

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
VALUE OF PRODUCTS

UNITED STATES CENSUS OF AGRICULTURE: 1945

SPECIAL REPORT FARMS AND FARM CHARACTERISTICS BY VALUE OF PRODUCTS

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 Value of Products

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UNITED STATES CENSUS OF AGRICULTURE: 1945

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|--|--|
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BY SIZE OF FARM
BY VALUE OF PRODUCTS
BY TYPE OF FARM

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COOPERATIVE REPORTS

(Bureau of the Census of the U. S. Department of Commerce and the Bureau of Agricultural Economics of the U. S. Department of Agriculture. Basic data primarily from the Censuses of Agriculture.)

LAND UTILIZATION—GRAPHIC SUMMARY

A cooperative report, of the Bureau of the Census of the U. S. Department of Commerce and the Bureau of Agricultural Economics of the U. S. Department of Agriculture, presenting graphically the uses being made of the agricultural land resources, both inside and outside farm boundaries. Attention has been given to factors contributing to record volumes of crop and livestock production with little expansion in physical area. 41 p., il., paper, \$0.20.

FARM TENURE—GRAPHIC SUMMARY

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 value of products 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.

Acknowledgement 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 VALUE OF PRODUCTS

Introduction.—This special report provides recent data for an analysis of many of the characteristics of farms and farm operators in their relation to the total value of farm products sold or used by farm households. It has been designed to supplement other reports of the 1945 Census of Agriculture in giving a detailed picture of our agricultural resources and their utilization by different producing groups. It makes available to students and agricultural workers generally a mass of information on the characteristics of our agriculture which should be helpful in providing a better understanding of the agriculture and 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 | } Farms reporting and dollar amounts |
| 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 | |
| *Milking 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 | |

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 value of products, 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 value of products are also published by State, both in volume I and in volume II, for the following items:

- | | |
|---|------------------------------------|
| Total number of farms | } Farms reporting and dollar value |
| Total value of farm products | |
| Farm products sold, total and each of the eight major sources of income | |
| Farm products used by farm households | |

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 from 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 this report, represent an understatement 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. This underenumeration of farm population is estimated to be between 300,000 and 850,000 for the United States as a whole.

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 was obtained. For 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 types.

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.—The data given in this report for cattle and calves represent the sum of the number reported 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. The inquiries for the sex and age groups of cattle were made for only those farms included in the sample. 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. Since the figures given for cattle and calves in this special report represent a sum of the number reported for each of the eight sex and age groups and not the total number of cattle and calves reported, the figures represent an understatement of the farms reporting and total number of cattle and calves of all ages on farms and for cows and heifers 2 years old and over.

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. However, 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 potatoes or sweetpotatoes.

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 trees 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 non-agricultural 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 1943-1944 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 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 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-\$249.

Sampling reliability of estimates.—Approximate measures of the sampling reliability of estimates presented by value-of-product 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 value-of-product 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 value-of-product groups. Moreover, percentage figures derived from the tables will have greater reliability than the estimated totals involved, 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, that is, 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. This is true for several reasons: (1) Maximum figures intended

to serve for all value groups 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 the largest value-of-product group in these States is only about one-fifth of the value indicated in the tables below. This factor, of course, affects only the larger value-of-product groups and is progressively less important as the value of products decreases.

The estimated sampling reliability of the number of farms in any value-of-product 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 value-of-products 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 value-of-product groups by States, may be determined from the following table:

If the estimated farm population in the age group—value-of-product class is—	Then the chances are about 95 in 100 that the estimated farm population in the age group—value-of-product 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 value of products 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 value-of-product groups 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 VALUE OF PRODUCTS FOR SPECIFIED ITEMS

Item	Level of sampling reliability (refer to corresponding numbered column in table B)
Value of implements and machinery, dollars.....	2
Work off farm, days.....	3
Cash wages paid, dollars.....	4
Expenditures, dollars:	
Purchase of livestock and poultry.....	5
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-thresher), number.....	2
Motortrucks, number.....	2
Tractors, number:	
Total.....	2
Garden.....	17
Crawler.....	27
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.....	2
All cattle and calves, number.....	2
Cows and heifers 2 years old and over, number.....	3
All hogs and pigs, number.....	2
Sows and gilts for spring farrowing, number.....	2
All sheep and lambs, number.....	2
All goats and kids, number.....	2
Cows and heifers milked, number.....	3
Milk produced, gallons.....	3
Whole milk sold, gallons.....	3
Cream sold, pounds of butterfat.....	3
Butter sold, pounds.....	3
Number of animals sold alive:	
Cattle.....	3
Hogs.....	3
Sheep.....	3
Number of animals butchered:	
Cattle.....	2
Calves.....	1
Hogs.....	13
Chickens on hand, number.....	13
Eggs produced, dozens.....	13
Chickens raised, number.....	13
Turkeys raised, number.....	2
Corn for all purposes, acres.....	2
Corn harvested for grain:	
Acres.....	2
Bushels.....	2
Oats threshed:	
Acres.....	2
Bushels.....	2
Barley threshed:	
Acres.....	2
Bushels.....	2
All wheat threshed:	
Acres.....	2
Bushels.....	2

See footnotes at end of table.

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

Item	Level of sampling reliability (refer to corresponding numbered column in table B)
All hay cut:	
Acres.....	2
Tons.....	2
Tobacco:	
Acres.....	3
Production, pounds.....	3
Cotton:	
Acres.....	3
Production, running square bales.....	3
Irish potatoes:	
Acres.....	4 3
Production, bushels.....	4 3
Sweet potatoes and yams:	
Acres.....	4 3
Production, bushels.....	4 3
Value of vegetables grown for farm household(s) use, dollars.....	1
Vegetables harvested for sale, acres:	
Fresh beans.....	3
Cabbages.....	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.....	4 5
Quantity harvested, bushels.....	4 5
Peaches:	
Trees of all ages, number.....	4
Quantity harvested, bushels.....	4
Pears:	
Trees of all ages, number.....	4
Quantity harvested, bushels.....	4

1 5 for New England States.

4 5 for value groups of \$2,500 or more.

2 5 for Pacific States.

5 6 for value groups less than \$2,500.

3 5 for value groups less than \$2,500.

Table B.—SAMPLING RELIABILITY OF ESTIMATED ITEM TOTALS FOR STATES BY VALUE OF PRODUCTS 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 value-of-product 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 value-of-product groups are presented on pages XVII to XXIII. 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 following discussion relates only to the United States. Since the farms in 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 value-of-product group and the relative contribution of farms in each group to the total differ from State to State.

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.

The total value of products is a measure of all the operations on the farm. It is the resultant of a number of factors, such as the number of acres in the farm, the number of livestock on the farm, the amount of equipment used on the farm, the amount of feed purchased, etc.

The difference between the total value of products and net income requires consideration when using the total value of products as a measure of the size of farming operations. For example, for some crops the total value of products per acre may be small, but only a relatively small proportion of the total may be required to pay production expenses; for such crops the net income per acre may be relatively large. On the other hand, the sale of livestock usually provides a high total value of products which is one of the reasons why a large proportion of the farms in the high value groups are farms on which the production of livestock and livestock products is important. For farms on which the production of livestock, livestock products, poultry and poultry products forms an important enterprise, the total value of products would be materially reduced if allowances were made for the purchase of livestock, the cost of feed and other expenses associated with livestock production.

The data for farms classified by value of products indicate that a large part of the total agricultural production is concentrated on a relatively small proportion of the farms. Farms with a total value of products of \$10,000 or more represent 4.9 percent of all farms and account for 36.4 percent of the total value of products. Farms with a value of products of \$4,000 or more represent only about one-fifth of all farms and have two-thirds of the total value of farm products. On the other hand, farms with a value of products of less than \$600 account for 25.7 percent of all farms, but contribute only 2.6 percent of the total value of products. Farms with a value of products of \$600 to \$2,499 represent 41.1 percent of all the farms, but have only 17.8 percent of the total value of products.

The following paragraphs summarize some of the important facts regarding the contribution to total agricultural production, as shown by data given in this special report, and the relation of various groups of farms classified on the basis of total value of products.

Land in farms, land use, and size of farm.—Farms with a value of products of \$40,000 or more, comprising 0.4 percent of all farms and having 11.7 percent of all land in farms, account for 12.5 percent of the total value of farm products. On the other hand, farms with a value of products of less than \$250, comprising 9.5 percent of the farms and having 3.8 percent of all land in farms, contribute only 0.4 percent of the total value of farm products. Farms in the value-of-product group \$2,500 to \$3,999, in which falls the average value of farm products for the United States, comprise 12.7 percent of all farms, have 12.5 percent of all land in farms, and produce 12.9 percent of all farm products. There is a significant relationship between size of farm and value of products. Except for farms in the value group \$0–\$249, the average acreage for all land in farms increases from the lowest to the highest value-of-product group.

There is a similar relationship between the acres of cropland harvested and value of products. The average acreage of cropland harvested increases from 11.6 acres for farms in the value group \$250–\$399 to 615.6 acres for farms in the value group \$40,000 and over. More than two-thirds of the farms with less than 20 acres of cropland harvested are in the farm value groups \$0 to \$249, \$400 to \$599, and \$600 to \$999.

The value of land and buildings per farm increases with the increase in the value of products. This average increases from

\$2,746 for the value group \$250-\$399 to \$119,231 for the value group \$40,000 and over. The percentage of farms with a value of land and buildings of less than \$10,000 decreases with the increase in the value of products. Over 94 percent of the farms with a value of products of less than \$250 have a value of land and buildings of less than \$10,000, while less than 5 percent of the farms with a value of products of \$40,000 or more have a value of land and buildings under \$10,000.

Age of farm operators and years on farm.—The proportion of farm operators 55 years old and over, in general, decreases as the value of farm products increases. For farms with a value of products under \$250, the proportion of farm operators over 55 years of age is almost 43 percent, while for farms with a value of products of \$40,000 or more, the proportion is only 29.8 percent. More than one-half of the farm operators over 65 years of age are on farms with a value of products of less than \$1,000. Many of these older operators on farms with a relatively small value of products are performing very little farming. They are probably not able to increase their agricultural production because of their age and limited resources. Many of them depend upon sources other than their farms for their income.

The proportion of farm operators who have been on their farms less than 5 years decreases as the value of products increases, while the proportion who have been on their farms 15 years and over increases. For farms with a value of products under \$250, more than 48 percent of the operators have been on their farms less than 5 years, while for farms with a value of products of \$40,000 or more, less than 25 percent of the farm operators have been on their farms less than 5 years. On the other hand, the proportion of operators who have been on their farms 15 years or more is less than 25 percent for farms with a value of products under \$250, as compared with more than 40 percent for farms with a value of products of \$40,000 and over.

Work off the farm.—Twenty-eight out of every 100 farm operators report work off their farms for pay or profit. In some cases, the work off farm provides only a small supplemental income, but in the case of a majority of those farm operators reporting work off their farms, the off-farm work is probably more important as a source of income than the operator's farming activities. The proportion of farm operators reporting work off their farms decreases as the value of farm products increases. More than 43 out of every 100 operators of farms with a value of products under \$250 report work off their farms as compared with less than 7 out of every 100 operators of farms with a value of products of \$40,000 and over.

The average number of days worked off the farm also varies with the value of products. As the value of farm products increases, the average number of days reported by the farm operators at off-farm work decreases. Operators of farms with a value of products of less than \$250 average 240 days of work off their farms as compared with 179 days for operators of farms with a value of products of \$40,000 or more.

Farm expenditures.—Cash wages are reported for almost one-half of the farms in the country. They are reported for farms in all value groups. However, the proportion of farms reporting cash wages increases as the value of products increases. For farms with a value of products of less than \$250, slightly more than one out of every six reports cash wages paid. On the other hand, cash wages are reported on nearly every farm with a value of products of \$40,000 or more.

The amount of cash wages is concentrated in the higher value-of-product groups to a much greater extent than is the number of farms reporting. More than four-fifths of the total cash wages are reported for farms with a value of products of \$2,500 and over; however, these farms account for less than 60 percent of the farms reporting cash wages. The amount of cash wages per farm reporting increases from \$122 for farms with a value of products of \$400 to \$599 to \$17,321 for farms with a value of products of \$40,000 and over.

In general, the proportion of farms reporting expenditures for feed, purchase of livestock and poultry, commercial fertilizer, lime and other liming materials, and seeds, bulbs, plants, and trees increases from the lowest to the highest value-of-product group, although the proportion for the value-of-product groups \$10,000 to \$39,999 and \$40,000 and over is usually less than for the group \$6,000 to \$9,999. Likewise, the amount of expenditure per farm reporting varies by value groups, usually increasing from the lowest to the highest value group.

Facilities in farm dwelling.—The proportion of farms reporting specified facilities is significantly related to value of products. Beginning with the value-of-product group \$1,000 to \$1,499, the proportion of farms reporting facilities, such as running water, electricity, telephone, radio, kitchen sink with drain, mechanical refrigeration, and power-driven washing machine, increases with each succeeding value-of-product group. The relationship of the proportion of farms reporting facilities to value of products is not so evident for the five value-of-product groups under \$1,000, largely because of the influence of farms with operators securing their principal source of income from sources other than their farms.

Farm equipment and work power.—The proportion of farms reporting such items of farm equipment as motortrucks, tractors, combines, milking machines, electric motors, and stationary gasoline engines is larger for the higher than for the lower value-of-product groups. For example, the proportion of farms with motortrucks is 9.5 percent for farms with a value of products of under \$250. This proportion increases as the value of products increases, the percentage for each value group being higher than for the preceding group. The proportion of farms reporting automobiles and motortrucks under 5 years of age is greater in the higher value groups than in the lower groups and the proportion reporting vehicles 10 years old and over is smaller in the higher value groups.

Approximately one-fourth of all the farms in the United States do not report horses, mules, or tractors. More than 85 percent of these farms without work power are in the six value-of-product groups under \$2,500. The proportion of farms without work power decreases from 63.7 percent for farms with a value of products under \$250 to 6.4 percent for farms with a value of products of \$10,000 or more. Likewise, more than nine-tenths of the farms that do not have a tractor and have only one horse or mule are in the value-of-product groups under \$2,500. More than one-half of the farms with a tractor and no horses or mules are in the groups of \$2,500 or over.

Livestock and livestock products.—In general, the proportion of farms with horses, cattle, cows and heifers 2 years old and over, hogs, sheep, and chickens increased from the lowest value group to the group \$6,000 to \$9,999. Usually, the number per farm reporting for horses, cattle, cows and heifers 2 years old and over, hogs, sheep, and chickens is larger for each succeeding value group, from the lowest to the highest. Farms with a value of products of \$10,000 or more, while comprising only one-twentieth of all farms, have approximately one-eighth of all horses and mules, one-fourth of all cattle, over one-fifth of all cows and heifers 2 years old and over, one-fifth of all sows, over one-half of all sheep, and more than one-eighth of all chickens. On the other hand, farms with a value of products of less than \$1,000, representing almost two-fifths of all farms, have less than one-fifth of all horses and mules, one-tenth of all cattle, one-ninth of all cows and heifers 2 years old and over, one-tenth of all hogs, one-twelfth of all sows, one-twentieth of all sheep, and one-sixth of all chickens.

The production of a large part of all livestock products occurs on the half of the farms that have a value of products of \$1,500 or over. These farms account for 95.6 percent of all whole milk sold, 90.0 percent of all cattle and calves sold alive, 93.1 percent of all hogs and pigs sold alive, and 95.7 percent of all sheep and lambs sold alive.

Acreage and production of selected crops.—The half of the farms with a value of products of \$1,500 or over has a larger part of the acreage and production of the important crops. They account for 80.4 percent of the acreage of corn for all purposes, 94.2 percent of the total wheat acreage, 80.7 percent of the total hay acreage, 71.0 percent of the total cotton acreage, 83.0 percent of the Irish potato acreage, and 86.8 percent of the acreage of vegetables harvested for sale. The half of the farms with the highest value of products produces seven-eighths of all corn, eight-ninths of all wheat, six-sevenths of all hay, three-fourths of all cotton, and nine-tenths of all Irish potatoes, apples, and pears.

Source of income and type of farm.—The higher the value-of-product group, the greater is the proportion of the total value obtained from the sale of farm products. For farms in the value-of-product groups under \$600, the value of farm products sold represents less than one-half of the total value of products. The proportion of the total value of farm products represented by fruits and nuts sold increases from the value-of-product group \$250–\$399 to the highest value-of-product group. Likewise, the percentage of the total value of products represented by the sale of livestock and livestock products, other than dairy and poultry, increases from the lowest to the highest value-of-product group.

The half of the farms with a value of products of \$1,500 or over accounts for almost 90 percent of the total value of farm products, over 92 percent of the value of all farm products sold, over 95 percent of the value of fruits and nuts sold, over 94 percent of the value of vegetables and dairy products sold, over 98 percent of the value of horticultural-specialty products sold, over 90 percent of the value of field crops sold, and over 89 percent of the value of poultry and poultry products sold.

The distribution of farms by type varies for each value-of-product group. More than one-half of the farms in the three value-of-product groups under \$600 are subsistence farms or farms producing products primarily for use by farm households. All-other-crop (field crop) farms comprise the second largest group of farms in the value-of-product groups under \$600. All-other-crop farms form the largest group of farms in all value groups from \$600 to \$39,999. These farms represent approximately 46 percent of all farms in the groups from \$1,000 to \$2,499 and tend to decrease as the value of products increases. However, in general, farms on which the production of livestock and livestock products is the principal source of income increase in relative importance for each value-of-product group beyond the \$2,500 to \$3,999 group. Fruit-and-nut, livestock, and all-other-crop farms comprise over two-thirds of all farms with a value of products of \$40,000 or more.

Farms with a total value of products under \$1,000.—Over 2,280,000 farms, comprising 39 percent of all farms, have a value of products under \$1,000. These farms contain 13.8 percent of the land and 9.1 percent of the cropland in all farms. Almost one-half of these farms contain less than 30 acres. Almost 6 out of 10 have less than 20 acres of cropland harvested. Seven out of 10 are operated by owners. Almost one-half have a value of less than \$2,000 and 4 out of 5 have a value of less than \$5,000. These farms account for 5.9 percent of the total value of all farm products and only 3.4 percent of all farm products sold. The average value of farm products is only \$460 and the average value of all farm products sold is less than \$250. Persons living on these farms total over 8,000,000 or one-third of the entire farm population. This population includes more than two and one-half million children under 14 years of age or over one-third of all children under 14 living on farms.

Almost one-half million of these farms are operated by farmers 65 years old and over. Slightly over one-third of these farmers have operated their farms for 15 or more years. Two out of five have operated their farms less than 5 years. Two-fifths work off their farms for pay or profit. Eight out of 10 of those

working off their farms perform more than 100 days of off-farm work during the year.

One-fourth of these farms have running water and mechanical refrigeration, two-fifths have electricity, and one-third have a kitchen sink with drain. One out of 10 has a tractor or a truck. Almost one-half of them have no tractor, horse, or mule. They comprise almost two-thirds of all farms without work power. They include more than 63 percent of all the farms having only one horse or mule and no tractor. Two out of 3 have cattle, 2 out of 5 have hogs, and 7 out of 10 have chickens. They account for 1.7 percent of the whole milk sold, 7.2 percent of all corn, 9.8 percent of all hay, 2.6 percent of all wheat, and 5.3 percent of all Irish potatoes.

Farms with a total value of products of \$1,000 to \$2,499.—Over 1,500,000, or 27.8 percent of all farms, have a value of products of \$1,000 to \$2,499. These farms contain 16.7 percent of the land and 18.6 percent of the cropland harvested in all farms. More than one-third of these are less than 50 acres in size. Two-thirds have less than 50 acres of cropland harvested and over one-fourth have less than 20 acres of cropland harvested. More than one-half of the farms are operated by owners and over one-third are operated by tenants. Croppers and other share tenants operate one out of every four farms in this group. One out of seven is operated by a farmer 65 years old or over. Three out of five of the farms in this group gave a value of less than \$5,000 and one out of four, a value of less than \$2,000. These farms, as a group, produce 14.5 percent of the total value of all farm products and 12.7 percent of all farm products sold. The average value of all farm products sold or used by farm households is \$1,600 and the average value of farm products sold is \$1,280. Approximately 6,500,000 persons, including more than 2,000,000 children under 14 years of age, live on these farms.

More than one-fourth of the operators of these farms have been operating their farms for 15 years or more. Almost 3 out of 10 have operated their farms less than 5 years.

One-fifth of these operators work off their farms for pay or profit and over one-half of those working off their farms perform 100 days or more of off-farm work during the year.

One-fifth of these farms have running water and mechanical refrigeration. One out of three has electricity and kitchen sink with drain. One out of six has a motortruck and one out of four, a tractor. Over 21 percent have no horse, mule, or tractor. The farms in these value groups account for over 22 percent of all farms that do not have work power. Four out of 5 have cattle, 3 out of 5 have hogs, and almost 9 out of 10 have chickens.

As a group, these farms account for one-ninth of all the whole milk sold, slightly more than one-fifth of all eggs and cotton, one-sixth of all the corn and hay, one-eleventh of all vegetables harvested for sale, one-twelfth of all wheat, and almost one-third of all tobacco.

Farms with a total value of products of \$2,500 to \$5,999.—Over 1,250,000, or 21.5 percent of all farms, have a total value of products of \$2,500 to \$5,999. These farms contain 24.3 percent of all land in farms and 32.4 percent of all cropland harvested. More than three-fifths of these farms are 100 acres or over in size and over one-fourth have 100 acres or more of cropland harvested. Approximately two-thirds of the farms in this group are operated by owners and one-third by tenants. Three-fifths of the farms have a value of less than \$10,000 each. This group of farms has 26.7 percent of the total value of all farm products and 26.7 percent of the total value of all farm products sold. The average value of all farm products is \$3,867, while the average value of all farm products sold is \$3,469. Approximately five and one-third million persons live on the farms comprising this group.

Less than one out of three of the operators of farms in this group is 55 years old or over and approximately one out of five is under 35 years of age. Approximately two-fifths of the

operators have been on their farms less than 5 years, while three-tenths have been operating their farms 15 years or more. One out of six of the operators of the farms in this group works off his farm for pay or profit and 39.1 percent of those working off their farms perform 100 days or more of off-farm work during the year.

Approximately one-third of these farms have running water and mechanical refrigeration, three-fifths have electricity, and one-half have a kitchen sink with a drain. One out of three has a motortruck and two out of three have a tractor. About one out of eight has a tractor but no horses or mules. Seven out of 8 have cattle, 7 out of 10 have hogs, one out of 8 has sheep, and 9 out of 10 have chickens.

These farms, as a group, produce 38.9 percent of all whole milk sold, 33.7 percent of all eggs, 27.6 percent of all cattle and calves sold alive, 34 percent of hogs and pigs sold alive, 34.4 percent of all corn, 26.5 percent of all wheat, 33.3 percent of all hay, 26.0 percent of all cotton, 46.6 percent of all tobacco, and 16.9 percent of all Irish potatoes.

Farms with a total value of products of \$6,000 to \$9,999.—

Farms having a total value of products of \$6,000 to \$9,999 comprise 6.8 percent of all farms, contain 13.0 percent of all land in farms, and have 17.5 percent of all cropland harvested. More than one-third of these farms contain 260 acres or more, and over 25 percent have 200 or more acres of cropland harvested. Approximately two-thirds of the farms are operated by owners, while almost one-third are operated by tenants. More than three out of four farms in this group have a value of \$10,000 or more. While farms in this group comprise less than 7 percent of all farms, they produce more than one-sixth of all farm products sold. The average value of all farm products sold or used by farm households is \$7,588 for farms in this group.

Almost one out of three of the operators of farms in this group has been operating his farm less than 5 years, while more than one out of three has been operating his farm 15 years or more. Only 13 percent of the farm operators work off their farms for pay or profit and only 4 percent of these work off their farms as much as 100 days during the year.

Approximately one-half of these farms have running water and mechanical refrigeration, 2 out of 3 have electricity, and 7 out of 10 have a kitchen sink with drain. Almost one-half of the farms have a motortruck and over 84 percent have a tractor. Nine out of 10 have cattle, 7 out of 10 have hogs, and 1 out of 6 has sheep.

As a group, these farms produce 22.0 percent of all whole milk sold, 16.1 percent of all eggs, 16.1 percent of all cattle and calves

sold alive, 23.7 percent of all hogs and pigs sold alive, 21.8 percent of all corn, 21.0 percent of all wheat, 16.9 percent of all hay, and 13.7 percent of all Irish potatoes. Cash wages are paid on over 83 percent of all these farms and on more than one farm out of four reporting cash wages there is a cash wage payment of \$1,000 or more.

Farms with a total value of products of \$10,000 and over.—

Less than 1 farm in 20 has a total value of products of \$10,000 or more. Farms in this group contain almost a third of all land in farms and have over one-fifth of all cropland harvested. Almost one-third of the farms in this group contain 500 acres or more and almost one-half of the farms have 200 or more acres of cropland harvested. Almost 7 out of 10 of these farms are operated by owners, 1 out of 10 is operated by a manager and 2 out of 10 are operated by tenants. Nine out of 10 of these farms have a value of \$10,000 or more. The value of farms in this group represents over one-fourth of the value of all farms. These farms account for 39.8 percent of the value of all farm products sold. The average value of farm products sold per farm is \$22,422.

Of the farms in this group, approximately 7 out of 10 have running water and a kitchen sink with drain, 8 out of 10 have electricity, and almost 2 out of 3 have mechanical refrigeration. One out of 4 has a combine, 1 out of 5 has a milking machine, 7 out of 10 have a motortruck, 85 out of 100 have a tractor, 1 out of 2 has an electric motor, and 3 out of 10 have stationary gasoline engines.

Expenditures for cash wages occur on over 9 out of 10 of these farms. Cash wages on these farms comprise over one-half of the expenditures for hired labor on all farms. More than three out of five of these farms have an annual expenditure of \$1,000 or more for cash wages.

Farms in this group have over one-fourth of all cattle, over one-fifth of all hogs, over one-fifth of all cows and heifers 2 years old and over, over one-half of all sheep, and over one-third of all goats. They account for 25.7 percent of all whole milk sold, 36.6 percent of all cattle and calves sold alive, 26.7 percent of all hogs and pigs sold alive, and 61.6 percent of sheep and lambs sold alive.

As a group, these farms account for 20.5 percent of the total corn acreage, 42.0 percent of the acreage of barley, 41.6 percent of the acreage of wheat, 22.3 percent of the acreage of hay, 16.6 percent of cotton acreage, 55.4 percent of the acreage of Irish potatoes harvested, 59.9 percent of the acreage of vegetables harvested for sale, and 43.5 percent of the land in fruit orchards, vineyards, and planted nut trees.