CHAPTER III

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Land Resources and Size of Farm

In the United States 1 percent of the farms with 16 percent of the land produced 17 percent of the value of products sold, traded, or used by farm households in 1939. At the other extreme in the low-value groups, 19 percent of all farms with 6 percent of the land reported only 2 percent of the total value of products.

The $1,000 to $1,499 value group, which includes the average value of products for the entire United States, has 11.6 percent of the farms, 11.4 percent of the land, and 11.1 percent of the total value of products. The percentage of all farms in each of the value groups below $1,000, as a result, is greater than the corresponding percentage of the total value of products. Approximately two-thirds of all the farms, one-third of all the land, and one-fifth of the total value of products are reported on farms with less than $1,000 as the gross value of products. Approximately one-fifth of the farms, about half of the land, but more than two-thirds of the total value of products are included in the value groups of $1,500 and over. Above $1,500 the proportion of all farms in each of the value groups is less than the corresponding proportion of the total value of products.

Although these same general relationships are noted in every geographic division, the differences in the percentage distribution of farms, land, and value of products by value groups are marked. For instance, the East South Central Division, with the lowest average value of products, has 70 percent of its farms reporting less than $600 value of products; these farms include half of the land in farms in the area, but produce only about one-third of the total value of products.

In the Pacific Division, with the highest average value of products, all of the value groups below $2,000 have to be combined to obtain 68 percent of the farms; these farms, however, include only 25 percent of the land and produce 18 percent of the total value of products. For both land and value of products, the percentages for the Pacific Division are approximately half of the comparable figures for the East South Central Division. The average size of farm in the East South Central Division is 75 acres compared with an average of 231 acres in the Pacific Division. The average value of products for all classified farms in these 2 divisions are $604 and $2,647, respectively. On the other hand, in the Mountain Division where all of the value groups below $2,000 have to be combined to obtain 70 percent of the farms, 34 percent of the land accounts for 23 percent of the value of products. The average size of a farm in the Mountain Division is three and one-half times the average in the Pacific Division, but the average value of products for the Mountain Division is 18 percent less than for the Pacific.

Four percent of the classified farms 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 value of products consumed by the operator's family, 13 and 10 percent, respectively. In no other value groups was the percentage over 5; in most instances 2 or 3 percent of the farms in each value group did not report the use of any farm products by the household.[1]

The percentage of the total value of products used by the farm household declined as the value of products increased. Almost three-fourths (72 percent) of the total products of the $1 to $99 value group are consumed by the farm household. The percentage drops to less than half (48.4 percent) in the $250 to $399 value group; to one-fourth in the $750 to $999, and to 6 percent in the $4,000 to $5,999 value groups.

On the other hand, the value of the products used by the farm household increased with an increase in the total value of products. The family which presumably needed a large quantity of home grown products because of a low gross farm income actually reported the smallest value for family living. The $1 to $99 value group, on the average, consumed products valued at $46 per farm. The $100 to $249 group used more than twice as much. Products valued at $212 were used by the $600 to $749 value group. In the $10,000 and over group the products used by the farm household were valued at $379.

This pattern of the household using a larger quantity of farm products but a smaller proportion of the total as the value of products increased is found in every division. The Pacific Division, with 8 percent, has the largest percentage of classified farms not using any of their farm products. The Middle Atlantic, East North Central, South Atlantic, and the East South Central Divisions all report less than 3 percent in this category. The average value of products used by the households was smallest, $155, in the Pacific Division and largest, $222, in both the New England and South Atlantic Divisions.

The average size of farm in the United States as revealed by the 1940 Census was 174 acres and the average value of products per farm for the United States was $1,309. This study shows that for the $1,000 to $1,499 value-of-products group the average size of farm was 170 acres. Practically all of the farms in this value group (98 percent) had land from which they harvested crops; the average was 67 acres per farm or 39 percent of all the land in the farms in this value group. About $5,700 per farm was invested in land and buildings, an average of $34 per acre. The value of products in this value group was, therefore, about one-fifth (21 percent) of the investment in land and buildings.

However, it is not possible to say for all divisions, or even for a single division, that a given acreage of land, or of cropland, or even a given value of land and buildings are always associated with a given value of products. The characteristics of farms with the same value of products show wide variations among the geographic divisions due principally to differences in predominating type of farming or to diversity of type.

For the value-of-products group, $1,000 to $1,499, the average acreage per farm varied from 102 acres in New England to 480 acres in the Mountain States. The average acreage of cropland harvested ranged from 28 acres in New England and the

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Pacific States to 110 acres in the West North Central States. The proportion that the cropland harvested in this value group was of the land in farms varied from 18 percent in the Pacific and Mountain States to 48 percent in the East North Central States. The average value of land and buildings was lowest, $3,726, in the South Atlantic States and highest, $8,597, in the Pacific States. When distributed on an acreage basis the smallest investment per acre, $12, was found in the Mountain States and the highest, $59, in the New England States. The value of products on farms in this value group, $1,000 to $1,499, ranged from 14 percent of the value of land and buildings in the Pacific States to 32 percent in the South Atlantic States. Similar variations are found in each of the value groups.

If these factors are analyzed in relation to the entire range of value groups, however, several significant relationships appear. For the Nation as a whole, there is a correlation between the size of farm and the value of products sold, traded, and used by the farm household. There is a similar correlation between the acres of cropland harvested per farm and the total value of products. This correlation is particularly high in the divisions where the growing of crops such as corn, wheat, cotton, or tobacco is the dominant type of farming.

Farms in the $1 to $99 value group averaged 51 acres per farm with an average of 10 acres in cropland harvested. For the $400 to $599 value group the comparable acreages were 95 and 30, respectively. The $1,000 to $1,499 value group had an average of 170 acres in the farm and 67 acres in cropland harvested, while the $4,000 to $5,999 value group had comparable acreages of 442 and 162, respectively. As can be noted easily, the number of acres in the farm and the number of acres in cropland harvested increased with an increase in the value of products.

Wide variations existed in each of the value groups in the number of acres in the farm. Even though the average number of acres of all land per farm was 51 in the $1 to $99 value group, almost one-third of the farms had less than 10 acres and more than three-fifths less than 30 acres. Although the average size of farms of operators reporting $1,000 to $1,499 value of products was 170 acres, only 32 percent of the farms are reported as having 100 to 179 acres; almost 5 percent had 500 acres or more. The general pattern of relationship between value of products and size of farm is similar for all the divisions, even though there are noticeable differences among the divisions, in the average number of acres per farm for a given value group.

Variations among divisions in acreage per farm within a value-of-products group may be explained in large part by the differences in the character of the land, the amount and distribution of rainfall, the crops grown, and the type of farming practiced. 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 than average proportion of the land is cropland.

More than half the classified farms reporting 1 to 9 acres of cropland harvested are in the 2 groups reporting $1 to $249 value of products. Approximately the same distribution of farms with 1 to 9 acres of cropland harvested was found in all the divisions except the Pacific and New England, where these farms were distributed more widely throughout all the value groups. Practically all the value groups in every division had some of these farms.

The percentage of farms not reporting cropland harvested was largest in the 2 lowest-value groups, 24 and 10 percent, respectively, but no value group reported less than 1 percent of its farms in this category. The proportion of all classified farms not reporting any cropland harvested ranged from 4 percent in the South Atlantic and East South Central Divisions to 14 and 15 percent, respectively, in the Pacific and Mountain Divisions. 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 this type of farm. Livestock farms which did not grow crops or cut any hay in 1939 are included in this classification as are farms, such as greenhouses, which have only a small fraction of an acre of land in crops.

The value of land and buildings per farm increased with the increase in the value of products. The value of the land and buildings was $1,947 per farm for the $1 to $99 value-of-products group compared with $9,624 per farm for those having $2,000 to $2,499 and $25,387 for those reporting $6,000 to $9,999 value of products. The relationship between the value of products and the value of land and buildings is similar in all of the divisions, but the average value of the land and buildings per farm varied markedly among the divisions, being $2,272 in the East South Central States and $11,720 in the Pacific States. There are similar differences among the divisions in the value of land and buildings per farm within any single value group.

The greatest difference between the value of land and buildings per farm in the lower-value groups and those in the higher-value groups was noted in the East South Central Division; the smallest difference was found in the New England States.

The average value of land and buildings per acre was $32 for all farms in the United States; the average by value groups varied from $19 to $43 but there seems to be no consistent relationship between the total gross value of products and the average value of land and buildings per acre. In part, this lack of a consistent relationship is due to double cropping, to the extent of livestock production, to the price at which the crops or livestock were sold, to the intensity of farming, to the efficiency at which the farm enterprise was operated, and other factors associated with the type of farming. All of these affect the gross income received from the farm, but which may be only indirectly related to the value of land and buildings. It should also be remembered that the value of land and buildings is more closely related to net than to gross income. Two farms with about the same net income after paying expenses may be in two entirely different value groups because of the difference in the gross value of their products.

There are wide variations among the divisions in the average value of land and buildings per acre. In the East North Central and the Middle Atlantic States, which are high with averages of $65 and $61 per acre, respectively, types of farming requiring considerable investment in land and buildings are common. These types of farming usually involve some combination of crop farming with intensive livestock enterprises such as dairying, hog raising, and cattle feeding. The per acre value of land and buildings was lowest in the Mountain States; part of this low value is due to extensive areas of semiarid land of low value, small investment per acre required for buildings on livestock ranches and cash-grain farms, and to some extent to the use of publicly owned land in this area.

The total value of products as a percentage of the value of land and buildings increased as the value of products increased. The farms in the $1 to $99 value-of-products group had a total value of products only 2.9 percent of the value of land and buildings. This ratio increased rapidly to 21 percent in the $600 to $749 value group and then gradually increased to 30 percent in the $6,000 to $9,999 value group. It was 41 percent in the highest-value group. This same general relationship was noted in all of the geographic divisions. 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 homes 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 land and buildings is less significant because land and buildings generally constitute a smaller proportion of the total farm capital. This is particularly true of livestock farming which makes up a large proportion of the farms in the higher-value-of-products groups.