

UNITED STATES CENSUS OF AGRICULTURE 1945



DEPARTMENT OF COMMERCE

Charles Sawyer, *Secretary*
BUREAU OF THE CENSUS
J. C. Capt, *Director*

FARMS AND
FARM CHARACTERISTICS
BY
TYPE OF FARM

UNITED STATES CENSUS OF AGRICULTURE: 1945

SPECIAL REPORT FARMS AND FARM CHARACTERISTICS BY TYPE OF FARM

Farms, Farm Acreage, Facilities in Farm Dwellings, Farm Equipment,
Farm Population, Number of Principal Kinds of Livestock,
Production of Important Livestock Products,
Acreage and Production of Principal Crops,
and Value of Farm Products Sold
or Used by Farm Households
by Type of Farm

Prepared under the supervision of
RAY HURLEY
CHIEF, Agriculture Division
Bureau of the Census

BUREAU OF THE CENSUS

J. C. CAPT
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Assistant Director

MORRIS H. HANSEN
Statistical Assistant to the Director

ROBERT Y. PHILLIPS
Executive Assistant to the Director



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Assistant Chief

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HILTON E. ROBISON

Crops
JOHN A. BURROUGHS

Livestock
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Value of Farm Products
RAYMOND S. WASHBURN

UNITED STATES CENSUS OF AGRICULTURE: 1945

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BY VALUE OF PRODUCTS

BY TYPE OF FARM

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Provides a graphic presentation of the extent and general nature of the various forms of tenure under which farms are held or operated. The factors contributing to trends and changes in farm tenure since 1880 are analyzed. 42 p., il., paper (in press).

LETTER OF TRANSMITTAL

DEPARTMENT OF COMMERCE,
BUREAU OF THE CENSUS,
Washington, D. C.,
June 1, 1948.

SIR:

I transmit herewith a special report of the 1945 Census of Agriculture. This report presents statistics compiled for a sample of all farms included in the 1945 Census of Agriculture. It includes data by type of farm for farms, farm acreage, facilities in farm dwellings, farm equipment, farm population, the number of principal kinds of livestock, the production of important livestock products, the acreage and production of principal crops, and the value of farm products sold or used by farm households.

The 1945 Census of Agriculture was taken in conformity with the Act of Congress providing for the Fifteenth Decennial Census and subsequent censuses, approved June 18, 1929. The collection of data was performed by Census enumerators under the direction of supervisors appointed by the Director of the Census. The compilation of the statistics in this special report was made under the supervision of Ray Hurley, Chief, Agriculture Division, and Warder B. Jenkins, Assistant Chief, with the assistance of Hilton E. Robison, John A. Burroughs, Carl R. Nyman, Harold Nisselson, Lois Hutchison, Orville M. Slye, Gladys L. Eagle, Elmer O. Rea, and Henry A. Tucker. The mechanical tabulation, by electrical machines, was made under the supervision of C. F. Van Aken. The maps and charts were prepared under the supervision of Clarence F. Batschelet, Geographer.

Acknowledgment is made of the technical assistance and of the loan of technical personnel by the United States Department of Agriculture in the planning, the enumeration, and the compilation of the 1945 Census of Agriculture.

Respectfully,

J. C. CAPT,
Director of the Census.

HON. CHARLES SAWYER,
Secretary of Commerce.

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SPECIAL REPORT—FARMS AND FARM CHARACTERISTICS BY TYPE OF FARM

Introduction.—The data included in this special report provide the first opportunity in recent years to analyze many of the characteristics of farms and farm operators in their relationship to type of farm. This report has been designed to supplement other reports in order to give a detailed picture of our agricultural resources and their utilization by different producing groups. This report provides a mass of information which will be of much value to students and agricultural workers generally in becoming more familiar with the characteristics of our agriculture. The material presented herein should be helpful in providing a better understanding of the agricultural problems of our Nation.

Source of data.—The statistics in this special report are estimates prepared on the basis of tabulations for a cross section, or a sample, of all farms included in the 1945 Census of Agriculture. This sample included approximately 50,000 designated large farms and a sample of approximately 323,000, or about 6 percent, of all other farms.

Description of sample.—In the sampling plan a cross section of small areas throughout the country was selected in such manner that the farms in those sample areas might represent all farms in the United States, as well as all farms in each State, for the items to be included in the enumeration. For this purpose, every county in the United States was completely subdivided into small areas or segments which averaged about 5 farms each and 2.5 square miles in area. A sample of 1 out of every 18 of these segments or sample areas was drawn. Every county in the United States was represented in the sample, with the exception of a few counties containing only a very small number of farms. Provision was made to insure the proper representation of farms in incorporated places and thickly settled unincorporated areas, as well as in open country areas. A detailed statement of the specific methods used in selecting this sample and for evaluating the precision of results may be obtained by writing to the Bureau of the Census. The sample was developed jointly by the Bureau of the Census and the Bureau of Agricultural Economics, with the cooperation of the Statistical Laboratory of Iowa State College, for use in connection with the 1945 Census of Agriculture and for general use in sample surveys in the field of agriculture.

All farms having their headquarters (farm dwellings, farm buildings, or farm entrance) within the selected areas were designated as sample farms. In addition, the sampling plan provided for the inclusion of approximately 50,000 of the largest farms in the United States, regardless of whether or not these were located in sample segments. For many items these large farms, although few in number, accounted for a considerable part of the State and national totals, and efficient sampling called for their inclusion in the sample. The criteria for selection of these large farms varied from State to State but were such as to insure the inclusion of most of these farming operations making large individual contributions to the total agriculture of the State. Lists of these specified large farms, prepared by the district supervisors, were provided the enumerator in advance of his canvass.

The sample, by including all the larger farms in addition to 1 in 18 of the remaining farms, covered about one-fourteenth of the farms in the United States and a much larger proportion of the acreage and production. This size of sample, except for a few of the smaller States and some of the more detailed tabulations, provided an adequate basis for State and national estimates.

Comparisons with other published data.—When data are

tabulated for a sample, exact agreement with the results that would have been obtained from a tabulation of all farms is not, in general, expected. The differences in such cases are partly due to sampling variation, and partly to possible differences between the enumeration and processing of sample farms and other farms.

State totals based on all farms enumerated in the 1945 Census of Agriculture are published in both volume I (Statistics by Counties) and volume II (General Report, Statistics by Subjects) for all items presented in this report except the following:

- *Expenditures for:
 - Purchase of livestock and poultry.
 - Commercial fertilizer.
 - Lime and other liming materials.
 - Seeds, bulbs, plants, and trees.
- *Stationary gasoline engines, farms reporting by horsepower of largest engine and total number of engines.
- *Combines, farms reporting and number.
- *Milk machines, farms reporting.
- Farms by class of work power.
- Farms by value of land and buildings.
- *Farms reporting specified facilities in farm operator's dwelling:
 - Kitchen sink with drain.
 - Mechanical refrigeration.
 - Power-driven washing machine.
- *Farms reporting by year of newest model:
 - Motortrucks.
 - Automobiles.
- *Electric motors, total and by horsepower, farms reporting and number.
- *Number of tractors by kind.

} Farms reporting and dollar amounts.

Items marked with an asterisk are among those for which information was obtained for only a sample of the farms enumerated in the 1945 Census of Agriculture. Information for those items not marked with an asterisk was obtained for all farms, but the data were tabulated for only those farms included in the sample.

Comparison of the State totals of the estimates, presented here by type of farm, with the corresponding published State totals for all farms provides a measure of the sampling and other variations to which the estimates are subject. Measures of sampling reliability for all statistics in this report are given in the section titled "Sampling Reliability of Estimates."

Tabulations based on all farms classified by type of farm are also published by State, both in volume I and in volume II, for the following items:

- Total number of farms.
- Total value of farm products.
- Farm products sold, total and each of the eight major sources of income.
- Farm products used by farm households.

} Farms reporting and dollar value.

Comparisons with the estimated numbers presented in this report, however, would lead to an underestimate of the variation to which the data as a whole are subject, because, in processing the sample, adjustments based on the known total numbers of farms reporting were introduced.

Definitions and explanations.—Definitions and explanations are given below for the various items for which data are included in this report.

Farm.—The schedule book for the 1945 Census of Agriculture was entitled "Farm and Ranch Schedule." The following definition appeared in each schedule book:

A farm, for Census purposes, is all the land on which some agricultural operations are performed by one person, either by his own labor alone or with the assistance of members of his household, or hired employees. The land operated by a partnership is likewise considered a farm. A "farm" may consist of a single tract of land, or a

number of separate tracts, and the several tracts may be held under different tenures, as when one tract is owned by the farmer and another tract is rented by him. When a landowner has one or more tenants, renters, croppers, or managers, the land operated by each is considered a farm. Thus, on a plantation the land operated by each cropper, renter, or tenant should be reported as a separate farm, and the land operated by the owner or manager by means of wage hands should likewise be reported as a separate farm.

Include dry-lot or barn dairies, nurseries, greenhouses, hatcheries, fur farms, mushroom cellars, apiaries, cranberry bogs, etc.

Do not include "fish farms," "fish hatcheries," "oyster farms," and "frog farms." Do not report as a farm any tract of land of less than 3 acres, unless its agricultural products in 1944 were valued at \$250 or more.

Farming, or agricultural operations, consists of the production of crops or plants, vines, and trees (excluding forestry operations) or of the keeping, grazing, or feeding of livestock for animal products (including serums), animal increase, or value increase. Livestock, as here used, includes poultry of all kinds, rabbits, bees, and fur-bearing animals in captivity, in addition to mules, asses, burros, horses, cattle, sheep, goats, and hogs. Frequently, certain operations are not generally recognized as farming. This is especially true where no crops are grown or where the establishments are not commonly considered as farms.

There was provided a partial list of types of specialized agriculture and of operations not generally recognized as farming but for which a report was required. This list included such operations as apiaries (bee farms), feed lots, greenhouses, hatcheries, mushroom cellars, etc.

Farms reporting.—The term "farms reporting," as used in the tables, denotes the estimated number of farms for which the specified items would have been reported in a complete enumeration, based on the number of farms reporting the item in the sample.

Land in farms.—The acreage designated as "all land in farms" includes considerable areas of land not actually under cultivation and some land not even used for pasture or grazing, but all such land must have been under the control of the operator and considered a part of his farm. However, large areas of timberland or other nonagricultural land held by an operator of a farm as a separate business, and not used for pasture or grazing, or for any other farm purpose, were to be excluded. Land neither owned nor leased but from which crops, including wild hay, were harvested was to be reported as part of the farm. When cattle, sheep, or other livestock were grazed or pastured on land neither owned nor leased by the operator, such land was not to be included as a part of the farm. Operations limited to livestock grazing on open range and reported as having no land owned or leased were given "0" acres and were included with farms of under 3 acres.

The 1945 Census also includes in farm acreage more Indian grazing land than prior censuses because of changes in the method of enumerating agricultural activities on Indian reservations. In 1945, if land in an Indian reservation was used by the Indians on a cooperative basis, the entire acreage in the reservation was reported as a single farm. In such cases, much grazing land, not included in farms in previous censuses, was included as land in farms in 1945.

In 1945, data were obtained for eight classes of land based upon the use made of the land in 1944. Data are presented in this report for only cropland harvested and total land pastured.

Cropland harvested.—The land from which cultivated crops were harvested; land from which hay (including wild hay) was cut; and land in small fruits, orchards, vineyards, nurseries, and greenhouses. When two or more crops were harvested in 1944 from the same acreage, such acreage was included only once in the acreage for cropland harvested. However, the acreage and the quantity of each individual crop were reported separately as crops harvested.

Total land pastured.—Total land pastured represents the sum of the acreages reported for three separate classes of land in farms, namely, cropland used only for pasture, woodland pastured, and pasture other than woodland and cropland. Cropland used only for pasture comprises land used only for pasture in 1944 that had been plowed within the last 7 years. Woodland pastured comprises all farm wood lots or timber tracts, natural or planted, and cut-over land with young growth that had or would have value as wood or timber which were used for pasture

or grazing in 1944. Pasture other than cropland and woodland includes nonwooded land that was not suitable for cropping or had not been plowed within 7 years which was used for pasture or grazing in 1944.

Farm values.—The enumerators were instructed to obtain from each farm operator the value of the farm (land and buildings) owned by the operator and, also, the value of that part of the farm rented from others. The value to be reported was the market value.

The operator was asked to place an over-all value on the farm implements and machinery used in operating the farm. This was to represent the present market value and was to include not only the farm implements but also the tools, tractors, motor-trucks, wagons, harnesses, dairy equipment, gins, threshing machines, combines, and all other farm machinery. However, the values of automobiles, commercial mills and factories, and, also, permanently installed irrigation and drainage equipment were to be omitted.

The difference in the number of farms reporting value of implements and machinery and the total number of farms indicates that this item may be incompletely reported, as it is not likely that the number of farms not having implements and machinery is as great as this difference indicates.

Farm operator.—A "farm operator," according to the Census definition, is a person who operates a farm, either performing the labor himself or directly supervising it. The number of farm operators is identical with the number of farms.

Years on farm.—The data on years on farm were secured on the basis of the answer to the question "Year the operator began to operate this farm (continuously)." The data will reflect the stability or the instability of operators on particular farms. They do not necessarily represent the total years of farm experience.

Work off farm.—Many farm operators obtain additional income from personal services performed off their farms. In some cases the operator supplements his farm income with work at odd or spare-time jobs or businesses. In many other cases, his off-farm job provides the principal source of his income, and his farm activities are only secondary. The figures on the number of farm operators reporting work off their farms represent the minimum number of farm operators working off their farms in 1944 as reports were not secured for a considerable number of farm operators.

Farm population.—The inquiries on farm population called for the number of persons in each of four age-sex groups. Farm population was defined as all persons living in specified occupied dwellings on farms. Enumerators were instructed not to report as persons living on farms inmates of institutions, persons living in dwellings rented to others (other than the farm operator), and those living in tourist camps. The figures for farm population, as given in volume I and volume II of the reports of the 1945 Census of Agriculture, represent an understatement of not more than 850,000 of the farm population because of the failure of Census enumerators to report all persons living in the second, third, fourth, etc., dwellings on farms. However for farms included in the sample the enumerator was instructed to list by name each person living on the farm. This procedure apparently resulted in a more complete enumeration of persons living on farms. Therefore the figures given in this special report by total farm population might more nearly represent actual farm population than the data given for all farms in volumes I and II of the reports of the 1945 Census of Agriculture.

Specified farm expenditures.—Data are presented in this report for only six items of farm expenditure, namely, cash wages paid for hired labor; feed for livestock including dairy cattle and poultry; purchase of livestock and poultry; commercial fertilizer; lime and other liming materials; and seeds, bulbs, plants, and trees. The value of lime and other liming materials includes the value of lime, etc., furnished by the Agricultural Conservation Programs but excludes the cost of lime used in sprays, disinfectants, etc.

Specified facilities in farm operator's dwelling.—The number of farms reporting running water, electricity, radio, and telephone was obtained by means of the inquiry, "Does the farm dwelling have—Running water? Electricity? Radio? Telephone?" The data given in this report represent the number of farms with occupied and unoccupied dwellings reporting "Yes" for these inquiries. On those farms included in the sample, the head of each household living on the farm was asked, in addition, whether or not there was on the farm—

1. Kitchen sink with drain.
2. Mechanical refrigeration.
3. Power-driven washing machine.

The figures on the number of farms reporting kitchen sink with drain, mechanical refrigeration, and power-driven washing machines relate only to those farms that have resident farm operators. However, the figures include estimates made for resident farm operators for whom Census enumerators failed to obtain all the household information. These estimates were made on the basis of the reports for resident operators for whom the information was obtained by enumerators.

Distance to all-weather roads.—The Census enumerator was instructed to indicate the distance from the farm to the nearest all-weather road, that is, to the nearest road that is passable at all times and all seasons. If the main farm entrance was on an all-weather road, the enumerator was asked to report "0" miles; if not, to give the distance along the highway to the nearest road that was passable at all times and all seasons. Data are presented in this report for farms located less than 0.3 of a mile from an all-weather road and for those located 0.3 of a mile or more from an all-weather road.

Specified farm machinery and equipment.—Data were secured regarding the number of motortrucks, tractors, automobiles, combines, electric motors, and stationary gasoline engines on farms and the number of farms reporting milking machines. In general, the data for these items represent minimum numbers as occasionally enumerators failed to obtain the information for every farm. In addition to the total number of tractors, the number of garden tractors, crawler tractors, and tractors other than garden and crawler, a classification was obtained according to type, that is, whether they had rubber tires on all wheels, rubber tires on rear wheels only, or no rubber tires. Garden tractors were not defined. The inquiries regarding the type of tractors were answered for only about 90 percent of the farms that reported tractors. Occasionally, these reports were inconsistent with the total number of tractors reported for that farm. After the tabulations were made, the tractors on those farms for which the type of tractor was not reported were distributed on the basis of the distribution of tractors on those farms which reported the type.

Data were also secured on the year of model of the newest automobile and motortruck. Approximately 90 percent of the farms that reported automobiles on farms reported the year of model of the newest automobile and about 85 percent of the farms that reported motortrucks reported the year of the newest model. After the tabulations were made, farms reporting automobiles and motortrucks, but not reporting the year of newest model, were distributed according to the year of newest model in the same proportions as shown for those farms for which the year of model was reported. For farms with two or more automobiles and motortrucks, the year of model was obtained only for the newest automobile and motortruck; therefore, it was not possible to classify all automobiles and motortrucks on farms as to the year of model.

The questionnaire contained two inquiries on electric motors. One of these inquiries called for the number of electric motors under one horsepower but at least one-third horsepower and the other called for the number of electric motors of one horsepower and over. The enumerators were not given any instructions regarding the exclusion of household motors as it was believed

that the exclusion of electric motors under one-third horsepower would eliminate household electric motors such as those used for vacuum cleaners, electric refrigerators, etc. The inquiries on stationary gasoline engines on farms called for the number of such engines that were not self-propelled. The second inquiry regarding stationary gasoline engines called for the horsepower of the largest engine on the farm. The horsepower of the largest stationary gasoline engine was reported for approximately 74 percent of the farms reporting engines. Farms reporting gasoline engines but not reporting horsepower were distributed by horsepower of the largest engine in the same proportion as indicated for those farms reporting both gasoline engines and horsepower of the largest engine.

Horses and mules.—Inquiries on horses and mules called for the total number of all ages on the farm on January 1, 1945. The number of horses was to include horses, colts, and ponies.

Cattle and calves.—For farms included in the sample, Census enumerators were requested to report the number for each of the following sex and age groups: Cows and heifers 2 years old and over kept for milk, cows and heifers 2 years old and over not kept for milk, heifers 1 year old and under 2 kept for milk, heifers 1 year old and under 2 not kept for milk, steers 1 year old and over, bulls 1 year old and over, 1944 heifer calves, and 1944 bull calves and steer calves. Census enumerators failed to give the number by sex and age groups for some farms for which the total number of cattle and calves was reported. The figures given in this special report for farms reporting and total number of all cattle and calves and for cows and heifers 2 years old and over are only for those farms included in the sample for which the sex and age distribution of cattle was reported. Since the sex and age distribution was not reported for all farms included in the sample, the estimates for all cattle and calves and for cows and heifers 2 years old and over represent an understatement.

The understatement for farms reporting cattle and calves for the United States is 4.8 percent and for cows and heifers 2 years old and over, 4.3 percent. Likewise, the number given for the United States for cattle and calves represents a 2.5 percent understatement and for cows and heifers 2 years old and over, a 3.2 percent understatement. These understatements result in the average number per farm reporting being 2.4 percent too large in the case of cattle and calves and 1.2 percent in the case of cows and heifers 2 years old and over.

Hogs and pigs.—Figures are given in this report for hogs and pigs of all ages and also for sows and gilts kept for spring farrowing.

Sheep and lambs and goats and kids.—Inquiries on sheep and lambs and on goats and kids called for the total number of animals of all ages on January 1, 1945.

Cows milked and dairy products.—"Cows milked" includes cows and heifers of all kinds reported as having been milked any time during 1944. The inquiry following the one on cows milked called for the number of gallons of milk produced in 1944. Several inquiries were made concerning the utilization of milk produced in 1944, namely, gallons of whole milk sold, pounds of butterfat sold as cream, and pounds of butter sold. The information for butter sold was more completely reported for farms included in the sample than for all farms; therefore, the data given in this special report for butter sold probably more nearly represent the total amount of butter sold than the data given for all farms in volumes I and II of the reports for the 1945 Census of Agriculture.

Farm slaughter and sales of livestock.—The inquiry on farm slaughter called for the number of animals butchered for use on the particular farm, as well as those for sale as dressed meat from that farm. Animals butchered off the farm on a custom basis, or otherwise, for use on the farm were to be reported by the operator of the farm for which the animals were butchered.

Animals sold alive were reported for the farm from which sold whether produced on that farm or purchased from others. How-

ever, enumerators were instructed not to report animals purchased and resold immediately.

Chickens on hand, eggs produced, and chickens raised.—The inquiry on chickens called for the number over 4 months old on hand January 1, 1945. The question on eggs produced called for the number of dozens produced in 1944. The enumerators were instructed to report the total number of chickens raised regardless of whether or not they were still on the farm at the time of the census. However, some of the enumerators did not always provide reports on chickens raised. Other enumerators failed to report chickens raised from baby chicks purchased from hatcheries or those that were sold or consumed before they reached 4 months of age. In the editing process for those farms included in the tabulations for this special report, adequate adjustments for the underreporting of chickens raised were not made; thus, the totals given for chickens raised represent an understatement of approximately 4 percent for the United States.

Turkeys raised.—The only inquiry made in the 1945 Census of Agriculture regarding turkeys called for the number raised in 1944. The number of turkeys raised as shown in this report represents an understatement of the actual number as enumerators failed to secure a report for every farm on which turkeys were raised.

Selected crops harvested.—Data are given in this report for only selected crops. The acreage of the crops for which data are presented represents approximately 85 percent of the acreage of all crops. The acreage or area given in the tables for these crops represents the acreage harvested in the crop year of 1944, except that the acreage given for land in fruit orchards and vineyards and planted nut trees represents the land in bearing and non-bearing orchards on January 1, 1945. The production for the various crops represents the quantity harvested during the crop year of 1944. Totals for "all hay" include all kinds of hay cut except sorghums saved for hay or dry forage, cowpeas for hay, soybeans for hay, and peanut vines saved for hay.

Vegetables harvested for sale.—Figures were obtained for all States for fresh beans, cabbages, tomatoes, green peas, and all other vegetables and melons harvested for sale. The acreage for all vegetables harvested for sale other than fresh beans, cabbages, tomatoes, and peas has been included as a total for all other vegetables and melons. Vegetables sold to canneries, as well as vegetables harvested for the fresh market, were to be reported as vegetables harvested for sale. "Vegetables harvested for sale" does not include Irish or sweet potatoes.

Land in fruit orchards.—Enumerators were instructed to report all land in bearing and nonbearing fruit orchards, vineyards, and planted nut trees. On many farms, there were a few fruit or planted nut trees or grapevines which were not a part of a well-defined orchard or vineyard. In many such cases, reports were secured for the number of tree or vines with or without production, but no acreage was reported. Unless there were sufficient trees to equal the number of trees usually planted on two acres, the acreage was not supplied during the editing process. For this reason, the number of farms reporting specified fruits may exceed the number of farms reporting the acreage in orchards, vineyards, and planted nut trees.

Selected fruits.—The inquiries on tree fruits call for the number of trees of all ages and the production during the crop year of 1944. Data are given in this report for only apples, peaches, and pears.

Value of farm products sold or used by farm households.—The values presented in this report as "Value of farm products sold or used by farm households" were obtained by the enumerators from farm operators. The 1945 Farm and Ranch Schedule contained nine questions relating to the value of farm products sold, traded, or used by farm households. The total value of farm products sold or used by farm households represents the sum of the individual reports of farm operators for the nine value-of-products questions on the schedule. The total value of farm products, or the value of farm products sold plus the

value of farm products used by farm households, gives an approximate measure of gross farm income. The arrangement on the schedule of these nine questions was such that each question immediately followed the production reports on the items to which the value questions related; for example, the inquiry on the value of field crops sold immediately followed the inquiries on the acreage and production of field crops.

The value questions relating to livestock and livestock products, horticultural products, and forest products apply, in general, to sales during the calendar year 1944; whereas, those relating to fruit and nut crops, vegetables harvested for sale, all other crops (field crops), and farm products used by farm households are for the crop year immediately preceding the census.

Since the individual farm is the unit of enumeration, the value-of-products figures necessarily include duplications because of interfarm sales. For example, feed crops produced on farm A may be sold to farm B; in this case, their value will be reflected in the gross livestock income for farm B. Similarly, a Texas ranch may show sales of feeder cattle, and the same cattle may be fattened and sold from an Illinois farm.

The value-of-products figures do not include income from nonagricultural sources, such as work off the farm by the farm operator or members of his family.

Enumerators were instructed not to include in the value of farm products any government payments, such as soil conservation and dairy feed or dairy production payments.

Fruits and nuts sold.—In general, the figures reported for this question cover the value of all fruits and nuts harvested in 1944 that had been or were to be sold at the time of the census enumeration. However, the information on citrus fruit applies to the 1943-44 season, that is, to the crop harvested from the bloom of 1943. The value figures on fruit cover all tree fruits, nuts, and grapes, as well as small fruits. Sales of wild fruits and nuts are excluded with two exceptions—wild blueberries were to be reported on the Census schedule if the land was used primarily for their production; and wild or seedling pecans were also reported whether grown in orchards, farmyards, pastures, or elsewhere on the farm or ranch. The enumerator was instructed that, for all the value-of-products questions, gross receipts or values were desired without deductions for expenses of any kind. However, in many commercial fruit areas there was a noticeable tendency for growers to report their net receipts instead of the gross value of all fruit sold or traded. This was particularly true in sections where certain marketing costs were commonly deducted from the payments to the grower. Another factor which may have contributed to the tendency to report net receipts for fruit crops was the absence of any questions on the schedule regarding expenditures for such items as spray materials, orchard cultivation, irrigation water, containers, and other production and marketing costs.

Vegetables sold.—The values reported for this item represent the total value of vegetable crops harvested in 1944 for sale. Irish and sweet potatoes were not included under vegetables but were included under field crops.

Horticultural specialties sold.—The values reported for this item include the value of sales for crops grown under glass and propagated mushrooms; nursery products; and flower and vegetable seeds, bulbs, and flowers and plants grown in the open.

All other crops (field crops) sold.—This question covers the value of the sales of field crops, such as corn, sorghums, small grains, annual legumes, hay, clover and grass seeds, and miscellaneous crops, including Irish and sweet potatoes, cotton (lint), tobacco, sugarcane, sugar beets, hops, etc. In addition, the enumerator was instructed to include the value of sales of by-products, such as cottonseed, beet pulp and tops, pea vines, etc., although no provision was made on the schedule for reporting the production of such byproducts. On some schedules the value of sales of cottonseed apparently was not included in the value of field crops sold or traded. The enumerator was also

instructed that, if the farm operator was a tenant, the landlord's share should be included in reporting the value of sales not only for this item, but also for all other value-of-products questions. Receipts for the grazing of livestock on a per-head basis were also included under this question.

Dairy products sold.—This question called for the value of all dairy products sold or traded in 1944, including sales of cheese, buttermilk, and skimmed milk, as well as sales of whole milk, butterfat, and butter. The value of sales of dairy products purchased was to be excluded.

Poultry and poultry products sold.—Sales of ducks, geese, guineas, pigeons, baby chicks, poults, etc., were included, as well as sales of eggs, broilers, fryers, other chickens, and turkeys.

Livestock and livestock products sold (other than dairy and poultry).—This question included the value of animals sold alive, such as horses, mules, cattle and calves, hogs and pigs, sheep and lambs, goats, fur animals in captivity, and bees; and livestock products not included with dairy and poultry, such as meat, goat milk, wool, mohair, hides and pelts, and honey.

Forest products sold.—The values reported for this question include sales of firewood, fuel wood, standing timber, sawlogs, veneer logs, pulpwood, mine props, bark, charcoal, fence posts, railroad ties, poles and piling, turpentine, resin, maple sirup and sugar, etc.

Farm products used by farm households.—This question called for the value of products of the farm in 1944 that were or were to be used by all households on the farm. The following items were to be included in this question if consumed on the farm where produced: Meat, milk, cream, butter, poultry, eggs, honey, vegetables, fruit, firewood, fuel wood, and Irish and sweet potatoes. Farm products of institutional farms which were used by inmates of the institution were considered as sold, and the values were included under the other value-of-products questions. The same procedure was followed with respect to products of community victory gardens.

Tenure of operator.—Farm operators are classified according to the tenure under which they operate their farms.

Full owners own all the land they operate.

Part owners own a part and rent from others the remaining part of the land they operate.

Managers operate farms for others and are paid wages or salaries for their services. Persons acting merely as caretakers or hired as laborers are not classified as managers.

Tenants operate hired or rented land only. Cash tenants pay a cash rental, such as \$4.50 per acre for the cropland, \$500 for the use of the whole farm, etc. Share-cash tenants pay a part of their rental in cash and part as a share of the crop or livestock production. Share tenants pay a share only of either the crop or livestock production or both. Croppers have been defined as share tenants to whom their landlords furnish all the work animals or tractor power in lieu of work animals. In some of the cropper areas, tenants pay cash rent for noncash crops and a share of the crop for the cash crop. These tenants, as well as those for whom the method of rental was not reported, were classified as croppers if the work power was furnished by the landlord. Other and unspecified tenants include those whose rental agreement was unspecified and those who could not be included in one of the other subclasses.

Classification of farms by value of products.—The data given in this special report are for farms classified according to the total value of farm products sold or used by farm households. The value group into which an individual farm has been placed was determined by obtaining a total for the amounts reported for the eight inquiries on the value of farm products sold plus the amount reported for the inquiry on the value of farm products used by farm households.

Classification of farms by type.—In the 1945 Census, all farms were classified mechanically by type of farm, based on the principal source of income in 1944. The procedure was as follows:

After eliminating "farms with no products" and "unclassified" farms, which could not be classified by type on the basis of the value of products, the remaining farms were sorted into two groups: (1) farms producing products primarily for sale and (2) farms producing products primarily for use by farm households. If the value of farm products used by farm households exceeded the total value of all farm products sold, the farm was classified as a "farm producing products primarily for own household use." On the other hand, if the value of all farm products sold equaled or exceeded the value of farm products used by farm households, the farm was classified as a "farm producing products primarily for sale." Farms producing products primarily for sale were further classified into the following nine major types on the basis of source of income: Fruit-and-nut farms, vegetable farms, horticultural-specialty farms, all-other-crop (field crop) farms, dairy farms, poultry farms, livestock farms, forest-products farms, and general farms. If the value of products sold from one source of income was more than 50 percent of the total value of all farm products sold, the farm was classified as the type corresponding to that source of income. Farms for which the value of products from any one of the eight sources of income did not exceed 50 percent of the total value of all farm products sold were classified as "general" farms.

Farms not classified by type.—Farms not classified by type include two groups of farms. The first group consists of farms on which no farm products were sold or used during 1944. Farms included in this group represented (a) new farms being operated for the first time in 1945 and (b) farms having a complete crop failure in 1944 with no livestock or livestock products sold and no farm products used by farm households. The second group of farms includes a number of farms designated "unclassified farms" for which the information on value of products sold or used was incomplete or was not reported. In the tables giving data for farms classified by value of products, generally, unclassified farms have been included in the value-of-product group \$0 to \$249.

Sampling reliability of estimates.—Approximate measures of the sampling reliability of estimates presented by type-of-farm groups, by States, are given below.

These measures indicate the general level of sampling reliability of the estimates, but they do not include any allowance for sources of error other than sampling variation—for example, underreporting or errors in the original data furnished by farmers. Adjustments made for underreporting, differences in reporting between the farms in the sample and other farms in the census, and other problems in reporting that affect both the sample and the complete census are discussed above, in connection with the definitions of the items, as they apply. It should be borne in mind that for estimates for the United States and for geographic regions and the larger States, sources of error other than sampling may become relatively more important than sampling variation.

It will be noted in the tables below that estimated numbers of farms and estimated item totals are subject to relatively large sampling errors when the number of farms reporting is small. Nevertheless, the complete detail for all type-of-farm groups in each State is presented for every item in this report. This method of presentation insures maximum flexibility for obtaining estimates for desired combinations of States or type-of-farm groups. Moreover, percentage figures and averages derived from the tables will have generally greater reliability than the estimated totals; and significant patterns of relationships may sometimes be observed even though the individual data are subject to relatively large sampling errors. Also, it is for this latter purpose, i. e., to facilitate the study of relationships, that many items are shown for the sample farms in this report even though complete totals based on all farms in the census have previously been published.

In general, the measures of sampling reliability presented tend to overestimate the variation in the sample estimates.

FARMS AND FARM CHARACTERISTICS

This is true for several reasons: (1) Maximum figures intended to serve for all type-of-farm groups in all States were used for the sampling errors in setting the limits of reliability. (2) The predicted limits of error presented ignore the complete enumeration of large farms. When large farms account for a substantial proportion of the item total in a class, the data on sampling reliability may overstate considerably the sampling variation. For example, in Arizona and Nevada about 80 percent of all sheep reported were on large farms. Consequently the sampling error of this item for most of the type-of-farm groups in these States is only about one-fifth of the value indicated in the tables below. This factor, of course, varies in importance from item to item and differently from type to type.

The estimated sampling reliability of the number of farms in any type-of-farm group given as reporting a specified item is shown in the following table. This table shows percentage limits, such that the chances are about 95 in 100 that the difference between the sample estimate and the number of farms reporting that would have been obtained from a tabulation for all farms would be less than the limit specified. However, most of the items would be expected to show a difference of less than one-half the percentage limit given in the table below:

If the estimated number of farms reporting in the type-of-farm class is—	Then the chances are about 95 in 100 that the estimated number would differ from the results of a complete tabulation by less than ¹ 2—
	Percent
100.....	110
500.....	51
1,000.....	36
2,500.....	23
5,000.....	16
10,000.....	11
25,000.....	7.2
50,000.....	5.2
100,000.....	3.6
500,000.....	1.6

¹ For estimated number of resident operators reporting kitchen sink with drain, mechanical refrigeration, and power-driven washing machine in the following States, the percent differences given should be multiplied by 7/4:

California	North Carolina
Indiana	Ohio
Iowa	Pennsylvania
Kansas	

² In the case of items for which the estimated number of farms reporting constitutes more than 50 percent of all farms in the class, more precise limits may be obtained by multiplying the percent difference given in the table by an appropriate factor as follows:

When farms reporting constitute (percent)—	Multiply given limit by—
50.....	0.75
75.....	.50
90.....	.30
95.....	.20

The magnitude of sampling errors in the estimated farm population figures by age group, for type-of-farm groups by States, may be determined from the following table:

If the estimated farm population in the age group—type-of-farm class is—	Then the chances are about 95 in 100 that the estimated farm population in the age group—type-of-farm class would differ from the results of a complete tabulation by less than—
	Percent
100.....	100
500.....	45
1,000.....	32
2,500.....	20
5,000.....	14
10,000.....	10
25,000.....	6.4
50,000.....	4.5
100,000.....	3.2
500,000.....	1.4

A majority of the estimated population figures would be expected to show a difference of less than one-half the percentage limit given in the table. Estimates of total population by type of farm have somewhat greater sampling reliability than the estimates by age group, and similarly for percentages derived from the data presented by age group.

Two tables are given below to assist in determining the general level of sampling reliability of estimated totals by type of farm for other items presented in this report. In table A, a list of the items is given, and the level of sampling reliability as shown in table B is indicated. By referring to table B, in the column for the level of sampling reliability designated in table A, percent limits according to the number of farms reporting may be obtained. As pointed out above, the percent limits indicated represent maximum figures intended to serve for all groups, and a majority of the estimates would be expected to show differences of less than one-half the stated limits. In using tables A and B, it should be noted that, in general, for States in which an item is reported relatively frequently the level of reliability in table B will tend to overestimate the sampling variation to a greater extent than when the item is reported relatively infrequently.

Table A.—INDICATED LEVEL OF SAMPLING RELIABILITY OF ESTIMATED STATE TOTALS BY TYPE OF FARM FOR SPECIFIED ITEMS

Item	Level of sampling reliability (refer to corresponding numbered column in table B)
Land in farms, acres.....	3
Cropland harvested, acres.....	2
Land pastured, acres.....	3
Value of implements and machinery, dollars.....	2
Work off farm, days.....	3
Cash wages paid, dollars.....	5
Expenditures, dollars:	
Purchase of livestock and poultry.....	6
Commercial fertilizer.....	4
Lime and other liming materials.....	3
Seeds, plants, bulbs, and trees.....	4
Feed bought for livestock, including dairy and poultry feed.....	4
Combines (harvester-threshers), number.....	2
Motortrucks, number.....	2
Tractors, number:	
Total.....	2
Garden.....	17
Crawler.....	17
Other:	
With rubber tires on all wheels.....	2
With rubber tires on rear wheels only.....	7
With no rubber tires.....	4
Automobiles, number.....	2
Electric motors, number:	
Total.....	2
1 horsepower and over.....	2
Under 1 horsepower but at least 1/4 horsepower.....	2
Stationary gasoline engines, number.....	2
All mules and mule colts, number.....	2
All horses and colts, including ponies, number.....	13
All cattle and calves, number.....	13
Cows and heifers 2 years old and over, number.....	4
All hogs and pigs, number.....	2
Sows and gilts for spring farrowing, number.....	3
All sheep and lambs, number.....	2
All goats and kids, number.....	12
Cows and heifers milked, number.....	13
Milk produced, gallons.....	13
Whole milk sold, gallons.....	3
Cream sold, pounds of butterfat.....	4
Butter sold, pounds.....	
Number of animals sold alive:	
Cattle.....	13
Hogs.....	3
Sheep.....	
Number of animals butchered:	
Cattle.....	2
Calves.....	2
Hogs.....	13
Chickens on hand, number.....	13
Eggs produced, dozens.....	3
Chickens raised, number.....	3
Turkeys raised, number.....	2
Corn for all purposes, acres.....	
Corn harvested for grain:	
Acres.....	2
Bushels.....	
Oats threshed:	
Acres.....	2
Bushels.....	
Barley threshed:	
Acres.....	2
Bushels.....	

See footnotes at end of table.

Table A.—INDICATED LEVEL OF SAMPLING RELIABILITY OF ESTIMATED STATE TOTALS BY TYPE OF FARM FOR SPECIFIED ITEMS—Continued

Item	Level of sampling reliability (refer to corresponding numbered column in table B)
All wheat threshed:	
Acres.....	2
Bushels.....	2
All hay cut:	
Acres.....	2
Tons.....	2
Tobacco:	
Acres.....	3
Production, pounds.....	3
Cotton:	
Acres.....	3
Production, running square bales.....	3
Irish potatoes:	
Acres.....	5
Production, bushels.....	5
Sweetpotatoes and yams:	
Acres.....	5
Production, bushels.....	5
Value of vegetables grown for farm household(s) use, dollars.....	1
Vegetables harvested for sale, acres:	
Fresh beans.....	3
Cabbage.....	3
Tomatoes.....	3
Green peas.....	3
All other vegetables and melons.....	3
Land in fruit orchards, vineyards, and planted nut trees, acres.....	6
Apples:	
Trees of all ages, number.....	6
Quantity harvested, bushels.....	5
Peaches:	
Trees of all ages, number.....	4
Quantity harvested, bushels.....	4
Pears:	
Trees of all ages, number.....	4
Quantity harvested, bushels.....	4

¹ Five for groups in which the given type constitutes more than 10 percent of all tractors.

² Two for dairy farms.

³ One for dairy farms.

⁴ Two for livestock farms.

⁵ Two for poultry farms.

Table B.—SAMPLING RELIABILITY OF ESTIMATED ITEM TOTALS FOR STATES BY TYPE OF FARM FOR SPECIFIED NUMBERS OF FARMS REPORTING, BY LEVELS

[See table A for designation of level for any item]

If the estimated total number of farms reporting in the type-of-farm group is—	Then the chances are about 95 in 100 that the estimated item total would differ from the results of a complete tabulation of the item for all farms by less than—						
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
100.....	82	117	143	165	200	260	450
500.....	37	52	64	73	90	117	200
1,000.....	26	37	45	52	64	82	143
2,500.....	16	23	28	33	40	52	90
5,000.....	12	16	20	23	29	37	64
10,000.....	8.2	12	14	16	20	26	45
25,000.....	5.2	7.4	9.0	10	13	17	29
50,000.....	3.7	5.2	6.4	7.4	9.0	12	20
100,000.....	2.6	3.7	4.5	5.2	6.4	8.2	14
500,000.....	1.2	1.6	2.0	2.3	2.9	3.7	6.4

Presentation of data.—A State is the smallest geographic area for which the data given in this report are available. Table C presents a summary of data for the United States and gives many of the significant averages and percentages needed for an appraisal and analysis of the data. Maps and charts showing some of the important characteristics and relationships for farms for various types of farms are presented on pages XVIII to XXVII. Data by States are given in tables 1 to 17, inclusive. The States have been arranged in groups, by geographic divisions, in order to facilitate comparisons among States in the same general area.

The discussion which follows relates only to the United States. Since the farms in the various States differ from those of the United States as a whole, the conclusions for the United States would not apply to an individual State. The characteristics of farms in each type and the relative contribution of farms in each type to the total differ from State to State.

Vegetable farms represent 1.6 percent of all farms, contain only 0.7 percent of all land in farms and 1.1 percent of all cropland harvested. The average size of vegetable farms is only 83.2 acres and the average acreage of cropland harvested per farm is 40.2. Almost three-fifths of all vegetable farms have less than 20 acres of cropland harvested and only 7 percent have over 100 acres of cropland harvested. One out of 6 is less than 10 acres in size and 44 percent have an area of less than 30 acres. Seven out of ten are operated by owners. The average value of land and buildings on vegetable farms is \$9,739 and almost four-fifths of these farms have a value under \$10,000.

More than one-half of the vegetable farms report cash wages for hired labor and the amount of cash wages per farm reporting is higher for this type of farm than for any other type except horticultural-specialty farms. Expenditures for commercial fertilizers are reported for almost two out of three vegetable farms. The expenditure per farm reporting for commercial fertilizer of \$461 for these farms is greater than for any other type of farm except for fruit-and-nut farms.

On vegetable farms the acreage in vegetables harvested for sale represents slightly more than one-half of the acreage of cropland harvested, corn for all purposes represents almost one-seventh, and all hay represents almost one-ninth.

About two-thirds of the value of all vegetables sold is on farms classified as vegetable farms. On these farms, the sale of vegetables represents over 83 percent of the value of all farm products sold and the sale of all other crops (field crops) accounts for approximately 11 percent. The sale of all crops amounts to 95 percent of the sale of all farm products on these farms.

Fruit-and-nut farms represent 2.3 percent of all farms, contain less than 1 percent of all land in farms, and have 6.5 percent of the sales of all farm products. The average size of fruit farms is only 81.2 acres or only about 40 percent of the average size of all farms in the United States. Over one-half of all fruit-and-nut farms have an area under 30 acres. Farms under 10 acres in size represent nearly one-fifth of all farms of this type. The average acreage of cropland harvested per farm reporting for these farms is 35.9. However, 57.4 percent of all fruit-and-nut farms have less than 20 acres of cropland harvested and only 6.5 percent have over 100 acres.

The value of land and buildings per farm for fruit-and-nut farms exceeds that for all the other types except horticultural-specialty farms. The value per acre for fruit-and-nut farms is almost six times the per-acre value for all farms. While the value per farm for fruit-and-nut farms is \$18,879, more than 53 percent of these farms have an average value of less than \$10,000.

More than 87 percent of all fruit-and-nut farms are operated by owners. A higher percentage of these farms are operated by hired managers than for any other type except horticultural-specialty farms. The percentage of farm operators less than 35 years of age is lower for fruit-and-nut farms than for any other type of farm except horticultural-specialty farms. On the other hand, the percentage of farm operators 55 years old and over is higher for fruit-and-nut farms than for any other type of farm except poultry farms. The percentage of farm operators who have operated their farms 15 years or more is higher for fruit-and-nut farms than for any other type except horticultural-specialty farms.

One-third of the operators of fruit-and-nut farms work off their farms and more than 82 percent of these work 100 days or more off their farms during the year.

Over three-fourths of the fruit-and-nut farms report cash wages, the proportion being higher than for any other type of farm. Cash wages on fruit-and-nut farms represent over one-eighth of the cash wages reported for all farms.

More than one-half of the fruit-and-nut farms report expenditures for commercial fertilizer and the expenditure per farm reporting is greater for these farms than for any other type of farm.

A higher percentage of fruit-and-nut farms than of any other

type of farm except horticultural-specialty farms have running water, electricity, kitchen sink with drain, and mechanical refrigeration. More than two-fifths of the farms of this type have motortrucks and tractors. More than one out of eight have crawler tractors. However, more than two-fifths do not have a tractor or horses or mules.

Fruit-and-nut farms are highly specialized. On these farms, the sale of fruits and nuts accounts for over 93 percent of the value of all farm products sold. All other crops (field crops) provide the second most important source of income, the sale of these crops accounting for 2.0 percent of the sale of all farm products. The average value of all farm products sold for fruit-and-nut farms is \$7,990, the highest average value for any type of farm except horticultural-specialty farms. Fruit-and-nut farms represent more than 17 percent of all farms with a value of products of \$40,000 and over.

Commercial fruit-and-nut production is concentrated largely on fruit-and-nut farms. More than 91 percent of the sale of fruits and nuts was reported by these farms. These farms have more than 60 percent of all the land in orchards, vineyards, and planted nut trees, over 40 percent of all apple trees, 51 percent of all peach trees, and 61 percent of all pear trees. They account for 75 percent of the total production of apples, 78 percent of the production of peaches, and 79 percent of the production of pears.

Horticultural-specialty farms comprise only 0.3 percent of all farms and contain only 0.1 percent of all land in farms. The average size of these farms is less than that of any other type. Over one-half of the horticultural-specialty farms are under 10 acres in size. Almost two-thirds of the farms of this type have less than 20 acres of cropland harvested. The value per farm and value per acre are higher for horticultural-specialty farms than for farms of any other type. Almost one-half of the farms of this type have a value of \$10,000 or more. More than 9 out of 10 horticultural-specialty farms are operated by owners or managers. While these farms account for less than 0.3 percent of all farms, cash wages paid on farms of this type amount to 3.1 percent of the cash wages for all farms. A larger proportion of horticultural-specialty than of any other type of farm have running water, electricity, telephone, kitchen sink with drain, mechanical refrigeration, and a power-driven washing machine. The value of farm products sold is derived almost entirely from the sale of horticultural-specialty products. Vegetables harvested for sale represent the only other source of income accounting for as much as 2 percent of the total value of all farm products sold.

All-other-crop (field crop) farms are more numerous than farms of any other type, accounting for 31.8 percent of all farms, containing 26.9 percent of all land in farms and 43.5 percent of all cropland harvested. The average size of farm of this type is 166.3 acres and the average acreage of cropland harvested per farm is 49.7. However, almost two-thirds of the farms have less than 50 acres of cropland harvested. Nearly 2 out of 5 of these farms have a value of less than \$2,000 and over 6 out of 10 have a value of under \$5,000. Over one-half of all farms operated by tenants are classified as all-other-crop farms. More than one-half of all share tenants and over 86 percent of all croppers are on these farms. This is the only type of farm on which owners represent less than one-half of the farm operators.

Dairy farms comprise 9.5 percent of all farms and contain 7 percent of all land in farms and 9 percent of all cropland harvested. The average size of these farms is 143.3 acres. Thirty-nine and nine-tenths percent of the land is in harvested crops and 45.4 percent in pasture. More than one-half of all dairy farms are between 70 and 179 acres in size. Four out of five are operated by owners. Almost two-fifths of the farms have a value under \$5,000 and over 28 percent have a value of \$10,000 or over. They contribute 12.9 percent of the value of all farm products sold and 63.6 percent of all dairy products sold. Over three-fourths of the value of all farm products sold on dairy farms is derived from the sale of dairy products. Livestock sales, representing largely the sale of calves and dairy cows, account for al-

most one-eighth of the total value of all farm products sold. The sale of poultry and poultry products comprises 5 percent and the sale of field crops represents 4 percent of the total sales from dairy farms. The average milk production per farm is 10,542 gallons and the sale of dairy products per farm averages \$2,888. Almost 9 out of 10 dairy farms sell whole milk, 11.2 percent sell cream, and 1.4 percent sell butter. They produce 7 out of every 10 gallons of whole milk sold, and 1 out of every 9 pounds of butterfat sold. They have over 17 percent of all cattle and 22 percent of all cows and heifers 2 years old and over. These farms have an average of 25.9 cattle, of which 17.5 are cows and heifers 2 years old and over.

Over 37 percent of the dairy farms have a milking machine, more than 55 out of 100 have a tractor, 3 out of 4 have horses, 1 out of 2 has hogs, and 1 out of 12 has sheep. About 7 out of 10 dairy farms have corn, over one-half have oats, almost one-half have Irish potatoes, and 1 out of 9 has vegetables harvested for sale. Feed is purchased on 94 out of every 100 farms and the average annual expenditure for the farms purchasing feed is \$1,131.

Corn acreage on dairy farms represents 22 percent of cropland harvested; hay, 43.6 percent; oats, 15.1 percent; and wheat and barley, 7.8 percent. These farms have over one-fifth of the total hay acreage of all farms.

Poultry farms comprise 4.7 percent of all farms and contain 1.7 percent of all land in farms and 1.6 percent of all cropland harvested. The average size of poultry farms is 69.6 acres and the average acreage of cropland harvested is 27.2. Over one-fourth of all poultry farms contain less than 10 acres each. Approximately one-ninth of all farms under 10 acres are poultry farms. More than 2 out of 5 poultry farms contain less than 30 acres and almost 3 out of 5 have less than 50 acres. The value of land and buildings per poultry farm is \$5,357. About 5 out of 8 poultry farms have a value of less than \$5,000 and only 1 poultry farm out of 8 has a value of \$10,000 and over. These farms contribute 5.4 percent of the value of all farm products sold and 48.3 percent of the value of all poultry and poultry products sold. They have 18.6 percent of all chickens and produce 24.1 percent of all eggs.

The sale of poultry and poultry products accounts for almost nine-tenths of the value of all farm products sold from these farms. The sale of dairy products and livestock and livestock products other than dairy and poultry accounts for one-twelfth of the sales of all farm products.

The average number of chickens on hand over 4 months old per farm reporting is 314. Egg production averages 3,214 dozens per poultry farm reporting, chickens raised average 1,365, and turkeys raised, 678.

Approximately 95 out of 100 poultry farms purchase feed. The average expenditure for feed per farm reporting is \$1,721.

Over 86 out of every 100 farms are operated by owners. Almost one-half of all operators of poultry farms are 55 years of age and over. More than 1 out of 3 poultry farm operators do off-farm work and over 80 percent of these operators spend 100 or more days at off-farm work during the year.

Almost one-half of all poultry farms have running water and mechanical refrigeration; 2 out of 3 have electricity; 1 out of 4 has a motortruck; and 2 out of 3 have cattle.

Of every 100 acres of cropland harvested on poultry farms, 29 acres are used for corn, 28 acres for hay, and 22 acres for small grains.

Livestock farms (other than dairy and poultry farms) represent 13.8 percent of all farms, contain 43 percent of all land in farms and 16.3 percent of all cropland harvested. They have 23.1 percent of the value of all farm products and 24 percent of the value of all farm products sold. The average size of livestock farms is 609.8 acres. Livestock farms account for more than one-half of all farms having 1,000 acres or more each. The average acreage of cropland harvested per farm reporting is 110. Approximately 1 farm out of 8 has 200 acres or more of cropland

harvested. The value of livestock farms represents over one-fourth of the value of all farms. Almost one-half of the farms have a value of \$10,000 or more each. Three out of four livestock farms are operated by owners, and 1 out of 4 by tenants. About one-half of the tenant farms are operated by share tenants and one-half by cash and share-cash tenants. One-tenth of the farm operators have been operating their farms for less than 1 year. More than 1 out of 5 operators work off their farms for pay or profit. Of those working off their farms, 58.7 percent perform 100 or more days of off-farm work during the year.

More than 9 out of 10 livestock farms have cattle, over 7 out of 10 have hogs, 6 out of 10 have sows, and 2 out of 10 have sheep. Approximately 7 out of 10 farms have corn, and more than 4 out of 10 have oats.

Of the cropland harvested on livestock farms, corn acreage represents 32.5 percent; oats, 13.2 percent; barley, 2.8 percent; wheat, 9.4 percent; and hay, 27.7 percent. The average numbers of animals per farm reporting are as follows: Horses, 4.4; cattle, 43.8; cows and heifers 2 years old and over, 20.8; hogs, 36.6; sheep, 166.6; and goats, 111. Livestock farms have 40.2 percent of the cattle, 47.3 percent of the hogs, 48.8 percent of the sows, 73.4 percent of the sheep, and 77.4 percent of the goats on all farms. The average numbers of animals sold alive per farm reporting are as follows: Cattle and calves, 27.3; hogs and pigs, 64.1; and sheep and lambs, 148.2.

Almost 9 out of 10 livestock farms purchase feed and 7 out of 10 buy livestock or poultry. The average expenditure per farm reporting is \$915 for feed and \$1,229 for the purchase of livestock and poultry.

Nearly 6 out of 10 livestock farms sell dairy products, 4 out of 10 sell field crops, and 3 out of 4 sell poultry and poultry products. On the farms of this type the sale of livestock and livestock products (other than dairy and poultry) accounts for 78.4 percent of the value of all farm products sold, while the sale of dairy products accounts for 6 percent and the sale of poultry and poultry products accounts for 5.2 percent.

General farms comprise 11.8 percent of all farms and contain 10.7 percent of all land in farms and 16.0 percent of all cropland harvested. These farms account for 12.5 percent of the value of farm products and 12.4 percent of all farm products sold. The average size of general farms is 179.3 acres. Two out of five of these farms have less than 50 acres of cropland harvested.

The diversification of general farms is indicated by the amount of income obtained from various sources. Of the total value of farm products sold on general farms, 25.2 percent comes from the sale of field crops, 22.6 percent from the sale of dairy products, 14.7 percent from the sale of poultry and poultry products, and 30.7 percent from the sale of livestock and livestock products (other than dairy and poultry). Of the cropland harvested on general farms, corn represents 30 percent; oats, 14.2 percent; wheat, 12.8 percent; and hay, 20.4 percent. Eight out of 10 farms have corn, over 9 out of 10 have cattle and calves, and 7 out of 10 have hogs.

General farms produce 23.5 percent of all whole milk sold, 26.4 percent of all the butterfat sold, 19.9 percent of the cattle and calves sold alive, 23.3 percent of the hogs and pigs sold alive, and 23 percent of all sheep and lambs sold alive.

Forest-products farms represent less than one-half of 1 percent of all farms, contain 0.6 percent of all land in farms, and only 0.2 percent of all cropland harvested. These farms account for 38.9 percent of all forest products sold. Over three-fourths of the forest-products farms have less than 50 acres of cropland harvested. Moreover, 3 out of 4 have a value under \$5,000.

Of the total value of farm products sold on forest-products farms, 75.3 percent is derived from the sale of forest products, 8.7 percent from the sale of livestock and livestock products other than dairy and poultry, and 7.4 percent from the sale of field crops.

Almost 3 out of 10 forest-products farms have no horses, mules,

or tractors. About 1 out of 2 of these farms has automobiles, 3 out of 10 have motortrucks, and almost 2 out of 10 have tractors.

Over 38 percent of the operators of forest-products farms perform off-farm work for pay or profit. More than 70 percent of those working off their farms spend 100 days or more at such work during the year.

Subsistence farms represent 22 percent of all farms and contain 6.8 percent of all land in farms, and 4 percent of all cropland harvested. These farms produce 3.3 percent of the value of products of all farms and only 0.9 percent of all farm products sold. Two-thirds of all subsistence farms are under 50 acres in size and one-fourth are under 10 acres. They represent over one-half of all farms under 10 acres in size. Five out of 8 of these farms have less than 20 acres of cropland harvested and 79 out of 100 have less than 50 acres of cropland harvested. Subsistence farms represent 43 percent of all farms with 1 to 19 acres of cropland harvested and 55 percent of all farms with less than 10 acres of cropland harvested.

The average acreage of cropland harvested per farm reporting is 13.2. Of the total acreage of cropland harvested, corn represents 35.8 percent, oats 4.4 percent, wheat 4.1 percent, hay 29.4 percent, and cotton 4.4 percent.

More than one-fourth of all subsistence farms have a value of products of less than \$250 and over one-half have a value of products of less than \$400. Ninety-two out of every 100 such farms have a value of products of less than \$1,000. These farms comprise 62 out of 100 farms with a value of products of less than \$250, 72 out of 100 with a value of products of \$250 to \$399, and 56 out of 100 with a value of products of \$400 to \$599.

The average value of farm products sold or used per farm is \$469. Two out of 11 of these farms report the sale of crops; 1 out of 6 reports the sale of dairy products; 1 out of 3 reports the sale of livestock and livestock products other than dairy and poultry; and 2 out of 5 report the sale of poultry and poultry products.

The average value of subsistence farms is \$3,047. Almost one-half of them have a value of less than \$2,000 and 84 out of 100 have a value of less than \$5,000. They comprise 38.9 percent of all farms with a value of less than \$2,000 and 52 percent of all farms with a value of products under \$1,000.

Seven out of 10 subsistence farms have cattle; 43.5 percent have hogs; and 82.5 percent have chickens. The average number of animals per farm reporting is as follows: Cattle, 4.6; hogs, 4.5; and chickens, 35. The average number sold alive per farm reporting is 2.3 for cattle and calves and 6.1 for hogs and pigs.

Of all subsistence farms, 27.4 percent have running water; 46.4 percent, electricity; 21.2 percent, a telephone; 69 percent, a radio; 34.9 percent, a kitchen sink with drain; 29 percent, mechanical refrigeration; and 34.3 percent, a power-driven washing machine. Almost half of the subsistence farms have neither horses, mules, nor a tractor. One out of five has only 1 horse or mule and no tractor. They comprise 39 percent of all farms with no work power and over 2 out of 5 farms having only 1 horse or mule and no tractor.

The operators of one-half of all subsistence farms work off their farms for pay or profit. Seven out of eight of those working off their farms perform 100 days or more of off-farm work during the year.

Over five and one-third million persons including 1,788,087 children under 14 years of age live on subsistence farms, comprising over one-fifth of all persons living on farms.

Farm population.—There is very little difference in the average number per farm of persons living on farms among the various types of farms. The total farm population for farms of various types, arranged in order of relative importance of the farm population, is as follows: All-other-crop farms, 8,028,301; subsistence farms, 5,345,881; livestock farms, 3,154,932; gen-

eral farms, 2,808,933; dairy farms, 2,412,217; poultry farms, 932,851; fruit-and-nut farms, 495,397; vegetable farms, 398,338; forest-product farms, 119,057; and horticultural-specialty farms, 59,432.

Land in farms, land use, and size of farm.—Land in farms is not distributed among the several types of farms in proportion to the number of farms in each type. Livestock farms, representing only 13.8 percent of all farms, contain 43 percent of all land in farms. On the other hand subsistence farms, comprising 22 percent of all farms, contain only 6.8 percent of all land in farms. Likewise, there is considerable variation among types of farms in the use of farm lands. For all-other-crop farms, cropland harvested represents 49.7 percent of all land in such farms. Cropland harvested represents two-fifths or more of all land in farms in fruit-and-nut, vegetable, horticultural-specialty, and general farms. More than three-fifths of all farms with less than 50 acres of cropland harvested are all-other-crop and subsistence farms.

Livestock farms are larger than farms of any other type, the average size of these farms being 609.8 acres. Forest-products farms are second largest with an average of 207.8 acres and horticultural-specialty farms are smallest with 49 acres per farm.

Farm operator characteristics.—The proportion of farm operators who are 55 years old or over is related to type of farm. The highest percentages of operators 55 years old and over are found on all-other-crop and subsistence farms. More than one-half of all farm operators 65 years old and over are on farms of these types. Horticultural-specialty, fruit-and-nut, and dairy farms have the highest percentages of farm operators who have been on their farms 15 years or more. The highest proportions of farm operators who have been on their farms less than 5 years occur on all-other-crop (38.3 percent) and subsistence farms (22.5 percent).

The percentage of farm operators working off their farms is highest (50.3 percent) for subsistence farms and lowest (18.2 percent) on all-other-crop farms. Operators of subsistence farms account for approximately one-half of all farm operators working 100 days or more off their farms. More than two-fifths of the operators of subsistence farms and more than one-fourth of the operators of fruit-and-nut, poultry, and forest-products farms work 100 days or more off their farms during the year.

The percentages of farms operated by owners are highest for forest-products farms (89.8 percent), fruit-and-nut (87.7 percent), poultry (86.6 percent), and horticultural-specialty (83.9 percent) and lowest for all-other-crop farms (45.8 percent). More than one-half of all-other-crop farms, and one-fourth or more of vegetable and general farms are operated by tenants.

Facilities in the farm dwelling.—The proportion of farms reporting facilities such as running water, electricity, telephone, radio, kitchen sink with drain, mechanical refrigeration, and power-driven washing machine is lowest for all-other-crop farms and is highest for horticultural-specialty and fruit-and-nut farms with the exception of farms reporting telephone and radio. For example, less than 1 out of 6 all-other-crop farms has running water as compared with more than 78 out of 100 horticultural-specialty farms. Twenty-nine percent of all farms have running water. The proportion of farms having running water is less than this average for all-other-crop, forest-products, and subsistence farms. In fact, the percentage of the farms having electricity, telephone, radio, kitchen sink with drain, mechanical refrigeration, and a power-driven washing machine is lower for all-other-crop, forest-products, and subsistence farms than for all farms.

Farm equipment and work power.—The percentage of farms reporting selected kinds of farm equipment varies by type of farm. More than one-half of the dairy, livestock, and general farms have tractors. On the other hand less than one-third of the all-other-crop, poultry, forest-products, and subsistence farms have tractors. The proportion of farms with automobiles

varies from less than 50 percent for all-other-crop farms and forest-products farms to 83 percent for dairy farms. Over 3 out of 5 horticultural-specialty farms and more than 2 out of 5 fruit-and-nut and vegetable farms have motortrucks. The percentage of farms that report milking machines and the number of combines on farms are related to type of farm. Dairy farms account for more than one-half of all farms with milking machines. Dairy, general, and livestock farms comprise more than nine-tenths of all farms with milking machines. Almost one-half of all combines are on all-other-crop farms. All-other-crop, general, and livestock farms have over 87 out of every 100 combines on all farms.

Over 1,500,000 or over one-fourth of all farms in the United States do not have horses, mules, or tractors. More than 2 out of 3 of these farms without work power are either subsistence farms or all-other-crop farms. More than 637,000 farms have only 1 horse or mule and no tractor. Subsistence and all-other-crop farms comprise more than 77 out of every 100 such farms. On the other hand, more than half a million farms have a tractor, but no horses or mules. All-other-crop farms represent approximately one-third and general, dairy, and livestock farms each comprises only slightly more than 10 percent of farms with only a tractor as a source of work power.

Livestock and livestock products.—Approximately three-fourths of dairy, livestock, and general farms have horses or mules as compared with less than one-third of the fruit-and-nut and horticultural-specialty farms. More than 9 out of 10 livestock, dairy, and general farms have cattle and calves as compared with less than one-half of the fruit-and-nut, vegetable, and horticultural-specialty farms. Livestock and the production and sale of livestock and livestock products are concentrated on the livestock types of farm. Livestock and dairy farms have almost three-fifths of all cattle and calves. Livestock farms have almost one-half of all hogs and of all sows and gilts and over 73 percent of all sheep. Livestock and dairy farms account for more than two-thirds of all cattle and calves sold alive, while almost three-fifths of all hogs and pigs sold alive and over four-fifths of all sheep and lambs sold alive are from livestock farms. Dairy farms account for more than 70 out of every 100 gallons of whole milk sold.

Farm expenditures.—The proportion of farms reporting cash wages paid for hired labor varies from 75.8 percent for fruit-and-nut farms to 23.4 percent for subsistence farms. Cash wages of \$1,000 and over are reported for approximately 2 out of 5 horticultural-specialty farms, 1 out of 3 fruit-and-nut farms, 1 out of 5 vegetable farms, and 1 out of 10 dairy and livestock farms. Out of every \$100 paid for cash wages, \$32 is paid on all-other-crop farms, \$18 on livestock farms, \$13 on fruit-and-nut farms, and \$12 on dairy farms. These four types of farms account for over three-fourths of the cash wages paid on all farms. Nearly all poultry, dairy, and general farms report the purchase of feed for livestock, including dairy and poultry. Out of every \$100 of feed bought, \$27 is bought on livestock, \$25 on dairy, \$18 on poultry, \$14 on general, and \$9 on all-other-crop farms. Feed bought on these five types of farms accounts for \$93 out of every \$100 expenditure for feed on all farms. The purchase of livestock and poultry is reported for more than two-thirds of all livestock and general farms and almost two-thirds of all dairy and poultry farms. Livestock farms account for 52.9 percent; all-other-crop farms, 14.2 percent; dairy farms, 11.7 percent; and general farms, 11.1 percent of the expenditures of all farms for the purchase of livestock and poultry.

Expenditures for commercial fertilizer are reported for one-half or more of the fruit-and-nut, vegetable, horticultural-specialty, and dairy farms. Over two-fifths of the expenditures for commercial fertilizer occur on all-other-crop farms, while general, livestock, and dairy farms each accounts for approximately one-tenth of the expenditures for commercial fertilizer on all farms.

Acreage and production of selected crops.—The relative

importance of selected crops varies according to the type of farm. Feed crops, corn, oats, and hay are relatively important on livestock and general farms. More than 70 out of 100 dairy and general farms have corn. More than one-half of the dairy and more than two-fifths of the livestock and general farms grow oats for grain. Corn represents at least 30 percent of the acreage of cropland harvested on livestock and general farms and over one-fifth of such acreage on dairy and poultry farms. Oats for grain comprises at least one-tenth of the acreage of cropland harvested on livestock, dairy, poultry, and general farms. Hay represents over two-fifths of the cropland harvested acreage on dairy and forest-products farms and over one-fifth of the acreage on livestock, poultry, subsistence, and general farms.

Fruit-and-nut farms have more than three-fifths of the total acreage of all land in fruit orchards, vineyards, and planted nut trees. Likewise, more than two-fifths of the acreage of all vegetables harvested for sale is on vegetable farms. More than 68 percent of the acreage of all wheat, more than 87 percent of the acreage of all cotton, over 88 percent of the acreage of all tobacco, and over 55 percent of the acreage of all Irish potatoes is on all-other-crop farms. Wheat represents over one-fourth and cotton over one-tenth of the acreage of cropland harvested on all-other-crop farms. On farms of all types except fruit-and-nut, vegetable, and all-other-crop farms, hay and corn, on the basis of acreage, represent the first and second most important crops. On the basis of acreage, the important crops for each type of farm are as follows: Fruit-and-nut farms, land in orchards, vineyards, and planted nut trees and hay; vegetable farms, vegetables

harvested for sale and corn; all-other-crop farms, wheat, corn, and cotton; dairy farms, hay, corn, and oats; poultry farms, hay and corn; livestock farms, corn, hay, and oats; general farms, corn, hay, and oats; forest-products farms, hay and corn; and subsistence farms, hay and corn.

Source of income.—Since farms were classified by type on the basis of source of income, there is a definite relationship between type of farm and source of income. The percentage of the value of all farm products obtained from the sales of farm products from the most important source for the specialized types of farm is as follows: Horticultural-specialty, 93 percent; fruit-and-nut, 91 percent; poultry, 80 percent; vegetables, 79.7 percent; all-other-crop, 75 percent; livestock, 73 percent; dairy, 70 percent; and forest-products, 62 percent. Farms classified on the basis of income from a particular source usually account for a large proportion of the income from that source on all farms. For example, fruit-and-nut farms account for over 91 percent of the value of fruits and nuts sold, all-other-crop farms account for over 80 percent of the value of all other crops sold, and dairy farms account for over 63 percent of the value of all dairy products sold. The average value of farm products sold or used for all farms is \$3,171. The rank of farms of various types according to the average value of farm products sold or used by farm households is as follows: 1. Horticultural-specialty farms, \$15,277; 2. Fruit-and-nut farms, \$8,180; 3. Vegetable farms, \$5,480; 4. Livestock farms, \$5,193; 5. Dairy farms, \$4,126; 6. Poultry farms, \$3,494; 7. General farms, \$3,317; 8. All-other-crop farms, \$3,226; 9. Forest-products farms, \$1,730; 10. Subsistence farms, \$469.