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	[1] 7
Crawler	[2] 7
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 ⅓ 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	2
All hogs and pigs, number	3
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	2
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	2
Hogs	1
Chickens on hand, number	[3] 3
Eggs produced, dozens	[3] 3
Chickens raised, number	[3] 3
Turkeys raised, number	[3] 3
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:	3
Acres	3
Production, pounds	3
Cotton:	
Acres	3
Production, running square bales	3
Irish potatoes:	
Acres	[4] 3
Production, bushels	[4] 3
Sweetpotatoes 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
Cabbage	3
Tomatoes	3
Green peas	3
All other vegetables and melons	3
Land in fruit orchards, vineyards, and planted nut trees, acres	6
Apples:	
Trees of all ages, number	[5] 5
Quantity harvested, bushels	[5] 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.
[2] 5 for Pacific States.
[3] 5 for value groups less than $2,500.
[4] 5 for value groups of $2,500 or more.
[5] 6 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