APPENDIX A. General Explanation

TABLE

A. PERCENT OF STATE TOTAL REPRESENTED BY ADJUSTMENT FOR WHOLE FARM NONRESPONSE: 1978 . . . . . . A-14

TAKING THE CENSUS

Method of Enumeration

The 1978 Census of Agriculture was the first census to include a mailout/mailback enumeration supplemented by a thorough direct interview of all households in a sample of area segments. This combination list-direct enumeration sample approach was instituted to improve completeness of coverage for State level agriculture census statistics.

In censuses prior to 1969, enumerators were assigned to a specific area and called on all farms within the area. Beginning with the 1950 census, copies of the report form were mailed prior to the enumeration date to each boxholder served by post offices in predominantly rural areas and farmers were asked to complete the forms and have them ready for the enumerator to pick up. Enumerators going door-to-door in rural areas collected and reviewed all forms that had been completed; they also completed forms for those places with agricultural operations which did not have forms ready.

For the 1969 and 1974 censuses, data were collected primarily by a self-enumeration, mailout/mailback procedure. This procedure was made possible by the availability of specialty lists and several administrative lists, including records from the prior agriculture census, from which a list of agriculture-related names and addresses was constructed.

The mailout/mailback enumeration procedure was not used in taking the agriculture census in Puerto Rico, Guam, the Virgin Islands, and the Northern Mariana Islands. A discussion of the direct enumeration methods used appears in the reports for these outlying areas.

Mail List

The mail list for the 1978 census was comprised of all individuals, businesses, and organizations that could be readily identified as being associated with agriculture. The list was assembled from the records of the 1974 census and administrative records of various government agencies, primarily the Internal Revenue Service and the U.S. Department of Agriculture. The administrative lists used for 1978 were more accurate and extensive than those used for the 1974 and 1969 censuses. For 1978, most administrative lists were used in their entirety; whereas, for 1974 and 1969 some lists were sampled so that only selected records were included in the census mailing list.

Lists of large or specialized operations, such as nurseries, broiler growers, fish farms, and livestock range and feedlot operations, which might not be identified in other administrative records, were obtained from State and Federal agencies, trade associations, and similar organizations. Lists of multi-establishment companies having one or more establishments (or locations) producing agricultural products or providing agricultural services were obtained from the 1974 census and updated using results of the 1976 and 1977 Company Organization Surveys conducted by the Economic Surveys Division of the Census Bureau.

A preliminary census mail list was assembled using names and addresses from the 1974 census and administrative source lists available early in 1978. Those records identified as most likely not to be farms, since the name appeared on only one source list or on selected combinations of list sources which had yielded a low percentage of farm operators for the 1974 census, were then selected for inclusion in the 1978 Farm and Ranch Identification Survey. Slightly over 4 million of the short identification forms were mailed in May of 1978 to identify persons who were not active farm operators, to identify tenant and successor operators who were not on administrative source lists, and to update the name, address, and size information for the identified active farm operators. Approximately 1.9 million survey returns were classified as out-of-scope (nonfarms), and an additional 400,000 reports were returned by the Postal Service as being undeliverable, resulting in over 2.3 million names and addresses being deleted from the census mail list as a result of the 1978 Farm and Ranch Identification Survey. The final census mail list containing 4,241,000 names and addresses was developed using results of the 1978 Farm and Ranch Identification Survey, names and addresses from the unduplicated preliminary list that were retained without precensus verification, and new or updated source lists acquired after the preliminary unduplication.
The preliminary and final census mail lists were both constructed by merging and unduplicating the names and addresses from the various source lists on the basis of Employer Identification numbers, Social Security numbers, and names and addresses. To facilitate processing, each name on the administrative source lists was assigned a geographic code indicating the State and county location of the operation and a size code indicating an estimated value of sales. Most duplicates were identified and resolved during computer processing; an additional group of possible duplicates identified during computer processing was resolved clerically. Other duplicate names not identified prior to mailing were either reported by respondents or located during office processing.

Direct Enumeration Area Sample

When the evaluation survey conducted for the 1974 census confirmed the results of the evaluation survey for 1969 (i.e., an unacceptable number of midsize and a larger number of smaller farms were not included in the mail list), the decision was made to incorporate into the 1978 data collection procedures a direct enumeration area sample to provide State level estimates of the number and statistical characteristics of farms found not to be included in the mail list. The effect of this combination mail list-direct enumeration sample approach has been to drastically reduce the number and effect of missed farms in State totals.

The direct enumeration sample consisted of approximately 6,400 segments in “rural” areas (areas outside places with 2,500 or more population in 1970) in all States, except Alaska and Hawaii. The segments were created and selected using enumeration district maps and data from the 1970 Census of Population and Housing. In October and November 1978, enumerators visited each household in these segments to determine if anyone in the household was associated with an agricultural operation. A 78-A1(A) report form was completed for each person with agricultural operations. This form was similar to the 78-A1(S) sample form but collected additional information on alternate names and addresses and other individuals associated with the operation for use in matching these cases to the census mail file. The front page of the 78-A1(A) report form is reproduced in appendix C. During the enumeration, each operator received an orange-colored sticker and was instructed that if he/she received a census form in the mail, the form should not be filled but returned with the sticker attached indicating that a report had already been completed.

During office processing, a concentrated effort was made to match the direct enumeration sample returns to names and addresses on the census mail list using the sticker returns, microfilm search of the mail file for all associated names, telephone calls to all cases that could be reached by phone, and any other available information. Direct enumeration sample returns not matched to the census mail list after this extensive research comprise the sample representing farms in the State not on the census mail list. Data from these unmatched direct enumeration sample returns were used to provide estimates at the State level for farms not on the census mail list. For each State, these data have been tabulated and published as a “pseudo” county and are an integral part of the State totals. The direct enumeration sample estimates have not been included in individual county totals.

Report Forms

The Census Bureau recognizes the need to minimize both respondent burden and census cost by limiting the number of items for which data are requested to those most needed by users as the basis for current understanding and future planning. In addition to limiting data items, the most recent eight censuses of agriculture have also used sampling techniques to further minimize reporting burden and census cost. For 1945, additional items were included in the enumeration of designated geographic segments, but were omitted from the report forms used for all other areas. For the 1950, 1954, 1959, and 1964 censuses, similar goals were met by instructing the enumerators to determine whether to ask or omit the items in designated sections of the report forms. For the 1969, 1974, and 1978 mailout/mailback censuses, two report forms were used again with the result of minimizing the reporting burden, particularly for smaller farms.

For 1978, the two report forms were a 5-page report form (78-A1(S)) containing all the items asked in the census, and a 4-page form (78-A1 (N)) omitting the sample items (sections 22 through 27). Form 78-A1(N) and the 78-A1(S) sample items are reproduced in appendix D. In all States except Alaska and Hawaii, the sample form (A1(S)) was mailed to all certainty addresses (large farms) and to 20 percent of the noncertainty addresses; the nonsample form (A1(N)) was mailed to the remaining noncertainty addresses. The sample form was mailed to all Alaska addresses. For Hawaii, a modified version of the sample form was used for all farms. The modifications were made principally in the crops section in order to cover the specialized agriculture on the islands.

Initial Mailing

The report forms were distributed by the U.S. Postal Service during the last week of December 1978 to all individuals, businesses, and organizations on the mail list. Approximately 4,241,000 forms were included in the initial mailing (3,140,000 nonsample forms and 1,101,000 sample forms).

From February through August 1979, additional initial mailings were sent primarily to new tenants and successors identified during report form processing. Thus, the total mailing list for the 1978 Census of Agriculture was 4,430,000.

An information sheet containing detailed instructions for completing the form was included with each report form (see appendix D). Additional special instructions were included with report forms sent to identifiable producers of poultry under contract, bees and honey, laboratory animals, feedlot operations, and nursery and greenhouse products.

In an effort to provide additional help in completing reports, approximately 60,000 copies of a Farm Census Guide booklet were sent to county agricultural agencies and related institutions or businesses to whom farmers might turn for help. Included were rural banks, accountants, vocational agriculture instructors, and the following U.S. Department of Agriculture county offices: Agricultural Stabilization and Conservation Service,
Farmers Home Administration, and Agricultural Extension Service. This guide contained descriptions and definitions for 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 if assistance was requested. In addition, the telephone number for the Jeffersonville, Ind. processing office was provided in the original mailing in case the respondent requested assistance or had additional questions which were not covered in the instructions.

Followup Procedures

The data collection effort included seven followup letters to nonrespondents, three of which were accompanied by a report form. To evenly distribute the workloads in mailing, receipts, and processing, the mail list was divided into three groups for followup purposes. In late January, the first followup letter was sent to all nonrespondents reminding them of the February 15 due date. The other reminders followed on a flow basis at 3- to 4-week intervals starting in late February and continuing into July.

In low response areas, additional efforts were made. State Commissioners of Agriculture were asked to issue supporting statements urging farmers to complete and return their reports. In early April 1979, nonrespondents in about 300 counties with the lowest response rates were mailed an additional letter using simpler language in large print suggesting that if they needed help in completing their report, they could call collect to the Jeffersonville, Ind. processing office.

From March to November 1979, telephone calls were made to nonrespondents who were large (for most States, those with expected sales of $80,000 or more) or were located in about 60 counties with low response. Data for large farms were obtained by telephone from secondary sources if the addressee could not be contacted or refused to provide information. Most of the nonresponse calls were made by the staff of the Jeffersonville, Ind. processing office. However, calls to the larger and more complex operations were made by the Agriculture Division staff. Upon completion of data collection, all counties had response rates exceeding 75 percent of the final mail list including additional addresses. The overall response rate for the 50 United States was 88 percent for all addresses and nearly 95 percent for addresses with a known history of farm operations. A significant proportion of the nonresponse cases was found not to have qualifying agricultural operations for 1978. For a description of the adjustment for nonresponse, see Statistical Adjustments.

DATA PROCESSING

All report forms were subjected to a clerical screening review, during which they were corrected to make them acceptable for keying onto magnetic tape. Farm operators completing a nonsample form who reported sales or acreage above the certainty level were sent correspondence requesting the additional sample data. Reports for special list cases identified on the mail list as producing specific products such as broilers or cattle were checked to insure that the special item had been reported. Problem reports requiring special review or additional handling were referred to technical assistants, or if necessary, to statisticians for resolution. Report forms with sales or acreage above levels listed as State "must" were subjected to a more stringent precomputer review, including completeness checks for key basic data items. Reports from multunit operations and institutional and government-operated farms were reviewed and edited by statisticians. All farms with expected or reported sales of $1,000,000 or more or 30,000 acres or more, all Alaska and Hawaii reports, selected multunit operations, and other selected problem reports were reviewed by statisticians in the Agriculture Division. Omissions, inconsistencies, and other problems that could not be resolved by reference to other information on the report were resolved by contacting the respondents by telephone or correspondence.

All successors and the more significant tenant names and addresses reported in the census were researched on microfilm of the census mail file. Report forms were mailed to addresses not located on the mail file. Research was also conducted on reports from selected respondents claiming that they had previously completed a census form to eliminate possible duplication.

Data for each report form were subjected to a detailed item-by-item computer edit. The edit included comprehensive checks for consistency and reasonableness, corrected data found to be in error or inconsistent, supplied missing data based on similar size farms within the same county, and assigned farm classification codes which were necessary for tabulating the data. Entries of large magnitude and significant computer-generated changes to the data were manually verified. Obvious errors such as reports of cotton or citrus in the Northern States were also identified and corrected.

Many of the acceptability limits on data were necessarily wide making it impossible to identify and correct all errors or to always supply precise estimates for all the incompleteness in the reports. These factors and others may affect the reliability of data for some minor items, but they should not have a significant effect on major data items in any county.

In the computer edit, those farms with sales or acreage exceeding State "must" levels were tested for historical consistency. Key items such as acreage, number of livestock sold, crops, and sales were compared for significant changes between 1974 and 1978. Problems in historical consistency were resolved usually by telephone.

In order to reduce duplicate reporting because of more than one completed report being received for the same operation under different names, computer listings of reports with similar operator names and size of operation were produced and duplicate reports were deleted prior to tabulations.

After each report was screened, computer edited, and had all identified problems corrected, each data item on the report was added into the total for that item for the county. The result was a computer tabulation matrix for each county containing the sum of individual entries for each data item. This matrix enabled the easy and precise construction of the published tables.

Prior to publication of preliminary reports and volume 1 reports, tabulated totals were reviewed by statisticians to
identify remaining inconsistencies and potential coverage problems. Comparisons were made with historical census trends as well as current year State level estimates published by the U.S. Department of Agriculture and other agencies as part of the coverage review. Selected report forms were reviewed and problem entries were either verified as being correct or the data were corrected.

**COMPARABILITY OF DATA**

Significant changes were made to the data collection procedures to improve the coverage of the 1978 census, including a more complete mail list and the use of a direct enumeration area sample to supplement the mail list. The effect of these improvements has been to increase the 1978 State farm counts above what they would have been using previous methods. The 1978 State farm counts, consisting of totals from the mail list and the direct enumeration area sample, include farms that would have been missed in the 1974 and 1969 censuses.

The 1978 county farm counts do not include any totals from the direct enumeration sample. However, for some counties, the counts may have increased substantially because of the improved coverage of small farms in the 1978 mail list. County level data on acreages and inventories are generally comparable.

Estimates of the net proportion of farms missed in the 1974 census varied widely by State, from a low of 0.7 percent in Nebraska to a high of 33.0 percent in West Virginia. Appendix C shows adjusted farm counts by State. Because missed farms were typically small, the percent missed was generally higher in States having a relatively large proportion of small farms and urbanized areas having a sizable number of part-time farms. The proportion of the total farms in each State represented by the direct enumeration sample in 1978 can be expected to follow a pattern similar to that for missed farms in 1974.

Since most of the farms identified in the direct enumeration sample were small, these farms have a much greater effect on the State counts of farms and farms reporting than on measures of agricultural production such as land in farms, sales of agricultural products, acres and production of crops, and inventory and sales of livestock and poultry.

Changes in the farm definition also affect the comparability of data. In general, data for 1978 and 1974 would be directly comparable with data for 1969 and earlier censuses only for farms with sales of $2,500 or more because the data for these farms are not affected by changes in the farm definition. A difference in timing and the change from personal interview to mail enumeration affect comparability with data from censuses prior to 1969. The effect of the 1974 definition change for selected State and county totals is shown in appendix B.

Dollar figures shown for expenses and agricultural product sales have not been adjusted for changes in price levels between census years. Crop and livestock production and sales and expense data are for the calendar year 1978, except for a few crops (such as citrus) for which the production year overlaps the calendar year. Inventories of livestock, poultry, and other specified items are as of December 31, 1978. The reporting period and inventory date are the same as for the 1974 and 1969 censuses.

Censuses prior to 1969 were taken by enumerators, each assigned to a specific geographic area. Field work for the 1959 and 1964 censuses was completed mainly in October, November, and December of the reference year. Livestock and poultry inventories for these two censuses were as of the time of enumeration. Other variations in the time of enumeration occurred prior to 1959.

**MAJOR CHANGES IN DATA COLLECTED**

Unusually strong adverse reaction to the length and content of the 1974 census report form stimulated an intensive review and restatement of all data inquiries accepted for collection on the 1978 census report form. Data users were requested to provide the Bureau with their data requirements, including the level of publication needed—county, State, or national. Each data item requested was reviewed to determine if it was needed at the county level and if so, whether on a complete or sample basis. Some data items needed only at the State or regional level were relegated to one or another of the follow-on surveys scheduled to be conducted in 1980 for calendar year 1979. By eliminating many items included on the 1974 report form, redesigning the form to accommodate two columns of items per page, and converting many more items to write-in status, especially in the crops sections, the report form was reduced from a 20-page booklet to a 4-page form for most farms and a 5-page form for certainty and sample farms. Data items on the 1974 report form which were eliminated on the 1978 report form were:

- Type of rental arrangement
- Sales of forest products
- Commercial fertilizer used for specific crops
- Irrigation methods and quantity of water used
- Drainage
- Grain storage facilities
- Futures markets
- Contracts
- Injuries and illnesses
- Other production expenses
- Income and expenses from farm-related sources
- Farm credit
- Family income from off-farm sources

Much of the detailed data collected in 1974 for costs of materials for individual types of agricultural chemicals and for quantities and costs of several feed categories including roughages purchased were deleted from the report form. In addition, many of the redundant totals used on the 1974 report form for cross checking data, especially in the production expenses and value of agricultural products sold sections, were eliminated.

The following high priority new data items were added to the 1978 report form:

- Set-aside acres in Federal Farm Program
- Government Commodity Credit Corporation (CCC) loans for grain and cotton
- Direct sales to consumers
- Foreign ownership of farmland
- Greater detail on expenses for energy
FOLLOW-ON SURVEYS AND THE CENSUS OF HORTICULTURAL SPECIALTIES

Integral to each census of agriculture program are the follow-on surveys conducted after the main census. The purpose of these specialized surveys is to collect additional, much needed agriculture-related information from highly specialized operations or from only a sample of farms without burdening all farm operators. Thus, allowing the use of a shorter report form for the general census. The follow-on surveys are limited to high priority data items that yield United States, regional, or State level estimates, which in and of themselves or in association with general census data, are used as the basis for current decisionmaking and future planning.

Data from the Farm Finance, the Farm and Ranch Irrigation, and the Farm Energy Surveys, conducted in 1980 covering calendar year 1979, are published in Volume 5, Special Reports, of the 1978 Census of Agriculture.

The Farm Finance Survey provides detailed farm financial data, including debts, expenses, taxes, credits, assets, and farm and off-farm incomes for farm operators. Many of these items as well as detailed data concerning land ownership and landlord characteristics are also being collected from the landlords of the farms involved in the survey.

The Farm and Ranch Irrigation Survey provides high priority data on water use by irrigated farms. Included in the data are: acreage irrigated, yields for irrigated and nonirrigated crops, quantity of water used, methods of distribution, types of pumps, and number of wells.

The Farm Energy Survey provides detailed data on energy purchased by type of energy source, storage capacity, and selected kinds of energy-consuming machinery and equipment.

The 1979 Census of Horticultural Specialties covers the operations of producers of nursery and greenhouse products, mushrooms, and sod in much greater detail than the main census of agriculture. This census has been conducted in 1890, 1930, 1950, and every 10 years since, in association with the census of agriculture. Data for this census are published in Volume 5, Special Reports.

DISCLOSURES

In many tables, data are suppressed and a (D) is used instead of a number. To ensure the confidentiality of information on a characteristic of an individual farm, it is necessary to suppress data when the value of an item for one or two farms can be definitely or approximately determined by mathematical manipulations.

Suppressions of data made within frequency distributions are accomplished in a way that will maintain maximum integrity of the frequency groups as suppressions are made whenever possible in adjacent frequency classes. This allows the user, by subtraction from the total, to have a farm count and total quantity reported for the combined suppressed frequencies. Although the published frequency data are not complete, the truncated frequency distribution is available for analysis purposes.

1974 DATA CORRECTIONS

Some 1974 data have been revised since the 1974 volume I publications were released. The major revisions were for:

Madera County, California—number of heavy breed turkeys sold and related data.
Maricopa County, Arizona—acreage of improved pecans and related data.

DEFINITIONS AND EXPLANATIONS

Definitions and explanations of terms in this section provide more detailed descriptions for selected items and terms than are available on the report form or in the tables. Differences in definitions between censuses, data deficiencies, and special processing performed for individual or related data items are also explained. For an exact wording of the questions on the sample and nonsample forms used in 1978 for the conterminous United States, and the information sheet which accompanied these forms, see appendix D.

For all tables, historical data are shown whenever individual items are comparable, otherwise an (NA) is used. Some historical data may differ slightly from totals included in prior census publications due to rounding of fractions and dollar values.

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 operation. Large acreages of woodland or wasteland held for nonagricultural purposes were deleted from individual reports during the processing operations.

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. Except for open range and grazing land used under government permits, all grazing land was included as “land in farms” provided it was part of a farm or ranch. Grazing land operated by grazing associations was to be reported by the person chiefly responsible for conducting the business of the association. All land in Indian reservations used for growing crops or grazing livestock was to be included as land in farms. Land in Indian 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 total land area of counties and States shown for 1978 represents the land area as determined by records and calculations updated as of January 1, 1979. These data are updated periodically; however, the acreage shown for 1978 are essentially the same as in 1974. Any differences between the land area in 1978 and 1974 are due to annexations, disincorporations, 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 were raised or produced. It was usually the county containing all or the largest proportion of the land in the farm. For a limited number of 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 1974 census and prior special surveys as having more than one separately reportable farm unit. Other reports received showing land in more than one county were separated into two or more reports if the data would significantly affect the county totals. These reports were assigned to the appropriate counties during office processing.

Value of land and buildings—Farm operators receiving the sample form 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 respondent’s estimate of what the land and buildings would sell for under current market conditions. For 1978, this information is estimated from the replies of a sample of farms; whereas for 1974, all farm operators were asked to provide these data. If the value of land and buildings was not reported, it was estimated during processing by using the average value of land and buildings from a similar farm in the same geographic area.

Other land—This category includes land in house lots, barn lots, ponds, roads, wasteland, etc. The definition of “other land” is the same in 1978 and 1974 only for farms with sales of $2,500 or more. In 1974, for farms with sales of less than $2,500, “other land” included pastureland and rangeland other than cropland and woodland pasture in addition to land in house lots, barn lots, ponds, roads, and wasteland.

Land set aside in the Federal Farm Program—The 1978 report form included a new inquiry on the number of acres set aside in 1978 under the provisions of the Federal Farm Program. These data are for acres of cropland taken out of production by growers of wheat, corn, grain sorghums, and barley, and instead planted in cover crops, soil-improvement grasses, etc. No information was obtained as to which grains would have been grown on the acres set aside.

Foreign ownership of agricultural land—An inquiry measuring the impact of foreign ownership of agricultural land was added to the 1978 report forms. All farm operators were asked to report the number of acres owned by individuals who are not U.S. citizens; or owned by foreign-held corporations, unincorporated associations, or foreign governments.

In some cases, operators using land owned by others may not know the beneficiary owner of the land or, if the owner is known, they may not know the citizenship of the landlord. Therefore, a “don’t know” category was included on the report form. Corporations with 50 percent or more of the stock held by foreign investors were considered foreign owned. Any land owned and operated by such corporations was included as land held under foreign ownership.

County summary table 36 provides operators response to the foreign ownership inquiry. Counts are provided for those responding “yes,” “no,” “don’t know,” and “no response.” No attempt was made to contact nonrespondents.

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, marketing, etc. The operator may be the owner, a member of the owner’s household, a salaried manager, a tenant, a renter, or a sharecropper. If he/she rents land to others or has land worked on shares by others, he/she is considered the operator only of the land which he/she retains for his/her own operation. For partnerships, only one partner is counted as an operator. If there is no clear-cut partner in charge, then the senior or oldest active partner is considered to be 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 operations.

Operator characteristics—Data on characteristics such as residence, race, Spanish origin, age, sex, principal occupation, and off-farm work were collected from all operators in 1978. In the 1974 census, operator characteristics were collected only for all farms with sales of less than $2,500 and for farms with sales of $2,500 or more operated by individuals (sole proprietorships) and partnerships. If operator characteristics of race, age, sex, and principal occupation were not reported for 1978, they were derived based on reports with similar acreage size, tenure, and sales size. No adjustments were made for nonresponse to residence, Spanish origin, and off-farm work.

Extensive verification and recontacting were done for positive responses to Spanish origin, especially in Southern States. It was found that a number of these responses were in error, apparently the word American in “Mexican American” was mistaken as American origin.

Write-in entries of “other” race were clerically reviewed and recoded where necessary; entries without an accompanying write-in description were not verified by recontacting the respondent. Based on demographic classifications, “other” race is limited to native non-Spanish populations of Central and South American countries.

In the presentation of data on race of operator, the classification “Black and other races” includes Blacks, American Indians, Asian or Pacific Islanders, and any other separate racial group excluding White. For the 1978 census, operators of
Spanish origin are tabulated by reported race. Prior censuses included Spanish origin as "White" whenever separate data for the White race were shown.

The 1978 Census of Agriculture is the first census to collect data on the sex of the operator. For farm operations where both husband and wife participated, the response was determined by the parties involved.

**Selected production expenses**—Data on selected production expenses incurred in 1978 were requested from farm operators reporting on the sample form. Only selected production expenses were requested; thus, the expense data cannot be used in combination with gross sales to calculate net farm income. The 1974 census attempted to gather selected expenses plus a category "all other production expenses" to arrive at total expenses. This category was to include items such as depreciation, taxes, interest, rent, and insurance for the farm business. Because of the burden to respondents and inaccuracy in reporting, the "all other production expenses" inquiry was not included on the 1978 report form. The 1979 Farm Finance Survey provides estimates on net farm income.

For 1978, as with earlier censuses, expense data in some cases were not fully reported especially by operations producing crops, livestock, or poultry on a contract basis. Many such operators were unable or unwilling to estimate the value of production inputs furnished by the contractor. Estimates were made for individual expense items based on reported crop and livestock information, or on averages or ratios of expense items reported by similar farms in the same geographic area.

**Commercial fertilizer**—The expense for commercial fertilizer is the amount spent on fertilizer during 1978, excluding the cost of application. Some fertilizer purchased in 1978 may not have been applied during the year. If the fertilizer was applied by someone other than the operator, the cost of application is included as an expense for customwork, machine hire, and rental of machinery and equipment. Some operators may have included the cost of application with the amount spent on fertilizer.

**Other agricultural chemicals, including lime**—Expenses include the cost of all insecticides, herbicides, fungicides, other pesticides, lime, etc., excluding costs of application. Data exclude commercial fertilizer purchased.

**Customwork, machine hire, and rental of machinery and equipment**—This expense represents 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 labor used on rented or hired machinery is included as a hired farm and ranch labor expense.

**Energy and petroleum products**—More extensive data on energy usage for the farm business were collected in the 1978 census than in prior censuses. Data were collected on expenses, gallons purchased, and storage capacity for gasoline; diesel fuel; LP gas, butane, and propane; and fuel oil. In addition, data on expenses for natural gas; kerosene, motor oil, and grease; electricity; and all other energy sources were collected. Data for 1974 include only storage capacity and expenses for gasoline; diesel; LP gas, butane, and propane; and a combined total expense for motor oil, grease, piped gas, kerosene, and fuel oil. The 1978 energy data were collected from a sample of farms. Additional data on energy usage and storage capacity are available from the 1979 Farm Energy Survey.

Caution should be used in evaluating storage capacity. Farms not reporting storage capacity were not identifiable from farms with no storage capacity; therefore, the totals underestimate the actual storage capacity available.

**Value of agricultural products sold**—This item represents the gross market value before taxes and production expenses of all agricultural products sold or removed from the place in 1978 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, and others associated with the operation. The value of agricultural products sold represents the sum of all crops including nursery products sold, and livestock and poultry and their products sold. It does not include income from farm-related sources such as customwork or agricultural services, or income from nonfarm sources. For 1974 and 1969, the value of agricultural products sold included sales of forest products from farms and ranches.

The value of crops sold in 1978 does not necessarily represent the sales from crops harvested in 1978. Data include sales from crops produced in earlier years and exclude some crops produced in 1978, but held in storage and not sold in 1978. For crops sold through a co-op which made payments in several installments, only the total value received in 1978 was to be reported.

The value of agricultural products sold was collected from all operators. Where the operator failed to report a value of sales, estimates were made based on the amount of crops harvested or the number of livestock or poultry sold. Extensive estimation was required for operators growing crops or livestock under contract.

Caution should be applied when comparing sales in 1978 with sales reported in earlier censuses due to the extreme fluctuations in per-unit prices between census years.

**Income from machine work, customwork, and other agricultural services**—This category consists of gross income received during 1978 by farm operators for providing machine work, customwork, and other agricultural services for others such as plowing, planting, harvesting, etc. Entries were deleted when duplicate information was reported in the 1978 Census of Agricultural Services, or when entries were large enough to consider the agricultural services activity separate from the farm or ranch. The agricultural services part of a farming operation was generally considered a separate operation when income from agricultural services was greater than $500,000, or when it was $10,000 or more and greater than the value of agricultural products sold. Data for establishments primarily engaged in agricultural services are published separately in volume 3.
Value of agricultural products sold directly to individuals for human consumption—This item represents the value of agricultural products produced and sold directly to individuals for human consumption from roadside stands, farmers’ markets, pick-your-own sites, etc. By definition, it excludes nonedible products such as nursery products, cut flowers, wool, grains, etc. Sales of agricultural products by vertically integrated operations through their own processing and marketing operations were excluded where identified.

Fertilizer and lime—Detailed inquiries on acreage fertilized and tonnage of fertilizer applied by crop, which were included on the 1974 census form, were not collected in 1978. Data collected for 1978 are limited to total acres of cropland fertilized excluding cropland used only for pasture, and total acres of pastureland and rangeland fertilized. Data on lime use were requested in both 1978 and 1974. Land fertilized and limed data were collected from a sample of farms in 1978. Total acres of cropland fertilized in 1974 were obtained by adding the acres of individual crops fertilized and, therefore, may include duplication where two or more crops using the same acreage were each fertilized during the year.

Irrigation—The 1978 report forms included inquiries on acres irrigated for specific crops and total acres irrigated for harvested cropland, pastureland, and rangeland, and any other land. Data on methods of irrigation and estimated quantity of irrigation water used by farms and ranches collected in the 1974 and 1969 censuses are available from the 1979 Farm and Ranch Irrigation Survey and are included in Volume 5, Special Reports. Irrigation data collected on the 1978 report form are summarized in more detail in volume 2, Part 9, Irrigation on Farms and in Volume 4, Irrigation, which also includes data from off-farm water suppliers covered in the 1978 Census of Irrigation Organizations.

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 the State average price. 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 Economics, Statistics, and Cooperatives Service of the U.S. Department of Agriculture. Prices applied to other livestock and poultry were census-derived averages based primarily on reported value of sales in the 1978 Census of Agriculture. The 1974 and 1969 data were developed in a similar manner.

Poultry hatched—The 1978 data include all poultry hatched during the year that were placed or sold; whereas for 1974, data include only poultry sold. For example, chickens hatched and raised for layer replacement on the same farm are included in 1978 data for poultry hatched, but excluded from 1974 totals. The value of hatchery sales is included in the category “Poultry and Poultry products.”

Fish and other aquaculture products—The raising of fish and other aquaculture products in captivity was included as agricultural production by the 1972 Standard Industrial Classification, and data for such operations were included in the agriculture census for the first time in 1974. The value of fish and other aquaculture products sold is included in the category “Other livestock and livestock products.” Production in salt water was considered not to be in captivity and was excluded.

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 for pollination of crops). The completeness and accuracy of these data are affected by the fact that some bee operations may not have been on the mail list and some operators on the mail list may not have considered beekeeping to be an agricultural operation, and therefore did not report.

Citrus enumeration—For the 1978 census, reports for selected citrus caretakers in Arizona, Florida, and Texas were obtained by direct enumeration. 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 report form. A citrus caretaker is an organization or person caring for or managing citrus groves for others. 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 number of acres of citrus. The names on the lists were matched to completed grove owners’ reports to eliminate duplication. The caretaker was also 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 again. In the 1978 census, 8 caretakers in Arizona reported 250 grove owners having 12,000 acres of citrus; the 100 caretakers in Florida reported 6,600 grove owners having 240,000 acres of citrus; and 27 caretakers in Texas reported 1,500 grove owners having 30,000 acres of citrus.

More detailed information by State and county are included in volume 2, part 6.

Crop year or season covered—Acres and quantity harvested are for the calendar year 1978 except for citrus fruits, avocados, and olives; vegetables in Florida; sugarcane in Florida and Texas; and pineapples and coffee in Hawaii.

Citrus fruits—The data relate to the crops harvested from the bloom of 1977 for the 1977-78 marketing season.

Avocados—The data for California relate to the quantity harvested from November 1, 1977 through November 30, 1978; the data for Florida relate to the quantity harvested or to be harvested from April 1978 through March 1979.

Olives—The data relate to the quantity harvested from the bloom of 1977 for the October 1977 to March 1978 harvest season.

Vegetables—The data for Florida relate to the crop harvested for the September 1, 1977 through August 31, 1978, harvest season.
Sugarcane—The data for Florida and Texas relate to the reported cuttings from November 1977 through April 1978.

Pineapples and coffee—The data for Hawaii for pineapples relate to quantity harvested for the year ending May 31, 1978, and coffee for the 1977-78 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 products; in Hawaii, taro, ginger root, and lotus root. Totals for crops reported in tenths 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. The 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, cropland in cultivated summer fallow, or cropland idle.

For crops grown purposely for grazing, quantity harvested was not reported. Acres for these crops were to be reported as “cropland harvested” and not as “cropland used only for pasture or grazing.” This procedure applies to the following crops:

- Corn cut for dry fodder, hogged or grazed
- Cowpeas hogged or grazed or cut for silage
- Sorghums hogged or grazed
- Soybeans hogged or grazed or cut for silage

Quantity harvested was not obtained for crops such as vegetables, nursery and greenhouse products, and soybeans plowed under.

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 or for the individual crop acreages.

Data for hay represent all hay crops, including grass silage and hay crops cut and fed green. 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.

Crop units of measure—For some crops, the operator could report quantity harvested in a unit of measure currently in use in the area. These crops were: Corn for grain or seed, in bushels shelled or hundredweight shelled; sorghums for grain or seed, in bushels or pounds; rice in 100-lb. bags, bushels, or 162-lb. barrels. Corn for grain and sorghums for grain are published in bushels and rice in 100-lb. bags. 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 United States were prelisted (see sections 2 and 3 of the report form). For the 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 (see sections 4, 5, 6, 7, and 8 of the report form). 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. Crops not coded by the respondent were coded during processing before keying. 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 of the report, 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 unusual crops for the area were examined to minimize the possibility that they were in error.

Comparability of crop data—For the 1974 and 1969 censuses, data for all crops are available for farms with sales of $2,500 or more while only data for the major crops—corn, sorghums, soybeans, peanuts, wheat, cotton, tobacco, potatoes, hay, vegetables, land in orchards, and berries are available for all farms. For 1978, data for all crops are available for farms with sales of $2,500 or more and for all farms.

For a number of commodities, less detailed data were collected in 1978 than in 1974. In these instances, 1974 data have been combined to provide comparable figures wherever possible.

The “acres of vegetables harvested” in 1978 and 1969 was the summation of the acres of individual vegetables harvested,
but in 1974 it was the total land used for vegetable crops. For “land used for vegetable crops,” the acres were to be reported only once even though two or more harvests of a vegetable or more than one vegetable were harvested from the same acres.

The “other crops” in the tables are not comparable from census to census as crops are added and deleted from the report form each census.

Value of crop production—This item represents the estimated value of all crops harvested during the 1978 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 in most part from publications of the Economic, Statistics, and Cooperative Service, U.S. Department of Agriculture (USDA). When USDA estimates were not available, Bureau of the Census statisticians made estimates using available sources such as data from adjacent States, respondents, report forms, county extension agents, and other persons knowledgeable about specific crops.

“See Text” References

Items in the tables which carry the note “See text” are explained or defined in this section. Also, additional definitions and explanations for some items are provided.

Data for 1978 are based on a sample of farms—Sections 22 through 27 of the census report form 78-A1(S), which include inquiries on commercial fertilizer and lime, chemicals, machinery and equipment, expenses for energy and petroleum products, selected production expenses, and value of land and buildings, were requested of all certainty (large) farms and approximately 20 percent of all other farms. As these data are subject to sampling error, estimates of the sampling reliability of county totals for selected items are shown in table D.

Farms operated by Black and other races—For 1974 and 1978, “other races” includes American Indians, Asian and Pacific Islanders, and all other racial groups other than White. The 1969 data are limited to farms operated by Blacks. Additional information on race of operator is provided under “operator characteristics”.

All other races—This category is limited to native non-Spanish populations of Central and South American countries.

1974 data apply only to individual or family operations (sole proprietorships) and partnerships—For 1974, farm operator characteristics were not collected from corporations, cooperatives, prison farms, grazing associations, and Indian reservations. For 1978, characteristics and occupation of the senior partner or person in charge were collected from all farms, regardless of the type of organization.

Other type of organization—This category includes cooperatives, estates or trusts, prison farms, grazing associations, and Indian reservations.

Market value of agricultural products sold—This item represents the gross market value, before taxes and expenses, of all agricultural products sold in the census year including livestock and poultry and their products, and crops including nursery products and hay. The data include landlords’ and contractors’ shares. The 1974 and 1969 data include sales of forest products.

Farms with value of agricultural products sold less than $2,500—In 1978, this category includes all farms, except abnormal farms, with sales less than $2,500. In 1969 and 1974, farms reporting sales less than $2,500 but having the production potential for sales of $2,500 and over are included in the category farms with sales of $2,500 and over. In frequency distributions, the 1969 and 1974 farms with potential sales of $2,500 and over are included in the $2,500 to $4,999 sales group.

Other livestock and livestock products—Production of fish and laboratory animals is included in this category in 1974 and 1978; whereas, production of these items was excluded entirely from the 1969 census.

Poultry hatched—For 1978, this category includes all poultry hatched during the year that were placed or sold; whereas for 1974, it only included poultry sold. Incubator egg capacity on December 31, 1978, is tabulated under the column heading Inventory and the number of poultry hatched is under the heading Sales.

Worms—For 1978, the production of worms was separately identified; whereas for 1974, it was not. Inventory consists of the number of standard worm beds in production. A standard worm bed was considered to be 24 cubic feet measuring 8 feet by 3 feet by 1 foot. Sales of worms are shown in pounds. Worm casting sales are included in livestock products sold.

Hay crops (tons, dry)—Data shown for hay represent all hay crops, including grass silage and hay crops cut and fed green. 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.

Other tame dry hay—The 1974 categories clover-timothy hay, lespedeza hay, coastal Bermuda grass hay, and other hay have been combined into “other tame dry hay” in 1978.

All vegetables harvested for sale—In 1978 and 1969, the acres of vegetables harvested is the summation of the acres of individual vegetables harvested; while in 1974, it is the total land used for vegetable crops.

Land used for vegetables—Data are 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.
Grapes (pounds)—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 fresh weight.

All nursery and greenhouse products—Data are a summation of the individual items presented.

Excludes abnormal farms—Abnormal farms include institutional farms, experimental and research farms, and Indian reservations. Institutional farms include those operated by hospitals, penitentiaries, schools, grazing associations, government agencies, etc.

Farms by standard industrial classification—See explanation under Farm Classifications.

FARM CLASSIFICATIONS

State tables 29 through 35 present detailed 1978 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. In 1974, comparable detailed data were tabulated only for farms with sales of $2,500 or more. Other tables include data classified by value of sales groups, or other characteristics of the farm or the operator.

Farms by type of organization and for farms with sales of $2,500 or more.

For 1978, corporations were subclassified by two additional characteristics into:

a. Family held.
   Other than family held.
   b. More than 10 stockholders.
   10 or less stockholders

These subclassifications were not used in the 1974 Census of Agriculture. However, somewhat similar classifications were obtained in a follow-on survey of all corporations identified in the census, which were published in volume IV, part 5 of the 1974 Census of Agriculture. This survey collected detailed information on family and nonfamily corporations, number of shareholders, and other classifications and characteristics of corporations at both the firm (company) and farm levels. In the 1969 census, corporations were classified only by number of shareholders; those having more than 10 or those having 10 or fewer shareholders.

Caution should be exercised when comparing 1978 corporation data to those of the 1974 survey and the 1969 census. For the 1974 survey, respondents were given a choice of four kinds of corporations from which to select the one that best described their operation: Family corporation, independent corporation, parent corporation (with one or more subsidiaries), and subsidiary of another corporation. Classification rules used prevented an independent, parent, or subsidiary corporation from being classified as a family corporation. The two-way choice of family held or other than family held used in 1978 has resulted in a decrease in the number and proportion of nonfamily held corporations reported.

A followup study of the 1969 data indicated that a sizable number of farms were incorrectly reported as corporations, especially in the Southern States. The 1974 survey was used to identify and correct the misreporting of corporations in that
census. In the 1978 census, some reports incorrectly had both individual or family operation (sole proprietorship) and family held corporation indicated. These reports were reviewed during the processing phase and resolved based on whether or not the respondent operated under a corporate name, had reported as a corporation in the 1974 census, or was shown to be a corporation on one or more of the administrative records used in developing the census mail list.

Farms by age and principal occupation of operator—Data on age and principal occupation were obtained from all operators for 1978. In 1974, these data were collected only for all farms with sales of less than $2,500 and for farms with sales of $2,500 or more operated by individuals (sole proprietorships) and partnerships. Detailed characteristics are shown by six age-of-operator groups in combination with occupation information for all farms in State table 31 and for farms with sales of less than $20,000 in State table 32. The principal occupation classifications used for 1978 were:

Farming—The operator spent 50 percent or more of his worktime in 1978 in farming or ranching.

Other—The operator spent 50 percent or more of his worktime in 1978 in occupations other than farming. Some operators engaged in ranching marked “other” as their principal occupation. Most such obvious errors were corrected during processing.

Farms by size—All farms were classified by size according to the total land area in each operation. 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. Detailed characteristics of all farms by 12 size-of-farm groups are presented in State table 33.

Farms by standard industrial classification—As in the 1974 census, agricultural production establishments (farms, ranches, nurseries, greenhouses, etc.) are classified by the Standard Industrial Classification (SIC) system in the 1978 census. These classifications, found in the 1972 SIC Manual, are used to promote uniformity and comparability in the presentation of statistical data collected by various agencies.

An establishment primarily engaged in crop production (major group 01) or livestock production (major group 02) is classified in the 3- or 4-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 was less than 50 percent from a single 4-digit industry, but 50 percent or more from the products of two or more 4-digit industries within the same 3-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.

All farms in the 1978 census were classified by SIC. In the 1974 census, farms with sales of less than $2,500 were not classified by SIC. In 1978, those agricultural producers having no sales reported were retained as farms and classified as general livestock farms in industry 0291 if livestock or pasture were reported or as general crop farms in industry 0191. Characteristics of all farms by selected SIC groupings are shown in State tables 11 and 35. Additional and more complete 1978 data for various SIC classifications are published in volume 2, part 8.

UNPUBLISHED DATA

Additional data have been assembled in a series of unpublished tables. The unpublished State table “Summary by Standard Industrial Classification of Farms by Value of Sales: 1978” has a format similar to State table 34. The largest size group in the boxhead is $100,000 or more. Data are shown for the following SIC groupings:

- Cash grain farms (011)
- Field crop farms except cash grain farms (013)
- Cotton farms (0131)
- Tobacco farms (0132)
- Sugar crop, Irish potato, hay, peanut, and other field crop farms (0133)
- Vegetable and melon farms (016)
- Fruit and tree nut farms (017)
- Horticultural specialty farms (018)
- General farms, primarily crop (019)
- Livestock farms except dairy, poultry, and animal specialty (021)
- Beef cattle farms, except feedlots (0212)
- Dairy farms (024)
- Poultry and egg farms (025)
- Animal specialty farms (027)
- General farms, primarily livestock (0291)

The following unpublished county summary tables include data tabulated by detailed size groupings:

- Farms by Size of Farm: 1978 and 1974
- Acreage and Value of Owned and Rented Land: 1978
- Farms by Acres of Cropland Harvested: 1978 and 1974
- Place of Residence of Operator by Occupation and Off-Farm Work: 1978
- Hawai‘i Farms by Rent: 1978
- Hawai‘i Farms by Expenses for Hired Farm or Contract Labor: 1978
- Hawai‘i Broilers Sales by Number: 1978
- Hawai‘i Cows and Heifers That Had Calved-Inventory by Number Per Farm: 1978
- Hawai‘i Beef Cows Inventory by Number Per Farm: 1978
- Hawai‘i Milks Cows Inventory by Number Per Farm: 1978
- Hawai‘i Cattle and Calves Inventory by Number Per Farm: 1978
- Hawai‘i Cattle and Calves Sales by Number Sold Per Farm: 1978
- Hawai‘i Fattened Cattle Sales by Number Sold Per Farm: 1978
- Hawai‘i Hogs and Pigs Inventory by Number Per Farm: 1978
- Hawai‘i Hogs and Pigs Sales by Number Sold Per Farm: 1978
- Hawai‘i Feeder Pigs Sales by Number Sold Per Farm: 1978
- Hawai‘i Other Hogs and Pigs Sales by Number Sold Per Farm: 1978
- Hawai‘i Sheep and Lambs Inventory by Number Per Farm: 1978
- Hawai‘i Sheep and Lambs Sales by Number Sold Per Farm: 1978

Data similar to that shown in State table 28 for the acreages of crops harvested and production by acreage size have been summarized at the county level, but have not been tabulated.
These summaries can be tabulated at a minimal cost depending on the detail of data requested.

For information on the availability and cost of unpublished tabulations, please write to the Chief, Agriculture Division, Bureau of the Census, Washington, D.C. 20233.

NONSAMPLING ERRORS

Every census or survey is subject to errors. In addition to sampling variability, errors may arise from such sources as incorrect or incomplete reporting, processing, and the inability to obtain a report from each eligible reporting unit.

Reported data in the census may be incorrect as a result of the misunderstanding of questions or because of the use of estimates in reporting. During processing, adjustments were made to data items which appeared to be inconsistent with other items reported for the same farm.

Respondents may have failed to provide all of the information requested. In some cases, the respondent may have indicated the presence of an item but not the amount. Imputations were made for missing data on the quantities and sales of crops and livestock but no imputations were made for place of residence or foreign ownership of land.

Careful efforts were made to keep errors introduced during clerical and electronic processing to a controlled level through the use of quality control, verification, and check measures on specific operations.

An adjustment was made for nonrespondent operations on the mail list. This adjustment employed sampling of both nonrespondent and respondent cases and variation from the adjustment is measured in sampling error; however, any systematic bias is not measured.

CENSUS COVERAGE

Although a complete and fully accurate count of farms, farmland, and farm production is the aim of each nationwide census of agriculture, the complex structure of America’s agriculture makes this aim difficult to achieve. Among the complexities are the many places to be included, the variety of arrangements under which farms are operated, the continuing changes in the relationship of operators to the farm operated, the expiration of leases and the initiation or renewal of leases, the problem of obtaining a complete list of agricultural operations, the difficulty of locating and identifying some types of farms, the operator’s absence from the farm during the data collection period, and the operator’s opinion that part or all of the operation does not qualify and should not be included in the census.

An evaluation of coverage has been conducted for the contiguous United States (48 States) for each census of agriculture since 1945. Although the primary purpose of these evaluations is to identify problem areas and supply evidence as a basis for improvements, they also provide users of census data with estimates of the completeness of census counts. The results of the coverage evaluation study were published for the 1974 census in Volume IV, Special Reports, part 3. This report included estimates of the net percentage of all farms missed in the census.

For Alaska and Hawaii, supplemental lists of farm operators obtained from the U.S. Department of Agriculture are used in addition to the administrative lists used in other States. The use of these lists ensures coverage of most farms. Such lists have been used to obtain satisfactory coverage in Alaska for several censuses.

The supplemental lists used for Hawaii in the 1978 census for the first time added substantially to the coverage, especially for smaller farms. Although no separate coverage evaluation information is available for Hawaii for comparison of recent censuses, data for 1978 appears much more complete. Therefore, comparison of 1978 data with that of earlier mail censuses should be made with caution.

STATISTICAL ADJUSTMENTS

Report forms were obtained and tabulated for all the identified larger farms (in general, those with expected sales of $80,000 or more). In the few instances where the operator did not supply the required information, data were obtained from secondary sources. By means of detailed, programed edit specifications, adjustments or corrections were made during the computer edit operation for internally incomplete or inconsistent data. The review procedures provided for computer printouts of edit changes that exceeded specified limits for the item. These changes were then reviewed for reasonableness by members of the processing staff and necessary corrections made.

Nonresponse

The statistics for each State and county were adjusted to account for nonrespondent smaller operations. The number of farms for which adjustment was made was estimated on the basis of the results of a canvass of a random sample of mail list addressees who did not respond to the census during the regular followup period. The canvass, using an abbreviated form, was accomplished with the use of the mail and telephone. The sample for each State was designed to provide estimates of the number of nonrespondent farms with a relative standard error of approximately 6 percent. However, approximately one third of the sample could not be contacted resulting in a potential bias in the estimates. The sample estimate of the number of nonrespondent farms at the State level was allocated to strata at the county level using the number of nonrespondents and the proportion of census farms among respondents. A sample of respondent data records was selected by stratum and weighted to represent the nonrespondent farms.

Table A shows for selected items for the State the percent of the published total that the whole farm nonresponse adjustment represents. Adjustment for individual item nonresponse on respondent forms is not included in the percentages. These percentages indicate the potential for bias in published figures resulting from nonresponse, i.e., the extent to which the actual data for nonrespondents may not agree with the nonresponse adjustments. The probable range of difference is unknown, However, the degree of uncertainty regarding the accuracy of
the data increases as the percentage of the total represented by the nonrespondent adjustment increases.

Reliability of Census Estimates

The only source of sampling variability affecting the data for Hawaii is from the imputation for nonrespondents. This is expected to be small and estimates are not included.

The sampling involved in the imputation for nonrespondents affects all data items at all geographic levels of tabulation. However, farms above specified size limits were not eligible for selection to represent nonrespondents. The size limits varied by State from $60,000 to $150,000 and from 1,000 to 2,000 acres. As a result of these limits, the sampling variability arises primarily from smaller farms.

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<tr>
<td>Value of agricultural products sold</td>
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</tr>
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<td>Harvested cropland</td>
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<td>Corn for grain or seed acres</td>
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<td>Wheat for grain acres</td>
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<tr>
<td>Hens and pullets of laying age</td>
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<td>Hogs and pigs</td>
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<th>Definition used for 1959, 1964, and 1969</th>
<th>Operations excluded by current definition but not by 1959 definition</th>
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B-1
APPENDIX C. Report Forms

SECTION 1 ACREAGE IN 1978

All the land you operated during the year, if changed during the year, refer to the INFORMATION SHEET, Section 1.

1. All land owned, rented, or used by you, your spouse, or by the partnership, corporation, or organization for which you are reporting. Include ALL LAND, REGARDLESS OF LOCATION OR USE. Cropland, pastureland, idle land, woodlots, etc.

2. All land rented or leased from OTHERS, including land worked by you or他人, used rent free, in exchange for services, payment of taxes, etc. Include leased Federal, State, and railroad land. (DO NOT include land used on a per-head basis under a grazing permit). Also complete item 5 below.

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

4. ACRES IN THIS PLACE — Add all acres owned (item 1) and acres rented to OTHERS (item 3), and enter the result in this space.

For this census report these are the “ACRES IN THIS PLACE.” If the entry is zero please refer to the INFORMATION SHEET, Section 1.

5. If you rented land from OTHERS (item 2) enter the following information for each landlord.

<table>
<thead>
<tr>
<th>Name of landlord</th>
<th>Mailing address (include ZIP code)</th>
<th>Number of acres</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

List additional landlords on a separate sheet of paper.

6. If you rented land to OTHERS (item 3), enter the following information for each renter.

<table>
<thead>
<tr>
<th>Name of renter</th>
<th>Mailing address (include ZIP code)</th>
<th>Number of acres</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

List additional renters on a separate sheet of paper.

a. Of the land you rented or leased to others, how many acres did you own? None 000 Acres 000

7. During 1978, did you have any Federal or State grazing permit on a per-head basis, such as Forest Service, Taylor Grazing, Indian Reservations, etc.? Yes 000 No 000

8. How many sets aside acres did you have in the Federal Farm Program in 1978? None 000 Acres 000

9. LOCATION OF AGRICULTURAL ACTIVITY FOR THIS PLACE

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

b. If you also have agricultural operations in any other county(ies), enter the county name(s), etc.
### Appendix C—Continued

#### Section 4
Was there a combined total of 20 or more nut trees, banana plants, coffee trees, or fruit trees including citrus on this place in 1987? (Do not include abandoned trees or plantings.)
-  ☐ YES — Complete this section
-  ☐ NO — Go to section 6

1. Total acres in bearing and nonbearing fruit orchards, groves, coffee trees, nut trees, and banana plants.

2. Report the following information for each crop even if not harvested because of low prices, or damage from weather. For interplanted trees, estimate the area covered by each kind of fruit.

<table>
<thead>
<tr>
<th>Crop Name</th>
<th>Code</th>
<th>Number of Trees or Plants of Each Age</th>
<th>Acres All Ages</th>
<th>Quantity Harvested</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Nonbearing Age</td>
<td>Bearing Age</td>
<td>Whole Acres</td>
</tr>
<tr>
<td>Avocado</td>
<td>235</td>
<td>2</td>
<td>2</td>
<td>/10</td>
</tr>
<tr>
<td>Banana</td>
<td>341</td>
<td>2</td>
<td>2</td>
<td>/10</td>
</tr>
<tr>
<td>Coffee (1977-98 crops)</td>
<td>195</td>
<td>1</td>
<td>2</td>
<td>/10</td>
</tr>
<tr>
<td>Guava</td>
<td>193</td>
<td>2</td>
<td>2</td>
<td>/10</td>
</tr>
<tr>
<td>Limes</td>
<td>285</td>
<td>2</td>
<td>2</td>
<td>/10</td>
</tr>
<tr>
<td>Macadamia nuts</td>
<td>325</td>
<td>2</td>
<td>2</td>
<td>/10</td>
</tr>
<tr>
<td>Mangoes</td>
<td>196</td>
<td>2</td>
<td>2</td>
<td>/10</td>
</tr>
<tr>
<td>Oranges</td>
<td>197</td>
<td>2</td>
<td>2</td>
<td>/10</td>
</tr>
<tr>
<td>Papayas</td>
<td>215</td>
<td>2</td>
<td>2</td>
<td>/10</td>
</tr>
<tr>
<td>Passion fruit</td>
<td>319</td>
<td>2</td>
<td>2</td>
<td>/10</td>
</tr>
<tr>
<td>Plums</td>
<td>243</td>
<td>2</td>
<td>2</td>
<td>/10</td>
</tr>
<tr>
<td>Tangerines and mandarins</td>
<td>309</td>
<td>2</td>
<td>2</td>
<td>/10</td>
</tr>
</tbody>
</table>

**All other fruit and nuts — Specify:**

<table>
<thead>
<tr>
<th>Crop Name</th>
<th>Code</th>
<th>Number of Trees or Plants of Each Age</th>
<th>Acres All Ages</th>
<th>Quantity Harvested</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Nonbearing Age</td>
<td>Bearing Age</td>
<td>Whole Acres</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Section 5
Were any nursery and greenhouse products, sod, bulbs, flowers, flower seeds, vegetable seeds, and plants, vegetables under glass or other protection, GROWN FOR SALE on this place in 1987?
-  ☐ YES — Complete this section
-  ☐ NO — Go to section 6


2. Report the following information for each product group:

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Code</th>
<th>Square Feet Under Glass or Other Protection in 1978</th>
<th>Acres in the Crop in 1978</th>
<th>Sales in 1978</th>
<th>Whole Acres</th>
<th>Tents</th>
<th>Whole Acres</th>
<th>Tents</th>
<th>Pounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bedding plants (include vegetable plants)</td>
<td>479</td>
<td>1</td>
<td>/10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulbs</td>
<td>458</td>
<td>1</td>
<td>/10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cut flowers and cut floral greens</td>
<td>465</td>
<td>1</td>
<td>/10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursery products — environmental, tying-out stock, fruit and nut trees, and vines</td>
<td>486</td>
<td>1</td>
<td>/10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foliage and flowering plants</td>
<td>481</td>
<td>1</td>
<td>/10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sod harvested</td>
<td>497</td>
<td>1</td>
<td>/10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetable and flower seeds</td>
<td>500</td>
<td>1</td>
<td>/10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greenhouse vegetables</td>
<td>503</td>
<td>1</td>
<td>/10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other — Specify</td>
<td>506</td>
<td>1</td>
<td>/10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Section 6
Other crops: Were any other crops harvested from this place in 1978? Corn, sorghum, sugar beet, lentil, radish, potatoes, or other crops not previously listed?
-  ☐ YES — Complete this section
-  ☐ NO — Go to section 9

<table>
<thead>
<tr>
<th>Crop Name</th>
<th>Code</th>
<th>Acres Harvested</th>
<th>Quantity Harvested</th>
<th>Acres Irrigated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweet potatoes</td>
<td>497</td>
<td>1 Hundred-weight</td>
<td>/10</td>
<td>2</td>
</tr>
<tr>
<td>Tans</td>
<td>485</td>
<td>1 Hundred-weight</td>
<td>/10</td>
<td>2</td>
</tr>
<tr>
<td>Sweet potatoes</td>
<td>497</td>
<td>1 Hundred-weight</td>
<td>/10</td>
<td>2</td>
</tr>
<tr>
<td>Tans</td>
<td>485</td>
<td>1 Hundred-weight</td>
<td>/10</td>
<td>2</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Crop Name</th>
<th>Code</th>
<th>Acres Harvested</th>
<th>Quantity Harvested</th>
<th>Acres Irrigated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn for grain</td>
<td>050</td>
<td>1</td>
<td>/10</td>
<td>2</td>
</tr>
<tr>
<td>Sorghum for grain or silage or seed (bushels, shelled)</td>
<td>067</td>
<td>1</td>
<td>/10</td>
<td>2</td>
</tr>
<tr>
<td>Corn for silage or green crop (tons, green)</td>
<td>079</td>
<td>1</td>
<td>/10</td>
<td>2</td>
</tr>
<tr>
<td>Hay: alfalfa (tows, dry)</td>
<td>080</td>
<td>1</td>
<td>/10</td>
<td>2</td>
</tr>
<tr>
<td>Hay: alfalfa (tows, green)</td>
<td>080</td>
<td>1</td>
<td>/10</td>
<td>2</td>
</tr>
<tr>
<td>Hay: other (tons, dry)</td>
<td>079</td>
<td>1</td>
<td>/10</td>
<td>2</td>
</tr>
<tr>
<td>Hay: other (tons, green)</td>
<td>079</td>
<td>1</td>
<td>/10</td>
<td>2</td>
</tr>
<tr>
<td>Sorghum for grain or seed (bushels)</td>
<td>067</td>
<td>1</td>
<td>/10</td>
<td>2</td>
</tr>
<tr>
<td>All other crops (bushels)</td>
<td>067</td>
<td>1</td>
<td>/10</td>
<td>2</td>
</tr>
</tbody>
</table>

**Sections 7 and 8** NOT APPLICABLE TO THIS REPORT.

---

*Observation: 12-10-85*

*Page 2*
### APPENDIX C—Continued

#### SECTION 9  GROSS VALUE of CROPS SOLD from this place in 1978, BEFORE taxes and expenses (Refer to the INFORMATION SHEET, Section B.)

Report your best estimate of the value for each of the following groups of crops sold from this place in 1978. Include the value of the landlord's and/or contractor's share, estimating if necessary.

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Grain — corn and earings for grain or seed</td>
<td>750</td>
</tr>
<tr>
<td>2. Hay and silage</td>
<td>761</td>
</tr>
<tr>
<td>3. Vegetables, sweet corn, and melons</td>
<td>782</td>
</tr>
<tr>
<td>4. Fruit and nuts — pineapples, bananas, coffee, mangoes, nuts, avocados, citrus, etc.</td>
<td>783</td>
</tr>
<tr>
<td>5. Nursery and greenhouse products — flowers, plants, etc.</td>
<td>784</td>
</tr>
<tr>
<td>6. Other crops — sugarcane, ginger root, flax, soil, lino, potatoes, etc.</td>
<td>785</td>
</tr>
</tbody>
</table>

#### SECTION 10  LAND USE in 1978

1. Copy ACREs IN THIS PLACE (less section 1, item 4, page 1) ... Acres

   NOTE — If the same land had more than one use in 1978, REPORT THAT LAND ONLY ONCE — in the use first listed below that applies. For example, cropland harvested and also pastured is to be reported only as "Cropland harvested."

2. CROPLAND

   a. Cropland harvested — include all land from which crops were harvested or hay was cut, and all land in orchards, citrus groves, vineyards, and nursery and greenhouse products

   b. Cropland used only for pasture or grazing — include rotation pasture and grazing land that should have been used for crops without manure, etc.

   c. Cropland used for cover crops, legumes, and soil-improvement grasses, but not harvested and not pastured

   d. Cropland on which all crops failed (Exception! Do not report here land in orchards and vineyards on which the crop failed. Such acreage is to be reported in item 6.)

   e. Cropland in cultivated summer fallow

   f. Cropland in pineapples or sugarcane or not harvested in 1978.

   g. Cropland idle

3. WOOLLD — Wooded land — include all wooded land and timber tracks and cutters and deforested land with young timber growth.

   a. Woodland pastured

   b. Woodland not pastured

4. Other pastured and range land — include any pastured and other cropland and woodland pasture

5. All other land — Land in house lots, pools, roads, wasteland, etc. Includes any land not reported in items 2 through 4 above.

6. TOTAL ACRES — Add the acres reported in items 2 through 8 (should be the same as item 1 above.)

#### SECTION 11  Did you or anyone else have any LAND in this place IRREGATATED at any time in 1978? 

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

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How many acres of each of the following classifications of land were irrigated in 1978?</td>
<td>None</td>
</tr>
</tbody>
</table>

a. HARVESTED LAND reported in section 10, item 2a — include land more which hay was cut and land in bearing and non-bearing fruit and nut crops

b. WOOLLDLAND or Rangeland reported in section 10, item 2b and c — include spring flooding or water diverted or caused by dams, irrigation, fishe, shem, etc., or other works

c. ANY OTHER LAND — Such as land not harvested due to complete failure, idle land, in pineapples or sugarcane or not harvested, or land in cover crops and soil-improvement grasses

4. TOTAL LAND IRRIGATED (Total of a, b, and c above.)

#### SECTION 12  Did you or anyone else have any CATTLE or CALVES on this place in 1978?

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>012</td>
<td>YES — Complete this section</td>
</tr>
<tr>
<td>012</td>
<td>NO — Go to section 13</td>
</tr>
</tbody>
</table>

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

   a. BEEF COWS — include beef heifers that have calved

   b. MILK COWS — include all dairy cows and milk heifers that have calved

   c. CADELLS — provide production of milk or cream for sale at home or ultr — include dry milk cows and milk heifers that have calved

   d. STEERS, STEER CALVES, BULLS AND BULL CALVES

2. CATTLE AND CALVES SOLD FROM THIS PLACE IN 1978 — include those sold on this place on a contract or custom basis. Also report as sold, cattle moved from this place to a feedlot for further feeding.

3. Calves weighing less than 500 pounds

4. Cattle, including calves weighing 500 pounds or more

   a. Of the total cattle sold, how many were FATTENED on this place on GRAIN or CONCENTRATES for 60 days or more and SOLD for SLAUGHTER?

   b. DAIRY PRODUCTS SOLD FROM THIS PLACE

   c. DAIRY PRODUCTS SOLD FROM THIS PLACE IN 1978

#### SECTION 13  Did you or anyone else have any HOGS or PIGS on this place in 1978?

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>013</td>
<td>YES — Complete this section</td>
</tr>
<tr>
<td>013</td>
<td>NO — Go to section 14</td>
</tr>
</tbody>
</table>

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

   a. HOGS and PIGS used or to be used for BREEDING

   b. OTHER HOGS and PIGS

2. LITTERS FARRROWED


   b. June 1, 1978 and November 30, 1978

3. HOGS and PIGS SOLD

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

#### SECTION 14  Did you or anyone else have any SHEEP or LAMBS on this place in 1978?

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>014</td>
<td>YES — Complete this section</td>
</tr>
<tr>
<td>014</td>
<td>NO — Go to section 15</td>
</tr>
</tbody>
</table>

1. SHEEP and LAMBS of all ages

   a. EWES 1 year old or older

2. SHEEP and LAMBS SHORN

3. What was the gross value of sales of sheep, lambs, and wool from this place in 1978?
### APPENDIX C—Continued

**SECTION 15** Did you or anyone else have any HORSES, REELS, FISH, OTHER LIVESTOCK, or ANIMAL SPECIALTIES in 1978?

<table>
<thead>
<tr>
<th>Inventory Number</th>
<th>Total Number Held in 1978</th>
<th>Gross Value of Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Dollars</td>
<td>Cents</td>
</tr>
<tr>
<td>Horses and ponies of all ages</td>
<td>1</td>
<td>233</td>
</tr>
<tr>
<td>Mules, burros, and donkeys</td>
<td>333</td>
<td>555</td>
</tr>
<tr>
<td>Mink and their pelts</td>
<td>836</td>
<td>1,038</td>
</tr>
<tr>
<td>Other livestock or animal specialties in captivity (enter name and code from &quot;List B&quot; below)</td>
<td>25</td>
<td>5</td>
</tr>
</tbody>
</table>

**SECTION 16** Did you or anyone else have any POULTRY such as CHICKENS, TURKEYS, DUCKS, etc., on this place in 1978? (Include poultry raised for sale to a commercial buyer.)

<table>
<thead>
<tr>
<th>Code</th>
<th>Name</th>
<th>Code</th>
<th>Name</th>
<th>Code</th>
<th>Name</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td>1</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>4</td>
<td></td>
<td>1</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>6</td>
<td></td>
<td>1</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>8</td>
<td></td>
<td>1</td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

**SECTION 17** Income from MACHINE WORK, CUSTOMWORK, and OTHER AGRICULTURAL SERVICES PROVIDED for others in 1978.

**SECTION 18** During 1978 did you SELL any crops, livestock, or livestock products DIRECTLY to INDIVIDUALS FOR HUMAN CONSUMPTION — roadside stands, farm markets, or pick-your-own, etc.? (Enter name and code from "List B" below.)

**SECTION 19** TYPE OF ORGANIZATION.

**SECTION 20** CHARACTERISTICS AND OCCUPATION OF OPERATOR (Senior partner or person in charge). (Enter information about all members of the partnership together.)
### SECTION 22
**Was any COMMERCIAL FERTILIZER, including ROCK PHOSPHATE, or LIME used on this place during 1978?**

- **NY** = Complete this section.
- **NO** = go to section 25.

<table>
<thead>
<tr>
<th>Acres</th>
<th>Number of acres on which used</th>
</tr>
</thead>
<tbody>
<tr>
<td>fertilized</td>
<td></td>
</tr>
</tbody>
</table>

- **1.** Acres of cropland fertilized in 1978, other than cropland used only for pastures reported in section 10, Item 5a. 
- **2.** Acres of grassland and range fertilized in 1978 reported in section 10, Items 5b and 4. 
- **3.** Lime (in tons) and lime used on which applied (do not include land planted or grazed or lime used for sanitation).

### SECTION 23
**Were any INSECTICIDES, HERBICIDES, FUNGICIDES, OTHER PESTICIDES, or OTHER CHEMICALS used on this place in 1978?**

- **YES** = Complete this section.
- **NO** = go to section 25.

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

- **1.** Sprays, dusts, granules, fungicides, etc. (fungicide, herbicide, insecticide, nematocide) to control:
  - a. Insects on hay and other crops
  - b. Nematodes in crops
  - c. Diseases in crops and orchards (blight, rust, etc.)
  - d. Weeds, grass, or brush in crops and pastures
  - e. Chemicals for delimitation or for growth control of crops or trimming of fruit

- **2.** Were any chemicals used for:
  - a. Insect control on livestock and poultry, including treatment of buildings.
  - b. Spraying, sanitation and tile control, etc.

### SECTION 24
**MACHINERY AND EQUIPMENT on this place on December 31, 1978**

<table>
<thead>
<tr>
<th>Estimated market value</th>
<th>Dollars</th>
<th>Cents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tractors</td>
<td>945</td>
<td>1</td>
</tr>
</tbody>
</table>

**Value of ALL machinery and equipment on this place, December 31, 1978**

1. What is the estimated market value of machinery, equipment, and implements usually kept on the place and used for the farm or ranch business? Include cars, trucks, farm tractors, hay rakes,粮食, dasheen, sprayers, pumps, motors, irrigation equipment, other equipment involving motors and such tanks, livestock feeders, grain bins and mixing equipment, etc.

2. **Automobiles**
3. **Motorcycles**
4. **Wheel tractors other than garden tractors and motor tractors**
5. **Plow plows**
6. **Grain and hay combines, self-propelled only**
7. **Comb heads for combines**
8. **Other corn pickers and pickers-threshers**
9. **Mower-conditioners**
10. **Pickup trucks**
11. **Plow, forage harvesters, shear bar or cylinder type**

### SECTION 25
**EXPENDITURES FOR ENERGY and petroleum products for the farm business during 1978**

<table>
<thead>
<tr>
<th>Expenditures</th>
<th>Gallons purchased in 1978</th>
<th>Storage capacity on this place (in gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dollars</td>
<td>Cents</td>
</tr>
<tr>
<td>Gasoline for farm business</td>
<td>964</td>
<td>0</td>
</tr>
<tr>
<td>Diesel fuel for the farm business</td>
<td>972</td>
<td>0</td>
</tr>
<tr>
<td>L.P. gas, butane, propane for farm business (4.5 lbs.)</td>
<td>974</td>
<td>0</td>
</tr>
<tr>
<td>Fuel oil for the farm business</td>
<td>976</td>
<td>0</td>
</tr>
<tr>
<td>Natural gas for the farm business</td>
<td>978</td>
<td>0</td>
</tr>
<tr>
<td>Kerosene, motor oil, grease, for the farm business</td>
<td>980</td>
<td>0</td>
</tr>
<tr>
<td>Electricity for the farm business</td>
<td>982</td>
<td>0</td>
</tr>
<tr>
<td>LP &amp;3S, butane, propane for the farm business</td>
<td>984</td>
<td>0</td>
</tr>
<tr>
<td>Fuel oil for the farm business</td>
<td>986</td>
<td>0</td>
</tr>
</tbody>
</table>

### SECTION 26
**SELECTED PRODUCTION EXPENSES paid by you and others for this place in 1978**

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 1978. DO NOT INCLUDE expenses connected with performing custom work for others; operation of nonfarm activities, businesses, or services; the processing of sugar and pineapple; or household expenses not related to the farm business.

- **1.** Livestock and poultry purchased — cattle, calves, hogs, pigs, sheep, lambs, goats, horses, chickens, turkeys, started pullets, etc.
- **2.** Total feed purchased for livestock and poultry — grain, hay, silage, mixed feeds, concentrates, etc.
- **3.** Commercially mixed feed purchased — complete, supplement, concentrates.
- **4.** Seeds, bulbs, plants, and trees purchased.
- **5.** Commercial fertilizer purchased — all forms, including rock phosphate and gypsum.
- **6.** Agricultural chemicals purchased — insecticides, herbicides, fungicides, other pesticides, lime, etc.
- **7.** Help for the farm or ranch labor (wages and transportation costs).
- **8.** Employment of hired workers, including paid family workers, how many — (1) Worked 150 days or more? (2) Worked less than 150 days?
- **9.** Contract labor — Includes expenses primarily for labor, such as harvesting of fruit, sugarbeets, vegetables, etc., performed on a contract basis by a contractor, as a group, or in other ways.
- **10.** Maintenance, machine hire and rental of machinery and equipment — include expenses for use of equipment and for custom work as grading and moving land, plowing, spraying, drilling, fertilizing, sugar beets planting, harvesting, etc.
- **11.** Contract labor — includes expenses for grading and moving land, plowing, spraying, drilling, fertilizing, sugar beets planting, harvesting, etc.
- **12.** Contract labor — includes expenses for grading and moving land, plowing, spraying, drilling, fertilizing, sugar beets planting, harvesting, etc.
- **13.** Contract labor — includes expenses for grading and moving land, plowing, spraying, drilling, fertilizing, sugar beets planting, harvesting, etc.
- **14.** Contract labor — includes expenses for grading and moving land, plowing, spraying, drilling, fertilizing, sugar beets planting, harvesting, etc.
GENERAL INFORMATION

WE NEED A COMPLETED REPORT FORM FROM EVERYONE reaching this request. Please follow the instructions given below for completing section 1. You will then be able to determine what additional information is to be provided.

1. The enclosed census report form is being used by Land Owners in all the States of the United States. Because it is meant for use in all parts of the country, it may contain sections and inquiries which do not apply to you. In this case, mark the “NONE” or “NO” box and go on to the next item or section.

2. If you receive more than one report form if you have multiple farming operations, you should complete a report for EACH SEPARATE and DISTINCT production unit, that is, 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 arrangements, and production. Return any duplicate or extra report forms in the same envelope with the report(s) you complete so we can remove the extra addresses from our mail register. In the space provided to the right of the address label of the report form you complete, write the 11-digit number from the label of the extra form or forms.

3. Partnership Operations

A partnership is an association of two or more persons having a contract to share profit or loss of an undivided estate, by you and/or your spouse, or married to an undivided estate, by you and/or your spouse, or tenancy in common. For example, whenever a tenant is a member of a partnership, please indicate that you are reporting a partnership operation and the name of the partnership. For additional information on Partnerships see section 19 below.

4. How To Enter Your Responses On The Report Form

Please enter your answers 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.

Enter whole numbers unless the "Tenths" column is provided, such as reporting acres of Irish potatoes in section 6. If you have 1/2, 1/4, or 1/10 of an acre, convert to tenths. For example convert 1/2 to 0.5, 1/3 to 0.3, 1/10 to 0.1, etc.

If you do not request classes, please give your best estimate. You may indicate "EST." (for estimated) beside the answer, if you like. For all dollar items, we need only whole numbers, although a "Cents" column is provided for those who wish to report cents.

COMPLETING THE REPORT FORM

Section 1 - ACREAGE IN 1978

This section determines the land for which you should report agricultural activities. It also provides space for reporting landlords, tenants, and locations of agricultural activities.

Changes in the Acres Operated in 1978 - Report all land that YOU USED during 1978, and the crops and livestock production on that land, even if some or all of it was no longer a part of your operation on December 31, 1978.

If you had agriculture operations at any time during 1978, but quit farming before December 31, 1978, report your 1978 crops and livestock production and sales from that land for the portion of the year that you operated the land. Please explain in the margin of the report form (or on a separate sheet of paper) that you quit farming or ranching during 1978 and give the approximate date and the name and address of the present operator, if known.

If you acquired land for agricultural operations, but did not use it for livestock or crop production in 1978, include the land in section 1. Please explain in the margin or on a separate sheet of paper.

Completing Items 1, 2, 3, and 4 of Section 1 - Use items 1, 2, and 3 to determine the acres of land that are your responsibility for the purpose of making the agriculture census report. Include all land that you were associated with in 1978, regardless of location or use, but do not include holdings of residential property not associated with agricultural operations. Report all land in whole acres in this section.

Item 1 - Land Owned - Report all land owned in 1978 whether held under title, purchase contract, mortgage, homestead, or as heir or trustee or of an undivided estate, by you and/or your spouse, or partnership, corporation, or organization for which you are accounting.

Item 2 - Land Rented or Leased FROM Others - Report all land rented or leased by you, even though the landlord may have supplied equipment, fertilizer, or other materials and/or some supervision of the work.

INCLUDE in item 2:

a. Land (for agricultural uses) that you rented FROM others for cash payments
b. Land worked on a share basis
c. Land (owned by someone else) which you used rent-free
d. Federal, State, Indian, 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 land used under Section 3 of the Taylor Grazing Act, National Forest Land, or Indian Reservation Permit Land.

Item 3 - Land Rented TO OTHERS - Cash tenants, share tenants, and share croppers are farm operators for census purposes and are responsible for making the agriculture census report for the land they operate.

INCLUDE in item 3:

a. Owned land rented TO others for cash or a share of the crops or livestock
b. Land which you rented from others and then subleased to others in 1978
c. Land rented out for residential or other nonfarm purposes, if it was part of the land reported in item 1 or 2

d. Land worked for you by someone else on a share of crop basis

The following examples show how to report crops harvested in sections 2 through 6.

Section 2 - CROPS

This is a report of crops harvested during 1978, or acreage planted in 1978 and harvested during 1979, or livestock on hand at December 31, 1978. The section covers all crops and livestock on your farm or ranch. In order to better describe the land, the crops and livestock produced, and the operator, the questions are divided into the following parts.

"Zero Acres in Place" - Should you complete the rest of this form?

If you yourself had crop or livestock activities on the land for any portion of the year, you should complete the rest of the form. See "Changes in Acres Operated in 1978." above.

If all your land was operated by a renter or sharecropper for all of 1978, you do not have to complete the entire form. In this case, you should:

1. Complete item 6 for renter.
2. Skip to section 2B and complete Name, Address, Telephone number, etc.
3. Explain briefly in the margin or on a separate sheet of paper that you did not operate the farm or ranch in 1978. For example, "All land rented out," "Sold Farm," "Retired," etc., and give the approximate date that you quit operating. If you sold your farm, please give the name and address of the current owner or operator, if known.
4. Mail the form in the return envelope provided.

Sections 2-6 CROPS

Sections 2 through 6 provide space for reporting crops harvested during the 1978 crop year from the land shown in section 1. Item 4 of your report. Please report your crops in the appropriate section. Do not include any crops grown on land rented, leased, or worked on shares by others during 1978.

Crop Irrigation - For each crop irrigated, report number of acres irrigated. Irrigation is defined as land watered by artificial or controlled means - sprinklers, furrows, or ditches, sprayers, dikes, etc. Includes acres that received supplemental, partial, and preplant irrigation. For any crop not irrigated, leave "Irrigated" blank.

How to Report Crops Harvested

The following examples show how to report crops harvested in sections 2 through 6.

Section 2 - SUGARCANE AND PINEAPPLES

In 1978, a farmer had 100 acres of sugarcane on his farm. He harvested 50 acres of sugarcane for sugar which yielded 4,500 tons of cane. He also harvested 5 acres of sugarcane for seed which yielded 250 tons. The remaining 45 acres of sugarcane were not harvested. All of the 100 acres were irrigated. His entries on the report form are shown in the following example.
Sections 3-4 - CROPS - Continued

For pineapples, report the acreage and quantity harvested during the 12 month period ending May 31, 1978. Acreages of pineapple harvested between June 1, 1978 and December 31, 1978 should be considered part of the 1979 pineapple crop area. The acreage of sugarcane and pineapple not harvested should be entered in section 10, item 4.

Two or More Crops Harvested From the Same Land (Double Cropping) - Report the total acres and production of each harvested crop in the appropriate section of the report form.

Interplanted Crops and "Skip Row" Planting - If the same crop was grown at the same time in alternating strips in the same field, report the proportion of the field used for each crop.

Vegetables - Report acres of vegetables harvested for SALE. Do not report acres of vegetables for home use. Report the total acreage of each vegetable crop harvested.

Example: You harvested 10 acres of lettuce from a field in 1978, then replanted the field to lettuce and harvested the 10 acres again. Enter only 10 acres of land from which vegetables were harvested in item 1 of section 3, but enter in 20 acres of lettuce harvested in item 2 of section 3.

Fruit and Nuts - In counting the total crop of trees, shrubs, and plants, include those that are home use as well as those maintained for sale of the production (excluding abandoned trees and plants).

If crops other than fruit and nuts were interplanted with fruit trees or plants, report the total acres for home use. Report the total acreage of each crop harvested in pounds of husked or harvested the in a field in 1978, then replanted the field to lettuce alternating strips in the same field, report the number as sold and delivered or removed from this place.

For coffee crop - Report in pounds of cherry coffee. For macadamia nuts, report the number listed in section 6 along with the additional expenses related to nonfarm activities.

For livestock - Expenditures for hired labor should not be included in the expenses for the production of crops, poultry, and other agricultural products on this place. Include expenses paid for the production of crops, poultry, and other agricultural products on this place.

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