CENSUS OF AGRICULTURE: 1929 AND 1930

TYPE OF FARM

INTRODUCTION

Scope of report.—Statistics by type of farm are presented in a detailed way for the first time in the 1930 census. In the 1900 census a somewhat similar classification was made, but on a different basis and in considerably less detail. There are, therefore, no comparative figures for this classification in previous census reports.

The following data, classified by type of farm, are presented in this report: Number of farms; farm acreage; value of specified farm property; value of farm products sold, traded, or used by operator's family; receipts from boarders, lodgers, and campers; specified livestock and livestock products; size of farm; specified value (groups) of farm products sold, traded, or used by operator's family; tenure of farm operator; and specified farm expenditures (feed, fertilizer, and labor).

The Bureau of the Census employed the same methods of enumeration in the census of 1930 that were used heretofore; the figures are, therefore, the results obtained from the tabulation of the information given census enumerators by the farm operators in a personal canvass of the individual farms and ranges of the United States.

In the presentation of these statistics the States are arranged by geographic divisions to facilitate their study by broad agricultural regions.

Census date.—The data for inventory items relate to April 1, 1930; and for livestock products, "family living", expenses, and sales, for the year 1929.

EXPLANATION OF TERMS

Farm.—A "farm," for census purposes, is all the land which is directly farmed 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 of a number of separate tracts, and these 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 or tenant was reported as a separate farm, and the land operated by the owner or manager with or without wage hands likewise was reported as a separate farm. The enumerators were instructed not to report as a farm any tract of land of less than 3 acres, unless its agricultural products in 1929 were valued at $250 or more.

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.

Farms reporting.—The term "farms reporting," as used in the tables, means the number of farms for which were reported the particular item, or items, shown in the particular table. For example, if only one-half of the farms in a State or county reported sheep on hand, the other half did not have sheep to report.

Tenure.—Farm operators are classified, according to the tenure under which they operate their farms, into four general classes, as follows:

Full owners are farm operators who own all the land which they operate.

Part owners are farm operators who own part of the land which they operate, and rent and operate additional land. Part owners, therefore, have some of the characteristics of full owners and some of the characteristics of tenants.

Managers are farm operators who operate farms or ranches for the owners, receiving wages or salaries for their services.

Tenants are farm operators who operate hired land only. In this report separate figures are shown for three classes of tenants—namely, (1) cash tenants who pay a cash rental, as $7 per acre for crop land or $500 for the use of the whole farm; (2) croppers (reported only for the Southern States), who are defined as share tenants, to whom landlords furnish all the work animals; and (3) all other tenants, including those giving a share of the products for the use of the land or a share for part and cash for part.

Land in farms.—The acreage designated as "All land in farms" includes considerable areas of land not actually under cultivation and some not even used for

pasture, since each farmer was asked to report as a unit all the land under his control, or rather all the land which he thought of as a part of his farm. Isolated tracts of timberland and other areas not connected with the farm were not included.

Crop land harvested in 1929 comprises all land from which cultivated crops were harvested, all land from which hay was cut (including wild hay cut within the limits of the farm), and all land in small fruits, orchards, vineyards, gardens, nurseries, and greenhouses. A given acreage was counted but once, even though two or more crops were harvested from it.

Pasture land.—The total pasture land consists of three classes of land, only two of which are shown in this volume, the third being designated as woodland pasture. The classes shown are:

1. **Plowable pasture,** comprising land used only for pasture in 1929 which could have been plowed and used for crops without clearing, draining, or irrigating.
2. **"Other" pasture,** comprising all land used for pasture in 1929 which was not included under "Plowable pasture" or "Woodland pasture."

Value of specified farm property.—The farmer was asked to report, first, the total value of his farm (land and buildings), including all the land which he operated, both owned and hired, whether operated by himself or managed for others. He was asked to give the current market value—that is, the amount for which the farm would sell under normal conditions, not at forced sale. The tabulated results of this inquiry are shown as value of "Land and buildings" and represent the total value of farm real estate.

Farm buildings.—The farmer was also asked to report the value of all farm buildings on his farm and of his dwelling house alone. These values were necessarily estimated, and the figures obtained are probably somewhat less satisfactory than the figures for the total real-estate value. The question calling for the value of the farmer's dwelling appeared on the general farm schedule for the first time in 1930.

Value of land, excluding buildings.—This value was obtained by subtracting the value of all buildings from the basic value of land and buildings together.

Implements and machinery.—The value of farm implements and machinery is the combined value of automobiles; trucks; tractors; tools; wagons; harnesses; dairy equipment; cotton gins; threshing machines; combines; apparatus for making cider, grape juice, and sirup, and for drying fruits; and all other farm machinery. The value of commercial mills and factories located on the farm was not included.

Value of farm products sold, traded, or used by operator's family.—Five questions relating to the value of farm products sold, traded, or used by the operator's family, and one question relating to receipts from boarders, lodgers, and campers, were included in the general farm schedule of 1930. These questions covered the following items:

Value of crops sold, traded, or to be sold, includes the value of grains, cotton, tobacco, hay, vegetables, fruits, plants, flowers, and all other crops harvested in 1929 which had been or were to be sold or traded.

Value of livestock sold or traded, includes only the value of domestic animals, sold or traded in 1929.

Value of livestock products sold or traded, includes the value of milk, cream, butter, butterfat, meat, poultry, eggs, honey, wool, mohair, and other livestock products, sold or traded in 1929.

Value of forest products sold, includes the value of saw logs, veneer logs, firewood, pulpwood, fence posts, railroad ties, poles, piling, bark, turpentine, gum, etc., sold in 1929.

Value of farm products used by operator's family, includes the value of meat, milk, poultry, eggs, honey, vegetables, fruits, firewood, etc., furnished by the farm for the use of the family of the operator in 1929 (rent of farmer's dwelling excluded), as reported by the farm operator.

Receipts from boarders, lodgers, and campers, includes income received from boarders, lodgers, and campers (but excludes the value of board and lodging for persons working on the farm).

The total value of all products is the sum of the value of crops, livestock and livestock products, *sold or traded,* forest products *sold,* and products *used by* the operator's family; but excludes receipts from boarders, lodgers, and campers.

TYPE OF FARM

The following types of farms based on principal source of income have been differentiated: General, cash-grain, cotton, crop-specialty, fruit, truck, dairy, animal-specialty, stock-ranch, poultry, self-sufficing, abnormal, and unclassified.

The abnormal type is divided into five subtypes: Institution or country estate; part-time; boarding and lodging; forest-product; and horse farm, feed lot, or livestock dealer.

Basis of classification.—The inclusion, on the general farm schedule, of the questions on the value of farm products sold, traded, or used by operator's family provided the basis for classifying the farm by type. The value of products from a particular source in relation to the value of products from all sources was the primary basis used in the classification. "Source" relates to the product or products from which the income is derived, resulting from the sale of a single product in certain cases and from the sale of a group of products in other cases. Products used on the farm itself are not included, except those for family consumption the value of which was reported by the farmer.

In certain cases, notably for crops and livestock products, the values reported on the general farm schedule were for the entire group of such products, instead of for each separate crop or livestock product sold. In such cases, before the farm could be classified by type, it was necessary to break down these totals to determine the amount or proportion attributable to each product or group of products which comprised each type. This was readily done by applying average prices to each of the products shown on the schedule

as sold, or to those in excess of farm requirements for feed, seed, etc. and for the use of the farm operator's family.

Having the income segregated by different sources, the next problem involved in the classification had to do with the selection of the exact percentage of the income which each source should represent of the total income before the farm could be classified under a particular type. After a study of the various percentages, it was finally decided to classify a farm under a particular type if it received 40 per cent or more of its income from a particular source. This percentage is arbitrary, but its final selection was based upon a number of considerations.

It was important, in the first place, to select a percentage which would reflect satisfactorily the dominant enterprise and at the same time not show too many farms in a "general" farm class. Furthermore, an examination of farm income by source disclosed, for most of the important agricultural regions of the country, that the majority of farms in such areas received not greatly in excess of 40 per cent of their income from one source. The use of a percentage greater than 40 would have resulted in segregating farms into a particular *type group* which received a very high proportion of their income from one source; but the classification would have been less satisfactory for all farms in that the bulk of the farms would have been put in a "general" farm group. The use of a percentage less than 40 would have failed to differentiate clearly any one particular group of farms, but would have thrown all farms into a very few large groups, thereby defeating the purpose of the classification.

For each of the major types here listed, sales (or anticipated sales) of products, or groups of products, had to represent 40 per cent or more of the total value of "all products" of the farm before the farm was classified under a particular type as follows:

Cash-grain.—Corn, wheat, oats, barley, flax, rye, emmer and spelt, buckwheat, rice, and grain sorghum.

Cotton.—Cotton (lint) and cottonseed.

Crop-specialty.—Sweet sorghum for sirup, sugarcane, sugar beets, maple sugar and sirup, soybeans, cowpeas, velvetbeans, ripe field peas and beans, tobacco, hay, peanuts, potatoes (Irish or white), sweetpotatoes, mushrooms, hops, broomcorn, and other field crops.

Fruit.—Small fruits, tree fruits, nuts, and grapes.

Truck.—All vegetables sold.

Dairy.—Milk, cream, butterfat, butter, and dairy cows and calves.

Poultry.—Chickens, ducks, geese, turkeys, and eggs.

Animal-specialty and stock-ranch.—All classes of meat animals, such as beef cattle, sheep, and hogs; also wool, mohair, and slaughtered animals; for both types.

The chief distinction between "stock-ranch" and "animal-specialty" farms lies in the ratio of the pasture land to the crop land. A "stock-ranch" is a type of organization in which chief emphasis is placed upon the production of livestock by *grazing*, while an "animal-specialty" farm is one in which more emphasis is placed upon the *production of crops* and *feeding* of livestock.

In the case of either type, sales of beef cattle, sheep, and hogs, or wool and mohair, had to represent 40 per cent or more of the total value of all products of the farm.

In differentiating "stock-ranch" from "animal-specialty" farms it was found necessary, because of variation in the quality of pasture in different parts of the United States, to use two limits for this ratio of crops to pasture, one for the territory lying, roughly, east of a line extending north and south through the approximate middle of the States of North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas, and the other limit applying to the area west of this line.

Thus *east* of this line, where the acreage in pasture was five times the acreage in crops, it was classified as a "stock-ranch," and where less than five times the acreage in crops, as an "animal-specialty" farm. West of the designated line, a larger ratio applied, so that where the acreage in pasture was ten times that in crops, it was classified as a "stock-ranch," and where less than ten times the acreage in crops, it was classified as an "animal-specialty" farm.

In the western United States, farms reporting considerable numbers of cattle or sheep and little or no pasture land, but which were evidently using public land for grazing, were classified as stock ranches.

The basis for classifying the remaining two major and the abnormal types was as follows:

General.—Farms were classified as "general" where the value of products from any one source did *not* represent as much as 40 per cent of the total value of all products of the farm. If the value of products from each of two sources represented 40 per cent or more of the total, the farm was classified as "general," except for specialized combination types, such as cotton-tobacco, fruit-truck, dairy-poultry, and other similar combinations, when it was classified as one or the other of these types, depending upon which was dominant in the locality.

Self-sufficing.—Where the value of the farm products used by the family was 50 per cent or more of the total value of all products of the farm it was classified as "self-sufficing."

Abnormal.—For convenience, farms of unusual types, which differed markedly from ordinary farms, were designated "abnormal." This class was divided into five subtypes, which are defined specifically as follows:

INSTITUTION OR COUNTRY ESTATE.—*Institution.*—Where the farm was owned or operated by a public or semipublic agency, for example—a school, college, church, foundation, or asylum. *Country estate.*—Where the value of the residence was $25,000 or more, on farms consisting of 10 acres and over.

PART-TIME.—Where the operator spent 150 days or more at work for pay at jobs not connected with his farm, or reported an occupation other than farmer, provided the value of products of the farm did not exceed $750.

BOARDING AND LODGING.—Where the receipts from boarders, lodgers, and campers represented 50 per cent or more of the total value of all products and receipts of the farm.

FOREST-PRODUCT.—Where the value of forest products sold represented 50 per cent or more of the total value of all products of the farm.

HORSE FARM, FEED LOT, OR LIVESTOCK DEALER.—*Horse farm.*—Where the value of horses or mules sold represented 50 per cent or more of the total value of all products of the farm; or when from inventory items on the schedule it was evident that the principal business was the production of horses or mules. *Feed lot.*—Where the value of beef cattle, sheep, and hogs sold represented 50 per cent or more of the total value of all products of the farm and where the acreage in the farm was small, little

or no crop production, and expenditures for feed large. *Livestock dealer.*—Where large numbers of livestock were reported under both purchases and sales, little or no feed being either produced or purchased, little or no pasture reported, and the operator reported an occupation other than farmer, or spent a number of days at work for pay at jobs not connected with his farm, and where the value of livestock sold represented 50 per cent or more of the total value of all products of the farm.

Unclassified.—Where the farm was not operated in 1929, or where there was an incomplete report of the quantity of crops, livestock raised and sold, or where other information was missing or incomplete, the farm was not classified by type.

METHOD OF HANDLING SPECIAL CASES

The use of income alone as a basis for type classification had to be modified somewhat to take certain peculiar situations into account. Gross income alone does not give a correct index of type—for example, where there is a total or partial crop failure, where the income from a particular enterprise is indicated only by an increase in inventory, or where there has been a liquidation of inventory items. Likewise, for such abnormal types as institution farms, country estates, and part-time farms, income alone is not sufficient to determine the type classification. These and other conditions led to the development of special rules for handling unusual cases. The more important of these follow:

Small summer places owned by nonresidents.—On small summer places owned by nonresidents where only hay was grown, or where production of other crops was negligible and the value of products did not amount to $250 or more, the farms were classified as "part-time" farms.

Cropper and "home" farms on plantations.—*On cropper farms* in the cotton and tobacco sections of the South the operator frequently reported spending 150 days or more at work for pay at jobs not connected with his farm. Such farms were not classified as "part-time" farms since it was assumed that the time spent off the farm really was the time spent in working for the plantation owner. *The "home farm" of the plantation* was classified as a "cotton" farm even though no sale of cotton was shown on the schedule reporting the operations of the plantation owner, except in unusual cases, where the value of some product other than cotton represented a larger proportion of the total income than did the value of cotton from the entire plantation. It is characteristic on such plantations for the plantation owner to rent all or most of the cotton land to croppers, or share tenants, while the owner on the "home farm" produces, largely, the feed for the work animals. The plantation owner also frequently buys all the fertilizer and materials used and keeps the livestock in a central barn. This situation gives rise to a difficulty in computing the averages per farm for items such as expenditures for feed, fertilizer, and labor; and for the number of animals; since the averages are computed on a *farm reporting basis*, in cases where the plantation owner reports such expenditures for the entire plantation the averages necessarily would be higher than would be the case were all the croppers to report expenditures for their units separately.

Self-sufficing farms in the vicinity of cities.—Farms frequently were found adjacent to urban centers which apparently were occupied by people usually well past middle age who had retired from active business pursuits. It was evident from the value of the residences and character of improvements that these farms were not actually "self-sufficing" farms. It was obvious that the operator did not depend entirely upon the farm for a livelihood, but relied in part upon savings, or income from other sources. Although such farms were not true "self-sufficing" farms they fitted in with this classification better than any other available and were so classified.

Farms with land in summer fallow.—In certain of the dry-land-farming wheat areas of the west and southwest a customary practice is to rotate the wheat crop with fallow. On small farms it occasionally happens that the entire farm will be in wheat one year and fallow the next year. The usual practice, however, is to have one-half or one-third of the crop land in grain or fallow each year. Whenever such a farm was entirely in fallow, or reported crop failure, and it was apparent from other information on the schedule that the farm was a grain farm, or would be in grain the next year, it was classified as a "cash-grain" farm. In the new combine-harvester areas in the western section of the Great Plains where land formerly in range was being put under the plow and fallowed preparatory to cropping, the farm was classified as a "cash-grain" farm.

Nonbearing orchards.—On farms where new orchards were being developed and it was apparent that the care of the orchard was the main business, such farms were classified as "fruit" farms. When such orchards were 5 acres or less in size, or cotton, truck, or other crops were grown between the fruit trees, the farm was classified according to the source of income which reported 40 per cent or more of the total receipts. In the lower Rio Grande Valley of Texas this situation was particularly in evidence, but was true more or less in all areas where intercropping is practiced.

Crop failure.—If a crop that failed could be reasonably identified and it apparently represented the major crop of the farm, the farm was classified according to the type that represented the *crop failure;* similarly, if there was only partial crop failure as evidenced by a low yield, the farm was classified according to the type representing that crop, provided the farm would have been so classified had there been a normal yield.

Building up or liquidating livestock inventories.—In the ranch areas of the West, farms reporting no sales of livestock and on which it was apparent that the normal increase of livestock was being kept to build up the herd, were classified as stock ranches. Conversely, when dairy and livestock farms were liquidating the herd preparatory to going out of business or shifting to other lines of production, the value of such animals was not considered or was discounted in classifying the farms by type.

Grazing farms showing no livestock on hand or sold.—Farms were found occasionally throughout the country, but particularly in the "Flint Hills" of east central Kansas, which reported receipts from the sale of pasture, but showed neither sale of livestock nor livestock on hand; in such cases the farms were classified as stock ranches. The income received from the rental of the pasture on these farms was considered income derived from crops.

Determination of kind of cattle sold.—In classifying dairy farms the sale of dairy animals was added to the sale of dairy products to obtain the total income from dairy sources. Frequently it was difficult to determine the kind of cattle sold. In such cases the procedure was as follows: Cattle, of course, were considered as dairy cattle when there were no beef cattle shown on the schedule; likewise, when beef cows were reported milked and their number was one-fourth or less of the total number of cows milked, the cattle sold were considered as dairy cattle, provided that no beef cattle were fattened and sold.

Veal calves were considered as dairy animals and their value was added to the value of dairy products in classifying dairy farms. In New York and Pennsylvania particularly, the statistics show more farms classified as "dairy" farms than the number of "dairy" farms reporting cows milked. This resulted from the fact that the cows on certain farms were not milked, but the milk was marketed through veal calves.

Poultry farms with small number of chickens.—Frequently farms were classified as "poultry" farms even though they reported but few chickens. This situation obtained where the sale of chickens, turkeys, baby chicks, ducks, and geese were the predominant source of income. This fact, also, seriously affected the relation of egg production to the number of chickens on farms April 1, 1930.

Wild hay on ranches.—In distinguishing "stock-ranch" from "animal-specialty" farms the acreage in wild hay was considered as pasture land in calculating the ratio of crop land to pasture land. Furthermore, if it was apparent from the schedule that roughage was used for feeding the livestock through the winter (little, if any, being sold) the farm was classified as a stock-ranch, provided it was a ranch in all other respects.

Family living discounted in special cases.—On small cotton or tobacco farms in the South where the principal source of income and the value of family living were of about equal importance, the farm was classified either as "cotton" or "crop-specialty." Ordinarily, for example, a farm reporting as much as 5 acres of cotton or producing at least 2 bales of cotton, or harvesting 3 acres of tobacco, was classified as a "cotton" or a "crop-specialty" farm even though the value of cotton or tobacco may have been somewhat less than the value reported for family living.

Large numbers of livestock with little or no sales.—In the Southern States particularly, farms were frequently found which reported relatively large numbers of livestock on hand though but few animals were reported as sold. This situation usually was accepted since the general practice in this section is to allow the stock to range widely unattended. The values of livestock sold, also, were sometimes relatively low when compared with the number on hand.

Farms on Indian reservations.—Farming on Indian reservations ordinarily was so inconsequential that the farms were classified as "self-sufficing" farms even though relatively small values for family living were shown. Occasionally, however, an Indian farm operator would be found whose operations were of such magnitude as to make him a bona fide farmer. In such cases his farm was classified according to the dominant source of income. Farms operated by Indians not on reservations were classified like other farms according to the dominant source of income. Many such farms were found in the ranching areas.

Greenhouses, nurseries, and apiaries.—The original intent was to make a separate type classification for the greenhouses, nurseries, and apiaries, but physical limitations made it necessary to include them with those "unclassified."

APPRAISAL OF THE STATISTICS

Type of farm.—In interpreting the statistics by type of farm it is important to remember that a classification of farms by type was made in a detailed way for the first time in the 1930 census. The results, therefore, probably do not constitute as finished a piece of work as would have resulted with more experience as a background. The work was of a pioneering nature. Considerable difficulty was encountered, at the outset, in formulating the exact meaning of each type of farm. In order that there would be no difficulty in identifying the type, from the data on the general farm schedule, it was necessary that the definition for each type be as precise as possible and not subject to misinterpretation. It was also impossible to foresee all the difficulties which did arise. The farming systems, in the United States, are so diverse in character that broad general rules of classification did not accurately cover all cases. Extreme cases had to have careful individual study to determine just what problems were involved before the type could be determined.

Apart from the usual careful analysis made by the Bureau of the Census of all its statistics, numerous additional checks had to be devised for verifying the accuracy of the classification used. It is believed that as a result of these precautions, the major portion of the possible errors in classification was eliminated. The way in which the classifications for adjacent counties and States fit together and harmonize with studies made by other investigators confirms the belief that they are substantially correct.

In addition to the question of accuracy, certain other considerations should be given attention when interpreting these results.

In the first place, the exact basis of classification used should be kept clearly in mind. With the exception of some of the "abnormal" farms, and certain unusual cases, *income* was the primary basis used for classifying the farm, and furthermore, a certain definite percentage (40 per cent or more) of the total income had to come from a particular source before the farm could be so classified. Although income is probably the best single measure for determining type of farm that has yet been devised, in that it provides a common denominator to which the relative importance of all enterprises may be reduced, its use for a particular year may be open to the objection that the normal relationship between prices of particular products may be temporarily out of balance, or yields for a particular year may be out of line due to climatic disturbances. To the extent that such situations existed a different type classification obviously resulted than would have been the case if normal relationships had prevailed.

Probably the most stable type classification that could be obtained would be that of applying long-time average prices to long-time average production on individual farms. Such detailed data, of course, were not available for the 1930 census classification, which had to be made on the *gross value* of products sold, traded, or used by the operator's family for the one year (1929), as reported by the farmer. An examination of the 1929 price relationships for different agricultural products, however, reveals no greater distortions for

that one year than obtained during the preceding 5 years. It is probable, therefore, that the resulting classification of farms by type is not greatly different from that which would have been obtained had the average values for the previous 5 years been available.

Were the classification used for another year, under somewhat different conditions, most marked changes probably would be found in the "general" farming areas. No doubt farms which would classify as "general" under one set of price relationships, might conceivably classify under a different type, such as, "dairy," "poultry," or "cash-grain," were the prices of the products for these particular types to change relative to the prices of other products found on these farms. However, in intensive "dairy," "cash-grain," "cotton," "fruit," "truck," and "crop-specialty" areas, it is probable that little change in the present type classification would result. This arises from the fact that in such areas the income from the one source is usually outstanding in relation to the income from other sources.

The use of 40 per cent as the division point for classifying farms, by type, resulted in a situation peculiar to "general" farms which should be given consideration. Farms were classified as "general" farms if they did not receive as much as 40 per cent of their income from any one source. In certain areas, however, farms were frequently found which received 40 per cent from each of two sources, and the problem arose as to which type group they belonged. Such farms were particularly prevalent in the cotton, peanut, and tobacco areas in the South Atlantic States, in western New York, and in other areas, whenever most of the income came from two sources which were of about equal importance. Such specialized combination types were not classified as "general" farms, but as one or the other of the types shown by the combination depending upon which type was dominant in the locality.

In interpreting the results of the classifications in such areas, therefore, it should be kept in mind just what was done and recognize the fact that some of the farms found in the dominant type group are not strictly of that type, but are combination types.

Were the classification repeated it probably would be desirable to change the method of classification somewhat so as to recognize more adequately these specialized combination types. This could be accomplished by using two percentages for the classification—one to segregate the highly specialized farms, and the other to apply to the combination types, with income from two sources amounting to possibly 60 or 70 per cent or more of the total income.

Cognizance should be taken of still another factor in interpreting these results. In a general way, farms of a given type in the same county or area will have the same broad characteristics, but may differ considerably from those in some other county or area. In making numerical comparisons of farms of a given type by selected counties, or by geographic divisions, or by States, therefore, recognition should be given to this fact. The characteristics of "crop-specialty" farms, particularly, vary quite markedly in different parts of the country. This arises from the fact that there are so many different crops grouped under this type. While for the United States, as a whole, this type may lack definiteness, in particular counties or local areas it is quite definite and distinct.

Similarly, the products comprising the source of income on general farms vary widely. For example, in most of Ohio the principal products on "general" farms are dairy, poultry, livestock, and grain; in Michigan, dairy, poultry, beans, and potatoes; and in western New York, beans, potatoes, cabbage, fruit, poultry, and dairy.

Likewise farms of the same type vary widely in size, so much so that care must be exercised in interpreting the relative importance of a particular type in different parts of the country simply on a numerical basis.

All of these varying characteristics should be kept in mind when interpreting statistics by type of farm.

Value of products.—The accuracy of the statistics on value of products, as reported in this volume, should be judged from two viewpoints—as measuring the relative importance of the different producing groups, and as measuring the gross agricultural income of particular counties, States, or the United States as a whole.

The value of products sold, traded, or used by the operator's family, reported for the different types of farms, probably measures quite satisfactorily the relative proportion of the gross income derived from different producing groups. A somewhat different picture of the relative importance of the different types of farms probably would be shown, however, were the comparison shown on a net rather than on a gross basis. This arises because different types of farms represent varying degrees of intensity of production. It is not valid, consequently, to assume that two different types of farms receiving the same gross income would have the same net income.

The total value of products sold, traded, or used by the operator's family for the different divisions, States, or counties, on the other hand, is not a true measure of the gross agricultural income for any of these areas. The value of products as reported by the individual farmer on the general farm schedule, represents the gross agricultural income on that farm. When the separate farm reports are combined into State totals, however, the resulting total does not measure the gross income for the county or State. This is due to duplication arising from interfarm sales, which in certain areas, particularly the feeding areas of the Middle West, are of considerable importance. To

the extent that farmers in one county or State sell grain or livestock to other farmers in that same county or State, who in turn resell the livestock or remarket the grain in the form of livestock, there is duplication or double counting.

The totals, also, do not include the value of products for farms which were not classified by type. For the United States, 288,766 farms or 4.6 per cent of the total were unclassified by type. If the value of products on these farms were added to the total, it probably would be increased 4 or 5 per cent.

Furthermore, in analyzing results as reported on the general farm schedule, there was noted a distinct tendency for farmers to be conservative in reporting the value of dairy products. This apparently arose from the farmer being unduly influenced by the prices of dairy products prevailing at the time of enumeration, April 1930. There was a decline in the price of dairy products from the middle of 1929 to the spring of 1930 when the enumeration was made. In reporting the value of dairy products sold in 1929, some farmers apparently tended to apply the prices prevailing April 1, 1930, to the quantity sold in 1929, rather than to apply the average prices prevailing in 1929, to the quantity sold in that year. This probably resulted in a slight understatement of the value of dairy products sold, particularly in the States bordering the Great Lakes.

In the cotton areas of the Southern States, it was impossible to determine whether the value of cotton sold also included the value of cottonseed. Probably, in many cases, the seed was either partly or totally excluded. It is not an uncommon practice for farmers to use the seed to pay the cost of ginning, or for feed, fertilizer, or seed. Whenever a farmer used cottonseed for any one or all of these purposes, the likelihood is that the value of cotton reported by him included only the lint plus such proportion of the seed not so used.

There are certain other limitations pertaining to some of the items which should be kept in mind when interpreting the value figures. The value figure reported for forest products sold, for example, is probably the least satisfactory of all the farm product values shown. While the intent of the question was to obtain only the value of forest products sold in 1929, which were cut in 1929, the inquiry was open to possible misinterpretation. It is not possible, therefore, to determine whether the value of forest products sold includes only those cut in 1929, or whether it, also, includes those cut in years prior to 1929 but sold in that year. In the turpentine and resin areas and the regions producing mining timbers, frequently a value of products was shown with no forest products reported as cut, there being no provision on the general farm schedule for reporting the quantity of such items. These values were usually accepted as reported but were roughly checked against the land in woodland to determine if they were reasonably accurate.

In interpreting the total value of products on "animal-specialty" farms, particularly the value of livestock sold, it should be understood that this value includes the entire value of the finished animal sold with no deduction made for the cost of the original feeder. This probably, in the main, explains why the average value of products on "animal-specialty" farms is considerably higher than on "cash-grain" farms of approximately the same size.

One other consideration which has to do with changes in inventories, also, should be kept in mind in interpreting these statistics; they do not take into account net increases or decreases in inventory, hence, they fail to reflect the gross agricultural income to this extent.

Comparability with value statistics in Volume II of the 1930 census agricultural reports.—The value of products sold, traded, or used by operator's family as shown in County Table III of this volume, is not closely comparable with the gross value of crops harvested, and livestock products sold shown separately in County Table X, Volume II referred to above. In that table values were obtained by applying average prices to the total quantity of crops harvested, forest products cut in 1929, and quantity of livestock products sold; thus the totals include values for all crops *harvested*, of livestock products sold, and butter churned, but exclude certain products, such as animals sold alive and those slaughtered for food (whether sold or consumed by the operator's family), and hides and skins sold. The values in this volume, however, represent only the value of products *sold or to be sold or traded* (including animals sold alive and slaughtered) as reported by the farmer; they do not include the value of feed and other products consumed on the farm, except those used by the operator's family, or the value of products of farms unclassified by type.

In the intensive fruit areas, particularly California, there is some difference between the value of the fruits and nuts produced and the value of the products sold.

The difference is due to two main causes. The values computed in the other volume cover value of all fruit harvested. The portion produced but withheld from the market and not sold, of course would not be included with that sold. The other cause of difficulty is the difference in values when computed on a fresh-fruit basis and when computed on a dried fruit, or other basis for sale.

In Florida, in the fruit areas under quarantine because of the Mediterranean fruit fly, farmers frequently reported either *no* value for fruit sold, or a very low value in relation to the quantity of the fruit harvested or to the size of the orchard. This condition, probably, accounts for the difficulty encountered in this area in harmonizing the value statistics shown in this volume with those shown in Volume II of the 1930 census agricultural reports.

DISCUSSION OF MAPS

Type of farming regions in the United States.—The map (fig. 2), page 10, shows type of farming regions in the United States based on dominant number of farms of a given type, 1930. That is, the limits of each region are determined by the type of farm most frequently found there. Obviously a somewhat different grouping would result were type of farming regions based on dominant area in farms of a given type, dominant value of property, or dominant value of products of a given type, or were other basis used. This map, consequently, should not be construed as presenting type of farming regions other than those based on *dominant number* of farms.

An examination of this map discloses that dairying is the dominant type of farming in the northeastern section of the United States and along the Pacific Coast in Washington, Oregon, and northern California. Cash-grain farming is dominant in east central Illinois and the adjacent territory of Indiana, in northwestern Iowa, Texas (the Panhandle), and Oklahoma, the western two-thirds of Kansas, southern and western Nebraska and the adjacent counties of Colorado, North Dakota, and much of South Dakota, Montana, eastern Oregon, Washington, and west central Idaho. Animal-specialty, or livestock farming, is dominant in Iowa, southwestern Minnesota, southeastern South Dakota, eastern Nebraska, northeastern Kansas, northern Missouri, northwestern Illinois, and central Indiana and Ohio. Ranching is dominant in the "Sand Hills" of north central Nebraska, western South Dakota, southeastern and southwestern Montana, Wyoming, northern and western Colorado, central and western New Mexico, southwestern Texas, the major portion of Arizona, southern Utah, most of Nevada, and local areas of California and Oregon. General farming is dominant in Pennsylvania, much of Ohio, Indiana, Michigan, southern Illinois, southern Missouri, southeastern Kansas, and northeastern Oklahoma. Crop-specialty farming is dominant in Kentucky, northern Tennessee, southern Virginia, the northern half of North Carolina, northeastern South Carolina, southeastern Georgia, southern Louisiana, northern New Mexico, central Colorado, south central Montana, north central Wyoming, and southern Idaho. Cotton farming is dominant in the Southern States and in some of the irrigated portions of New Mexico, Arizona, and California. Truck farming is dominant in the vicinity of many cities, in localities along the Atlantic Coast, and in parts of California, Florida, and southern Texas. Fruit farms, likewise, are dominant in parts of Florida, California, Oregon, and Washington, and in scattered areas in other parts of the country. Self-sufficing farming is dominant in parts of West Virginia, eastern Kentucky and Tennessee, northeastern Georgia, western North Carolina, and in parts of Virginia.

Value of farm products.—The value of farm products sold, traded, or used by operator's family in 1929, is shown on the maps (figs. 3 and 4), page 11. Both maps are based on county figures. The relative concentration of dots in Figure 3 indicates the regions wherein the total value of products is the highest. These regions are the better agricultural regions of the United States. It will be noted that the heaviest concentration of dots occurs in Iowa, the northern two-thirds of Illinois and Indiana, northwestern, central, and northeastern Ohio, southeastern Pennsylvania, central and western New York, southern Michigan, Wisconsin, and Minnesota, southeastern South Dakota, eastern Nebraska, the eastern two-thirds of Kansas, southwestern Oklahoma, the "Black Belt" of east central Texas, the Delta region of Mississippi and Arkansas, the "Black Belt" of central Alabama, the "Basin" region of central Tennessee, and the "Bluegrass" region of central Kentucky. Other areas of heavy concentration are found in the Salt River Valley of southern Arizona, in California, Washington, and Oregon, and scattered areas in other States.

The map (fig. 4), page 11, shows the average value per farm of farm products sold, traded, or used by operator's family in 1929. This map indicates, in general, that the average value of products, per farm, is lowest south of the Ohio River and in the cut-over land adjacent to the Great Lakes. The highest value of products, on the other hand, appears in the ranching and irrigated sections of the West. Care must be exercised in interpreting this map since farms vary greatly in size and in intensity of production in different parts of the country. Furthermore, in the South the cropper farm complicates the comparison. Considering every cropper as a farmer does not give a satisfactory picture of the income, per farm, in the South, since the cropper unit is only a part of a larger proprietorship unit prevailing.

NOTE.—To avoid disclosure of individual operations when less than 3 farms are reported for a given type in the first section of State, or County, Table I, the data for these farms are combined with those of other types, as follows: In Tables I and II, with "Unclassified"; in Tables III, V, and VI, with "Abnormal"; and in Tables IV, VII, and VIII, with group "Abnormal and unclassified."

In the tables for geographic divisions and States only the District of Columbia and North Dakota required consolidations to avoid disclosures. With these two exceptions, the State figures in these tables are the actual figures before any consolidations were made in the county figures. Therefore, the State figures in the summary will not, in all cases, check to those of the State totals in the county tables.