

# CHAPTER IX

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APPALACHIAN REGION

(201)

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## Appalachian Region

This special chapter contains tabulations for the Appalachian States which include Virginia, West Virginia, North Carolina, Kentucky, and Tennessee.

### SUMMARY

The Appalachian Region has a large farm population pressing hard upon meager and inadequate natural resources with a correspondingly low value of products per farm and per person in the farm population. This Region included 18.7 percent of the entire farm population of 1940 in the United States; 17.3 percent of the farms; 10.2 percent of the gross value of farm products sold, traded, or used by the farm household; 7.8 percent of the land in farms; and 7.1 percent of the cropland harvested. The Region reported only 8.6 percent of the gross value of products sold or traded in the United States. Almost one-third of all the farms in the Region reported 1 to 9 acres of cropland harvested in 1939. This fact is extremely important to an understanding of the low value of products reported in the Region. On the other hand, some of the best farms in the United States are located in these States.

The Appalachian States had a high percentage of farms with a low value of products in 1939. Slightly more than three-fourths of all farms had less than \$1,000 value of products; one-fourth had less than \$250 gross value of products.

The lowest fourth of classified farms, those with less than \$250 value of products, had 12 percent of the land, 8 percent of the cropland harvested, and 5 percent of the value of products.

The middle one-half, those with \$250 to \$999 value of products, reported having about one-half of the land, one-half of the cropland harvested, but less than two-fifths of the value of products for these States.

Farms with \$1,000 and over value of products, although only one-fifth of the farms, had almost two-fifths of the land, almost one-half of the cropland harvested, and approximately three-fifths of the gross value of products.

### VALUE OF PRODUCTS UNDER \$250

The outstanding fact about the 256,777 farm operators reporting less than \$250 gross value of products per farm was the small income resulting from the operators' efforts. The average gross value of products reported by these groups was \$144, three-fourths of which was consumed by the farm household; approximately \$36 worth of products were sold or traded in 1939.

One-half of the operators in these value groups did not report any work off the farm in 1939. Approximately one-fourth of the group reporting such work spent less than 100 days at this type of activity. Two-thirds of all operators with less than \$250 value of products, therefore, did not report any work off the farm for pay or income or reported less than 100 days. Although no wage or salary figures are reported by the Census of Agriculture, the gross income per operator from work off the farm could not have been very much for the group reporting less than 100 days work off the farm. Four-fifths of the operators working off the farm reported they were performing nonfarm work.

One out of 16 operators in these value groups were men under 25 years of age; approximately one-fifth were 65 years of age and over and therefore probably farming less intensively than they did as young men. Some of these older men may be living in semiretirement and doing practically no farm work. The remaining three-fourths of the operators in these groups, however, should be fairly well established as farmers, particularly the group above 35 years of age.

The farm operators with less than \$250 value of products had very limited resources. One-fourth had farms of less than 10 acres; another one-third had between 10 and 29 acres; about two-thirds had between 1 and 9 acres of cropland harvested in 1939.

One-fifth of the operators did not have any horses, mules, cattle, and/or hogs; three-fifths did not report any horses, mules, or tractors. About 2 out of 5 did not milk any cows in 1939; less than one-half milked one cow. Hogs were reported by one-half of the farms.

About one-fourth of the operators had automobiles but very few had motortrucks or tractors. One-sixth of the dwellings were lighted by electricity; approximately 7 percent had telephones.

The land and buildings on these farms were valued at \$1,318 per farm, about \$33 per acre, or almost \$5 per acre less than the average for all farms in these States. As the number of acres in these farms was small the value per acre was determined largely by the value of the buildings.

### VALUE OF PRODUCTS—\$250 TO \$999

The middle one-half of the classified farms reported \$250 to \$999 gross value of products, with one-third to three-fifths of the products being consumed by the farm households.

More than three-fifths of the operators in these value groups did not report any work off the farm in 1939. More than two-fifths of the groups reporting such work spent less than 100 days working off the farm. Four-fifths of the 560,925 farm operators in this middle group, therefore, did not report any work off the farm or had less than 100 days, a proportion higher than for the groups with less than \$250 value of products. Three-fourths of the 171,837 operators working off the farm reported they were engaged in nonfarm occupations. Only about 3 percent reported work on other farms as well as nonfarm work.

About three-fifths of the operators were between 35 and 65 years of age, with approximately the same proportion in each of the 3 age groups—35 to 44, 45 to 54, and 55 to 64 years. One out of 7 operators was 65 years of age or older, or about two-thirds of the proportion noted in the groups with less than \$250 value of products. Only about 4 percent of the operators in the \$250 to \$999 value groups were under 25 years of age.

The farm operators with \$250 to \$999 gross value of products also had limited resources, although the resources available usually increased with an increase in the value of products. The average acreage for farms in this middle-value group was 71

acres. Almost one-third of the farms had less than 30 acres and one-sixth between 30 and 49 acres—a total of about one-half of the farms with less than 50 acres. More than one-fourth of the farms had between 1 and 9 acres from which crops were harvested in 1939.

More than one-fourth of the farms did not report any horses, mules, or tractors, but only 1 out of every 20 operators did not have any horses, mules, cattle, and/or hogs. Almost one-fifth did not report milking cows during any part of 1939; two-fifths milked 1 cow. One-fifth of the operators did not have any cattle on their farm April 1, 1940. Almost one-third were without any hogs on this date.

One-third of the operators had automobiles, about 1 out of 16 had a truck, but very few had a tractor. Less than one-fifth of the dwellings were lighted by electricity; more than one-tenth had telephones.

The land and buildings on these farms were valued at \$2,218 per farm or about \$32 per acre. The value per acre was practically the same as the corresponding value for the groups with less than \$250 gross value of products.

#### VALUE OF PRODUCTS—\$1,000 AND OVER

This group includes all farms with \$1,000 or more gross value of products. The farms are so diverse with respect to size of farm, number of acres of cropland harvested, value of land and buildings, and many other items summarized for the two other groups that no summary will be attempted; only a few selected items will be mentioned.

Three-fourths of the operators in these value groups did not report any work off the farm in 1939. Almost three-fifths of the operators working off the farm reported less than 100 days spent at this type of activity in 1939. Five-sixths of all operators with \$1,000 or more gross value of products, therefore, did not have any work off the farm for pay or income in 1939 or reported less than 100 days. Three-fourths of the operators working off the farm did nonfarm work.

These value groups, \$1,000 and over, had a greater concentration of operators in the 35 to 64 year age groups than the value groups under \$1,000 gross value of products. Very few operators were less than 25 years of age; about 1 out of 6 was under 35 years of age. More than 10 percent of the operators were 65 years of age and over.

Practically all of the farms reported one or more of the following classes of livestock—horses, mules, cattle, and/or hogs—but 1 out of 12 did not report any horses, mules, or tractors. Almost one-fifth did not milk any cows in 1939; more than one-fourth milked 1 cow. About one-fifth of the farms did not report any hogs on hand April 1, 1940.

Almost two-thirds of the operators had an automobile, less than one-fifth had a motortruck, and about 1 out of 7 had a tractor. One-third of the dwellings were lighted by electricity; more than one-fifth had telephones.

#### LAND RESOURCES

The average size farm in the Appalachian States, as revealed by the 1940 Agriculture Census, was 79 acres and the average value of products sold, traded, or used by the farm household, \$772. Practically all of the farms (95.7 percent) had land from which they harvested crops; the average was 23 acres per farm, or 28 percent of all the land in farms. About \$3,000 per farm was invested in land and buildings, an average of \$38 per acre. The gross income from products was 26 percent of the

investment in land and buildings. The average size farm in the United States was 174 acres and the average gross value of products \$1,909. The average cropland harvested was 56 acres per farm reporting, or 30 percent of all the land in farms. About \$5,500 per farm was invested in land and buildings, an average of \$32 per acre. The gross value of products was one-fourth of the investment in land and buildings.

The average farm in the Region, thus, was less than one-half the size of the average for the entire United States, had about two-fifths as many acres of cropland harvested, had farm real estate valued at approximately one-half, and produced about three-fifths the value of products sold, traded, or used by the farm households in the United States in 1939.

The prevalence of low-income farms with low-income farm operators in this Region is further indicated by the concentration of farms in the low-value-of-products groups.

More than two-fifths of the classified farms in this Region had less than \$400 value of products as compared with about one-third in the United States as a whole.

The farms in these value groups reported 12 percent of the total value of products in the Region; the same value groups for the United States reported 5 percent of the total value.

In the Appalachian Region, 1 out of every 4 acres of the farm land was included in the farms in the 3 lowest-value groups, \$1 to \$399. One out of every 8 acres of farm land of the United States was included in farms with this small value of products.

The Region has its larger and more productive farms but these farms are a smaller percentage of the total than in the United States as a whole; the Region, proportionately, has more farms than the United States in each of the value groups under \$1,000 and fewer in each group with \$1,000 or more gross value of products.

One-sixteenth of the farms in the Appalachian Region were in the \$1,500 to \$2,499 value groups and produced 16.6 percent of the value of products from 12 percent of the land in farms in this Region; one-ninth of the farms in the United States were in these same value groups and reported 17 percent of the value of products from 14.5 percent of the farm land.

The \$4,000 to \$9,999 value groups in the Appalachian Region included 1 percent of the farms, 5 percent of the land in farms, and about 10 percent of the value of products; the same value groups for the United States included 4 percent of the farms, 13 percent of the land, and 19 percent of the gross value of products.

For the Appalachian Region, as well as for the Nation as a whole, the average size of farm in each value group increased with the increase in the value of products. The average size farm in the \$250 to \$399 value group was 51 acres in the Appalachian Region and 74 acres for the United States. The comparable figures for the \$600 to \$749 value group were 79 and 114 acres, respectively. The acreages for the \$4,000 to \$5,999 value group were 266 and 442, respectively.

The size of the farms in each of the value groups in this Region, however, varied widely within each value group. Although the average farm had 32 acres in the \$1 to \$99 value group, more than one-third had less than 10 acres, more than two-thirds less than 30 acres, and about 2 percent 180 acres or more. The average size of farms of operators reporting \$2,500 to \$3,999 value of products was 201 acres; but 4 percent of the farms had less than 30 acres; 6 percent had 500 acres and over;

whereas, the group which included the average had only 35 percent between 180 and 499 acres. The variations in the acreage per farm within a value-of-products group may be explained in large part by such factors as the differences in the terrain, the character of the soil, double cropping, the growing of crops such as tobacco and truck which yield a high gross value per acre in contrast with corn, wheat, and oats yielding a low gross income per acre, the extent of livestock production, the price at which the crops or livestock were sold, the intensity of farming, the efficiency with which the farm enterprise was operated, and other factors associated with the type of farming. Areas in which the acreage per farm is much larger than the average for a value group are generally areas where the value of land is low, either because of low productivity or because a smaller proportion of the land is cropland.

The average number of acres of cropland harvested in each value group increased with the increase in the gross value of products in the Appalachian States and in the United States, but the averages are smaller in the Appalachian States than for the Nation as a whole.

Almost one-third of all farms in the Appalachian States reported 1 to 9 acres from which crops were harvested in 1939. The mountainous terrain of these States in large part is responsible for the small area of land from which crops can be harvested. Approximately one-half of the 331,004 classified farms reporting 1 to 9 acres cropland harvested were in the 2 groups with \$1 to \$249 gross value of products. Another one-fourth were in the \$250 to \$399 value group. As long as farm operators continue to work with such limited land resources and under the conditions existing in these States their gross value of products will be small.

The percentage of farms in this Region not reporting any cropland harvested was the largest in the lowest- and highest-value groups, 17 and 7 percent, respectively. All of the value groups between \$600 and \$3,999 reported less than 1 percent. This is in contrast with the distribution in the United States as a whole where the largest percentages also occurred in the 2 lowest groups, 24 and 10 percent, respectively; but no other value group reported less than 1 percent of the farms not reporting cropland harvested. Rural residences with cows or poultry but no crops, feed lots, dry-lot dairies, poultry farms which buy all their feed, hatcheries, fur farms, and farms with a complete crop failure in 1939 are illustrations of farms reporting no cropland harvested. Livestock farms which did not grow crops or cut any hay in 1939 are also included in this classification, as are farms, such as many greenhouses, which have only a small fraction of an acre of land in crops. The Appalachian States had a smaller proportion of farms in each value group not reporting cropland harvested than was true for the United States as a whole.

If the same value groups are considered in both the Appalachian Region and the United States, the gross value of products per acre of land in farms and per acre of cropland harvested was higher for the farms in the Appalachian Region than for the United States. The production of crops, such as tobacco, cotton, and peanuts, which have a high gross value per acre, and of gardens and livestock products for home consumption account in large part for the high value of products per acre in this Region.

In each value group in this Region the percentage of farms reporting the use of farm products by the household was slightly

greater than for the comparable value group for the entire United States. Only about 2 percent of the classified farms in the Region did not report using in their households any of the farm products obtained from their farms in 1939, not even vegetables from a home garden. The 2 extreme groups, \$10,000 and over and \$1 to \$99, had the largest proportion not reporting the value of products used by the operator's family, 10 and 7 percent, respectively. In the \$6,000 to \$9,999 value group the percentage was 4. Between 1 and 3 percent of the farms in each of the other value groups did not report the use of any farm products by the household.

The percentage of the value of products used by the farm household declined as the total value of products increased. Almost three-fourths of the total products of the \$100 to \$249 value group were consumed by the farm household. The percentage dropped to one-half in the \$400 to \$599 value group; to about one-fourth in the \$1,000 to \$1,499; and to 8 percent in the \$4,000 to \$5,999 value group.

On the other hand, the average value of the products used by the farm household in the Appalachian States increased with an increase in the total value of products and at a faster rate than for the United States as a whole. In other words, the families which presumably needed a large quantity of home-grown products because of low gross farm incomes actually reported the smallest value for home living. The \$1 to \$99 value group, on the average, consumed products valued at \$51 per farm. The \$100 to \$249 group used practically 2½ times as much. Products valued at \$263 were used by the \$600 to \$749 value group. In the \$6,000 to \$9,999 value group the products used by the farm households had an average value per farm of \$441. The average value placed on the farm products used by the households in every value group in this Region exceed the value of products for the same value groups for the United States by 10 to 70 percent. The average value of products used by the farm households in the Appalachian Region was \$223; the average value for the United States was \$197.

The average amount sold or traded in each of the value groups is smaller in the Region than for the United States. This smaller average of products sold or traded is due to the traditional practice of living largely off the products of the farm which practice has been encouraged in this Region by poor roads and inadequate local marketing facilities. This traditional way of life has been influenced, but not radically changed, by the introduction of motortrucks carrying products to and from metropolitan centers over hard-surfaced highways.

The value of land and buildings per farm increased with the increase in the value of products in this Region just as it did for the Nation as a whole. The value of land and buildings per farm was higher for the United States than in the Appalachian Region, but the value of land and buildings per acre was higher in the Appalachians than for the United States. Below the \$400 to \$599 value group there seems to be no relationship between the average value of land and buildings per acre and the value of products. Above \$400 value of products, however, the value per acre increased with an increase in the value of products. This fact suggests that the types of farming followed in these States are similar enough for these value groups to produce this relationship. It does not exist for the United States as a whole (see, ~~Technical Release No. 3~~, Land Resources and Size of Farm, for a discussion of the factors involved in this relationship).

Chapter III

The value of products as a percentage of the value of land and buildings increased as the value of products increased, but the percentages in each value group for the Appalachian Region were generally higher than those for the United States. The farms in the \$1 to \$99 value-of-products group had a gross value of products which was 4.6 percent of the value of land and buildings compared to 2.9 percent for the United States. This ratio for the Region followed the general pattern of the United States, increasing to 23.3 percent in the \$400 to \$599 value group and to 41 percent in the highest-value group. The small percentage in the low-value groups is partly explained by the fact that many of the farms in these value groups are primarily rural residences, the home of part-time farmers, or operators who are living in semiretirement. In the higher-value groups the relationship between the gross value of products and farm real estate is less direct or significant because land and buildings generally constitute a smaller proportion of the total farm capital—real estate, livestock, and equipment. This is particularly true of livestock farming which makes up a large proportion of the farms in the higher-value-of-products groups.

#### AGE OF OPERATOR

The younger farm operators are more frequently found in the lower-value groups in the Appalachians than for the United States as a whole. This situation is accounted for in part by the large number of young people in the area, the relatively poor opportunities for shifting to other occupations, the practice of dividing the home farm to give the young people a start in life, and the limited land resources of the Region. There are also fewer large farms demanding the services of young men as hired managers.

The older farm operators in the Appalachians, on the other hand, are less frequently found in the lowest-value groups and more frequently noted in the higher-value groups. One-tenth (10.4 percent) of the operators in the \$6,000 to \$9,999 value group in this Region were 65 years of age or older compared to 7.7 percent for the United States; the comparable figures for the 55 to 64 year age groups in the same value group were 24.8 and 20.2 percent, respectively.

#### WORK OFF FARM AND DAYS WORKED

Work off the farm assumed more importance in the Appalachian States than for the United States as a whole but in evaluating the relative significance of off-farm work in the agricultural economy of these States the fact that 3 out of 5 farm operators reported they did not do any work off the farm for pay or income in 1939 should be kept in mind. The average number of days worked by those working off the farm was 148 in the Appalachians and 137 days for the United States. Almost one-fifth of the operators in the Appalachian States but only 15.5 percent of the operators in the United States as a whole worked 100 days or more off the farm. The corresponding percentages of farmers working less than 100 days were 12.1 and 13.2 percent, respectively.

Working off the farm in this Region was not confined to operators with small value of products or low-income farmers. In every value-of-products group, except the \$4,000 to \$5,999, at least 1 out of every 7 operators reported working off the farm for pay or income in 1939 and even in the \$4,000 to \$5,999 value group almost 1 out of 8 reported work off the farm. Approximately one-half of the 256,777 operators with value of products of less than \$250 worked off the farm. The proportion reporting in each value group, except for the 2 highest-value groups, generally decreased with an increase in the value of

products. On farms with products valued at \$600 to \$749 one-fourth reported work off the farm, as did one-seventh of the operators with value of products of \$2,000 to \$2,499. Almost one-fifth of the operators in the \$10,000 and over value group also reported work of this nature.

The average number of days worked in each value group varied from 176 days in the group with less than \$100 gross value of products to 93 days in the \$10,000 and over group.

The wide variation in the number of days worked within each value group suggests that some operators had only odd or spare-time jobs; and for them the supplemental income was small. Other operators evidently obtained the major portion of their income from off-farm work. For this latter group farming was probably secondary in importance as a source of income. Data from other sources indicate that many of these individuals working off the farm do not consider themselves farmers. The number of farmers and farm managers, as reported on the Population Schedule, was only about three-fourths of the number of farm operators as reported by the Agriculture Schedule. The occupations of operators not considering themselves farmers were reported on the Population and Agriculture Schedules as coal miners, laborers, machinists, bankers, merchants, carpenters, etc.

These figures on the number of farm operators working off the farm, however, do not indicate the full extent to which the family income may have been supplemented from other sources. In many instances members of the farm family, other than the operator, work off the farm and pay for their board and room or make other contributions to the family income. Some of the family income may come from pensions, public assistance, legacies, investments, or the like.

The Appalachian States had a larger proportion of operators working off the farm and reporting nonfarm work, and a smaller percentage working on other farms, or working at both types of work than for the entire United States. More than three-fourths of the operators working off the farm reported working at non-farm work; one-fourth worked on other farms, while 2.8 percent reported both types of work.

Individuals working off the farm thus work either at nonfarm work or on other farms; they seldom do both types of work. This pattern of working either on other farms or at nonfarm work is found in all value groups, but operators in other States more frequently do both types of work than do the operators in the Appalachians.

From one-fifth to one-third of the operators reporting work off the farm in each value group in the Appalachians worked on other farms. The percentage usually increased with an increase in the value of products up to the \$1,000 to \$1,499 value group; above that point the pattern was not so definite, but in general, the percentage decreased with an increase in the value of products. In the United States the proportion of operators reporting work on other farms generally increased with an increase in the value of products except in the 2 highest-value groups. In the lower-value groups the percentage of operators working on other farms was about the same in both the Appalachians and the United States, but in the higher-value groups there were marked differences which may be illustrated by the situation in the \$2,500 to \$3,999 value group. In the United States two-fifths of the operators working off the farm reported work on other farms; in the Appalachians only one-fourth of those working off the farm reported this type of work. Part of this difference is due to the fact that the farms in the Appalachian Region are smaller, family labor is more abundant, and money is scarcer. Therefore, other operators in the neighborhood or community are seldom hired to help plant or harvest the crops.

The proportion of operators working off the farm and reporting nonfarm work is the complement of the number reporting work on other farms, except for the small percentage which do both types of work. The percentage reporting nonfarm work in the Appalachians varied from more than two-thirds in the \$750 to \$999 value group to more than five-sixths in the \$4,000 to \$5,999 value group. In most value groups the proportion reporting nonfarm work in the Appalachians was greater than the corresponding percentage for the United States. This was particularly true in the higher-value groups.

The greater proportion of operators in the higher-value groups working off the farm plus the fact that more than one-half of the operators, who reported both work off farm and a gross value of products of \$3,000 and over, worked 100 days or more a year at nonfarm work suggests that the Appalachian States had a larger proportion of operators who combined farming with some other occupation, profession, or business than was true for the United States. They spend the major portion of their time in their respective occupations, professions, or business; their farms are country residences, hobbies, or at least something less than a full-time occupation for the individual listed as operator on the Agriculture Farm and Ranch Schedule.

Farm operators working at nonfarm work average almost two and one-half times as many days of work as operators working on other farms—169 and 70, respectively. This ratio remains fairly constant for all the value groups in the Appalachians, although the average number of days worked at each of these 2 kinds of work usually decreased with the increase in the value of products. In the United States, however, the proportionate decrease in the number of days worked was greater for work on other farms than for nonfarm work. The decrease in the number of days worked on other farms in the Appalachians is illustrated by the drop from 95 days for operators with value of products of less than \$100 to about 40 days in the \$2,000 to \$3,999 value groups. The extent of the decrease in the average number of days at nonfarm work is indicated by the drop from 190 days in the \$1 to \$99 value group to 121 days in the group with \$10,000 and over value of products.

Seven percent of all farm operators or about one-fourth of the operators reporting work off the farm spent less than 50 days at work other than on their own farms. On farms with less than \$100 value of products 1 out of 9 operators performing off-farm work for pay or income reported under 50 days work off the farm in 1939. This proportion gradually increased, until on farms in the group with products valued at \$1,500 to \$1,999, approximately two-fifths of the operators working off the farm reported less than 50 days work. Above \$2,000 value of products the proportion of workers with this small amount of off-farm work gradually decreased.

On the other hand, the proportion of operators working off the farm and reporting more than 100 days work varied from about 3 out of 4 reporting this amount and living on farms with less than \$100 value of products to about 1 operator out of 3 on farms with products valued between \$2,500 and \$3,999. More than one-half of the operators on farms with \$10,000 and over value of products reported this same amount of work off the farm.

Although work off the farm is important and represents the work relationship to other farms as well as the shifting back and forth between farming and other occupations and industries, it should be remembered that less than one-third of all farm operators reported any work off the farm for pay or income in 1939; only one-fourth of the operators reported nonfarm work. Most operators working off the farm had only a few days of

work; only one-fifth of all operators reported as many as 100 days or more. In some instances members of the farm families, other than the operator, work off the farm and contribute to the family income, but for the great majority of farm families in these States the value of products from the farm represents the gross family income from which all expenses must be paid.

#### HORSES, MULES, CATTLE, AND/OR HOGS

About one-twelfth of the classified farms in the Appalachian Region and 9.7 percent of the farms in the United States did not report any horses, mules, cattle, and/or hogs. More than one-fourth of these farms without livestock had less than \$100 gross value of products. Three-fifths of the farms in the Appalachian Region not reporting any of these types of livestock had less than \$250 gross value of products. To obtain the same ratio for the United States it was necessary to also include the \$250 to \$399 value group. Each value group in the United States as a whole had more than 4 percent of its farms not reporting one or more of these classes of livestock, but about one-half of the value groups in the Appalachian Region, particularly the higher-value groups had less than this percentage not reporting any of these classes of livestock.

Most of the farms not reporting any of these classes of livestock are share-cropper units using livestock reported by the landlord, mountain farms cultivated with a hoe, retirement and residence units, or farms using livestock owned by relatives or neighbors.

In each of the value groups the percentage of farms reporting one or more of these classes of livestock was greater in the Appalachians than for the United States. In the Appalachian Region, 60 percent of the farms in the \$1 to \$99 value group, 85 percent of those in the \$100 to \$249 value group, and 92 percent or more in each of the other value groups reported one or more of these types of livestock.

#### CATTLE

The proportion of farms reporting cattle on April 1, 1940, was slightly larger for the United States than for the Appalachian Region, being 79.4 and 77.0 percent of all farms, respectively. The Appalachian Region had a slightly larger percentage in each of the value groups below \$600 but above \$750 gross value of products the proportions were usually larger for the United States. Except for the 2 lowest- and the 2 highest-value groups in the Appalachians, between 80 and 90 percent of the farms reported cattle on hand April 1, 1940; less than 70 percent in each of the 2 lowest-value groups and more than 90 percent in each of the 2 highest-value groups reported cattle.

#### COWS MILKED

The Appalachian Region had about the same percentage of its farms reporting cows milked during some part of 1939 as did the United States, 75.3 and 76.5 percent, respectively. Almost two-fifths of the farms in the Appalachians reported milking only 1 cow whereas less than one-fourth of the operators in the United States reported 1 cow milked. The comparable percentages for operators milking 2 cows were 19.8 and 15.2 percent, respectively. On the other hand, 1.9 percent of the farms reported 10 or more cows milked compared with 9.7 percent for the United States.

Approximately one-third of the farms in the \$1 to \$99 value group in the Appalachian Region and two-thirds of those in the \$100 to \$249 value group milked cows during some part of 1939. In the \$250 to \$5,999 value-of-products groups, between 80 and 86 percent of the operators reported milking cows; above \$6,000 gross value of products the percentages were 92 and 94. In the

5 lowest-value groups and the 2 highest-value groups the Appalachian Region reported a higher percentage of farms milking cows than did all farms in the United States; the lowest-value group in the Appalachian States had fewer rural residences buying all of their milk from other sources; and the highest-value groups had fewer specialized farms, such as cash-grain, hatcheries, feed lots, etc., which ordinarily do not milk cows. The Appalachians in each value group had a larger percentage of farms milking 1 cow and for most of the value groups a larger proportion reporting 2 or 3 cows milked.

In the lower-value-of-products groups, however, most of the farms reported only 1 or 2 cows milked. For the value groups below \$400 in the Appalachians, 92 percent of the farms with cows milked reported 1 or 2 cows compared with 83 percent for the United States. The \$400 to \$999 value-of-products groups in the Appalachian States reported that 72 percent of the farms milking cows had 1 or 2; 55 percent of the farms in the same value groups in the United States reported the same number of cows milked. For all farms with gross value of products of \$1,000 or more, those milking 1 or 2 cows were 57 percent of the farms reporting cows milked in the Appalachians and 26 percent in the United States.

#### HOGS

Two-thirds of all farms in the Appalachians reported hogs on hand April 1, 1940, compared with about three-fifths of the farms in the United States. In both areas fewer farms reported hogs in 1940 than reported cows milked during some part of 1939. The number of farms having hogs sometime during 1939, however, was larger than the number reporting hogs on April 1, 1940, as 76 percent of all farms reported the butchering of hogs or pigs compared with 67 percent reporting hogs on April 1, 1940. Some farmers buy 1 or 2 pigs for butchering; others raise hogs but do no butchering, therefore the proportion of farms raising or butchering hogs in 1939 must have been somewhat over 76 percent. These figures indicate that home-butchered pork and home-produced milk were available during some part of 1939 for a large proportion of the farm families in these States. The proportion of farms reporting hogs and sows in the different value groups follows the same pattern as for cows milked, increasing toward the middle of the value groups and then decreasing slightly in the higher brackets. Only the value-of-products group below \$100 had hogs on less than half of the farms.

About one-fourth of the farms in the Appalachian Region reported sows on April 1, 1940, compared with about one-third in the United States. The percentage of farms reporting sows in the Appalachians was 5 percent in the \$1 to \$99 value group but increased rapidly to approximately 50 percent on farms with a gross value of products of \$2,000 to \$9,999; the proportion of farms reporting sows in each value group in the United States was similar to that in the Appalachians but usually the percentages were higher for the United States.

Most of the farms in the lower-value groups that reported sows had only 1 or 2; in the groups with less than \$400 gross value of products 92 percent reported 1 or 2 sows. In the groups from \$400 to \$999 the proportion was 87 percent compared with 72 percent in the United States. For the value groups from \$1,000 to \$2,499 and \$2,500 and over, the percentages having sows and reporting 1 or 2 were 71 and 47, respectively, for the Appalachian Region, and 44 and 23, respectively, for the United States.

#### WORKSTOCK AND TRACTORS

One-third of all farms in the Appalachian Region reported not having horses, mules, or tractors; less than one-fourth of

the farms in the United States were without workstock or tractors. In the lower-value groups the percentage of farms not reporting workstock or tractors was noticeably higher in the Appalachian Region than for the United States; in the higher-value groups the proportions were about the same.

Three-fourths of the farms in the lowest-value-of-products group in the Appalachian Region did not report having any horses, mules, or tractors; almost three-fifths of the \$100 to \$249 value group were also without workstock or tractors. Some of these operators may have used oxen, borrowed workstock from relatives or neighbors, or used workstock or tractors furnished by the landlord. Approximately one-fourth of the operators in these 2 lowest-value groups were young men under 35 years of age; almost one-half of the men in these value groups reported they did not do any work off the farm in 1939. These facts suggest there must have been a considerable number of young operators in these States who did not have a horse, mule, or tractor with which to operate a farm nor did they have any work off the farm to supply an income with which to meet their needs. Their report of less than \$250 value of products indicates the very limited results they were able to obtain from their farms. For the value-of-products groups of \$1,500 and over, the proportion without these types of power—horses, mules, or tractors—was less than 10 percent; comparable percentages of less than 10 percent were noted for all value groups of \$1,000 and over in the United States.

More than three-fifths of the farms in the Appalachians reported horses and/or mules but no tractors; only one-half of 1 percent reported tractors but no horses or mules; and 4.1 percent reported both workstock and tractors. A smaller proportion, 53 percent, of all farms in the United States reported horses or mules but no tractor; the proportion of farms reporting tractors but no horses or mules was 4.5 percent; and the percentage reporting both tractors and workstock in the United States was 19, or almost 5 times as large as the proportion in the Appalachians.

The percentage of farms reporting horses and/or mules but no tractors in the value groups, \$1 to \$299, was slightly larger for the United States than for the Appalachian Region, but above the \$400 gross value of products the percentage of farms with horses and/or mules but no tractors was much larger in the Appalachians. The greatest difference existed in the \$2,500 to \$3,999 value group where 73.4 percent of the farms in the Appalachian Region and 29.3 percent of those in the United States had workstock but no tractors. A smaller proportion of the farms in the Appalachian Region reported horses and/or mules or a combination of horses, mules, and tractors than did the farm operators in the United States as a whole. In the Appalachian Region the proportion of farms reporting horses and/or mules with no tractors and the proportion reporting horses and/or mules were similar, being 62 and 66 percent, respectively. For the United States as a whole, however, there were marked differences between these 2 groups; 53 percent of the farms reported horses and/or mules without tractors and 71.5 percent reported horses and/or mules. The mountainous terrain, the small farms, and the growing of crops demanding a large quantity of hand labor limited the number of workstock and tractors used as well as the gross value of products. The proportion of farms reporting tractors and the proportion reporting both tractors and workstock are larger for the higher-value-of-products groups in both the Appalachians and the United States. Only about one-third of the farms reporting tractors in the Appalachians were in the value groups below \$1,000 but these groups contained more than three-fourths of all the farms in the Region. These value groups for the United States included about one-fourth of

the farms reporting tractors and two-thirds of the total number of farms.

#### AUTOMOBILES, MOTORTRUCKS, AND TRACTORS

About two-fifths of the farm operators in the Appalachians reported automobiles in 1940 compared with approximately three-fifths in the United States. Motortrucks were reported on farms in the United States twice as frequently as in the Appalachians; 15.5 and 8.0 percent, respectively. Tractors were reported five times as frequently in the United States, by 23.1 and 4.6 percent, respectively.

The proportion of farm operators reporting these items—automobiles, motortrucks, and tractors—in the Appalachians increased with the increase in the gross value of products. Tractors, for instance, were reported by about 1 percent of the farms in the \$1 to \$249 value-of-products groups and by one-half to three-fourths of the farms with gross value of products of \$6,000 and over. The proportion reporting motortrucks varied from 3 percent in the group with less than \$100 value of products to 71 percent in the highest-value group; the percentage reporting automobiles increased from 21 percent in the \$1 to \$99 value group to 86 percent in the group reporting \$10,000 and over gross value of products. Poor roads and inadequate funds with which to buy automobiles and trucks were important factors causing many farmers to depend upon horses and mules for transportation, but in this Region the greater dependence upon horses and mules for transportation and the smaller number of telephones causes many of the farm families in these States, particularly in the mountainous areas, to live in relative isolation.

#### ELECTRIC DISTRIBUTION LINES AND DWELLINGS LIGHTED BY ELECTRICITY

Less than two-fifths of the farms in the Appalachian Region were reported to be within one-quarter mile of an electric dis-

tribution line in 1940 and one-fifth of the farms reported dwellings lighted by electricity. The comparable percentages in the United States were 46 and 33, respectively. The proportion of dwellings lighted by electricity in the Appalachians increased with an increase in the gross value of products in all value groups above \$100. The \$1 to \$99 value group had a proportion slightly larger than that for the \$100 to \$249 value group.

#### TELEPHONES

Only one-eighth of all farms in the Appalachians reported telephones in 1940; in the United States twice that proportion reported telephones on the same date.

For telephones—as for automobiles, motortrucks, tractors, and dwellings lighted by electricity—the percentage of farms reporting this equipment increased with an increase in the gross value of products obtained from the farm. In the lowest-value group 7 percent of the farms reported telephones; in the highest-value group 77 percent reported telephones.

#### BUSINESS WITH OR THROUGH COOPERATIVES

One out of 10 farm operators in the Appalachian Region and more than 2 out of 10 operators in the United States reported doing business with or through cooperatives in 1939.

The proportion of operators dealing with or through cooperatives in the Appalachian Region increased with the increase in gross value of products; in the lowest-value group only 3 percent reported this type of business compared with 45 percent in the highest-value group. The relative isolation of the operators in these States and their traditional independence also affected the amount of business done with or through cooperatives.

CENSUS OF AGRICULTURE: 1940

TABLE 1.—NUMBER OF FARMS, 1940; VALUE OF FARM PRODUCTS, 1939; ALL LAND IN FARMS, 1940; CROPLAND HARVESTED, 1939; AND VALUE OF LAND AND BUILDINGS, 1940; CLASSIFIED BY TOTAL VALUE OF FARM PRODUCTS, 1939; FOR THE APPALACHIAN REGION<sup>2</sup>

[Bold face figures are the 1940 Census recorded totals for all farms; all other entries are based upon a 2-percent sample of the reports for the individual farms, expanded and adjusted to agree with the recorded totals. See text.]

VALUE GROUP	ALL FARMS		VALUE OF ALL FARM PRODUCTS SOLD, TRADED, OR USED BY FARM HOUSEHOLDS			FARM PRODUCTS USED BY FARM HOUSEHOLDS						
	Number	Percent of total	Total (dollars)	Average per farm (dollars)	Percent of total	Farms reporting		Value				
						Number	Percent of all farms in each value group	Total (dollars)	Average per farm reporting (dollars)	Percent of total	Percent of value of all farm products	
All groups.....	1,052,954	100.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Unclassified farms.....	5,210	0.5	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Farms with no farm products sold, traded, or used.....	13,201	1.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Classified farms, total.....	1,034,543	98.3	798,649,023	772	100.0	1,010,309	97.7	225,159,776	223	100.0	28.2	
\$1 to \$99.....	64,242	6.1	3,822,512	60	0.5	59,781	93.1	3,049,437	51	1.4	79.8	
\$100 to \$249.....	192,535	18.3	33,109,451	172	4.1	186,478	96.9	23,661,289	127	10.5	71.4	
\$250 to \$399.....	186,323	17.7	59,359,140	319	7.4	181,993	97.7	36,494,780	201	16.2	61.6	
\$400 to \$599.....	180,493	17.1	88,292,650	489	11.1	177,141	98.1	43,675,039	247	19.4	49.5	
\$600 to \$749.....	92,124	8.7	61,566,167	668	7.7	80,605	98.4	23,795,685	263	10.6	38.7	
\$750 to \$999.....	101,980	9.7	87,897,978	862	11.0	100,840	98.7	27,373,883	272	12.2	31.1	
\$1,000 to \$1,499.....	105,190	10.0	127,155,247	1,209	15.8	103,877	98.7	28,734,821	286	13.2	23.4	
\$1,500 to \$1,999.....	46,757	4.4	80,184,706	1,715	10.0	46,264	98.9	14,204,444	307	6.3	17.7	
\$2,000 to \$2,499.....	23,755	2.3	52,702,457	2,219	6.6	23,463	98.8	7,669,609	327	3.4	14.6	
\$2,500 to \$3,999.....	25,215	2.4	77,319,816	3,066	9.7	24,829	98.5	8,763,142	353	3.9	11.3	
\$4,000 to \$5,999.....	8,667	0.8	41,539,021	4,793	5.2	8,437	97.3	3,270,852	388	1.5	7.9	
\$6,000 to \$9,999.....	4,598	0.4	34,582,364	7,521	4.3	4,406	95.8	1,944,331	441	0.9	5.6	
\$10,000 and over.....	2,651	0.3	51,117,514	19,282	8.4	2,395	90.3	1,542,264	644	0.7	3.0	

  

VALUE GROUP	ALL LAND IN FARMS <sup>3</sup>			CROPLAND HARVESTED					
	Acres	Average per farm (acres)	Percent of total	Farms reporting			Percent of all farms in each value group		
				Any cropland harvested	1 to 9 acres of cropland harvested	Farms not reporting cropland harvested	Reporting any cropland harvested	Reporting 1 to 9 acres of cropland harvested	Not reporting cropland harvested
All groups.....	82,985,962	78.8	100.0	1,007,955	335,075	44,899	95.7	31.8	4.3
Unclassified farms.....	*289,442	*55.6	*0.3	3,941	*3,130	*1,369	73.7	*41.1	*20.3
Farms with no farm products sold, traded, or used.....	*691,217	*52.4	*0.8	*2,743	*1,033	10,458	*20.8	*14.0	70.2
Classified farms, total.....	82,005,303	79.3	98.8	1,001,371	331,004	33,172	96.8	32.0	3.3
\$1 to \$99.....	2,028,776	31.6	2.4	63,005	44,974	11,147	82.6	70.0	17.4
\$100 to \$249.....	8,371,978	49.5	10.1	170,073	118,992	13,463	93.0	61.8	7.0
\$250 to \$399.....	9,489,245	50.9	11.4	182,230	66,992	*4,098	97.8	46.7	*2.2
\$400 to \$599.....	12,664,355	70.2	15.3	178,293	47,405	*2,200	98.6	26.3	*1.2
\$600 to \$749.....	7,312,076	79.4	8.5	91,762	15,063	*362	99.6	16.4	*0.4
\$750 to \$999.....	9,837,380	96.5	11.0	101,450	9,557	*530	99.5	0.4	*0.5
\$1,000 to \$1,499.....	11,336,412	107.8	13.7	104,897	4,797	*901	99.7	*4.6	*0.4
\$1,500 to \$1,999.....	9,355,829	135.9	7.7	46,423	*1,594	*334	99.3	*3.4	*0.7
\$2,000 to \$2,499.....	3,836,298	153.1	4.4	23,612	*507	*143	99.4	*2.5	*0.6
\$2,500 to \$3,999.....	5,071,812	201.1	6.1	25,077	*373	*138	99.5	*1.5	*0.6
\$4,000 to \$5,999.....	2,304,820	265.9	2.6	8,436	*417	*231	97.3	*4.8	*2.7
\$6,000 to \$9,999.....	*1,993,913	*433.6	*2.4	4,559	*164	*30	99.2	*9.6	*0.8
\$10,000 and over.....	*1,602,811	*604.6	*1.0	2,464	*.....	*187	92.0	*.....	*7.1

  

VALUE GROUP	CROPLAND HARVESTED—Continued				VALUE OF LAND AND BUILDINGS				
	Acres				Amount (dollars)	Average		Percent of total	Total value of products as percent of value of land and buildings
	Total	Average per farm reporting	Percent of total	Percent of all land in farms		Per farm (dollars)	Per acre (dollars)		
All groups.....	22,960,614	22.8	100.0	27.7	3,122,479,199	2,955	37.63	100.0	xxxxx
Unclassified farms.....	49,239	12.8	0.2	*17.0	9,195,055	1,763	*31.74	0.3	xxxxx
Farms with no farm products sold, traded, or used.....	*24,896	*9.1	*0.1	*3.6	*26,863,373	*2,035	*38.86	*0.0	.....
Classified farms, total.....	22,836,479	22.9	99.7	27.9	3,095,430,171	2,983	37.64	99.6	28.0
\$1 to \$99.....	288,581	5.4	1.3	14.2	83,168,270	1,295	40.00	2.7	4.6
\$100 to \$249.....	1,566,362	8.7	6.8	18.7	255,228,200	1,326	30.40	8.2	18.0
\$250 to \$399.....	2,336,413	12.8	10.2	24.6	298,352,138	1,601	31.44	9.6	19.0
\$400 to \$599.....	3,332,038	18.7	14.5	26.3	379,284,202	2,101	29.05	12.1	22.3
\$600 to \$749.....	2,145,720	23.4	9.3	26.3	238,289,443	2,697	32.50	7.6	25.8
\$750 to \$999.....	2,817,725	27.8	12.3	28.6	328,349,228	3,220	33.38	10.5	28.5
\$1,000 to \$1,499.....	3,901,801	34.3	15.7	31.8	446,344,887	4,243	39.37	14.3	30.5
\$1,500 to \$1,999.....	1,968,898	42.4	8.6	30.0	271,925,024	5,809	42.74	8.7	26.5
\$2,000 to \$2,499.....	1,205,125	51.0	5.2	33.1	174,117,020	7,330	47.68	5.6	31.0
\$2,500 to \$3,999.....	1,660,491	65.8	7.2	32.5	244,908,402	9,713	48.20	7.8	31.6
\$4,000 to \$5,999.....	785,931	83.2	3.4	34.1	122,432,704	14,126	53.12	3.0	39.0
\$6,000 to \$9,999.....	*608,599	*133.5	*2.7	*30.5	*119,460,090	*25,982	*59.62	*3.8	*28.9
\$10,000 and over.....	*580,815	*235.7	*2.5	*36.2	*124,963,405	*47,101	*77.00	*4.0	*40.9

<sup>1</sup>Value of farm products sold, traded, or used by farm households.

<sup>2</sup>Virginia, West Virginia, North Carolina, Kentucky, and Tennessee.

<sup>3</sup>Since, for the sample farms, no tabulation of acreage was made by size, it was not possible to harmonize the adjusted figures for number of farms by size, either with the recorded figures for all land in farms by size, or with the adjusted figures for all land in farms by value groups.

<sup>4</sup>Figures marked with asterisks have a coefficient of variation of approximately 10 percent or more, and may, therefore, be subject to sampling errors greatly in excess of that amount. See text.

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**TABLE 2.—NUMBER OF FARMS BY SIZE OF FARMS, 1940, CLASSIFIED BY TOTAL VALUE OF FARM PRODUCTS,<sup>1</sup> 1939; FOR THE APPALACHIAN REGION<sup>2</sup>**

[Bold face figures are the 1940 Census recorded totals for all farms; all other entries are based upon a 2-percent sample of the reports for the individual farms, expanded and adjusted to agree with the recorded totals. See text.]

VALUE GROUP	FARMS BY SIZE <sup>3</sup>													
	Number of farms							Percent distribution of farms in each value group by size						
	Under 10 acres	10 to 29 acres	30 to 49 acres	50 to 99 acres	100 to 179 acres	180 to 499 acres	500 acres and over	Under 10 acres	10 to 29 acres	30 to 49 acres	50 to 99 acres	100 to 179 acres	180 to 499 acres	500 acres and over
All groups.....	118,308	240,229	162,703	262,094	173,730	65,468	10,422	11.2	22.8	15.5	24.0	16.5	8.1	1.0
Unclassified farms.....	*1,338	*1,302	*703	*638	*628	*301	*.....	*25.7	*25.0	*13.5	*16.0	*12.1	*5.8	*.....
Farms with no farm products sold, traded, or used.....	*3,704	*3,693	*1,847	*2,008	*1,312	*662	*135	*28.1	*20.8	*11.7	*15.2	*9.9	*4.3	*1.0
<b>Classified farms, total.....</b>	<b>113,230</b>	<b>234,934</b>	<b>160,956</b>	<b>259,486</b>	<b>172,418</b>	<b>64,805</b>	<b>10,287</b>	<b>10.9</b>	<b>22.7</b>	<b>15.5</b>	<b>23.0</b>	<b>16.6</b>	<b>8.2</b>	<b>1.0</b>
\$1 to \$999.....	23,230	20,024	7,450	8,010	3,573	*805	*130	21.8	32.6	11.8	12.5	5.6	1.4	0.2
\$100 to \$249.....	43,055	63,844	30,707	30,730	15,730	*4,234	*919	31.8	32.0	16.0	19.1	8.1	2.2	0.1
\$250 to \$499.....	25,719	54,894	31,419	40,350	20,061	*7,775	*170	13.8	20.4	17.0	24.0	10.8	3.1	0.1
\$500 to \$749.....	12,614	11,510	34,714	52,101	31,135	10,801	*789	7.0	23.0	17.6	26.0	17.2	5.0	0.1
\$750 to \$999.....	*4,308	18,327	14,593	20,430	17,879	7,065	*367	4.7	10.9	15.8	32.0	10.4	7.7	0.4
\$1,000 to \$1,499.....	*2,734	16,407	14,043	31,022	25,262	10,598	*924	2.7	16.2	14.7	30.1	24.8	10.4	0.9
\$1,500 to \$1,999.....	*1,544	13,600	18,197	20,888	20,072	12,070	*1,588	1.5	13.3	15.4	28.4	27.6	12.3	1.5
\$2,000 to \$2,499.....	*328	*3,870	6,170	12,007	13,303	9,837	*744	0.7	7.9	13.2	27.6	26.6	20.4	3.0
\$2,500 to \$2,999.....	*252	*1,206	*2,519	6,408	6,201	6,282	*706	0.1	5.6	10.3	27.0	28.5	29.4	5.7
\$3,000 to \$3,499.....	*43	*631	*1,013	5,140	6,861	8,881	*1,434	0.2	3.7	7.7	9.5	21.1	47.8	8.9
\$3,500 to \$3,999.....	*238	*194	*671	*825	*1,825	4,131	*775	0.2	3.2	4.7	9.5	*15.3	58.3	*20.1
\$4,000 to \$4,999.....	*40	*.....	*40	*211	*703	2,382	*.....	0.0	*.....	*6.9	*4.6	*8.0	*33.8	*51.7
\$5,000 and over.....	*105	*.....	*43	*.....	*293	*607	*1,370	4.0	*.....	*1.6	*.....	*.....	*.....	*.....

<sup>1</sup>Value of farm products sold, traded, or used by farm households. <sup>2</sup>Virginia, West Virginia, North Carolina, Kentucky, and Tennessee. <sup>3</sup>Since, for the sample farms no tabulation of acreage was made by size, it was not possible to harmonize the adjusted figures for number of farms by size, either with the recorded figures for all land in farms by size, or with the adjusted figures for all land in farms by value groups. \*Figures marked with asterisks have a coefficient of variation of approximately 10 percent or more, and may, therefore, be subject to sampling errors greatly in excess of that amount. See text.

**TABLE 3.—WORK OFF FARM, BY KIND OF WORK, 1939, CLASSIFIED BY TOTAL VALUE OF FARM PRODUCTS,<sup>1</sup> 1939; FOR THE APPALACHIAN REGION<sup>2</sup>**

[Bold face figures are the 1940 Census recorded totals for all farms; all other entries are based upon a 2-percent sample of the reports for the individual farms, expanded and adjusted to agree with the recorded totals. See text.]

VALUE GROUP	WORK OFF FARM					KIND OF WORK OFF FARM					PERCENT OF TOTAL OPERATORS WORKING OFF FARM—		
	Farm operators reporting		Days worked			Work on other farms		Nonfarm work					
	Total	Percent of total	Percent of all operators	Total	Average per operator reporting	Farm operators reporting	Days	Farm operators reporting	Days	Average per operator reporting			
All groups.....	333,046	100.0	31.6	49,363,016	148	86,350	6,018,951	70	256,247	43,364,065	169	25.9	76.9
Unclassified farms.....	*1,872	*0.6	*30.2	*263,040	*167	*387	*31,332	*81	*1,277	*201,708	*181	*24.6	*81.2
Farms with no farm products sold, traded, or used.....	*4,075	*1.5	*37.5	*1,058,632	*214	*1,112	*151,582	*136	4,073	*807,050	*223	*23.1	82.2
<b>Classified farms, total.....</b>	<b>328,174</b>	<b>98.0</b>	<b>31.6</b>	<b>48,304,384</b>	<b>147</b>	<b>84,968</b>	<b>5,867,369</b>	<b>60</b>	<b>250,807</b>	<b>42,557,017</b>	<b>168</b>	<b>26.0</b>	<b>76.8</b>
\$1 to \$99.....	31,305	9.5	48.0	5,515,708	176	6,208	869,288	60	25,008	4,925,420	190	19.8	42.5
\$100 to \$249.....	40,210	12.2	46.3	14,623,008	164	21,966	1,827,509	53	70,136	12,793,082	192	24.6	78.6
\$250 to \$499.....	74,594	22.7	40.0	11,270,131	151	18,217	1,372,878	75	58,675	9,897,316	160	24.4	78.5
\$500 to \$749.....	63,077	19.2	20.9	7,814,408	140	14,022	894,734	60	40,593	6,639,762	104	27.0	75.2
\$750 to \$999.....	32,600	9.8	24.8	3,741,230	121	6,813	314,011	40	16,316	2,400,228	149	30.1	72.2
\$1,000 to \$1,499.....	20,099	6.0	20.8	2,301,489	113	7,462	390,865	53	13,809	1,940,617	140	36.0	67.3
\$1,500 to \$1,999.....	17,893	5.3	19.7	2,083,058	110	*5,306	250,881	50	12,751	1,822,177	143	20.7	72.6
\$2,000 to \$2,499.....	*6,743	*2.0	14.4	740,032	111	*1,746	*65,912	*38	5,008	633,120	136	*25.0	82.1
\$2,500 to \$2,999.....	*3,783	*1.1	*18.0	476,887	134	*778	48,720	*63	*2,022	420,858	146	*27.1	74.0
\$3,000 to \$3,499.....	*1,474	*0.4	*15.4	*380,581	*98	*1,051	*42,189	*40	*2,809	*308,300	*187	*18.7	*81.7
\$3,500 to \$3,999.....	*1,020	*0.3	*11.0	*170,245	*105	*200	*7,605	*30	*872	*162,640	*119	*21.3	*78.8
\$4,000 to \$4,999.....	*800	*0.2	*17.5	*137,549	*171	*171	*20,080	*122	*605	*116,660	*184	*24.4	*75.6
\$5,000 and over.....	*801	*0.2	*18.0	*40,518	*93	*132	*404	*1	*378	*46,024	*121	*.....	*.....

<sup>1</sup>Value of farm products sold, traded, or used by farm households. <sup>2</sup>Virginia, West Virginia, North Carolina, Kentucky, and Tennessee. \*Figures marked with asterisks have a coefficient of variation of approximately 10 percent or more, and may, therefore, be subject to sampling errors greatly in excess of that amount. See text.

**TABLE 4.—OPERATORS WORKING OFF FARM BY NUMBER OF DAYS WORKED, 1939, AND OPERATORS REPORTING RESIDENCE NOT ON FARM OPERATED, 1940; CLASSIFIED BY TOTAL VALUE OF FARM PRODUCTS,<sup>1</sup> 1939; FOR THE APPALACHIAN REGION<sup>2</sup>**

[Bold face figures are the 1940 Census recorded totals for all farms; all other entries are based upon a 2-percent sample of the reports for the individual farms, expanded and adjusted to agree with the recorded totals. See text.]

VALUE GROUP	FARM OPERATORS BY NUMBER OF DAYS WORKED											FARM OPERATORS REPORTING RESIDENCE NOT ON FARM OPERATED					
	Reporting days "None"	Reporting days worked					Not reporting	Percent of all farms in each value group									
		Under 50 days	50 to 99 days	100 to 149 days	150 to 249 days	250 days and over		Reporting days "None"	Under 50 days	50 to 99 days	100 to 149 days			150 to 249 days	250 days and over		
All groups.....	642,115	75,302	51,778	45,131	80,789	80,046	77,793	61.0	7.2	4.9	4.3	7.7	7.8	7.4	48,848	4.6	
Unclassified farms.....	*2,300	*139	*101	*343	*620	*270	*1,308	*44.1	*2.7	*3.7	*5.6	*12.0	*5.3	*25.7	*776	*14.9	
Farms with no farm products sold, traded, or used.....	5,004	*504	*300	*420	*1,140	*2,477	*3,242	37.9	*3.8	*3.0	*3.2	*8.7	*18.8	*24.6	3,817	28.9	
<b>Classified farms, total.....</b>	<b>637,115</b>	<b>74,808</b>	<b>51,478</b>	<b>44,791</b>	<b>79,649</b>	<b>77,770</b>	<b>74,485</b>	<b>61.0</b>	<b>7.2</b>	<b>4.9</b>	<b>4.3</b>	<b>7.5</b>	<b>7.5</b>	<b>7.1</b>	<b>44,231</b>	<b>4.3</b>	
\$1 to \$99.....	28,140	*3,479	*1,405	*5,230	8,787	7,730	9,213	43.8	*5.4	*6.0	*8.2	13.6	14.8	*7.3	4,866	7.6	
\$100 to \$249.....	91,040	14,804	12,307	12,869	25,097	24,015	11,370	47.8	7.4	5.4	6.5	13.6	12.5	5.8	6,530	4.9	
\$250 to \$499.....	101,778	14,410	11,852	10,875	20,184	17,361	10,958	54.6	7.7	6.3	5.9	10.8	9.3	5.3	6,069	4.3	
\$500 to \$749.....	73,857	7,095	*4,230	7,077	14,013	11,280	6,642	61.2	7.0	4.7	3.9	7.2	4.1	4.7	5.8	*6,102	*3.4
\$750 to \$999.....	63,973	7,792	*4,230	*2,857	*2,870	*5,602	7,057	71.0	7.5	*3.5	*2.8	*3.8	*3.8	7.8	*3,697	*3.5	
\$1,000 to \$1,499.....	38,333	*4,028	*3,315	*1,594	*2,807	*3,409	4,080	73.2	6.1	*3.2	*1.5	*2.7	*3.2	10.2	*3,660	*3.5	
\$1,500 to \$1,999.....	*1,544	*2,800	*1,370	*507	*600	*1,393	*4,074	76.8	6.1	*3.2	*1.1	*1.4	*2.8	*9.0	*2,215	*4.7	
\$2,000 to \$2,499.....	18,532	*1,958	*850	*342	*475	*1,005	*2,156	76.9	4.0	*3.3	*2.0	*1.8	*3.8	*10.1	*3,866	*5.0	
\$2,500 to \$2,999.....	6,762	*210	*202	*.....	*130	*547	*2,505	74.7	*7.8	*2.2	*1.4	*1.0	*2.2	*9.9	*1,252	*4.1	
\$3,000 to \$3,499.....	3,446	*184	*185	*.....	*122	*397	*876	78.0	*2.4	*3.4	*.....	*1.5	*4.6	*10.1	*357	*4.1	
\$3,500 to \$3,999.....	1,967	*290	*.....	*174	*.....	*55	*183	74.2	*6.8	*.....	*6.6	*1.5	*6.6	*6.0	*506	*11.0	
\$4,000 to \$4,999.....															*487	*18.4	

<sup>1</sup>Value of farm products sold, traded, or used by farm households. <sup>2</sup>Virginia, West Virginia, North Carolina, Kentucky, and Tennessee. \*Figures marked with asterisks have a coefficient of variation of approximately 10 percent or more, and may, therefore, be subject to sampling errors greatly in excess of that amount. See text.

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TABLE 5.—FARM OPERATORS BY AGE, 1940, CLASSIFIED BY TOTAL VALUE OF FARM PRODUCTS,<sup>1</sup> 1939; FOR THE APPALACHIAN REGION<sup>2</sup>

[Bold face figures are the 1940 Census recorded totals for all farms; all other entries are based upon a 2-percent sample of the reports for the individual farms, expanded and adjusted to agree with the recorded totals. See text.]

VALUE GROUP	FARM OPERATORS BY AGE															
	Total	Operators reporting age					Operators not reporting age	Percent of all operators in each value group								Not reporting age
		Under 25 years	25 to 34 years	35 to 44 years	45 to 54 years	55 to 64 years		65 years and over	Total	Under 25 years	25 to 34 years	35 to 44 years	45 to 54 years	55 to 64 years	65 years and over	
All groups.....	1,008,508	48,331	173,038	211,310	229,986	191,437	164,406	44,446	95.8	4.6	16.4	20.1	21.8	18.2	14.7	4.2
Unclassified farms.....	4,862	*233	*1,431	*1,322	*755	*589	*523	*348	95.3	*4.5	*27.5	*25.0	*14.5	*11.3	*10.0	*6.7
Farms with no farm products sold, traded, or used.....	11,632	*1,654	*2,040	*2,404	*1,687	*1,197	*1,750	*1,500	88.1	*12.5	*22.3	*18.2	*12.8	*9.1	*12.3	*11.0
Classified farms, total.....	992,014	46,444	168,667	207,574	227,544	189,652	152,133	43,520	95.9	4.6	16.3	20.1	22.0	18.3	14.7	4.1
\$1 to \$99.....	60,945	*4,878	12,395	11,621	10,701	8,843	12,507	*3,297	94.9	*7.0	19.3	18.1	16.7	13.8	10.5	*5.1
\$100 to \$249.....	185,241	10,780	34,687	38,320	35,008	30,502	34,954	7,294	96.2	5.0	18.0	19.0	18.7	15.0	12.2	3.8
\$250 to \$399.....	180,255	8,716	33,232	34,801	39,858	33,008	30,040	*6,073	96.7	4.7	17.8	18.7	21.3	14.2	10.1	*3.9
\$400 to \$599.....	174,300	8,970	28,795	36,128	39,827	35,402	26,938	*6,109	95.6	5.0	18.0	20.0	21.3	10.8	14.7	*3.4
\$600 to \$749.....	88,313	*3,637	14,089	18,570	20,035	18,330	12,782	*3,811	95.0	*9.0	10.3	20.2	21.7	13.8	8.1	*4.1
\$750 to \$999.....	96,717	*3,721	15,573	21,889	24,520	18,883	12,122	*5,293	94.8	*9.6	18.3	21.8	24.1	14.5	11.0	*6.2
\$1,000 to \$1,499.....	11,900	*1,439	15,468	22,739	20,170	19,959	11,944	*5,217	95.0	*9.6	14.7	21.6	24.0	11.3	11.0	*5.0
\$1,500 to \$1,999.....	44,296	*718	6,216	9,139	12,998	9,798	5,377	*2,461	94.7	*1.5	13.5	10.5	27.8	20.0	11.5	*5.3
\$2,000 to \$2,499.....	22,846	*501	*3,010	5,235	7,021	4,783	*2,166	*900	96.2	*2.4	*12.7	23.3	20.6	20.1	*9.1	*3.8
\$2,500 to \$3,999.....	24,125	*519	*3,123	5,558	7,149	5,627	*2,140	*1,090	95.7	*2.1	*13.4	25.0	28.4	23.3	*8.5	*4.3
\$4,000 to \$5,999.....	8,326	*79	*605	*1,848	*2,958	*1,908	*970	*341	96.1	*0.9	*7.0	*21.3	*34.1	*21.6	*11.2	*3.9
\$6,000 to \$9,999.....	4,282	*38	*395	*1,055	*1,276	*1,142	*476	*216	95.3	*0.8	*6.6	*23.9	*27.6	*24.8	*10.4	*4.7
\$10,000 and over.....	2,287	*139	*627	*716	*716	*517	*288	*364	95.3	*6.2	*23.7	*20.6	*20.6	*9.7	*13.7	*13.7

<sup>1</sup>Value of farm products sold, traded, or used by farm households. <sup>2</sup>Virginia, West Virginia, North Carolina, Kentucky, and Tennessee. \*Figures marked with asterisks have a coefficient of variation of approximately 10 percent or more, and may, therefore, be subject to sampling errors greatly in excess of that amount. See text.

TABLE 6.—SPECIFIED FARM MACHINERY AND FACILITIES, 1940; AND FARM OPERATORS REPORTING BUSINESS WITH OR THROUGH COOPERATIVES, 1939; CLASSIFIED BY TOTAL VALUE OF FARM PRODUCTS,<sup>1</sup> 1939; FOR THE APPALACHIAN REGION<sup>2</sup>

[Bold face figures are the 1940 Census recorded totals for all farms; all other entries are based upon a 2-percent sample of the reports for the individual farms, expanded and adjusted to agree with the recorded totals. See text.]

VALUE GROUP	FARM MACHINERY AND FACILITIES												FARM OPERATORS REPORTING BUSINESS WITH OR THROUGH COOPERATIVES	
	Automobiles		Motor trucks		Tractors		Electric distribution line within 1/4 mile		Dwellings lighted by electricity		Telephones		Number	Percent of all operators
	Farms reporting	Percent of all farms	Farms reporting	Percent of all farms	Farms reporting	Percent of all farms	Farms reporting	Percent of all farms	Farms reporting	Percent of all farms	Farms reporting	Percent of all farms		
All groups.....	395,814	37.6	87,139	8.3	48,441	4.6	392,246	37.3	225,086	21.4	130,966	12.4	108,496	10.1
Unclassified farms.....	*1,130	*21.7	*.....	*.....	*.....	*.....	*2,063	*40.0	*758	*14.5	*168	*3.0	*130	*2.5
Farms with no farm products sold, traded, or used.....	2,036	*15.4	*414	*3.1	*346	*0.3	4,627	35.1	*2,875	*21.6	*935	*7.1	*949	*2.6
Classified farms, total.....	392,648	38.0	86,725	8.4	48,395	4.7	385,539	37.3	221,453	21.4	129,879	12.6	107,129	10.2
\$1 to \$99.....	13,732	21.4	*1,069	*3.1	*527	*0.8	22,580	35.1	11,887	18.5	*4,540	*7.1	*1,802	*2.9
\$100 to \$249.....	47,399	21.6	8,192	4.3	*2,096	*1.1	58,141	30.2	31,538	16.4	19,019	7.3	8,496	4.0
\$250 to \$399.....	48,194	25.9	9,495	5.1	*2,725	*1.5	60,563	32.0	31,928	17.1	16,133	8.7	12,254	6.6
\$400 to \$599.....	58,684	32.5	11,018	6.1	*4,067	*2.3	69,878	33.7	32,059	17.8	19,905	11.0	10,000	5.2
\$600 to \$749.....	36,144	39.2	6,398	8.9	*4,493	*4.4	33,543	36.4	17,108	18.6	12,283	13.3	11,043	12.0
\$750 to \$999.....	47,958	47.0	9,819	9.6	*5,348	*7.0	39,278	37.5	20,418	20.4	15,300	15.0	11,611	11.4
\$1,000 to \$1,499.....	60,127	57.2	13,238	12.0	8,348	7.0	47,709	45.4	26,346	25.9	17,088	16.8	16,728	15.0
\$1,500 to \$1,999.....	29,829	68.8	7,859	18.8	6,102	13.1	24,143	51.6	15,654	33.9	8,286	17.7	8,428	18.0
\$2,000 to \$2,499.....	17,970	75.6	4,935	20.8	*3,698	*15.5	13,768	59.0	9,789	41.2	6,772	24.3	6,588	26.5
\$2,500 to \$3,999.....	19,444	77.1	6,116	24.3	5,617	22.8	14,831	58.8	11,630	45.8	7,008	31.4	6,800	26.0
\$4,000 to \$5,999.....	7,002	80.8	3,459	40.0	3,471	40.0	6,476	74.7	5,431	63.7	3,413	38.1	*2,800	*31.0
\$6,000 to \$9,999.....	3,969	84.1	*2,372	*51.6	*2,416	*52.5	3,406	74.1	3,105	67.5	2,739	59.6	*1,601	*31.8
\$10,000 and over.....	2,286	86.2	1,890	70.9	2,190	70.6	3,221	83.8	2,094	70.0	2,031	70.6	*1,107	*45.3

<sup>1</sup>Value of farm products sold, traded, or used by farm households. <sup>2</sup>Virginia, West Virginia, North Carolina, Kentucky, and Tennessee. \*Figures marked with asterisks have a coefficient of variation of approximately 10 percent or more, and may, therefore, be subject to sampling errors greatly in excess of that amount. See text.

TABLE 7.—FARMS REPORTING SPECIFIED CLASSES OF POWER AND SPECIFIED CLASSES OF LIVESTOCK, 1940, CLASSIFIED BY TOTAL VALUE OF FARM PRODUCTS,<sup>1</sup> 1939; FOR THE APPALACHIAN REGION<sup>2</sup>

[Bold face figures are the 1940 Census recorded totals for all farms; all other entries are based upon a 2-percent sample of the reports for the individual farms, expanded and adjusted to agree with the recorded totals. See text. Horses, mules, and cattle over 3 mo. old and hogs over 4 mo. old, Apr. 1, 1940.]

VALUE GROUP	HORSES (OR MULES) AND TRACTORS						HORSES, MULES, CATTLE AND/OR HOGS						HORSES AND/OR MULES (Farms reporting)	
	Farms reporting		Farms not reporting		Farms not reporting		Farms reporting		Farms not reporting		Farms reporting		Farms not reporting	
	Number of farms	Percent of all farms	Number of farms	Percent of all farms	Number of farms	Percent of all farms	Number of farms	Percent of all farms	Number of farms	Percent of all farms	Number of farms	Percent of all farms	Number of farms	Percent of all farms
All groups.....	655,871	62.3	43,449	4.1	*4,992	*0.5	348,042	33.1	952,014	90.4	100,940	9.6	689,320	66.4
Unclassified farms.....	*1,787	*34.3	*.....	*.....	*.....	*.....	3,423	55.7	3,130	60.1	*2,080	*39.0	*1,787	*34.3
Farms with no farm products sold, traded, or used.....	1,983	*15.0	*46	*0.3	*.....	*.....	11,172	84.6	3,860	29.2	9,341	70.8	*3,020	*15.4
Classified farms, total.....	652,101	63.0	43,403	4.2	*4,992	*0.5	334,047	32.3	945,024	91.3	89,519	8.7	685,504	67.2
\$1 to \$99.....	15,188	23.6	*290	*0.5	*237	*0.4	48,527	75.5	38,618	60.1	25,024	30.9	16,478	24.1
\$100 to \$249.....	80,783	42.0	*1,368	*0.7	*752	*0.4	100,666	87.0	104,206	85.3	28,020	14.7	83,151	42.7
\$250 to \$399.....	107,263	57.6	*1,943	*1.0	*729	*0.4	76,340	41.0	171,374	62.0	14,954	8.0	100,200	58.6
\$400 to \$599.....	127,766	70.8	*3,338	*1.8	*420	*0.5	17,000	27.0	171,713	65.1	8,780	4.9	131,104	73.6
\$600 to \$749.....	72,298	78.5	*2,406	*2.6	*254	*0.2	16,229	15.9	89,187	66.8	*2,997	*3.2	74,704	81.1
\$750 to \$999.....	81,259	79.7	*4,238	*4.2	*736	*0.7	10,312	9.8	102,596	97.5	*4,239	*4.2	85,497	83.8
\$1,000 to \$1,499.....	86,539	82.3	7,812	7.2	*578	*1.2	3,659	*7.8	45,825	98.0	*932	*2.0	44,580	69.6
\$1,500 to \$1,999.....	36,996	79.1	5,524	11.8	*50	*0.2	1,020	*6.8	23,371	98.4	*584	*1.6	23,088	33.0
\$2,000 to \$2,499.....	18,466	73.4	8,509	21.8	*106	*0.4	*1,102	*4.4	24,993	99.1	*222	*0.9	24,095	35.2
\$2,500 to \$3,999.....	4,544	82.4	3,433	39.6	*38	*0.1	*682	*7.5	8,459	97.6	*208	*2.4	7,977	92.0
\$4,000 to \$5,999.....	4,544	82.4	2,259	48.3	*147	*3.2	*174	*3.8	4,067	95.0	*231	*5.0	4,277	93.0
\$6,000 to \$9,999.....	*2,008	*43.7	*.....	*.....	*135	*7.4	*106	*4.0	2,574	97.1	*77	*2.0	2,300	88.6
\$10,000 and over.....	*516	*19.4	1,835	69.2	*106	*7.4	*106	*4.0	2,574	97.1	*77	*2.0	2,300	88.6

<sup>1</sup>Value of farm products sold, traded, or used by farm households. <sup>2</sup>Virginia, West Virginia, North Carolina, Kentucky, and Tennessee. \*Figures marked with asterisks have a coefficient of variation of approximately 10 percent or more, and may, therefore, be subject to sampling errors greatly in excess of that amount. See text.

# FARM CHARACTERISTICS BY VALUE OF PRODUCTS

**TABLE 8.—FARMS REPORTING CATTLE, 1940; AND FARMS REPORTING COWS MILKED, BY NUMBER OF COWS MILKED, 1939; CLASSIFIED BY TOTAL VALUE OF FARM PRODUCTS,<sup>1</sup> 1939; FOR THE APPALACHIAN REGION<sup>2</sup>**

[**Bold face figures** are the 1940 Census recorded totals for all farms; all other entries are based upon a 2-percent sample of the reports for the individual farms, expanded and adjusted to agree with the recorded totals. See text. Cattle over 3 mo. old, Apr. 1, 1940; and cows milked during any part of 1939]

VALUE GROUP	CATTLE (Farms reporting)		COWS MILKED														
	Number of farms	Percent of all farms	Farms reporting							Farms not reporting <sup>3</sup>	Percent of all farms in each value group						Not reporting
			Total	1 cow	2 cows	3 or 4 cows	5 to 9 cows	10 or more cows	Reporting								
									Total		1 cow	2 cows	3 or 4 cows	5 to 9 cows	10 or more cows		
All groups.....	810,586	77.0	792,567	397,125	208,810	111,576	55,257	19,799	260,387	75.3	37.7	19.8	10.6	5.2	1.9	24.7	
Unclassified farms.....	*2,002	*38.4	*1,369	*1,042	*196	*131	*.....	*.....	3,841	*26.3	*20.0	*3.8	*2.5	*.....	*.....	73.7	
Farms with no farm products sold, traded, or used.....	2,231	*16.9	.....	.....	.....	.....	.....	.....	13,201	.....	.....	.....	.....	.....	.....	100.0	
<b>Classified farms, total.....</b>	<b>808,353</b>	<b>77.9</b>	<b>791,198</b>	<b>396,083</b>	<b>208,614</b>	<b>111,445</b>	<b>55,257</b>	<b>19,799</b>	<b>249,245</b>	<b>76.5</b>	<b>38.3</b>	<b>20.2</b>	<b>10.8</b>	<b>5.3</b>	<b>1.9</b>	<b>23.5</b>	
\$1 to \$99.....	25,743	40.1	21,093	13,630	2,725	*302	*.....	*.....	42,879	33.7	29.0	*4.2	*0.5	*.....	*.....	60.2	
\$100 to \$249.....	133,865	69.5	130,007	96,611	27,031	*5,897	*468	*.....	61,028	69.0	50.2	14.6	*9.1	*0.2	*.....	32.0	
\$250 to \$399.....	149,702	80.3	148,943	90,892	41,897	13,784	*2,460	*.....	37,365	79.9	48.7	22.5	7.4	*1.3	*.....	30.1	
\$400 to \$599.....	151,814	84.1	149,831	70,903	46,995	24,684	7,208	*331	30,672	83.0	39.1	26.0	13.7	4.0	*0.2	17.0	
\$600 to \$749.....	78,266	85.0	77,582	31,512	23,939	15,471	7,314	*393	14,532	84.2	34.2	24.9	16.9	7.9	*0.4	15.8	
\$750 to \$999.....	64,915	83.3	63,500	28,993	23,896	17,361	11,328	*1,448	18,414	81.9	28.4	23.4	17.6	11.1	*1.4	18.1	
\$1,000 to \$1,499.....	86,406	82.1	84,636	29,316	21,306	17,830	12,777	*3,407	20,562	80.5	27.9	20.3	16.9	12.1	*3.2	19.5	
\$1,500 to \$1,999.....	39,037	83.5	38,839	13,672	9,486	6,182	3,041	*3,458	7,918	83.1	29.3	20.3	13.2	12.6	*7.4	16.9	
\$2,000 to \$2,499.....	20,304	85.5	19,730	6,465	4,612	*3,397	*3,370	*1,892	*4,019	83.1	27.2	19.4	*14.3	*14.2	*8.0	*16.9	
\$2,500 to \$2,999.....	22,014	87.3	21,649	6,987	4,675	*3,486	*2,678	*3,723	*3,666	85.5	27.7	19.5	*13.8	*10.6	*14.8	*14.5	
\$3,000 to \$5,999.....	7,644	88.2	7,230	*1,665	*1,343	*1,213	*711	*2,398	*1,437	83.4	*19.2	*14.3	*14.0	*8.2	*27.7	*16.6	
\$6,000 to \$9,999.....	4,171	90.7	4,219	*629	*680	*679	*744	*1,587	*379	91.8	*11.5	*14.8	*14.8	*16.2	*34.5	*8.2	
\$10,000 and over.....	2,440	92.4	2,497	*292	*289	*559	*158	*1,199	*154	94.2	*11.0	*10.9	*21.1	*6.0	*45.2	*5.8	

<sup>1</sup>Value of farm products sold, traded, or used by farm households.

<sup>2</sup>Virginia, West Virginia, North Carolina, Kentucky, and Tennessee.

<sup>3</sup>Figures marked with asterisks have a coefficient of variation of approximately 10 percent or more, and may, therefore, be subject to sampling errors greatly in excess of that amount. See text.

**TABLE 9.—FARMS REPORTING HOGS, 1940; AND FARMS REPORTING SOWS FARROWING, 1940, BY NUMBER FARROWING; CLASSIFIED BY TOTAL VALUE OF FARM PRODUCTS,<sup>1</sup> 1939; FOR THE APPALACHIAN REGION<sup>2</sup>**

[**Bold face figures** are the 1940 Census recorded totals for all farms; all other entries are based upon a 2-percent sample of the reports for the individual farms, expanded and adjusted to agree with the recorded totals. See text. Hogs over 4 mo. old, Apr. 1, 1940, and sows and gilts on hand that farrowed since Dec. 1, 1939, or were to farrow before June 1, 1940]

VALUE GROUP	HOGS														
	Farms reporting any hogs	Total	Farms reporting sows				Farms reporting hogs but not reporting sows	Farms not reporting hogs	Reporting any hogs	Percent of all farms in each value group					
			1 sow	2 sows	3 or more sows	Reporting sows				Total	1 sow	2 sows	3 or more sows	Reporting hogs but not reporting sows	Not reporting hogs
All groups.....	702,629	249,353	144,368	55,370	48,615	453,276	350,325	66.7	23.7	13.7	5.3	4.7	43.0	33.3	
Unclassified farms.....	*2,128	*394	*272	*.....	*63	*1,794	3,082	*40.8	*6.4	*5.2	*.....	*1.2	*34.4	59.2	
Farms with no farm products sold, traded, or used.....	2,386	*483	*332	*70	*101	*1,902	10,816	*18.1	*3.7	*2.5	*0.4	*0.8	*14.4	81.9	
<b>Classified farms, total.....</b>	<b>698,116</b>	<b>248,836</b>	<b>143,704</b>	<b>55,020</b>	<b>48,452</b>	<b>449,580</b>	<b>336,427</b>	<b>67.5</b>	<b>24.0</b>	<b>13.9</b>	<b>5.3</b>	<b>4.8</b>	<b>43.5</b>	<b>32.5</b>	
\$1 to \$99.....	21,110	*3,110	*2,198	*708	*206	18,008	43,123	32.9	*4.8	*3.4	*1.1	*0.3	28.0	67.1	
\$100 to \$249.....	105,286	21,377	16,632	*2,963	*1,762	83,900	87,249	54.7	11.1	8.6	*1.5	*0.9	43.8	45.3	
\$250 to \$399.....	118,460	30,334	23,813	*6,341	*2,180	88,135	87,859	63.6	10.3	12.2	*2.9	*1.2	47.3	36.4	
\$400 to \$599.....	128,028	40,014	28,178	7,408	*4,428	86,014	52,465	70.9	22.2	15.6	4.1	*3.5	48.8	29.1	
\$600 to \$749.....	68,846	24,044	14,903	7,104	*2,937	43,902	23,278	74.7	27.1	16.2	7.7	*3.2	47.7	25.3	
\$750 to \$999.....	79,068	34,834	21,146	8,187	*5,831	45,134	25,012	75.4	34.2	20.7	8.0	*5.4	44.3	21.6	
\$1,000 to \$1,499.....	84,540	39,848	19,211	10,311	10,236	44,688	20,632	80.4	37.9	19.3	9.8	9.8	42.5	19.8	
\$1,500 to \$1,999.....	37,300	20,440	8,821	5,094	5,535	17,150	7,669	*3,245	86.3	54.1	19.9	*15.1	19.1	32.3	
\$2,000 to \$2,499.....	20,809	12,840	4,717	*3,691	4,532	7,669	3,137	80.4	49.7	18.9	10.8	14.0	36.7	19.6	
\$2,500 to \$2,999.....	21,321	13,952	*3,601	*2,998	5,383	8,599	*3,624	85.3	51.4	*14.3	*11.0	25.2	34.0	*13.7	
\$3,000 to \$5,999.....	6,038	4,288	*987	*1,006	*2,395	*2,350	*2,020	76.6	40.5	*10.2	*11.6	*27.6	*27.1	*23.4	
\$6,000 to \$9,999.....	3,690	2,847	*433	*410	*1,704	*1,143	*908	80.3	55.4	*9.4	*8.9	*37.1	*19.7	*24.9	
\$10,000 and over.....	1,906	*1,008	*224	*231	*553	*808	*745	71.8	*38.0	*8.4	*8.7	*20.9	*33.9	*28.1	

<sup>1</sup>Value of farm products sold, traded, or used by farm households.

<sup>2</sup>Virginia, West Virginia, North Carolina, Kentucky, and Tennessee.

<sup>3</sup>Figures marked with asterisks have a coefficient of variation of approximately 10 percent or more, and may, therefore, be subject to sampling errors greatly in excess of that amount. See text.

CENSUS OF AGRICULTURE: 1940

TABLE 10.—FARM OPERATORS BY TENURE, AND BY COLOR, APRIL 1, 1940, AND OPERATORS REPORTING OCCUPANCY BEGINNING IN EITHER 1939 OR 1940; CLASSIFIED BY TOTAL VALUE OF FARM PRODUCTS,<sup>1</sup> 1939; FOR THE APPALACHIAN REGION<sup>2</sup>

[Bold face figures are the 1940 Census recorded totals for all farms; all other entries are based upon a 2-percent sample of the reports for the individual farms, expanded and adjusted to agree with the recorded totals]

VALUE GROUP	ALL FARM OPERATORS	FARM OPERATORS BY TENURE <sup>3</sup>					FARM OPERATORS BY COLOR				FARM OPERATORS REPORTING OCCUPANCY BEGINNING IN 1939 OR 1940	
		Number		Percent distribution of farms in each value group by tenure of operator			Number		Percent distribution of farms in each value group by color of operators		Number	Percent of all operators
		Owners and managers	All tenants	All farm operators	Owners and managers	All tenants	White <sup>4</sup>	Nonwhite <sup>4</sup>	White <sup>4</sup>	Nonwhite <sup>4</sup>		
All groups.....	1,052,954	676,233	376,721	100.0	64.2	35.8	923,403	129,551	87.7	12.3	166,026	16.0
Unclassified farms.....	5,210	*2,095	3,145	100.0	*39.6	60.4	4,530	*671	87.1	*12.9	3,718	71.7
Farms with no products sold, traded, or used.....	13,201	7,531	5,670	100.0	57.0	43.0	11,898	*1,303	90.1	*9.9	7,348	54.0
Classified farms, total.....	1,034,543	668,637	367,906	100.0	64.4	35.6	906,906	127,577	87.7	12.3	157,610	15.2
\$1 to \$99.....	84,242	43,153	21,089	100.0	67.2	32.8	83,706	10,536	83.6	16.4	14,848	20.1
\$100 to \$249.....	182,535	127,481	65,054	100.0	66.2	33.8	169,859	22,676	88.3	11.7	35,006	18.2
\$250 to \$399.....	186,328	124,610	61,718	100.0	66.9	33.1	164,620	21,698	88.4	11.6	26,810	14.4
\$400 to \$599.....	180,493	115,650	64,843	100.0	64.1	35.9	156,460	24,033	86.7	13.3	27,310	15.1
\$600 to \$749.....	92,124	58,323	33,801	100.0	63.3	36.7	80,279	11,865	87.1	12.9	13,242	14.4
\$750 to \$999.....	101,980	61,002	40,878	100.0	59.8	40.2	87,413	14,567	85.7	14.3	14,501	14.1
\$1,000 to \$1,499.....	105,198	62,310	42,888	100.0	59.2	40.8	91,741	13,457	87.3	12.8	14,130	13.4
\$1,500 to \$1,999.....	46,757	29,456	17,801	100.0	63.0	37.0	41,563	8,194	86.9	13.1	8,071	10.8
\$2,000 to \$2,499.....	23,755	15,804	7,851	100.0	66.5	33.5	21,533	*2,222	90.6	*9.4	*2,405	*10.5
\$2,500 to \$3,999.....	25,215	16,520	8,695	100.0	65.5	34.5	23,884	*1,331	95.1	*4.9	*478	*1.5
\$4,000 to \$5,999.....	8,667	6,549	*2,118	100.0	75.6	*24.4	8,540	*127	98.5	*1.5	*163	*1.3
\$6,000 to \$9,999.....	4,598	3,422	*1,176	100.0	74.4	*25.6	4,530	*79	98.3	*1.7	*163	*3.3
\$10,000 and over.....	2,651	2,357	294	100.0	88.9	11.1	2,639	12	99.5	0.5	*18	*3.7

<sup>1</sup>Value of farm products sold, traded, or used by farm households. <sup>2</sup>Virginia, West Virginia, North Carolina, Kentucky, and Tennessee. <sup>3</sup>Figures for full owners, part owners, managers, croppers, and all other tenants not available. <sup>4</sup>"White" includes Mexicans; "nonwhite" includes Negroes, Indians, Chinese, Japanese, and all other nonwhite races. \*Figures marked with asterisks have a coefficient of variation of approximately 10 percent or more, and may, therefore, be subject to sampling errors greatly in excess of that amount. See text.

TABLE 11.—NUMBER OF FARMS, 1940, CROSS-CLASSIFIED BY MAJOR SOURCE OF INCOME AND TOTAL VALUE OF FARM PRODUCTS,<sup>1</sup> 1939; FOR THE APPALACHIAN REGION<sup>2</sup>

[Bold face figures are the 1940 Census recorded totals for all farms; all other entries are based upon a 2-percent sample of the reports for the individual farms, expanded and adjusted to agree with the recorded totals. For State figures showing the cross-classification of number of farms value of farm products by major source groups and value subgroups of "\$10,000 and over," see chapter V, table 4]

VALUE GROUP	ALL CLASSIFIED FARMS <sup>3</sup>	FARMS WITH MAJOR SOURCE OF INCOME FROM LIVESTOCK AND LIVESTOCK PRODUCTS					FARMS WITH MAJOR SOURCE OF INCOME FROM CROPS AND FOREST PRODUCTS					Farms with farm products used by farm households as a major source of income (sub-sistence farms)	
		Total	Livestock farms	Dairy farms	Poultry farms	Other livestock products farms	Total	Field crop farms	Vegetable farms	Fruit and nut farms	Horticultural specialty farms		Forest products farms
Classified farms, total..	1,034,543	94,047	57,195	20,803	15,396	653	395,709	378,720	5,717	5,722	1,062	4,488	544,787
\$1 to \$99.....	64,242	*1,826	*761	*252	*764	*81	5,511	54,707	*80	*200	*325	*235	87,100
\$100 to \$249.....	182,535	*4,600	*2,543	*604	*1,597	*50	28,342	24,478	*609	*761	*374	*274	161,300
\$250 to \$399.....	186,328	6,242	*4,127	*811	*1,304	*.....	41,936	39,439	*1,028	*427	*87	*385	138,780
\$400 to \$599.....	180,493	11,375	6,784	*2,276	*2,244	*71	62,757	61,310	*795	*341	*10	*442	100,361
\$600 to \$749.....	92,124	8,270	*4,609	*1,784	*1,630	*56	46,307	45,113	*405	*434	*120	*106	37,508
\$750 to \$999.....	101,980	13,662	9,367	*2,094	*1,512	*90	59,792	57,787	*627	*720	*82	*678	28,530
\$1,000 to \$1,499.....	105,198	17,113	10,932	*3,539	*2,552	*93	75,266	72,384	*673	*780	*104	*705	38,530
\$1,500 to \$1,999.....	46,757	10,002	6,429	*2,404	*1,110	*59	34,871	33,433	*520	*1,104	*40	*247	12,810
\$2,000 to \$2,499.....	23,755	5,950	*3,860	*1,082	*956	*60	17,415	16,308	*648	*167	*107	*247	*1,684
\$2,500 to \$3,999.....	25,215	7,008	*3,920	*2,171	*866	*40	16,209	16,020	*364	*422	*130	*301	*300
\$4,000 to \$5,999.....	8,667	3,525	*1,522	*1,550	*443	*10	6,142	4,440	*265	*512	*179	*619	*.....
\$6,000 to \$9,999.....	4,598	2,629	*1,362	*968	*239	*60	*1,015	*1,730	*.....	*207	*83	*101	*.....
\$10,000 and over.....	2,651	1,633	769	701	157	6	1,016	558	75	188	165	35	2

VALUE GROUP	All classified farms <sup>3</sup>	PERCENT DISTRIBUTION OF FARMS IN EACH VALUE GROUP BY MAJOR SOURCE OF INCOME										Farms with farm products used by farm households as a major source of income (sub-sistence farms)	
		Farms with major source of income from livestock and livestock products					Farms with major source of income from crops and forest products						
		Total	Livestock farms	Dairy farms	Poultry farms	Other livestock products farms	Total	Field crop farms	Vegetable farms	Fruit and nut farms	Horticultural specialty farms		Forest products farms
Classified farms, total..	100.0	9.1	5.5	2.0	1.5	0.1	38.2	36.6	0.6	0.6	0.1	0.4	52.7
\$1 to \$99.....	100.0	*2.8	*1.2	*0.4	*1.2	*(4)	8.3	97.3	*0.1	*0.4	*.....	*0.5	89.0
\$100 to \$249.....	100.0	*2.5	*1.3	*0.3	*0.5	*(4)	13.7	12.9	*0.3	*0.2	*.....	*0.3	83.8
\$250 to \$399.....	100.0	3.4	*2.2	*0.4	*0.7	*.....	22.2	21.2	*0.6	*0.2	*.....	*0.2	75.9
\$400 to \$599.....	100.0	6.3	3.6	*1.3	*1.2	*(4)	34.8	34.0	*0.4	*0.2	*.....	*0.2	58.9
\$600 to \$749.....	100.0	9.0	*5.2	*1.9	*1.8	*0.1	50.3	49.0	*0.5	*0.5	*.....	*0.1	40.7
\$750 to \$999.....	100.0	13.4	9.2	*3.6	*1.5	*0.1	58.6	56.7	*0.6	*0.7	*0.1	*0.0	28.0
\$1,000 to \$1,499.....	100.0	18.3	10.4	*3.4	*2.4	*0.1	71.5	68.8	*0.9	*1.1	*.....	*0.7	12.2
\$1,500 to \$1,999.....	100.0	21.4	13.7	*5.1	*4.0	*0.1	74.6	71.5	*1.1	*1.1	*0.4	*0.5	*1.0
\$2,000 to \$2,499.....	100.0	25.0	*16.3	*6.4	*5.0	*0.3	73.3	68.7	*1.5	*1.6	*0.5	*0.8	*1.0
\$2,500 to \$3,999.....	100.0	27.8	*15.5	*6.6	*3.4	*0.2	72.2	65.0	*1.1	*2.0	*0.7	*2.5	*.....
\$4,000 to \$5,999.....	100.0	40.7	*17.6	*17.9	*5.1	*0.1	69.3	51.2	*2.2	*3.1	*0.8	*1.0	*.....
\$6,000 to \$9,999.....	100.0	57.2	*20.6	*21.1	*5.2	*1.3	*41.6	*37.8	*.....	*2.8	*1.0	*.....	*1.2
\$10,000 and over.....	100.0	61.6	29.0	26.4	5.9	0.2	38.3	20.9	2.8	7.5	5.8	1.3	0.1

<sup>1</sup>Value of farm products sold, traded, or used by farm households. Since, for the sample farms, no tabulation of value of products was made by major source groups, it was not possible to harmonize the adjusted figures for number of farms, cross-classified by value of products and by major source of income, with the totals for value of products by major source groups, as published in ch. X of vol. III, General Reports on Agriculture, 1940. <sup>2</sup>Virginia, West Virginia, North Carolina, Kentucky, and Tennessee. <sup>3</sup>Includes farms with usable reports for value of farm products sold, traded, or used by farm households; but excludes 13,301 farms with no farm products sold, traded, or used by farm households, and also, 5,210 unclassified farms. <sup>4</sup>Less than one-tenth of 1 percent. \*Figures marked with asterisks have a coefficient of variation of approximately 10 percent or more, and may, therefore, be subject to sampling errors greatly in excess of that amount. See text.

## APPENDIX

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Facsimile of schedule is shown for one region only since the items covered in this report were standard for all regions.

CONFIDENTIAL CENSUS REPORT.—Your report is required by Act of Congress. This Act also makes it unlawful for the Bureau to disclose any facts, including population, resources, and business activities. Yours

DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS
WASHINGTON
SIXTEENTH CENSUS OF THE UNITED STATES: 1940
FARM AND RANCH SCHEDULE
(Including Special Agricultural Operations)

Inventory Items, April 1, 1940 Production Items, Calendar Year 1939

I.—FARM OPERATOR, APRIL 1, 1940

1. Name of person
2. Address (Street or Route No., Post office, State)
3. Age
4. Color or race: [Place a check (✓) in proper block]
5. Do you reside on this farm? (Yes or No)

II.—FARM TENURE, APRIL 1, 1940

6. If you rent any farm land from others or manage any farm land for others, give names and addresses of the owners of the land and indicate for each owner whether a corporation:
7. What does the landlord furnish as his share in the operation of this farm?
8. What did you agree to pay as rent for the year?
9. Do you operate this farm for others as hired manager? (Yes or No)

III.—FARM ACREAGE, APRIL 1, 1940

12. Total number of acres in this farm. Acres
13. Land from which crops were harvested in 1939. Acres
14. Land from which no crop was harvested in 1939 because of crop failure or destruction. Acres
15. Cropland lying idle all of 1939 or land in summer fallow in 1939. Acres
16. Land used ONLY for pasture or grazing in 1939 which could be plowed and used for crops without additional clearing, drainage, or irrigation. Acres
17. Woodland in this farm. Acres
18. All other land now in this farm. Acres

IV.—VALUES, APRIL 1, 1940

19. Total value of this farm (land and buildings), including farm land and buildings rented from others. \$
20. Value of all buildings on this farm. \$
21. Value of farm implements and machinery used in operating this farm, including automobiles, tractors, motortrucks, and trailers (present market value). \$

V.—FARM MORTGAGE DEBT AND FARM TAXES

22. Was there any mortgage debt on the land and buildings so owned on April 1, 1940? (Yes or No)
23. Total amount of outstanding mortgage debt on such land and buildings. \$
24. What was the annual rate (contract rate) of interest on the first mortgage debt? (Report fractions). (Percent)
25. Give amount of taxes levied in 1939 on the REAL ESTATE of this farm owned by you on April 1, 1940. \$
26. Give amount of taxes levied in 1939 on PERSONAL property owned by you on this farm. \$

VI.—OTHER LAND OWNED, APRIL 1, 1940

27. Do you own any land in addition to that shown under Question 10? (Do not include residential and nonfarm building sites). (Yes or No)
28. How many acres of such land are rented or are to be rented this year to others (including that rented to croppers)? Acres

VII.—WORK OFF FARM AND YEARS ON THIS FARM

29. How many days in 1939 did you work for pay or income off the farm you operated? Days
OF THESE, HOW MANY WERE SPENT—
(a) At farm work, not connected with your farm? Days
(b) At nonfarm jobs (including road work and relief or "made" work), businesses, or professions? Days
30. Year when you began to operate THIS farm. (Year)

VIII.—IRRIGATION

31. Land from which irrigated crops were harvested in 1939. Acres
32. Land irrigated in 1939 and used ONLY for grazing or pasture. Acres
33. Irrigation enterprise supplying water:
NAME
ADDRESS (Street or Route No., Post office, State)

Code A 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33

# FARM CHARACTERISTICS BY VALUE OF PRODUCTS

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names or identity, from your census reports. Only sworn census employees will see your statements. Data collected will be used solely for preparing statistical information concerning the Nation's Census Reports Cannot be Used for Purposes of Taxation, Regulation, or Investigation 16-1133

SCHEDULE No.	DEFINITION OF A FARM	ENUMERATOR'S RECORD AND CERTIFICATE	Code																																
	<p>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.</p> <p>Include dry-lot or barn dairies, nurseries, greenhouses, hatcheries, fur farms, mushroom collars, apfaries, cranberry bogs, etc.</p> <p>Exclude "fish farms," fish hatcheries, "oyster farms," and "frog farms."</p> <p>Do not report as a farm any tract of land of less than 3 acres, unless its agricultural products in 1939 were valued at \$250 or more.</p>	<p style="text-align: right;">E. D. No. _____</p> <p>State _____ County _____</p> <p>Number of farm in order of visitation _____</p> <p>From Population Schedule:                      Farm operator's name appears on Sheet No. _____; Line No. _____                      Visitation number of farm operator's household _____                      Visitation numbers of other households on this farm _____                      If no dwelling, or if no occupied dwelling, on this farm, give the identification used to designate the place on your map, as: P-1; V-3, P-2; etc. _____</p> <p>Minor Civil Division _____                      Give name, also class, as township, town, ward, precinct, district, beat, etc.</p> <p>If any part of this farm is in another Minor Civil Division, give location and acreage—                      M. C. D. _____ COUNTY _____ ACRES _____</p> <p>If this farm is located—                      In surveyed area, give Sec. No. _____; Township _____; Range _____                      Sec. No. _____; Township _____; Range _____</p> <p>In incorporated place, give name _____                      Enumeration completed by me at _____ {a. m.} on the _____ day of _____, 1940.                      {p. m.} _____, Enumerator.</p>																																	
THIS COLUMN FOR OFFICE USE ONLY	<b>IX.—COOPERATIVE SELLING AND PURCHASING, 1939</b>		Code																																
	Did you, in 1939, transact any business with or through—		C																																
	84. A cooperative SELLING organization? _____ (Yes or No)		6																																
	85. A cooperative BUYING organization? _____ (Yes or No)		7																																
	86. A cooperative SERVICE organization? _____ (Yes or No)		8																																
<b>CODE</b>	<b>X.—FARM LABOR</b>																																		
<b>TENURE</b>	87. Number of workers 14 years old and over and wages paid for farm work on this farm (do not include housework or contract construction work):																																		
	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">CLASS OF LABOR</th> <th colspan="2">Number of persons 14 years old and over working the equivalent of 2 or more days the week of—</th> <th rowspan="2">Total cash wages paid for all hired labor in 1939</th> <th rowspan="2">Dollars</th> <th rowspan="2">Code</th> </tr> <tr> <th>Mar. 24-30, this year</th> <th>Sept. 24-30, last year</th> </tr> </thead> <tbody> <tr> <td>(a) Operator and unpaid members of his family</td> <td>Number</td> <td>Number</td> <td></td> <td>x x x x x x x</td> <td>1, 2</td> </tr> <tr> <td>(b) Labor hired by month</td> <td></td> <td></td> <td></td> <td>(Omit cents)</td> <td>3, 4, 5</td> </tr> <tr> <td>(c) Labor hired by day or week</td> <td></td> <td></td> <td></td> <td>(Omit cents)</td> <td>6, 7, 8</td> </tr> <tr> <td>(d) Others (include piece work and contract labor)</td> <td></td> <td></td> <td></td> <td>(Omit cents)</td> <td>9, 10, 11</td> </tr> </tbody> </table>	CLASS OF LABOR	Number of persons 14 years old and over working the equivalent of 2 or more days the week of—		Total cash wages paid for all hired labor in 1939	Dollars	Code	Mar. 24-30, this year	Sept. 24-30, last year	(a) Operator and unpaid members of his family	Number	Number		x x x x x x x	1, 2	(b) Labor hired by month				(Omit cents)	3, 4, 5	(c) Labor hired by day or week				(Omit cents)	6, 7, 8	(d) Others (include piece work and contract labor)				(Omit cents)	9, 10, 11		
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(d) Others (include piece work and contract labor)				(Omit cents)	9, 10, 11																														
	<b>XI.—FARM EXPENDITURES IN 1939</b>																																		
	88. Amount expended in 1939 for hay, grain, mill feed, and other products for use as feed for domestic animals and poultry _____ \$ (Omit cents)		12																																
	89. Amount expended in 1939 for purchase of farm implements and machinery, including automobiles, tractors, motortrucks, and trailers. See kinds of machinery listed under Question 21. _____ \$ (Omit cents)		13																																
	90. Amount expended in 1939 for gasoline, distillate, kerosene, and oil for use on this farm _____ \$ (Omit cents)		14																																
	91. Amount expended in 1939 for building materials, including lumber, roofing materials, hardware, cement, paint, fencing material, etc., for use on this farm _____ \$ (Omit cents)		15																																
	92. Commercial fertilizer bought in 1939 for use on this farm (report fractional tons)	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Tons</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td>_____</td> <td>_____ \$ (Omit cents)</td> </tr> </tbody> </table>	Tons	Cost	_____	_____ \$ (Omit cents)	16, 17																												
Tons	Cost																																		
_____	_____ \$ (Omit cents)																																		
	93. Liming materials—lime, marl, gypsum, etc., bought in 1939 for use on this farm _____ \$ (Omit cents)		18, 19																																
	<b>XII.—FARM MACHINERY AND FACILITIES, APRIL 1, 1940</b>																																		
	94. Number of automobiles on this farm _____	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Number of units</th> <th>Year of latest model</th> </tr> </thead> <tbody> <tr> <td>_____</td> <td>_____</td> </tr> </tbody> </table>	Number of units	Year of latest model	_____	_____	9, 10																												
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_____	_____																																		
	95. Number of motortrucks on this farm _____		11, 12																																
	96. Number of tractors on this farm _____		13, 14																																
	97. Is there an electric distribution line within ½ mile of the farm (dwelling)? _____ (Yes or No)		15																																
	98. If the dwelling is lighted by electricity, check (✓) source of current:	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">1. _____ Power line</td> <td style="text-align: center;">2. _____ Home plant</td> </tr> </table>	1. _____ Power line	2. _____ Home plant	16																														
1. _____ Power line	2. _____ Home plant																																		
	99. Is there a telephone on this farm? _____ (Yes or No)		17																																
	100. Check (✓) each kind of road on which this farm is located:	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">1. _____ Hard-surfaced</td> <td style="text-align: center;">2. _____ Gravel, shell, shale etc.</td> <td style="text-align: center;">3. _____ Improved dirt</td> <td style="text-align: center;">4. _____ Unimproved dirt</td> </tr> </table>	1. _____ Hard-surfaced	2. _____ Gravel, shell, shale etc.	3. _____ Improved dirt	4. _____ Unimproved dirt	18																												
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<b>STATES</b>		<b>SUMMER FALLOW</b>																																	
Connecticut. Delaware. District of Columbia. Illinois. Indiana. Iowa. Maine. Maryland. Massachusetts. Michigan. Minnesota. New Hampshire. New Jersey. New York. Ohio. Pennsylvania. Rhode Island. Vermont. West Virginia. Wisconsin.		Land in tilled summer fallow in 1939 on which no crop was planted for harvest in 1939. _____ Acres Include also in Question 15.	19																																
<b>REGION</b>		<b>SOIL IMPROVEMENT CROPS</b>																																	
<b>1</b>		Total acres of crops plowed under in 1939 for soil improvement purposes ONLY—not pastured, grazed, hogged, or otherwise harvested (green manure crops). Acres _____ Cowpeas, soybeans, vetches, rye, etc. Underline or give kind. Include all such crops even though another crop was grown on the same land in 1939. That part of this acreage from which no crop of any kind was harvested or grazed in 1939 should also be included under Question 15.	20																																
		<b>CROP FAILURE</b>																																	
		Crops planted for harvest in 1939 which were not harvested because of crop failure, destruction, or low prices (do not consider as failure any crops which were grazed, hogged, or otherwise harvested for any purpose):																																	
		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Name of first crop planted for harvest in 1939 which failed (1)</th> <th>If replanted in a crop for harvest in 1939, name of second crop (2)</th> <th>Acres of first crop which failed (3)</th> <th>Acres of second crop harvested (4)</th> </tr> </thead> <tbody> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>	Name of first crop planted for harvest in 1939 which failed (1)	If replanted in a crop for harvest in 1939, name of second crop (2)	Acres of first crop which failed (3)	Acres of second crop harvested (4)	_____	_____	_____	_____	21																								
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_____	_____	_____	_____																																
		Report as reply to Question 14 the sum of acres in Column 3 minus the sum of acres in Column 4.																																	
		<b>DOUBLE CROPPING</b>																																	
		Crops which were harvested in 1939 in succession from the same acreage:																																	
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_____	_____	_____	_____																																
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_____	_____	_____	_____																																
		NOTE.—Double cropping must be considered in arriving at your reply to Question 13.																																	

CENSUS OF AGRICULTURE: 1940

OMITTED INQUIRY NUMBERS REPRESENT CROPS WHICH WILL BE INFREQUENTLY REPORTED IN THIS

Table with two main sections: XIV. LIVESTOCK, APRIL 1, 1940, AND LIVESTOCK PRODUCTS, 1939 and XV. CROPS HARVESTED ON THIS FARM IN 1939. Includes sub-sections for ANNUAL LEGUMES and HAY CROPS. Columns include descriptions, units, and codes.

# FARM CHARACTERISTICS BY VALUE OF PRODUCTS

219

GENERAL AREA. WHERE FRACTIONAL ACREAGE OR PRODUCTION IS REQUIRED, REPORT AS:  $\frac{1}{8}$ ,  $\frac{1}{4}$ ,  $\frac{3}{8}$ ,  $\frac{5}{8}$ ,  $\frac{7}{8}$ ,  $1$ ,  $1\frac{1}{2}$ , ETC.

SCHEDULE No.

**CLOVER AND GRASS SEEDS:**  
Report on "country-run" basis.

124. Alfalfa seed	Bu.	Quantity harvested in 1939	Code
125. Sweetclover seed	Bu.	Quantity harvested in 1939	J-24
126. Lespedeza seed	Bu.	Quantity harvested in 1939	J-25
127. Clover seed	Bu.	Quantity harvested in 1939	J-26
128. Grass seed	Bu.	Quantity harvested in 1939	J-27

**MISCELLANEOUS CROPS:**  
Report fractional acreage.

129. Irish potatoes	Bu.	Quantity harvested in 1939	Code
130. Sweet potatoes and yams	Bu. <td>Quantity harvested in 1939 <td>L-29</td> </td>	Quantity harvested in 1939 <td>L-29</td>	L-29
131. Tobacco (total, all types)	Lb. <td>Quantity harvested in 1939 <td>L-30</td> </td>	Quantity harvested in 1939 <td>L-30</td>	L-30
132. Sugar beets harvested for sugar	Tons. <td>Quantity harvested in 1939 <td>L-31</td> </td>	Quantity harvested in 1939 <td>L-31</td>	L-31
133. Broilincorn	Lb. <td>Quantity harvested in 1939 <td>L-32</td> </td>	Quantity harvested in 1939 <td>L-32</td>	L-32
134. Popcorn	Bu. <td>Quantity harvested in 1939 <td>L-33</td> </td>	Quantity harvested in 1939 <td>L-33</td>	L-33
135. Mint harvested for oil	Lb. <td>Quantity harvested in 1939 <td>L-34</td> </td>	Quantity harvested in 1939 <td>L-34</td>	L-34
136. Silage crops, other than corn and sorghums	Tons. <td>Quantity harvested in 1939 <td>L-35</td> </td>	Quantity harvested in 1939 <td>L-35</td>	L-35
137. Root and grain crops	x x x x x	Quantity harvested in 1939 <td>L-36</td>	L-36
138. Other field crops	Unit	Quantity harvested in 1939 <td>L-37</td>	L-37

139. Value of the crops reported under Question 87-142 (including landlord's share) which were or are to be sold or traded (omit cents) \$

**VEGETABLES FOR FARM HOUSEHOLD(S) USE:**

144. Value of vegetables grown on this farm in 1939 for consumption by your family and by all households on this farm (omit cents)

**VEGETABLES harvested in 1939 FOR SALE (not for home use):**

Note: Where a crop was harvested following another on the same land during the year, report acreage for each crop.

Report fractional acreage. Omit cents	Vegetables harvested in 1939 for sale		Code	Report fractional acreage. Omit cents	Vegetables harvested in 1939 for sale	
	Acres	Value			Acres	Value
146. Asparagus			M-46	146. Cabbage		
147. Green lima beans			M-47	147. Cauliflower		
148. Snap, string, or wax beans			M-48	148. Cucumbers		
149. Beets (table)			M-49	149. Eggplants		
150. Broccoli			M-50	150. Green beans		
151. Brussels sprouts			M-51	151. Green peas		
152. Swiss chard			M-52	152. Sweet peppers and jalapeños		
153. Chinese cabbage			M-53	153. Spinach		
154. Collards			M-54	154. Tomatoes		
155. Water cress			M-55	155. Watermelons		
156. Broccoli			M-56	156. Other*		
157. Escarole			M-57			
158. Cauliflower			M-58			
159. Carrots			M-59			
160. Celery			M-60			
161. Sweet corn			M-61			
162. Pumpkins			M-62			
163. Squash			M-63			
164. Cucumbers			M-64			
165. Eggplants			M-65			
166. Green beans			M-66			
167. Green peas			M-67			
168. Sweet peppers and jalapeños			M-68			
169. Spinach			M-69			
170. Tomatoes			M-70			
171. Watermelons			M-71			
172. Other*			M-72			

**HORTICULTURAL SPECIALTIES:**  
Report fractional acreage.

173. Crops grown under glass	Area in 1939 (Sq. feet)	Value	Code
174. Nursery products <th>Area in 1939 (Acres)</th> <th>Value</th> <td>M-73</td>	Area in 1939 (Acres)	Value	M-73
175. Flower and vegetable seeds, bulbs, and flowers and plants grown in the open <th>Area in 1939 (Acres)</th> <th>Value</th> <td>M-74</td>	Area in 1939 (Acres)	Value	M-74

**SMALL FRUITS:**  
Report fractional acreage.

172. Blackberries and dewberries	Qt.	Quantity harvested in 1939	Code
173. Tame blueberries	Qt. <td>Quantity harvested in 1939</td> <td>M-72</td>	Quantity harvested in 1939	M-72
174. Wild blueberries	Qt. <td>Quantity harvested in 1939</td> <td>M-73</td>	Quantity harvested in 1939	M-73
175. Cranberries	Qt. <td>Quantity harvested in 1939</td> <td>2,3</td>	Quantity harvested in 1939	2,3
176. Black raspberries	Qt. <td>Quantity harvested in 1939</td> <td>4,5</td>	Quantity harvested in 1939	4,5
177. Red raspberries	Qt. <td>Quantity harvested in 1939</td> <td>M-76</td>	Quantity harvested in 1939	M-76
178. Strawberries	Qt. <td>Quantity harvested in 1939</td> <td>2,3</td>	Quantity harvested in 1939	2,3
179. Other (specify)	Qt. <td>Quantity harvested in 1939</td> <td>M-78</td>	Quantity harvested in 1939	M-78

**TREE FRUITS, NUTS, AND GRAPES:**

184. Land in bearing and nonbearing fruit orchards, vineyards, and planted nut trees, April 1, 1940 (omit series) Acres

**KIND OF FRUIT:**

185. Apples	Bu.	Number of trees or vines, April 1, 1940		Quantity harvested in 1939	Code
		Not of bearing age	Of bearing age		
186. Sour cherries	Lb.			Quantity harvested in 1939	N-55
187. Sweet cherries	Lb.			Quantity harvested in 1939	N-56
188. Peaches	Bu.			Quantity harvested in 1939	7,8,9
189. Pears	Bu.			Quantity harvested in 1939	N-80
190. Plums and prunes	Bu.			Quantity harvested in 1939	4,5,6
191. Grapes	Lb.			Quantity harvested in 1939	N-82
192. Other tree fruits	Unit			Quantity harvested in 1939	N-85

193. Value of all fruits and nuts, including small fruits, produced in 1939 that were or are to be sold or traded (omit cents) \$

210. Improved pecans (budded, grafted, or top-worked) Lb.

211. Wild or seedling pecans Lb.

215. Other nuts (specify) Lb.

219. Value of all fruits and nuts, including small fruits, produced in 1939 that were or are to be sold or traded (omit cents) \$

220. Maple syrup and sugar made in 1939

221. Value (estimated) of products of this farm in 1939 that were used by your family and by all households on this farm (omit cents) \$

223. Value of forest products sold in 1939 (omit cents) \$

THE ABOVE SPACE FOR OFFICE USE ONLY

STATES

- Connecticut
- Delaware
- District of Columbia
- Illinois
- Indiana
- Iowa
- Maine
- Maryland
- Massachusetts
- Michigan
- Minnesota
- Missouri
- New Hampshire
- New Jersey
- New York
- Ohio
- Pennsylvania
- Rhode Island
- Vermont
- West Virginia
- Wisconsin

REGION

1

Form 111c

# Some Sampling Uses of Data From the Census of Agriculture<sup>1</sup>

By *Irvin Holmes*  
Bureau of the Census

The 1930 Census of Agriculture classification of farms by type of farm was used for making type-of-farm tabulations by counties and States of many agricultural items, such as acreage of land in farms, numbers of farms by tenure of operator, expenditures for specified items, etc. For the 1940 Census of Agriculture it was decided to use sample data instead of complete tabulations as a basis for presenting statistics on the characteristics of farms classified according to type (major source of income), according to total value of farm products, and according to color-tenure of operator. Four considerations contributed mainly to this decision: The urgent need for the figures in connection with war programs, particularly statistics on marginal (low income) farms and on farm labor; the necessity for holding costs to a minimum; the greater variety of tabulations that could be made on a sample basis than on a complete basis with the funds available; and the possibility of securing experience and information which would be valuable in preparing plans for future censuses, either on a complete or on a sample basis. The purpose of this talk is to review the work that has been done to date on these tabulations of sample data from the 1940 Census of Agriculture.

## SAMPLE DESIGN AND TYPE OF SAMPLING UNIT

The primary objective of these tabulations of sample data was to secure national statistics on farm characteristics. The secondary objective was to provide measures of the variation in these statistics by large geographic regions.

All of the data for one farm for a group of related items, such as value of farm products, are on a single punch card. Consequently it was feasible to use the smallest available sampling unit, that is, the individual farm. Most previous studies of sampling techniques for proposed sample censuses of agriculture have centered about the problem of size of sampling unit; i.e., the problem of balancing enumeration difficulties and costs for small sampling units, such as individual farms, against the loss of information for large sampling units, such as clusters of farms. The number of farms, according to the 1940 Agriculture Census, varies from 135,000 for the New England Division to nearly 1,100,000 for the West North Central Division. It was recognized that it would be desirable to vary the sampling ratio of number of farms for each geographic area for which statistics were desired. It was also recognized that for tabulations of farms classified by type of farm the sampling ratio should be varied by type groups; likewise for any tabulations of farms classified by total value of farm products, it would be desirable to vary the sampling ratio of number of farms by value groups. Administrative considerations made such procedures impractical; consequently, the following alternative was substituted:

First, the cards were sorted into two primary strata: Farms with less than \$10,000 and farms with \$10,000 or more total value of products. The farms with \$10,000 and over total value of farm products represented only 1 percent of all farms, but accounted for approximately 17 percent of the gross farm income for the United States in 1939. The cards for all farms with \$10,000 and over total value of farm products were sorted out and tabulated, i.e., a 100-percent sample was used.

For farms with less than \$10,000 total value of products a 2-percent sample was selected by machine by sorting out all

punch cards with serial numbers ending in 15 and 65. The same terminal digit "5" was selected to reduce the number of cards handled in the subsequent sort, i.e., 600,000 compared with 1,200,000. The "15" was selected to reduce the number of counties excluded from the sample. There were only 22 counties in the United States, chiefly independent cities in Virginia, which had less than 15 farms at the time of the 1940 Census, and which were, therefore, excluded from this 2-percent sample.

There is no reason to infer any relationship between the characteristics of the farms and their serial numbers. The serial numbers had been placed on the individual farm schedules prior to the time that the data were transferred from the schedules to the punch cards. The selection of the sample farms was on a county basis; that is, the secondary stratification of the 2-percent sample was geographic. Although the machine selection of the sample farms was done by counties, the individual farm schedules had been arranged by minor civil divisions within each county prior to numbering. Consequently, the geographic distribution of the sample farms approaches a stratification by minor civil divisions within each county. To a considerable extent, the original order of enumeration was preserved in numbering the schedules. Accordingly, the 2-percent sample also approximates a selection along the enumerator's route of every 50th farm in the "Under \$10,000" category.

## SCOPE OF TABULATIONS

At the present time, the following tabulations are completed or in progress:

- (1) Analysis of characteristics of small farms.
- (2) Analysis of farm characteristics by type of farm.
- (3) Analysis of value of farm products by color-tenure of operator.

The first tabulations are being made in cooperation with the Bureau of Agricultural Economics and the Farm Security Administration of the Department of Agriculture. Preliminary reports, or press releases, are now being prepared showing figures for those items by geographic regions for which the expected error is small enough to justify publication. Present plans are to publish the results of all three of these series of tabulations in a special monograph.

## METHODS OF EXPANDING THE SAMPLE

For the tabulations for the Department of Agriculture, two factors were available for expanding or inflating the sample. Published figures were available for the total number of farms and total value of farm products for each value-of-farm-products group. For these tabulations it was decided to use the total number of farms in each value group for expanding the sample data.

For nearly all of the items sampled, the totals for all value-of-farm-products groups were also known. On such items, the expanded sample figures for each value-of-farm-products group were scaled to equal these previously published totals by simple proportionate adjustments. In some of the tabulations, cross-classification tables were involved, such as numbers of farms cross classified by total value of farm products and by size of farm. In such cases, the expanded sample figures for all cells were adjusted to equal these known totals by a succession of horizontal and vertical proportionate adjustments. These adjustments were made for the convenience of any user who

<sup>1</sup>Paper presented at a meeting of the Washington chapter of the American Statistical Association.

might wish to relate the figures to previously published Census data.

It was recognized that for some of the items, particularly such items as value of land and buildings, and expenditures, some increase in precision might have been obtained had the sample data been expanded by using an inflation factor based on the total value of farm products for each value-of-products group. The decision to use total number of farms instead of value of products in expanding the sample was determined partly by administrative reasons and partly by the fact that, since the tabulation sort was by value of farm products, much of the over-all relationship between value of farm products and the sampled items had already been taken into account.

A third expansion factor, which could have been used, was the reciprocal of the sampling ratio based on number of farms for the total sample, that is, for all value groups combined. Obviously this would have given less precision than that obtained by the use of sampling ratios for the individual value groups. This would be particularly true for the terminal value groups where the population numbers of farms are relatively small and the sampling ratios quite variable.

#### PRECISION OF DATA

Because of cost and operational considerations, it was considered impractical to vary the size of sample by value groups or by geographic areas. For this reason, it is to be expected that the relative sampling errors will be considerably smaller for the central value groups, for which the number of farms is generally large, than for terminal value groups which have few farms. A similar difference in relative sampling errors is to be expected as between geographic divisions with large numbers of farms and geographic divisions with fewer farms. Likewise, the relative sampling errors differ as between items, depending, in the case of the farm counts, upon differences in the proportion of farms reporting specified characteristics, and, for

quantitative items, upon differences in the variability of the items.

For example, in estimating average age of operator, the size of sample necessary for a given degree of precision is considerably less than that required for all land in farms, cropland harvested, value of land and buildings, and work off farm. Some evidence is available from California and Illinois: For the upper terminal value groups in Illinois and California the sample size for all land in farms would need to be from 40 to 80 times as large as that for average age of operator to secure the same relative precision. The higher-value-groups include not only farms with large acreages but also small-size farms, such as hatcheries, greenhouses, and nurseries which accounts for the high degree of variability.

For work off farm in these high income groups the sample data for California indicate that it would require a sample approximately 250 times as large as that for average age of operator to secure the same relative precision. Most operators of large-income farms report very few days of work off farm, but a few such operators report nearly full-time nonfarm employment, generally at professional or business occupations. To secure statistics on the number of days of work off farm for these value groups with a relative error of 10 percent would require approximately a 33-percent sample, which figure includes a correction for sampling from a finite population. In these comparisons the formula used is for an unstratified sample; therefore, the coefficients of variation may slightly overstate the facts.

In the tables accompanying the reports, the figures have been marked with an asterisk when the expected sampling error is relatively large. However, in evaluating the reliability of the figures, the consistency in the pattern of relationships should be taken into account as well as the indicated precision for individual cells. For practically all items studied to date the relationship patterns have been remarkably consistent between States and geographic divisions.