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COUNTIES AND STATE ECONOMIC AREAS

MIDDLE ATLANTIC STATES

Prepared under the supervision of

Ray Hurley, Chief

Agriculture Division

VOLUME I PART 2

UNITED STATES GOVERNMENT PRINTING OFFICE 1952

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PREFACE

Volume I, Counties and State Economic Areas, is one of the four principal reports presenting the results of the 1950 Census of Agriculture and related programs of the Seventeenth Decennial Census. This volume, in 34 parts, presents the compilation of the information given by farm operators to Census enumerators in 1950.

The 1950 Census of Agriculture was taken in conformity with the Act of Congress providing for the fifteenth and subsequent decennial censuses, approved June 18, 1929, as amended.

The collection of the data was carried out by Census enumerators under the direction of supervisors appointed by the Director of the Census and working under the direction of Lowell T. Galt, Chief, Field Division. The planning of the census and the compilation of the statistics were supervised by Ray Hurley, Chief, Agriculture Division, and Warder B. Jenkins, Assistant Chief. They were assisted by Hilton E. Robison, Alvin T. M. Lee, Harold C. Phillips, Floyd W. Berger, Lois Hutchison, Gladys L. Eagle, Orville M. Slye, Henry A. Tucker, and Orvin L. Wilhite. The mechanical tabulation, by electrical machines, was made under the supervision of C. F. Van Aken. The maps were prepared under the supervision of Clarence E. Batschelet, Geographer.

Acknowledgment is made of the technical assistance and the loan of technical personnel by the United States Department of Agriculture in the planning, the enumeration, and the compilation of the 1950 Census of Agriculture.

SEPTEMBER 1952

UNITED STATES CENSUS OF AGRICULTURE: 1950

REPORTS

Volume I.—Counties and State Economic Areas.—Statistics for counties include number of farms, acreage, value, and farm operators; farms by size, by color and tenure of operator; facilities and equipment, farm labor, and farm expenditures; livestock and livestock products; specified crops harvested; farms and farm characteristics for commercial farms; farms classified by value of farm products sold, by type of farm, and by economic class; and value of products sold by source.

Data for State economic areas include farms and farm characteristics by size of farm, by tenure of operator, by type of farm, and by economic class.

Volume I will be published in 34 parts as follows:

Part	State or States	Part	State or States
1	New England States:		South Atlantic—Continued
	Maine.	15	Virginia and West Virginia.
	New Hampshire.	16	North Carolina and South Carolina.
	Vermont.	17	Georgia.
	Massachusetts.	18	Florida.
	Rhode Island.		East South Central:
	Connecticut.	19	Kentucky.
2	Middle Atlantic States:	20	Tennessee.
	New York.	21	Alabama.
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3	Ohio.	24	Louisiana.
4	Indiana.	25	Oklahoma.
5	Illinois.	26	Texas.
6	Michigan.		Mountain:
7	Wisconsin.	27	Montana.
	West North Central:	28	Idaho.
8	Minnesota.	29	Wyoming and Colorado.
9	Iowa.	30	New Mexico and Arizona.
10	Missouri.	31	Utah and Nevada.
11	North Dakota and South Dakota.		Pacific:
12	Nebraska.	32	Washington and Oregon.
13	Kansas.	33	California.
	South Atlantic:	34	Territories and possessions.
14	Delaware, Maryland, District of Columbia.		

Volume II.—General Report.—Statistics by Subjects, United States Census of Agriculture, 1950. Summary data and analyses of the data for States, for Geographic Divisions, and for the United States by subjects as illustrated by the chapter titles listed below:

Chapter	Title	Chapter	Title
I	Farms and Land in Farms.	VII	Field Crops and Vegetables.
II	Age, Residence, Years on Farm, Work off Farm.	VIII	Fruits and Nuts, Horticultural Specialties, Forest Products.
III	Farm Facilities, Roads, Trading Center, Farm Equipment.	IX	Value of Farm Products.
IV	Farm Labor and Farm Expenditures.	X	Size of Farm.
V	Farm Mortgages, Farm Taxes, Cash Rent.	XI	Color, Race, and Tenure of Farm Operator.
VI	Livestock and Livestock Products.	XII	Economic Class of Farm.
		XIII	Type of Farm.

Volume III.—Irrigation of Agricultural Lands.—State reports with data for counties and drainage basins and a summary for the United States, including number of enterprises, irrigation works and equipment, source of water, new capital investment since 1940, cost of irrigation water, number of farms and acreage irrigated, and quantity of water used for irrigation purposes.

The State reports will be issued as separate parts of Volume III as follows:

Part	State	Part	State
1	Arizona.	10	Nebraska.
2	Arkansas and Oklahoma.	11	Nevada.
3	California.	12	New Mexico.
4	Colorado.	13	North Dakota and South Dakota.
5	Florida.	14	Oregon.
6	Idaho.	15	Texas.
7	Kansas.	16	Utah.
8	Louisiana.	17	Washington.
9	Montana.	18	Wyoming.

Volume IV.—Drainage of Agricultural Lands.—State reports with statistics for counties and a summary for the United States. One part only. Data on land in drainage enterprises, number and types of enterprises, cost of drainage, indebtedness, assessments, and drainage works.

THE MIDDLE ATLANTIC STATES

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INTRODUCTION

INTRODUCTION

History of the census of agriculture.—The first National census of agriculture was taken in connection with the Sixth Decennial Census of Population in 1840. Since 1840, a census of agriculture has been taken in conjunction with the census of population in each decennial enumeration. Congress first provided for a mid-decennial agriculture census to be taken in 1915, but because of World War I this census was not taken. Congress again provided for a mid-decennial agriculture census to be taken as of January 1, 1925. Since 1920, there has been a Federal census of agriculture every fifth year.

Legal basis for the 1950 Census of Agriculture.—Authorization for the 1950 Census of Agriculture was made in the act of Congress, approved June 18, 1929, providing for the fifteenth and subsequent decennial censuses. This act also provided for a census of agriculture in 1935 and every 10 years thereafter.

The enumeration.—About 2 weeks prior to the census date of April 1, 1950, agriculture questionnaires were distributed to box holders in rural areas and to box holders in other areas not having city-type mail delivery in all States except North Carolina, South Carolina, Georgia, Alabama, Mississippi, Louisiana, and in 65 of the 75 counties in Arkansas. The agriculture questionnaires distributed were accompanied by a letter asking farm operators to examine the questionnaire and answer as many of the questions as possible prior to the visit of the Census enumerator. This method of enumeration was designed to help the enumerator and the farmer and to obtain more accurate information than in former censuses. Enumerators were required to visit each farm to pick up, complete, or fill the agriculture questionnaire and to obtain the required information on population and housing. This procedure enabled farm operators to become familiar with the kinds of information required for the census and also enabled them to check their records prior to the visit of the Census enumerator and to compile any data needed for answering the inquiries on the questionnaire. Even if the farm operator had filled out the agriculture questionnaire, the Census enumerator was instructed to examine the entries to determine that all required entries had been properly made.

Plans for the 1950 Census included four provisions designed to insure completeness of coverage of the census of agriculture. First, the questionnaire used for the census of population contained two possible inquiries for every family enumerated. One of these questions was: "Is this house on a farm?" In case the answer was "No," the second was: "Is this house on a place of three or more acres?" If the answer to either of these inquiries was "Yes," the Census enumerator was instructed to obtain an agriculture questionnaire from the person in charge of the place. This procedure was used in order to insure the enumeration of places, not locally considered as farms, with sufficient agricultural production to qualify as farms according to Census criteria. While this method resulted in the securing of a considerable number of questionnaires which did not meet the criteria, it did insure the inclusion of many places that might not have been enumerated otherwise.

Second, as in several former censuses, enumerators in rural areas were instructed to indicate on their maps the location of every dwelling place and farm. This procedure was intended to help the supervisor to ascertain if his enumerators had visited all parts of the enumeration districts assigned them.

Third, prior to the census, lists of the very large farms were prepared from the records of the 1945 Census of Agriculture and were reviewed in 1949 by members of the field staff of the Bureau of Agricultural Economics, U. S. Department of Agriculture (sworn in as special agents of the Bureau of the Census) for the purpose of making corrections, deletions, and additions as necessary. These lists were given to the Census supervisors who were required to check them to see that each of the farms was enumerated. The questionnaires obtained were also checked with the lists of large farms during the processing in the Washington office. (See Large Farms, p. x.)

Fourth, in most of the South, a special supplementary questionnaire (Landlord-Tenant Operations Questionnaire) aided in the enumeration of cropper and other tenant farms comprising parts of larger land holdings, plantations, etc. This questionnaire was required when two or more agriculture questionnaires were needed for a land holding. Enumerators were to list the names of the landlord and each cropper and other tenant and to give, for each listing, the information called for on the questionnaire.

Questionnaires used for the 1950 Census of Agriculture.—The number of inquiries in the 1950 Census of Agriculture varied from State to State. A total of 41 different versions of the questionnaire was used for taking the census. The questionnaires contained from 184 to 229 inquiries. Most of the differences in the number of inquiries related to crops. By using State questionnaires, it was possible to reduce the number of inquiries carried on the questionnaire for a particular State by eliminating questions, mainly for crops, which were not applicable in that State. For example, rice is an important crop in only a few States; by the use of State questionnaires, it was possible to omit the inquiry on rice from the questionnaires for all States except those in which rice is an important crop. Also, the use of a State questionnaire made it possible to have separate questions for all the important crops grown in a particular State, and to obtain reports of production in the unit of measure commonly used in that State. This variation in the number of inquiries by States (regionalization) was used in several previous censuses. It was used to a greater extent in the 1950 Census.

SAMPLING

Sampling was used for the 1950 Census of Agriculture in two ways. First, the data on farm facilities and equipment, farm labor, farm expenditures, distance to trading center, value of farm land and buildings, taxes, mortgage debt, etc. (Questions 306 through 332 of the questionnaire; see facsimile in the appendix), were enumerated for only a SAMPLE of farms. Second, the use of a sample made possible the tabulation of a greater volume of data than would have been possible if reports for all farms had been included. In fact, most of the data shown in this report by State economic areas are estimates prepared on the basis of the tabulation of data for the sample of farms. These tabulations are based on the same sample of farms as was used in the enumeration.

Description of the sample for the 1950 Census.—The sample used for the 1950 Census of Agriculture consisted of all large farms and one-fifth of all remaining farms. Farms to be included in the sample were selected during the enumeration. The Census enumerator was given a procedure for selecting the farms to be included in the sample and he was instructed not to modify this procedure in any case. He was instructed to include in the sample and to obtain the additional information (answers to Questions 306 through 332) for any farm if the questionnaire on which it was to be enumerated had a designated serial number. All agriculture questionnaires given

to Census enumerators, as well as those distributed through the mail, carried a serial number. These serial numbers ranged from 1 through 5. The designated serial number of the questionnaire for which the sample information was to be obtained was determined by comparing the serial number of the agriculture questionnaire with the serial number assigned in Washington to the enumeration district.

Crew leaders were instructed to see that the additional information required for farms in the sample was obtained for all farms on the large farm list. During the processing operations in Washington any farm not already in the sample that met the criteria for a large farm was added to the sample and if the necessary information for items to be obtained only for farms in the sample had not been secured, the required data were obtained by mail.

Description of the sample for the 1945 Census.—The sample of farms used in 1945 was only about one-third as large as that used in 1950 and was selected by a different method. In 1945, each county was divided into cross sections of small areas averaging 2.5 square miles in size and containing about 5 farms each. A sample of 1 out of every 18 of these small areas or sample segments was selected and all farms having their headquarters within the selected areas were designated as sample farms, and were enumerated on questionnaires containing the supplementary questions in addition to the questions asked of nonsample farms. In 1945, as in 1950, the sampling plan provided for the inclusion of approximately 60,000 large farms regardless of their location.

Adjustment of the sample.—An adjustment in the sample was made for the purpose of (1) improving the reliability of the estimates from the sample by a process essentially equivalent to stratifying the farms in the sample by size and economic class of farm and (2) reducing biases introduced because Census enumerators did not follow perfectly the method outlined for selecting the farms in the sample.

Census enumerators did not always correctly follow the sampling procedure for selecting farms to be included in the sample. In general, enumerators had a tendency to include the larger and better farms in the sample. Analyses indicated that more reliable estimates would be obtained if the farms in the sample were in effect stratified by size and by economic class before the estimates were prepared on the basis of the sample.

In order to adjust the sample for each economic area, counts were obtained of all farms and of sample farms by size and economic class groups. The corresponding counts for the sample were then compared with the number to be expected for the sample (the total count for all farms divided by 5) and an adjustment was made so that the sample count equaled its expected value. Adjustments were made in the sample by eliminating farms when too many were included for a specified class in an economic area or by duplicating farms when too few were included. The farms eliminated or duplicated for a class were selected at random from counties over- or under-represented in the class. The gross adjustments involved were relatively small in most areas, averaging 3 percent eliminated and 2 percent duplicated for all areas in the United States.

This adjustment procedure achieved most of the reduction in the sampling errors of the estimates for State economic areas that could have been realized by a more complicated method of estimation by which separate totals would be tabulated by size and economic class groups, estimates prepared group by group on the basis of the actual sampling ratio in the group, and the group estimates combined to provide the estimates for the economic area. This adjustment procedure also tended to reduce the effects of possible biases introduced by failure of some enumerators to follow strictly the rules for selecting the sample farms.

Reliability of estimates based on the sample.—The figures based on the tabulation of data for only a sample of farms are subject to sampling errors. When data based on only a sample of farms are shown in the same table with enumerated data for all farms, the data based on a sample are shown in italics. Approximate measures of the sampling reliability of estimates are given in State Tables 28, 29, and 30 for farms reporting and for item totals.

These measures indicate the general level of sampling reliability of the estimates, but do not include adequate allowances for sources of error other than sampling variation, as for example, errors in original data furnished by farmers. Sources of error other than sampling may be relatively more important than sampling variation, especially for totals for a State.

In general, the measures of sampling reliability presented are conservative, in that they tend to overestimate the variations in the sample estimates, because: (1) maximum figures intended to serve for all State economic areas were used and (2) the predicted limits of error do not take into consideration that complete data were tabulated for all large farms. Consequently, there is a tendency to overestimate the variations in the sample especially for groups for which the totals for large farms represent a high percentage of the item totals. Data for large farms for a number of items are given in State Table 13. The data in this table indicate for each item the proportion of the State total represented by large farms.

The estimated sampling reliability for number of farms and farms reporting specified items is given in State Table 28. Data in State Tables 29 and 30 are given to assist in determining the general level of sampling reliability of estimated totals. In State Table 30 a list of the items is given and the level of sampling reliability as shown in State Table 29 is indicated. By referring to State Table 29 in the column for the level of sampling reliability designated in State Table 30, the sampling error according to the number of farms reporting may be obtained. State Tables 28 and 29 show percentage limits, such that the chances are about 2 in 3 that the difference between the estimates based on the sample and the figures that would have been obtained from a tabulation for all farms would be less than the limit specified. However, the chances are 99 in 100 that the difference would be less than two and one-half times the percentage limit given in the table.

The data in State Tables 28 and 29 indicate that when the number of farms reporting specified items is small, the item totals are subject to relatively large sampling errors. Nevertheless, the complete detail for every classification for each item is presented to insure maximum usefulness for obtaining estimates for any combinations of items that may be desired. Percentage figures and averages derived from the tables will generally have greater reliability than the estimated totals; also significant patterns of relationship may sometimes be observed even though the individual data are subject to relatively large sampling errors.

Method of estimation.—All data shown in this report which are based on a sample of farms have been expanded to represent figures for all farms. These expanded figures were obtained by multiplying by five the totals tabulated from the sample for all except the large farms, and adding totals for large farms.

LARGE FARMS

Plans for the 1950 Census of Agriculture included special provisions to insure the enumeration of all large farm operating units. For Census purposes, any farm that met any of five criteria was considered a large farm. The criteria are shown in the following table:

Criteria

	Western States.[1]	Other States.
Land in farms	5,000 acres or more	1,000 acres or more
Total cropland (cropland harvested + cropland pastured + cropland not harvested or pastured)	1,000 acres or more	750 acres or more

[1] Ariz., Calif., Colo., Idaho, Kans., Mont., Nebr., Nev., N. Mex., N. Dak., Okla., Oreg., S. Dak., Tex., Utah, Wash., and Wyo.

Cattle of all ages	500 or more	200 or more
Sheep of all ages	4,000 or more	500 or more
Value of farm products sold or to be sold	$70,000 or more	$70,000 or more

In Alabama, Georgia, Mississippi, South Carolina, and Louisiana, and in specified counties in Kentucky, Maryland, Missouri, North Carolina, Tennessee, Virginia, Florida, Arkansas, and Texas, the criteria applied to the totals for the entire landlord-tenant operation, plantation, or other type of large farm holding. If the landlord-tenant operation qualified as a large farm, the home farm portion of the landlord-tenant operation was considered a large farm even though the home farm operating unit did not itself meet the criteria for a large farm.

PRESENTATION OF STATISTICS

This report presents data from the 1950 Census of Agriculture with comparable data from previous censuses, beginning with 1920. Data are presented for the State, for each county, and for State economic areas. For each of these areas, the tables present some information which is not shown in the tables for either of the other areas.

State tables.—The State tables present data for those items for which historical figures are available for censuses prior to 1945. They present data for some items which are not shown in the county or State economic area tables; for example, taxes and cash rent. They also show some items from the 1950 Census that are carried in the county or State economic area tables for which there is additional information (other than historical), for example, wage rates.

County tables.—County tables contain some data for most of the items on the 1950 Questionnaire. However, they do not contain all the available information; for example, the data for farms by size of farm and by tenure of operator are given, in part, in the county tables but in greater detail in the State economic area tables. Most data by economic class of farm and by type of farm are not given in the county tables, but they are given in the State tables and in the State economic area tables. For most items the available comparable data from the 1945 Census are also shown in these county tables.

State economic area tables.—These tables present frequency distributions of farms reporting specified items, such as operators by age, corn by acres harvested, cattle and calves by number on hand, etc. They also present detailed data on farms and farm characteristics by several classifications, namely, size of farm, tenure of farm operator, economic class of farm, and type of farm. Farm counts are also shown for classifications within classifications, for example, size of farm by tenure of operator, size of farm by economic class of farm, and size of farm by type of farm, etc.

Minor civil division tables.—Data for most of the items included in the 1950 Census were tabulated by minor civil divisions. These are not included in any published reports. Information for these small geographic areas may be obtained by paying the cost of checking the data and preparing statistical tables.

State economic areas.—State economic areas represent groupings of counties within a State. The counties comprising a State economic area have similar agricultural, demographic, climatic, physiographic, and cultural characteristics. Basically, State economic areas have been established for the purpose of presenting statistics not only for the 1950 Census of Agriculture but also for the Censuses of Population and Housing. In order to establish areas for all 3 of these censuses, the 48 States have been subdivided into 501 State economic areas. (For a description of State economic areas, see the Special Report of the 1950 Census entitled "State Economic Areas: A Description of the Procedure Used in Making a Functional Grouping of the Counties in the United States.") For the purpose of presenting agricultural statistics, most metropolitan areas have been combined with adjacent economic areas when the number of farms and agricultural production of the metropolitan area are of small importance. On the other hand, in a few cases, because of significant differences in the characteristics of the agriculture within the State economic areas, some State economic areas have been subdivided in order to present statistics for the 1950 Census of Agriculture. Outside the metropolitan areas, the State economic areas in general are the same as State type-of-farming areas. For the United States, it is planned to show detailed statistics for approximately 362 State economic areas. A map showing the State economic areas to which this report relates is shown at the beginning of Chapter C of this report.

The use of State economic areas as a unit for the presentation of statistics has made possible many tabulations, by size of farm, tenure of farm operator, economic class of farm, and type of farm, that would not have been possible by counties because of the cost of tabulation, amount of clerical work required, cost of publication, and reliability of the data. Since the counties comprising each State economic area have similar characteristics, data for a State economic area may be used for describing, with reasonable accuracy, the characteristics of the agriculture in each county making up the area.

Comparability of data for various censuses.—Comparability of the data may be affected by such factors as the month in which the enumeration was made, the definition of a farm, the wording of the questions, etc. When the comparability is affected to an appreciable extent, mention is made of the differences under the specific item.

DEFINITIONS AND EXPLANATIONS

Definitions and explanations are presented only for those items for which the table descriptions are considered inadequate. The descriptive terms and explanations refer principally to the 1950 Census of Agriculture, although, in general, they are also applicable to earlier censuses. The definitions consist primarily of a résumé of the questionnaire wording, occasionally supplemented by the more essential parts of instructions given to the enumerators. For the exact phrasing of the inquiries and of the instructions included on the questionnaire, reference should be made to the facsimile of the 1950 Agriculture Questionnaire shown in the appendix.

An analysis of the inquiries included on the questionnaires and of the data obtained is shown in Volume II, General Report, Statistics by Subjects, United States Census of Agriculture, 1950. The general report presents statistics for States by subject matter.

General Farm Information

The census date.—The 1950 Census of Agriculture was taken as of April 1, 1950. Inventory items relate to approximately that date. Data on acreage and quantity of crops harvested are for the crop year of 1949. Data on sales of crops relate to crops produced in the crop year of 1949; data on sales of livestock relate to the calendar year of 1949; data on sales of livestock products relate to the production in the calendar year of 1949. Although the section heading on the questionnaire specified April 1 for all inventory items, the individual inquiries did not refer to any date. Therefore, the replies may represent the date the questionnaires were filled. The questionnaires were generally filled within a few days following April 1. The act providing for the census requires that no enumerator be assigned a larger area than he can enumerate completely in 30 days from the census date. This provision was made for the purpose of ensuring promptness in the completion of the enumeration. However, because of weather, roads, or other conditions, a longer period may have been required for the enumeration in some cases. The average date of enumeration of the 1950 Census for each county is given in County Table 4, and the percentage of farms enumerated by various dates for the State is given in State Table 6. The date on which the enumer-

ator obtained the information required for the census of agriculture may affect the statistics because of changes that occurred between the census date and the actual date of enumeration.

A farm.—For the 1950 Census of Agriculture, places of 3 or more acres were counted as farms if the value of agricultural products in 1949, exclusive of home gardens, amounted to $150 or more. The agricultural products could have been either for home use or for sale. Places of less than 3 acres were counted as farms only if the value of sales of agricultural products in 1949 amounted to $150 or more. Places operated in 1949 for which the value of agricultural products in 1949 was less than these minima because of crop failure or other unusual situation, and places operated in 1950 for the first time were counted as farms if normally they could be expected to produce these minimum quantities of farm products.

All the land under the control of one person or partnership was included as one farm. Control may have been through ownership, or through lease, rental, or cropping arrangement.

The Census enumerator was not given the definition of a farm. He was instructed to obtain an agriculture questionnaire for every place that the operator considered a farm, for every place of 3 or more acres, whether or not it was considered a farm, and for certain specialized operations regardless of the size of the place. The specialized operations include greenhouses and nurseries, places having 100 or more poultry, or on which 300 or more dozen eggs were produced in 1949, and places with 3 or more hives of bees. Thus, agriculture questionnaires were filled for more places than those that qualified as farms.

The determination as to which reports were to be included in the tabulations as representing farms was made during the processing of the questionnaires in Washington. This procedure was followed in order that uniform criteria could be applied.

For the 1945 and earlier censuses of agriculture, the definition of a farm was somewhat more inclusive. Census enumerators were provided with the definition of a farm and were instructed to fill reports only for those places which met the criteria. From 1925 to 1945, farms for Census purposes included places of 3 or more acres on which there were agricultural operations, and places of less than 3 acres with agricultural products for home use or for sale with a value of $250 or more. For places of 3 or more acres, no minimum quantity of agricultural production was required for purposes of enumeration; for places of under 3 acres all the agricultural products valued at $250 or more may have been for home use and not for sale. The only reports excluded from the tabulations were those taken in error and a few with very limited agricultural production such as only a small home garden, a few fruit trees, a very small flock of chickens, or the like. In 1945, reports for 3 acres or more with limited agricultural operations were retained if there were 3 or more acres of cropland and pasture, or if the value of products in 1944 amounted to $150 or more when there was less than 3 acres of cropland and pasture.

The definition of a farm in the 1920 Census was similar to that used from 1925 to 1940 but was somewhat more inclusive. In that year, farms of less than 3 acres with products valued at less than $250 were to be included, provided they required the continuous services of at least one person.

Because of changes in price levels, the $250 limit for value of products for farms under 3 acres resulted in the inclusion of varying numbers of farms at the several censuses.

The change in the definition of a farm resulted in a decrease in the number of farms, largely in those of 3 or more acres in size. Places of 3 or more acres with a value of agricultural products of less than $150 were not counted as farms in the 1950 Census. In some cases, these places would have been counted as farms if the criteria used in 1950 had been the same as those used in previous censuses. The change in definition had no appreciable effect on the data for livestock or crops as the total agricultural production for such places would usually account for less than 1 percent of the total for a county or State.

An appraisal of the effects on the statistics of the change in the definition of a farm is included in Volume II, General Report, Statistics by States, United States Census of Agriculture.

Enumeration of land located in more than one county.—Land in an individual farm may be located in two or more counties. In such cases the entire farm was enumerated in only one county. If the farm operator lived on the farm, the farm was enumerated in the county in which the farm operator lived. If the farm operator did not live on the farm, the figures for the farm have been included in the county in which the farm headquarters was located. If there was any question as to the location of the headquarters of the farm, the farm and all the data for it have been included in the county in which most of the land was located.

Farm operators.—A "farm operator" is a person who operates a farm either performing the labor himself or directly supervising it. He may be an owner, a hired manager, or a tenant, renter, or share cropper. If he rents land to others or has land cropped for him by others, he is listed as the operator of only that land which he retains. In the case of a partnership, one member was included as the operator. The number of farm operators is considered the same as the number of farms.

Farms reporting or operators reporting.—Figures for farms reporting or operators reporting, based on a tabulation of all farms, represent the number of farms, or farm operators, for which the specified item was reported. For example, if there were 1,922 farms in a county and only 1,465 had chickens on hand over 4 months old, the number of farms reporting chickens would be 1,465. The difference in the total number of farms, and the number of farms reporting an item, represents the number of farms not having that item, provided the inquiry was answered completely for all farms.

For some of the items, such as the age of operator, for which reports should have been obtained for all farms, figures are given for the number not reporting. These farms, or operators, not reporting indicate the extent of the incompleteness of the reports for the item.

Figures for farms reporting or operators reporting, based on a tabulation for only a sample of farms, represent the total estimated from the sample, not the actual number of farms reporting or operators reporting. In a few cases, the estimated total may exceed the actual number of farms or farm operators in the county or State.

Land owned, rented, and managed.—The land to be included in each farm was determined by asking the number of acres owned, the acres rented from or worked on shares for others, and the acres rented to or worked on shares by others. The acres in the farm were obtained by adding the acres owned and acres rented from or worked on shares by others, and subtracting the acres rented to or worked on shares by others. In case of a managed farm the person in charge was asked the total acreage managed for his employer. From this total managed acreage was subtracted any of the acreage which was rented to or cropped by others. For 1950, the figures for land owned, land rented from others, and land managed by farm operators include land rented to others by farm operators.

In earlier censuses, the enumerator was instructed to include all land rented from others and to exclude all land rented to others. He recorded only that portion of the acreage owned and the acreage rented from others which was retained by the farm operator. Thus, the land included in each farm was essentially the same as that included in the 1950 Census.

Land owned.—Land owned includes all land which the operator or his wife, or both, hold under title, purchase contract, homestead law, or as one of the heirs, or as a trustee of an undivided estate.

Land rented from others.—Land rented from others includes

land worked on shares for others, and land used rent free, as well as all land rented or leased under other arrangements. Grazing land used under government permit was not included.

Land rented to others.—Many farm operators rent land to others. For the most part, this land rented to others represents agricultural lands but it also includes tracts rented for residential or other purposes. When land is leased, rented, or cropped on shares, the tenant or cropper is considered the farm operator even though his landlord may exercise supervision over his operations. The landlord is considered as operating only that portion of the land not assigned to tenants or croppers.

Land area.—The approximate land area reported for 1950 for States and counties is, in general, the same as that reported for the 1945 and 1940 Censuses. Changes since 1940 represent changes in boundary, actual changes in land area due to the construction of reservoirs, etc. The figures for 1940 represent a complete re-measurement of the United States and therefore may be at variance with the figures shown for earlier censuses.

Land in farms.—The acreage designated "land in farms" includes considerable areas of land not actually under cultivation and some land not used for pasture or grazing. All woodland and wasteland owned by farm operators, or included in tracts rented from others, is included as land in farms unless such land was held for other than agricultural purposes, or unless the acreage of such land held by a farm operator was unusually large. If the total acreage of land owned, rented, or managed by a farm operator was 1,000 or more (5,000 or more in the Western States) and less than 10 percent of the total was used for crops, or for pasture or grazing, or was rented to others, any woodland not grazed and any wasteland, in excess of the acreage used for agricultural purposes, were excluded from the farm area.

Except for open range and grazing lands used under government permit, all grazing land was to be included as land in farms. Land used rent free was to be included with land rented from others. Grazing lands operated by grazing associations were to be returned in the name of the manager in charge. All land in Indian reservations used for growing crops, or grazing livestock, was to be included. Land in Indian reservations not reported by individual Indians or not rented to non-Indians was to be reported in the name of the cooperative group using the land. Thus, in some instances the entire reservation was reported as one farm.

Land in farms according to use.—Land in farms was classified according to how it was used in 1949. These classes of land are mutually exclusive, i. e., each acre of land was included only once even though it may have had more than one use in 1949.

The classes are as follows:

Cropland harvested.—This includes land from which crops were harvested; land from which hay (including wild hay) was cut; and land in small fruits, orchards, vineyards, nurseries, and greenhouses. Land from which two or more crops were reported as harvested was to be counted only once.

The reported figure was checked for each farm by adding the acreages of the individual crops reported and subtracting the acres of land from which two crops were harvested.

Cropland used only for pasture.—In the 1950 Census the enumerator's instructions stated that rotation pasture and all other cropland that was used only for pasture were to be included under this item. No further definition of cropland pastured was given the farm operator or Census enumerator. Permanent open pasture may therefore have been included under this item or under "Other pasture" depending on whether the enumerator or farm operator considered it as cropland or other land.

The figures for 1945 and earlier censuses are not entirely comparable with those for 1950. In 1945, the figures include only cropland used solely for pasture in 1944 that had been plowed within the preceding seven years. The figures for this item for the Censuses of 1940, 1935, and 1925 are more nearly comparable with those for the Census of 1950, as they include land pastured which could have been plowed and used for crops without additional clearing, draining, or irrigating.

Cropland not harvested and not pastured.—This item includes idle cropland, land in soil-improvement crops only, land on which all crops failed, land seeded to crops for harvest after 1949, and cultivated summer fallow.

In the Western States, cropland not harvested and not pastured has been subdivided to show cultivated summer fallow separately.

Cultivated summer fallow.—Cultivated summer fallow includes cropland which was plowed and cultivated but left unseeded for several months to control weeds and conserve moisture. No land from which crops were harvested during 1949 was to be included under this item.

Other cropland.—This includes idle cropland, land in soil-improvement crops only, land on which all crops failed, and land seeded to crops for harvest after 1949.

Woodland pastured.—This includes all woodland that was used for pasture or grazing in 1949. No definition of woodland was given in 1950 to either farm operators or Census enumerators except an instruction to enumerators not to include brush pasture as woodland. Some of the changes from one census to another may merely represent differences in interpretation of the meaning of woodland.

Woodland not pastured.—This includes all woodland which was not used for pasture or grazing in 1949. Unusually large tracts of timber land reported as woodland not pastured were excluded from the tabulations of land in farms when it was evident that such land was held primarily for nonagricultural purposes.

Other pasture (not cropland and not woodland).—This includes rough and brush land pastured and any other land pastured which the respondent did not consider as either woodland or cropland. For the 1945 Census this item is more inclusive than for 1950 because all nonwoodland pasture not plowed within the preceding 7 years was included. For the 1940 Census and earlier years the figures are more nearly comparable with those for 1950, except that the item may be somewhat less inclusive as land which could have been plowed and used for crops without additional clearing, draining, or irrigating was classified as plowable pasture (shown as cropland used only for pasture in the tables).

Other land (house lots, wasteland, etc.)—This item includes all house lots, barn lots, lanes, roads, ditches, and wasteland. It includes all land which does not belong under any of the other land-use classes.

In addition to the complete classification of land in farms according to use, the tables also present data for three broader or summary classifications.

Figures are shown for the following summary classifications:

Cropland, total.—This includes cropland harvested, cropland used only for pasture, and cropland not harvested and not pastured.

Pasture, total.—This includes cropland used only for pasture, woodland pastured, and other pasture (not cropland and not woodland).

Woodland, total.—This includes woodland pastured and woodland not pastured.

Value of land and buildings.—The value to be reported was the approximate amount for which the land and the buildings on it would sell. This item was obtained for only a sample of the farms; however, the value was not reported for all the farms comprising the sample. Only the average value per farm and the average per acre for the farms reporting are given. The proportion of the farms and the proportion of the land in farms for which values were reported, provide an indication of the incompleteness of the reporting of this item. These proportions were obtained by dividing the estimate of farms and of land in farms, for which values would have been reported in a complete enumeration, by the total count of farms and land in farms, respectively, as obtained in the tabulation of all farms. Percentages of approximately 100 percent indicate that the value of land and buildings was reported for all or nearly all the farms which were included in the sample. In case the proportion of farms or the proportion of land in farms is less than 100 percent, reference should be made to the statement

of reliability of the sample estimate to determine whether this deviation is the result of the sampling procedure or of underreporting.

Age of operator.—Farm operators were classified by age into six age groups. The average age of farm operators was calculated by dividing the total of the ages of all farm operators reporting age by the number of farm operators reporting.

Residence of farm operator.—Farm operators were classified by residence on the basis of whether or not they lived on the farm operated. Some of those not living on the farm operated lived on other farms. When a farm operator rented land from others, or worked land on shares for others, and was permitted the use of a dwelling as part of the rental arrangement, the enumerator's instructions were to consider the dwelling a part of the farm operated. The dwelling assigned might be on a tract other than that assigned for crops. Since some farm operators live on their farms only a portion of the year, comparability of the figures for various censuses may be influenced to some extent by the date of the enumeration. In a few cases the enumerator failed to indicate the residence of the farm operator. Differences in the figures for total farms and those for operators by residence represent underenumeration of this item.

Years on present farm (year began operation of present farm).—The data on years on present farm and year began operation of present farm were secured on the basis of the inquiry, "When did you begin to operate this place? _____ _____." The
(Month) (Year)
time of year that farmers move is shown by a breakdown of the data for those farm operators who began to operate their present farms within a year of the census date by the month they began to operate their farms. The tabulation of years on present farm at each census is based on the calendar year the operator began operating his farm. Because of differences in the date for various censuses the figures are not entirely comparable from one census to another.

Off-farm work and other income.—Many farm operators receive a part of their income from sources other than their farms. The 1950 Agriculture Questionnaire included several inquiries relating to work off the farm and nonfarm income. These inquiries called for work off the farm by the farm operator; work off the farm by other members of the operator's family; and income from other sources, such as sale of products from land rented out, cash rent, boarders, old age assistance, pensions, veterans' allowances, unemployment compensation, interest, and help from other members of the operator's family. Another inquiry asked whether the income from off-farm work and other sources was greater than the total value of all agricultural products sold from the farm in 1949. Off-farm work includes work at nonfarm jobs, businesses, or professions, whether performed on the farm premises or elsewhere; also work on someone else's farm for pay or wages. Exchange work was not to be included.

The purposes of these four inquiries were (1) to obtain information in regard to the extent that farm operators performed off-farm work and their dependence on other income, and (2) to provide a basis for the classification of farms by economic class (See Farms by economic class, p. XIX). The intent of the inquiry in regard to whether or not a member of the family had a nonfarm job, and the inquiry regarding income of the farm operator from nonfarm sources was to obtain more accurate replies to the inquiry regarding the relationship of the income from off-farm work and other sources to the total value of all agricultural products sold.

Specified facilities.—The 1950 Agriculture Questionnaire contained inquiries regarding telephones, electricity, electric water pumps, electric hot water heaters, home freezers, and electric washing machines. These inquiries were asked for only a sample of the farms.

In 1950 the inquiries for electric facilities read, "Do you have ————?" followed by each of the specified electric facilities and equipment. The electric water pump was to include any on the place whether used for the home, for irrigation, for watering livestock, or for other purposes.

Specified equipment on farms.—In the 1950 Census the information on farm equipment was obtained for only a sample of farms. Wheel tractors were to include home-made tractors but were not to include implements with built-in power units such as self-propelled combines, powered buck rakes, etc. In reporting motortrucks and automobiles, "pick-ups" and truck-trailer combinations were to be reported as trucks. School buses were not to be reported, and jeeps and station wagons were to be included as motortrucks or automobiles, depending on whether they were used for hauling or as passenger vehicles.

For farms with motortrucks, tractors, and automobiles, data were also secured on the year of model of the newest motortruck, tractor, and automobile, respectively. For tractors, the figures for year of newest model are limited to wheel tractors (tractors other than garden or crawler). The inquiry for wheel tractors called for reporting "HM" for home-made tractors in lieu of the year of model of the newest wheel tractor. The count of home-made tractors on farms represents the minimum number of home-made tractors since a home-made tractor representing a second, third, etc., tractor on the farm would not be included. For farms with two or more motortrucks, wheel tractors, and automobiles, respectively, it is not possible to classify the second, third, etc., motortruck, tractor, or automobile since the inquiry was limited to the year of model of the newest unit.

For 1950 and 1940, no estimate of the year of model of the newest motortruck, tractor, and automobile was made if this item was not reported; for 1945, the farms not reporting the year of newest model were distributed in accordance with the year of model for vehicles for which the year of model was reported. For 1940, the figures on year of newest model for tractors are for all types of tractors.

Classification of farms by class of work power.—Farms have been grouped by class of work power on the basis of whether horses, mules, or tractors were reported. This classification does not present an entirely accurate picture of the work power used on all farms. For some farms, all the work power may be furnished by the landlord and for some farms all the work power may be hired. Thus, farms hiring all of the work power from others and those having it furnished are shown as having no work power.

Farm labor.—The farm labor inquiries for 1950 called for the number of persons doing farm work or chores on the place during the calendar week preceding the enumeration. Inasmuch as the enumeration occurred over a period of several weeks, the calendar week preceding the enumeration is not the same for all farms. (Farms classified by period of enumeration are shown in State Table 6. The average date of enumeration is shown by counties in County Table 4.)

Farm work was to include any work, chores, or planning necessary to the operation of the farm or ranch business. Housework and contract construction work were not to be included.

Separate figures were obtained for operators working, unpaid members of the operator's family working, and hired persons working. Operators were considered as working if they worked 1 or more hours, unpaid members of the operator's family if they worked 15 or more hours, and hired persons if they worked any time during the week preceding the enumeration. The inquiries and the instructions did not contain any specifications regarding the age of the persons to be reported.

The data shown for 1945, 1940, and 1935 on numbers of workers on farms are not fully comparable, primarily because of differences in the period to which such data relate. For the 1945 and 1935 Censuses, the numbers of farm workers are for the first week in January. The data for 1940 relate to the last week in March. In 1945, 1940, and 1935 only persons working the equivalent of two

or more days during the specified week were to be included. In 1945 and 1940, only workers 14 years old and over were to be included. In 1935, as in 1950, there was no age limit. In 1940 and in 1935, no instructions were issued to include farm chores as farm labor.

Regular and seasonal workers.—Hired persons working on the farm during the week preceding the enumeration were classed as "regular" workers if the period of expected employment was 150 days or more during the year, and as "seasonal" workers if the period of expected employment was less than 150 days. If the period of expected employment was not reported, the period of employment was estimated after taking into account such items as the method of payment, wage rates, perquisites, expenditures for labor in 1949, and the type and other characteristics of the farm.

Hired workers by basis of payment.—Hired persons working on the farm the week preceding the enumeration were also classified according to the basis of payment.

The questionnaire called for the numbers of hired workers paid on a monthly basis, on a weekly basis, on a daily basis, on an hourly basis, and on a piecework basis. Figures for hired workers for whom the basis of payment was not reported are shown separately.

Wage rates and hours worked.—The rate of pay and the hours that workers were expected to work to earn this pay were asked for each class of worker except those working on a piecework basis. The average hours worked and the average wage rates represent per worker averages obtained for farms reporting both wage rates and hours worked.

Perquisites furnished hired workers.—Farm operators were asked to report what items other than cash wages were received by the workers for each basis of payment by indicating one or more of the following: (1) house, (2) board and room, (3) other, and (4) none. If a farm had 2 or more hired workers with the same basis of cash payment, no provision was made for reporting separately those receiving different perquisites.

House furnished.—Farms reporting workers furnished "house" include those which also report "board and room" or "other" in addition to reporting "house" furnished.

Board and room furnished.—Farms reporting workers furnished "board and room" include those reporting "board and room" and those reporting "board and room" and "other." They do not include farms reporting "board and room" and "house."

"Other" furnished.—Farms reporting workers furnished "other" than board and room or house include only those reporting "other." Those reporting "board and room" or "house" are not included.

No perquisites furnished.—Farms reporting workers furnished no perquisites include only those farms with a report of "none." This count does not include farms furnishing perquisites to some workers in a particular class and no perquisites to others; nor does it include farms for which the inquiry was not answered.

Specified farm expenditures.—Data on farm expenditures were obtained only for selected items. For tenant-operated farms the expenditures were to include those made by the landlord as well as those made by the tenant. However, in landlord-tenant areas (where the Landlord-Tenant Operations Questionnaire was used) all the specified expenditures made by the landlord were sometimes reported on the agriculture questionnaire filled for the home farm, i. e., the land retained by the landlord and not reported on the questionnaires filled for the tenants. In such instances no attempt was made to prorate the expenditures. Therefore, in the presentation of data by various classifications of farms, the expenditures shown for a particular group of farms may not always be related to the agricultural operations shown for those farms.

Expenditures for machine hire were to include any labor included in the cost of such machine hire. Machine hire refers to custom machine work such as tractor hire, threshing, combining, silo filling, baling, ginning, plowing, and spraying. If part of the farm product was given as pay for machine hire, the value of the products traded for this service was to be included in the amount of expenditures reported. The cost of trucking, freight, and express was not to be included.

In reporting the amount spent for hired labor only cash payments were to be included. Expenditures for housework and contract construction work were not to be included.

Expenditures for feed were to include the expenditures for pasture, salt, condiments, concentrates, and mineral supplements, as well as for grain, hay, and millfeeds. Expenditures for grinding and mixing feeds were also to be included. Expenditures made by a tenant to his landlord for feed grown on the land rented by the tenant were not to be included.

Expenditures for purchase of livestock and poultry were to include amounts spent for purchase of baby chicks, poults, chickens, turkeys, domestic rabbits, fur-bearing animals kept in captivity, and bees, as well as the amount spent for horses, mules, cattle, hogs, sheep, oxen, and goats.

Expenditures for gasoline and other petroleum fuel and oil were to include only those used for the farm business. Petroleum products used for pleasure, or used exclusively in the farm home for heating, cooking, and lighting, were not to be included.

Expenditures for seeds, bulbs, plants, and trees were to include only the cash outlay.

Expenditures for tractor repairs and for other farm machinery repairs were to include the amount spent for repairing (both labor and parts) and the amount spent for repair parts and other replacement parts. Expenditures for tires, tubes, plowshares, blacksmithing, and the like were to be included. Expenditures for motortruck and automobile repairs were not to be included.

Farm mortgages.—Data on farm mortgages are presented in Volume II, General Report. This information is not included in this report.

Farm taxes.—The 1950 Questionnaire contained two inquiries on farm taxes as follows:

"What was the total amount of property taxes paid (or payable) in 1949 on *all* property owned by you?____ $_____ (Dollars only)
☐ None required.

(Include *only* taxes on real estate and personal property. Do *not* include taxes for drainage districts.)

(a) Of this total, what was the amount of taxes on the land and buildings?_ _____ $_____ (Dollars only) ☐ Not shown separately on tax bill."

This information was obtained only for owners who were operating farms.

Cash rent.—The information on cash rent relates to tenants and to those part owners who reported that they paid cash as rent for the portion of their farm rented and reported no other rental arrangement. The information was tabulated only when both value of land and buildings and the amount of cash rent were reported.

Irrigation

Irrigated land is that to which water is applied by artificial means for agricultural purposes. Data for total acreage irrigated and for acreage irrigated by sprinklers are shown for all States. In sprinkler irrigation the water is sprayed from stationary or revolving sprinklers or pipes either overhead or on the surface of the ground.

Additional data on irrigation were obtained for Arizona, Arkansas, California, Colorado, Florida, Idaho, Kansas, Louisiana, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming.

Statistics on the irrigation works which supplied irrigation water were collected in the Census of Irrigation and are published in Volume III, Irrigation of Agricultural Lands. This volume also

contains some additional data on irrigation which were collected in the 1950 Census of Agriculture.

Irrigated farms.—Irrigated farms are farms reporting any land irrigated in 1949. Data on land in irrigated farms, and land in irrigated farms according to use include the entire acreage of land in these farms, whether irrigated or not.

Land in farms irrigated.—Land in farms irrigated relates only to that part of the land in irrigated farms to which water was applied in 1949. That part of the land which was irrigated by sprinklers is shown separately.

Irrigated land in farms according to use.—The classification of irrigated land in farms according to use in 1949 accounts for all the irrigated land in farms, i. e., the sum of several uses equals the total irrigated acreage. The subclasses of irrigated pasture are not entirely comparable with the subclasses of all pasture in farms.

Irrigated cropland harvested represents that part of the **cropland harvested** to which water was applied in 1949. Statistics for individual crops which were wholly irrigated in the 20 Western States are shown in County Table 5a. If only a part of the acreage in a given crop on a particular farm was irrigated, the information for such acreage is not included in that table. In most of the States, the acreage in these partly irrigated crops represents only a small proportion of the total acreage of irrigated crops.

Irrigated pasture is that portion of the total land pastured to which water was applied in 1949.

Irrigated wild grass pasture is irrigated pasture consisting predominantly of original stands of grasses native to the locality or re-established stands of such grasses. Much of the irrigated wild grass pasture is included in **other pasture (not cropland and not woodland).**

Irrigated tame grass pasture is irrigated pasture consisting predominantly of grasses not native or wild in the locality and of alfalfa and clovers. Much of the irrigated tame grass pasture was classed by farm operators as **cropland used only for pasture.**

Livestock

The questionnaire used for the 1950 Census of Agriculture provided for an inventory of all the important kinds of animals and poultry on farms and ranches. Except for sheep and goats and the unit of measure for milk sold, the inquiries on livestock were uniform for all States. The questionnaire called for the number of the various kinds of animals and poultry on the farm as of April 1, 1950. Enumerators and farmers were instructed to report livestock belonging to the farms and ranches but grazing in national forests, grazing districts, or on open range. Livestock were to be enumerated on the farm or ranch on which they were located on April 1, regardless of ownership. However, it is known that to some degree the number of livestock or poultry reported on a farm or ranch depends upon the date the questionnaire is filled rather than the number on the farm or ranch at the date specified by the questionnaire. This characteristic in the reporting of livestock and poultry numbers has no significant influence on county and State totals unless the enumeration extends over a considerable period of time. In order to assist the user in appraising the data on livestock numbers the average date of enumeration for each county is given in County Table 4.

The last seven censuses of agriculture beginning with 1920 have been taken either as of April 1 or January 1. The censuses taken in the years ending in "0" have been taken as of April 1, except the 1920 Census which was taken as of January 1, while the censuses taken in the years ending in "5" have been taken as of January 1. An enumeration made in April results in inventory totals that differ considerably from the totals of an enumeration made in January. In most areas a large number of animals are born between January and April. On the other hand, a considerable number of older animals are sold or die during the 3-month period, January to April. Then too, in the range States, sheep and cattle are moved, with the change in season and grazing condition, from one locality and county to another for grazing. This movement may affect the comparability of data for counties and in some cases for States. Comparability of the data on the number of livestock and poultry has also been affected by changes in age grouping and questionnaire inquiries from census to census. State Table 11 presents a description of the different age, sex, and other groups of livestock and poultry for each census from 1920 to 1950.

Milk cows; cows milked; milk production.—Data on number of milk cows, number of cows milked, and milk production relate to the day preceding the enumeration.

Questionnaires in 26 States, chiefly Western and Midwestern, provided 3 alternative units of measure for enumerators and respondents for reporting whole milk sales, as follows: (1) pounds of milk, (2) pounds of butterfat, and (3) gallons of milk. In the other States, sales of milk on the basis of butterfat were considered relatively unimportant and the unit of measure, pounds of butterfat, was omitted from the questionnaire. However, in each State, the reports on whole milk sold have been converted into a common unit of measure for publication. Pounds of butterfat have been converted into gallons or pounds of whole milk on the basis of the average butterfat content of whole milk as shown by data furnished by the Bureau of Agricultural Economics of the U. S. Department of Agriculture.

Sows and gilts farrowing.—The 1950 Questionnaire carried two inquiries on sows for spring farrowing, as follows: (1) "How many sows and gilts have farrowed since December 1, last year?" and (2) "How many sows and gilts are expected to farrow between now and June 1, this year?" In the county and State economic area tables the replies to the two questions were combined, showing a total for sows for spring farrowing. In the State tables, the replies to each of the two questions, as well as a combined figure, are shown.

Sheep and lambs and wool.—In Arizona, California, Colorado, Idaho, Montana, New Mexico, Nevada, North Dakota, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming separate questions were asked in the 1950 Census to determine the number of (*a*) yearling ewes and (*b*) older ewes. In other States, only total numbers of ewes born before October 1, 1949, were obtained.

The enumeration of sheep in the range States continues to present special problems, necessitating a high degree of cooperation between enumerators and the owners and operators of transient bands. In some counties, transfers to spring ranges occurring before the enumeration may produce considerably different totals from those that would have been obtained if the census had been taken as of January 1. On the 1950 Questionnaire, the questions on number of sheep shorn and wool production in 1949 were separated from the questions on sheep on hand in order to obtain more consideration for cases where sheep were shorn in 1949 but none were on hand on the census date. In Texas and California, the question relating to pounds of wool shorn in 1949 specifically called for both spring and fall shearings. The wool value obtained was an enumerated value of all the wool shorn in 1949, whether or not sold at the date of enumeration.

Goats and mohair.—In Arizona, California, Missouri, New Mexico, Oregon, Texas, and Utah special questions were provided on goats and mohair. These questions called for the number of all goats, Angora goats, and other goats separately, the number of goats clipped in 1949, pounds of mohair clipped, and value of the goats and goat milk sold, and mohair clipped in 1949. In all other States, the number of farms reporting goats on hand or goats kept the previous year was obtained and the value of goats and goat milk sold and mohair clipped was reported in combination with the value of rabbits, fur animals, and pelts sold in 1949.

Bees and honey.—The 1950 Census called for the number of hives owned by the farm operator in 1949, pounds of honey produced in 1949 by these bees, and the value of the 1949 crop of honey and wax sold or to be sold, and bees sold. No restrictions were placed on the location of the bees owned in 1949.

Value of livestock on farms.—The values for 1950 shown in State Table 11 and County Table 4 were secured by multiplying the number of each class of livestock or poultry on hand for a

county, by the county-unit price. These county-unit prices were obtained cooperatively by the Bureau of Agricultural Economics, U. S. Department of Agriculture, and the Bureau of the Census. The data were obtained from farmers and dealers. The average prices were computed for groups of counties comprising a price-reporting district and the same average price was used for computing the value of livestock and poultry for each county comprising a given price-reporting district.

Livestock products.—The inquiries regarding livestock production relate to the calendar year 1949, and those for sales of livestock products relate to the production in 1949.

Crops

Crops harvested.—The agriculture questionnaire was so organized that it was possible to list the acreage and quantity harvested for every crop that was grown on the farm. In order to facilitate the enumeration, the inquiries regarding crops were varied by States or by groups of States. If a separate question was not carried for a particular crop, that crop could always be reported under one of several "all other" questions. The use of a different questionnaire for each State or group of States made it possible to list many of the important crops for the State and also to use the unit of measure that was commonly used in the State.

The acreage given for the several crops represents the area harvested for the crop year 1949 except that the acreage for land in fruit orchards, vineyards, and planted nut trees represents the land in bearing and nonbearing trees and vines on the census date. The acreage harvested for the various crops is often considerably less than the acreage planted. The acreage harvested represents the area harvested in a particular manner, which may have been different from that intended at the time of the planting of the crop. For example, soybeans may have been planted for beans but may have been actually cut for hay. The figures for quantity harvested represent the amount actually harvested during the 1949 crop year, except for citrus fruits. In Florida, Louisiana, and Texas the quantity of citrus fruit harvested relates to the 1949–50 harvest from the bloom of 1949. In California and Arizona, the production relates to the 1948–49 harvest from the bloom of 1948.

The unit of measure used for reporting the quantity harvested for some crops has varied not only from State to State but from census to census. In the State and county tables the figures on quantity harvested for each crop are shown in the unit of measure appearing on the 1950 Questionnaire. This often required that the figures for earlier years be converted into different units from those published for those years. Conversions have been made by using the weights in current use.

Corn.—Inquiries regarding corn acreage and quantity harvested were uniform for all States except California. However, as in former censuses, some farmers in certain sections had a tendency to report the quantity of corn harvested in terms of baskets of ear corn, barrels, or some unit other than bushels of corn on a shelled basis. Such reports, when detected, were corrected to the equivalent bushels of 70 pounds of ear corn or 56 pounds of shelled corn. It was not possible to make the corrections in all cases; therefore, in counties where the quantity harvested is sometimes reported in barrels, it is possible that the quantity harvested for grain may be somewhat understated and in counties where the quantity harvested is often reported in baskets of ear corn, the quantity harvested may be overstated.

Annual legumes.—Acreage and quantity harvested for the most important uses of soybeans, cowpeas, and peanuts, as well as the total acreage grown for all purposes, were obtained in the 1950 Census in States where these crops are grown extensively. The total acreage grown for all purposes includes some acreage not harvested as the acreage plowed under for green manure was included. Also, in certain States separate figures were obtained for the acres grown alone and the acres grown with other crops. A separate inquiry regarding the acreage and quantity of cowpeas harvested for green peas was made in North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas. In these States cowpeas harvested for green peas are shown with cowpeas harvested for other purposes. In other States, the acres and value of sales of cowpeas harvested for green peas are shown with vegetables harvested for sale.

Hay crops.—The questionnaire contained an inquiry regarding the total acres of land from which hay was cut in 1949. Sorghum, soybean, cowpea, and peanut hays were excluded from this total as separate questions were provided in those States where these hays are important. Alfalfa hay totals include any cuttings which were dehydrated. The tonnage of hay for dehydration (as well as that for other hays) is given on a dry-weight basis.

Enumerators and farmers were instructed to report the total quantity harvested from all cuttings, but to report only once the acres of land from which more than one cutting was made. The questionnaire contained instructions to report mixed hay under the kind of hay that made up the largest part of the mixture. The kinds of hay to be reported under "Other hay" varied from State to State, and can be determined by referring to the copy of the questionnaire included in the appendix.

In some cases the sum of the acres of individual hays does not equal the total acres of land from which hay was cut. There are two explanations for these differences. In processing the questionnaires, no correction was made if the difference between the detail and the total acres was minor. Another factor which may account for an excess of the detail over the total is that more than one kind of hay might have been cut from the same acreage.

Clover seed, alfalfa, grass, and other field seed crops.—The 1950 Questionnaire contained separate inquiries for a number of the field seed crops and provided a question on "other seeds" to obtain information for minor field seed crops in a given State.

Irish potatoes and sweetpotatoes.—The 1950 Census inquiry for both Irish and sweet potatoes called for acres harvested, quantity harvested, and the value of the amount sold. Notes on the questionnaire and instructions to enumerators, however, specified that it was not necessary to report the area harvested if less than 15 bushels (or 10 bags in specified States) of Irish potatoes or 15 bushels (or 1,000 pounds in specified States) of sweetpotatoes were harvested. This method of reporting was used in order to facilitate the enumeration of potatoes grown in a small plot for home use. Because the acreage was not reported for farms for which the quantity harvested was less than 15 bushels, the acreage harvested, as reported for the 1950 Census, is not entirely comparable with the acreage reported for prior censuses, especially in counties or States where the production of potatoes is largely for home use.

Berries and other small fruits.—The questionnaire called for acreage and quantity harvested in 1949 for sale. Nonbearing areas were not to be included. Separate inquiries were carried on the questionnaire for such berries as strawberries, blackberries and dewberries (tame), and raspberries (tame) in States where production of these crops was important commercially.

Tree fruits, nuts, and grapes.—The following question was used for all States for enumerating the land occupied by fruit and nut crops:

How much land is in bearing and nonbearing fruit orchards, groves, vineyards, and planted nut trees?.. ☐ Less than ½ acre

(Report tenths of an acre, such as 5/10, 1 1/10, etc. Do not include berry acreage or nurseries.) or Acres_____: ____/10

This question differs from those used in 1945 and 1940 as the enumerator and respondent were given an opportunity to check the block for "Less than ½ acre" when there was only a small

number of fruit and nut trees on the farm. This method was used to facilitate the enumeration through eliminating the problem of assigning fractions of an acre for small home orchards. In previous censuses, enumerators frequently did not report the acres for such orchards even though the questionnaire called for this information. Because of the differences in methods of enumerating the acres in small orchards, the figures on acreage of land in bearing and nonbearing fruit orchards, groves, and vineyards for 1950 are not fully comparable with those reported for prior censuses.

The questions calling for the number of trees or vines not of bearing age, of bearing age, and the amount harvested in 1949 for the most important fruit crops in each State followed immediately after the inquiry on land in bearing and nonbearing fruit trees, etc. In California, in addition, the questionnaire called for the acres in each individual fruit and nut crop. The number of trees to be reported in the census relates to the census date, while the quantity harvested is for the crop year 1949, with the exception of citrus crops. In Florida, Texas, and Louisiana figures for citrus fruits harvested relate to the harvest in 1949–50 from the bloom of 1949. In California and Arizona, the figures for quantities of citrus fruits harvested relate to the harvest in 1948–49 from the bloom of 1948.

The unit of measure in which the quantity of fruits, grapes, and nuts harvested was to be reported varied from State to State as the most commonly used unit of measure was used in each State. The tables in this report show production in the unit of measure appearing on the questionnaire.

Nursery and greenhouse products.—The agriculture questionnaire included three inquiries on horticultural-specialty crops. One of these called for acres and value of sales in 1949 of nursery products (trees, shrubs, vines, ornamentals, etc.). Another asked for acres grown in the open, square feet under glass, and value of sales of flowers and flowering plants grown for sale. The third called for acres grown in the open, square feet under glass, and value of sales of vegetables under glass, flower seeds, vegetable seeds, vegetable plants, bulbs, and mushrooms grown for sale.

A special census of farms reporting the sale of horticultural-specialty crops valued at $1,000 or more was made and the results of this census are issued as a special report.

Value of crops harvested.—The values of specified crops harvested shown in State Table 12 and County Table 5 were obtained by multiplying the quantity harvested for each crop by county-unit prices. Therefore, this value includes the value of crops consumed on the farm and crops used for seed on the farm where produced as well as the value of that part of the crop which was sold. The county-unit prices were obtained cooperatively by the Bureau of Agricultural Economics, U. S. Department of Agriculture, and the Bureau of the Census. These average prices were obtained on a sample basis from farmers and dealers. The average prices were computed for groups of counties representing price-reporting districts and the same average prices were used for computing the value for every county included in a given price-reporting district. In the case of vegetables harvested for sale and nursery and greenhouse products, average prices were not obtained because of the difficulty of securing a satisfactory common unit of production. When totals were obtained for the value of all crops harvested, the value of the sales of vegetables, and nursery and greenhouse products was used in the absence of the value of the quantity harvested. The value figures given for each crop in County Table 5 represent the value of the entire crop. The value of sales for each crop or group of crops is also given in the same table. Sales figures are always identified by the word "sales" in the stub and therefore can be differentiated from the calculated values. The figures on the value of sales were obtained for each farm and the totals given in the tables represent the addition of the figures reported for the individual farms. In case of feed and similar crops it would be expected that the value of the quantities sold would be considerably less than the value of the quantity harvested. On the other hand, in the case of cash crops, such as tobacco, cotton, sugar beets, etc., it is to be expected that the figures on the value of crops sold and the value of the crops harvested will be in close agreement.

Since the calculated values were obtained for price-reporting districts (groups of counties) there may be variations in the average calculated price and the average sales price for a given product in a given county because of local conditions.

The value of specified crops for 1944 shown in State Table 12 and County Table 5 includes the value of vegetables grown for home use. The figures for 1949 do not include the value of vegetables for home use as this value was not called for on the 1950 Questionnaire.

Classification of Farms

Farms by size.—Farms were classified by size according to the total land area of each farm. The same classification was used for all States.

In analyzing size-of-farm statistics, consideration should be given to the definition of a farm for Census purposes. Census farms are essentially operating units—not ownership tracts. If a landlord has croppers or other tenants, the land assigned each cropper or tenant is a separate farm even though the landlord may operate the entire holding essentially as one farm in respect to supervision, equipment, rotation practices, purchase of supplies, or sale of products.

Farms by tenure of operator.—In the 1950 Census farm operators are classified according to the tenure under which they hold their land on the basis of the total land owned, total land rented from others, and total land managed for others. In 1945 and earlier, full owners, part owners, and tenants were classified on the basis of the land retained. Under this earlier classification a part owner who sublets to others all the land he rents from others would have been classed a full owner; a part owner who rents to others all the land he owns would have been classed a tenant.

Full owners own land but do not rent land from others.

Part owners own land and rent land from others.

Managers operate farms for others and are paid a wage or salary for their services. Persons acting merely as caretakers or hired as laborers are not classified as managers. If a farm operator managed land for others and also operated land on his own account, the land operated on his own account was considered as one farm and the land managed for others as a second farm. In the 1950 Census, if a farm operator managed land for two or more employers all the land managed was considered one farm.

Tenants rent from others or work on shares for others all the land they operate. In 1950 tenants are further classified on the basis of their rental arrangement as follows:

Cash tenants pay cash as rent, such as $10 an acre or $1,000 for the use of the farm.

Share-cash tenants pay a part of the rent in cash and a part as a share of the crops or of the livestock or livestock products.

Share tenants pay a share of either the crops or livestock or livestock products, or a share of both.

Crop-share tenants pay only a share of the crops.

Livestock-share tenants pay a share of the livestock or livestock products. They may or may not also pay a share of the crops.

Croppers are crop-share tenants whose landlords furnish all the work power. The landlords either furnish all the work animals or furnish tractor power in lieu of work animals. Croppers usually work under the close supervision of the landowners or their agents and the land assigned them is often merely a part of a larger enterprise operated as a single unit.

The information on work power furnished was tabulated only for the Southern States and seven counties in Missouri. Therefore, data for croppers are shown only for the Southern States and seven counties in Missouri.

Other tenants.—Other tenants include those who pay a fixed quantity of any product; those who pay taxes, keep up the land and buildings, or keep the landlord in exchange for the use of the land; those who have the use of the land rent free; and others who could not be included in one of the other specified subclasses.

Unspecified tenants.—Unspecified tenants include those tenants whose rental agreement was not reported.

For earlier censuses the definition for each subclass of tenants is nominally similar to the corresponding subclass, or subclasses, for 1950. However, in 1945 the enumerator was asked to determine the subclass of tenants, while in 1950, 1940, and earlier censuses the classification was made during the processing of the questionnaires in Washington on the basis of the answer to the inquiries on the questionnaires. The procedure for 1945 may have affected the comparability of the data, particularly those for cash tenants and share-cash tenants.

Farms by color or race of operator.—Farm operators are classified by color as "white" and "nonwhite." Nonwhite includes Negroes, Indians, Chinese, Japanese, and all other nonwhite races. In the State tables, the nonwhite operators are further classified as "Negro" and "all other nonwhite" operators.

Farms by economic class.—A classification of farms by economic class was made for the purpose of segregating groups of farms that are somewhat alike in their characteristics. This classification was made in order to present an accurate description of the farms in each class and in order to provide basic data for an analysis of the organization of United States agriculture. Only the farms in the sample (one-fifth of the farms plus all large farms) were classified by economic class. The totals given in the tables represent estimates for all farms based on tabulations of the data for the farms included in the sample.

The classification of farms by economic class was made on the basis of three factors; namely, total value of all farm products sold, number of days the farm operator worked off the farm, and the relationship of the income received from nonfarm sources by the operator and members of his family to the value of all farm products sold. Institutions, experimental farms, grazing associations, and other community projects were classified as abnormal, regardless of any of the above-mentioned factors.

In making the classification of farms by economic class, farms have been grouped into two major groups, namely, commercial farms and other farms. In general, all farms with a value of sales of farm products amounting to $1,200 or more were classified as commercial. Farms with a value of sales of $250 to $1,199 were classified as commercial only if the farm operator worked off the farm less than 100 days and the income of the farm operator and members of his family received from nonfarm sources was less than the total value of all farm products sold. Farms with a value of sales of all farm products of less than $250, as well as county, State, private institutional, and experimental farms, were classified as "other."

Commercial farms have been divided into six groups on the basis of the total value of farm products sold, as follows:

Class:	*Value of farm products sold*
I	$25,000 or more
II	10,000 to $24,999
III	5,000 to 9,999
IV	2,500 to 4,999
V	1,200 to 2,499
VI	*250 to 1,199

*Provided the farm operator worked off the farm less than 100 days and provided the income the farm operator and members of his family received from nonfarm sources was less than the value of all farm products sold.

Other farms have been grouped into three classes as follows:

Part-time farms.—Farms with a value of sales of farm products of $250 to $1,199 were classified as part time provided the farm operator reported (1) 100 or more days of work off the farm in 1949, or (2) the nonfarm income received by him and members of his family was greater than the value of farm products sold.

Residential farms.—Residential farms include all farms except abnormal farms with a total value of sales of farm products of less than $250. Some of these represent farms on which the operator worked off the farm more than 100 days in 1949. Some represent farms on which the income from nonfarm sources was greater than the value of sales of agricultural products. Others represent subsistence and marginal farms of various kinds. Some farms are included here which, under normal conditions, would have qualified as commercial farms.

Abnormal farms.—Insofar as it was possible to identify them, abnormal farms include public and private institutional farms, community enterprises, experiment station farms, grazing associations, etc.

Farms by type.—The classification of farms by type was made on the basis of the relationship of the value of sales from a particular source or sources to the total value of all farm products sold from the farm. In some cases the type of farm was determined on the basis of the sale of an individual farm product, such as cotton, or on the basis of closely related products, such as dairy products. In other cases, the type was determined on the basis of sales of a broader group of products such as corn, sorghum, all small grains, field peas, field beans, cowpeas, and soybeans. Part-time, residential, and abnormal farms were not classified by type. Only commercial farms were classified by type. In order to be classified as a particular type, sales or anticipated sales of a product or a group of products had to represent 50 percent or more of the total value of products of the farm.

Only the farms in the sample (one-fifth of the farms plus all large farms) were classified by type.

The types of farms for which data are shown, together with the product or group of products that had to represent 50 percent or more of the total sales in order for the farm to be so classified, are as follows:

Type	Product or group of products amounting to 50 percent or more of the value of all farm products sold.
Cotton	Cotton.
Cash grain	Corn, sorghum, small grains, field peas, field beans, cowpeas, and soybeans.
Other field crop	Peanuts, Irish potatoes, sweetpotatoes, tobacco, sugarcane, sugar beets for sugar, and other miscellaneous crops.
Vegetable	Vegetables.
Fruit and nut	Berries and other small fruits, and tree fruits and nuts.
Dairy	Milk and other dairy products. The criterion of 50 percent of the total sales was modified in the case of dairy farms. A farm for which the value of sales of dairy products represented less than 50 percent of the total value of farm products sold was classified as a dairy farm if: (1) Milk and other dairy products accounted for3 0 percent or more of the total value of products, and (2) Milk cows represented 50 percent or more of all cows, and (3) Sales of dairy products, together with the sales of cattle, amounted to 50 percent or more of the total sales.
Poultry	Chickens, eggs, turkeys, and other poultry products.
Livestock farms other than dairy and poultry.	Cattle, calves, hogs, sheep, goats, wool, mohair, goat milk, and products from animals slaughtered on the farm, provided the farm did not already classify as a dairy farm.

Type	Product or group of products amounting to 50 percent or more of the value of all farm products sold—Con.
General	Farms were classified as general when the value of products from one source or group of sources did not represent as much as 50 percent of the total of the value of all farm products sold. Separate figures are given for three types of general farms: (a) Primarily crop, (b) primarily livestock, and (c) crop and livestock. Primarily crop farms represent farms for which the sale of one of the following crops or groups of crops—vegetables, fruits and nuts, cotton, cash grains, or other field crops—did not amount to 50 percent or more of the value of all farm products sold, but for which the value of sales for all these groups of crops represented 70 percent or more of the value of all farm products sold. Primarily livestock farms are those which could not be classified as dairy farms, poultry farms, or livestock farms other than dairy and poultry, but on which the sale of livestock and poultry and livestock and poultry products amounted to 70 percent or more of the value of all farm products sold. General crop and livestock farms are those which could not be classified as either crop farms or livestock farms, but on which the sale of all crops amounted to at least 30 percent but less than 70 percent of the value of all farm products sold.
Miscellaneous and unclassified farms.	This group represents farms that were not classified by type. It includes part-time, residential, and abnormal farms. It also includes miscellaneous types of commercial farms if 50 percent or more of the total value of products was accounted for by sale of horticultural products, or sale of horses, or sale of fur animals, or sale of forest products, or sale of bees and honey.

Because of changes in the method of classifying farms by type, comparative data by type of farm for earlier censuses are not shown in this report.

Value of farm products sold.—The value of farm products sold, as obtained in the 1950 Census of Agriculture, represents the approximate total of the gross cash income of the farms of a particular county or State. Gross sales by farmers, however, are greater than the gross income to agriculture because of the inclusion of inter-farm sales. Feed crops, feeder cattle, and breeding stock purchased by farmers contribute most to this duplication in gross sales.

Enumerators and farmers were instructed to include as sold any part of a crop that was yet to be sold. Trades, such as trading eggs at the store, were considered the same as cash sales. Products such as fruit, vegetables, and eggs purchased for immediate resale were not included because this was not considered as farm production. Likewise, immediate resale of cattle was considered as dealer operations, whereas resale of fattened feeder cattle was considered as farm production and the sales were included, even though these cattle may have been reported as sold by the farmer who sold them as feeders.

For many farms the sales enumerated do not represent their total gross cash income because certain sales were excluded and there was no provision for enumerating unusual sources of income. For example, sales of baby chicks, Government payments such as those for soil conservation, and income received by the farm operator for off-farm work, for custom work, and from land rents and other investments are not included.

In general, the value of the sales of livestock, livestock products, nursery and greenhouse products, and forest products is for the calendar year 1949. On the other hand, the value of the various crops sold is for the crop year immediately preceding the census.

The value of the sales of each farm product was usually obtained in connection with the enumeration of the production of that particular product. In some cases, related farm products were grouped for the purpose of obtaining the value of products sold; for example, small grains and straw sold were all included as a group.

Enumerators and farmers were instructed to report gross sales without deduction of expenses of any kind. However, it was impossible to obtain full adherence to this rule. The degree to which this instruction was followed varied from area to area depending primarily upon the type of farm products grown. For farm products which did not vary greatly in price it was possible during the course of processing the questionnaires for tabulation to make adjustments in those cases where there was obvious misinterpretation of the instructions. In examining the sales figures reported for individual farms, an entry was questioned if the indicated average price received was less than 50 percent or more than 200 percent of the State average price. Any report for an individual farm with entries outside these limits was referred for examination and changed if necessary. In general, changes on these questionnaires were not made unless a study of the questionnaires for nearby farms indicated that there was obvious error in reporting. It was not possible to correct all errors in enumeration, such as failure to include all products yet to be sold, omissions of some sales shared by the landlord or partner and reporting of net receipts instead of gross. While this tendency understates the total value of all farm products sold for a county or State, it does not seriously affect the use of the statistics as a measure of the relative importance of the different producing groups.

Poultry sales.—In the 1950 Census of Agriculture there was included on the questionnaire an instruction to exclude sales of baby chicks from the item of sales of poultry and poultry products. Receipts from the sale of baby chicks by hatcheries and farms were included in the 1945 Census of Agriculture. For this reason there will be an apparent large decrease in sales of poultry and poultry products in some counties which can be attributed almost entirely to change in procedure. Hatchery operations are concentrated in relatively few counties. However, this change in procedure should be considered in appraising the data on poultry sales. In important commercial broiler areas the poultry sales enumerated may be understated because of the difficulty of finding all operators who were engaged in broiler production in 1949. Those who had discontinued operations may have left the community. Contract operations also presented a problem in the enumeration; for example, a farm operator may have fed broilers for a percentage of the profits. Since he did not own the poultry, he may not have reported the sales.

Differences in data presented by counties and by State economic areas.—In many cases, data presented by State economic areas have been estimated on the basis of tabulations for a sample of the farms while most of the data presented by counties have been obtained by the tabulation of data for all farms in the county. However, data on farm facilities and equipment, farm labor, farm expenditures, and value of land and buildings have been estimated for each county on the basis of the tabulation of the figures for only a sample of the farms in each county. The same sample of farms was used also for the tabulation of data for these items by State economic areas or for the State. In some cases, the totals presented for these items by counties will differ from the totals presented in tables giving data by State economic areas or for the State since, as a matter of economy, adjustments were not made in the tabulations when the difference was not great enough to affect the usefulness of the data.