) on a per-head or lease basis should be reported by the person who had control of the animals.

Animals and Poultry to Exclude from the Report — Do not report animals or poultry kept on land rented to others or kept under a share arrangement on land rented to others. Do not include animals quartered in feedlots which are not a part of "this place." Animals kept on a place not operated by you are to be included on the report for that place.

Animals Bought and Sold — DO NOT REPORT ANY ANIMALS BOUGHT AND THEN RESOLD WITHIN 30 DAYS. Such purchases and sales are considered "dealer" transactions, and are not included in this census.

Number Sold — Report all animals and poultry sold or removed from "this place" in 1987, without regard to ownership or who shared in the receipts. Include animals sold for a landlord or given to a landlord or others in trade or in payment for goods or services. Do NOT report number sold for any livestock or poultry kept on another place.

Dairy Termination Program or "Whole-Herd Dairy Buy-Out Program" — The amount received in 1987 from the Government under the dairy termination program should be included in section 7, item 1. Dairy cattle and calves sold should be reported in section 5, part A.

Animals Moved to Another Place — For animals moved from "this place" to another place, such as for further feeding, report animals as "sold" and give your best estimate of their market value when they left "this place."

Fat Cattle Sold — Cattle fattened on grain or concentrates for 30 days or more and sold for slaughter are reported in section 5, part A, item 4a.

DO NOT INCLUDE WITH FATTENED CATTLE SOLD:

- a. Cattle and calves sold for further feeding
- b. Dairy cows fed only the usual dairy ration before being sold
- c. Veal calves, or any calves weighing less than 500 pounds

Value of Sales — Report the total gross value of animals and poultry sold or removed from "this place" in 1987 without deducting production or marketing expenses (cost of feed, cost of livestock purchase, cost of hauling and selling, etc.). If the sale price or market value is not known, give your best estimate of their market value when they left "this place." Do NOT report the value of sales of any livestock and poultry owned by you but kept and sold from a place you did not operate.

Contract and Custom Feeding Operations — Livestock or poultry kept by you on "this place" on a contract or custom basis should be included on this report REGARDLESS OF OWNERSHIP. Report as "INVENTORY" numbers of animals or poultry on the place on December 31, 1987. Report as "SOLD" animals and poultry kept on a contract or custom basis and removed or sold from the place in 1987. If the sale price or market value is not known, give your best estimate of the market value of the animals or poultry when they left the place.

The person who furnished the housing and labor should report the poultry operation on his/her report form regardless of who owned the birds. Report as sold the number of poultry that were taken or moved from the place in 1987.

Part E — HORSES, OTHER LIVESTOCK, ANIMAL SPECIALTIES, AND FISH

If you owned BEES — Report all colonies or hives of bees and honey operations conducted by you, regardless of where the hives were kept most of the year. Report hives or colonies, pounds of honey sold, and value of sales.

Other Livestock and Livestock Products — Include in all other livestock and livestock products manure, beeswax, and any other animal products sold from "this place" in 1987. Mink pelts and rabbit pelts should be included in number sold and value of sales, but not in inventory.

Fish and Other Aquaculture Products — Report quantity sold and gross value of sales for each.

▶ Section 6 — AMOUNT RECEIVED FROM GOVERNMENT CCC LOANS

Item 1 — Report the amount received under the regular or reserve program for commodities placed under CCC loan during 1987. Include amount received even if commodity was redeemed or forfeited prior to December 31, 1987.

Do not include CCC loans received to build crop storage facilities or amount received for storage payments in the reserve program.

▶ Section 7 — FEDERAL PAYMENTS RECEIVED

Report all payments received from Federal Farm Programs in 1987 regardless of whether payment was made in cash or commodity certificates. Include cash payments in item 1. In item 2, include the value of any certificates held or the value received from sale or redemption of any certificates in 1987.

Federal payments include receipts from Federal programs such as deficiency payments, "Whole-Herd Dairy Buy-Out," support price payments, indemnity programs, disaster payments, paid land diversion, inventory reduction payments, payments received for approved soil and water conservation projects, etc.

▶ Section 8 — ACRES SET ASIDE, DIVERTED, OR IDLED UNDER FEDERAL ACREAGE REDUCTION PROGRAMS IN 1987

Include in item 2 all acres in "this place" retired from production and placed, by long-term contract, into the Conservation Reserve Program. Acres placed into the program during and prior to 1987 should be included.

▶ Section 9 — CHARACTERISTICS AND OCCUPATION OF OPERATOR

This section collects information about the operator of "this place" defined as the individual owner, the operator, the senior partner, or person in charge.

For Family or Individual Operation — Complete this section for the operator.

For Partnership Operations — Answer all items, except item 2, for the "Senior Partner." The "Senior Partner" is the individual who is mainly responsible for the agricultural operations on "this place," not necessarily the person senior in age. If each partner shares equally in the day-to-day management decisions, consider the oldest as the "Senior Partner." For item 2 (Principal Occupation) consider all members of the partnership together. Please include as "farming or ranching" worktime at all types of agricultural enterprises, including work at greenhouses, nurseries, mushroom production, ranching, feedlots, broiler feeding, etc.

For Corporation and Other Operations (Cooperatives, Estates, etc.) — Complete section 9 for the person in charge, such as a hired manager, business manager, or other person primarily responsible for the on-site, day-to-day operation of the farm or ranch business.

Item 4 — Year Began Operation — Report the first year the operator or senior partner began to operate any part of "this place" on a continuous basis. If the operator returned to a place previously operated, report the year operations were resumed.