

ALABAMA AGRICULTURE

*Its Characteristics and
Farming Areas*



AGRICULTURAL EXPERIMENT STATION
of the **ALABAMA POLYTECHNIC INSTITUTE**

E. V. Smith, *Director*

Auburn, Alabama

PREFACE

This publication replaces Agricultural Experiment Station Bulletin 250, "Factors Influencing Alabama Agriculture—Its Characteristics and Farming Areas." Bulletin 250, based largely on data for 1935, 1930, and earlier years, was published in April 1941 as a cooperative report by the Agricultural Experiment Station of the Alabama Polytechnic Institute and the Bureau of Agricultural Economics of the United States Department of Agriculture.*

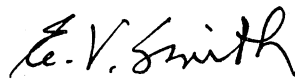
During the years that have elapsed since the early 1930's, many significant changes have occurred in the agricultural economy of the State. Changes in the relative importance of factors that affect Alabama's agriculture have occurred both on and off the farm. New and improved farm practices have been developed and adopted. Numerous scientific and technological improvements and developments have been made.

Many trends apparent in the 1930's have since continued; others have reversed themselves. Both the rate and direction of change and/or development of many Alabama farm enterprises differ vastly from those of the early 1930's.

The net effect of these and of other factors on Alabama's agriculture has been such that much of the material in Bulletin 250 is out of date and therefore does not adequately describe the agriculture of the State.

In this publication, the over-all objectives and general methods of treatment remain the same as in the earlier report. Changes that have occurred since the early 1930's have been analyzed and incorporated in this publication, both from the standpoint of the relative importance of major factors influencing Alabama's agriculture and of the characteristics of Alabama's agriculture and its farming areas.

Any progress made in developing desirable agricultural policies and farm programs must be based on intelligent analyses and interpretations of pertinent facts. It is in the hope of providing a basis for more constructive thinking and effort devoted to the formulation of more adequate and workable agricultural policies and farm programs that this bulletin is published.



Director

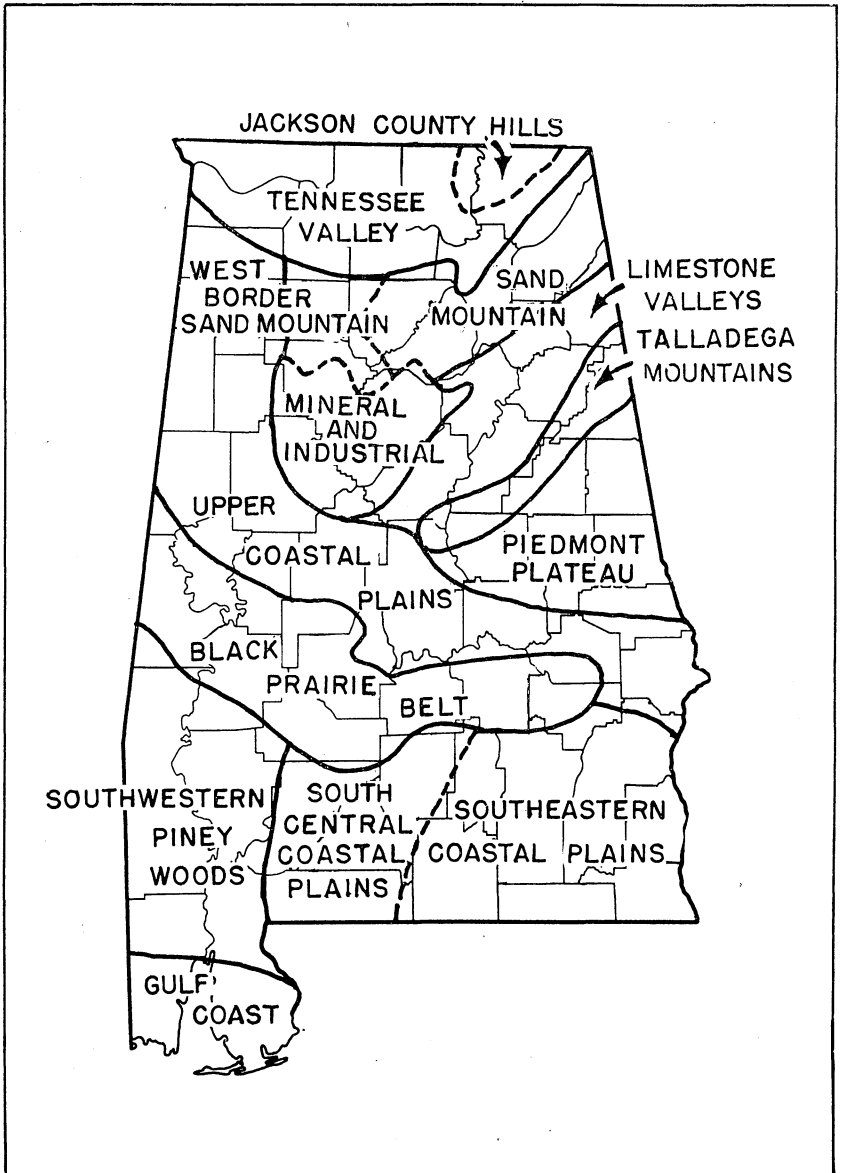
AGRICULTURAL EXPERIMENT STATION
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FARMING AREAS OF ALABAMA



ALABAMA AGRICULTURE

*Its Characteristics and Farming Areas**

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THE KINDS OF FARMING now followed and to be followed in future years in Alabama are and will continue to be influenced by the interaction of physical, biological, economic, and social forces. The action of these forces is not uniform in all parts of the State. For this reason, the predominant types of farming in different parts of the State are not the same.

Alabama's agriculture is widely diversified. This diversity is directly related to the existence of wide differences in soils, topography, and climatological conditions in different parts of the State. Closely associated with these physical variations are biological considerations of insect pests, plant and animal diseases, and weed infestations.

The choice of production enterprises under these environmental limitations is also influenced by numerous economic factors. Included in this group are marketing and transportation facilities and charges, competition of enterprises, labor supplies and wage rates, and available capital and credit facilities. The various expenses of production and the prices received for products, together with other economic factors, determine the enterprises or combinations of enterprises that may return the most profit.

The aptitudes and personal preferences of individual producers also determine within limits the choice of enterprises on farms.

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For an area as a whole, these factors are not as important as are physical, biological, and economic considerations.

Sound agricultural planning for the present and for the future must begin with adequate information of past and present conditions. The process of adapting production to the natural environment and to prevailing economic and social factors is a continuous one. Physical limitations that prevail at any given time may later be partly or entirely offset. Area changes in agriculture may also result from changes in the relative incomes from farm enterprises due to relative changes in yields or to changes in relative prices received.

Some natural environmental factors such as soils, topography, and climatic conditions are relatively fixed. Other natural factors such as insect pests, plant and animal diseases, and weed infestations are less fixed. These may be at least partially the result of climatic factors and often they are to some extent controllable.

The economic environment is less fixed than the natural environment. Prices received and paid, marketing costs, competitive supply and demand conditions, and availability of capital and other productive resources vary over both short- and long-run periods. Some economic factors, such as marketing and transportation costs, are affected by geographic location; hence they have a certain degree of relative constancy within a given area.

The human or personal factors that affect farmers' decisions vary among individual producers and from time to time for the same producer. The net effect of these factors upon the agriculture of any given area is small and occurs slowly.

The environmental factors in any agricultural area, therefore, tend to mold the agriculture of that area into a characteristic pattern which represents the net effects of these factors and differs from the pattern in any other area where a different set of factors prevail.

This report is primarily descriptive in nature and serves mainly to point out the problems connected with present utilization of land and other agricultural resources. A large part of the information in this report is derived from reports of the United States Census Bureau. In presenting the present agricultural situation in Alabama, insofar as possible, county data are shown in order that variations in different parts of the State may be more readily observed and their significance more fully appreciated. The various charts and maps give a graphic picture of Alabama's agri-

culture and of some of the principal factors that have influenced its development.

There is presented a brief historical sketch of the development of Alabama's agriculture from about 1800, when the State had its first big influx of settlers, to 1860. The period from 1860 to 1950 is briefly discussed, including pertinent data on major changes and trends in the State's population, its agriculture, and related forces. Following is a series of maps and charts with explanations showing the geographic distribution of major crop and livestock enterprises in the State. Also shown are data on related characteristics of the agriculture of Alabama.

These factors outline general areas that are relatively uniform in many agricultural phases, but which exhibit distinct differences, as units, from other areas of the State. Throughout each homogeneous area, similar management and cultural practices may be expected to yield somewhat similar results. For many purposes, therefore, these areas may be profitably studied and treated as units. To facilitate such study, major farming areas within the State have been delineated and described in the last part of this report.

FACTORS INFLUENCING ALABAMA'S AGRICULTURE

PHYSICAL FACTORS

Physical factors, including soils, topography, and climate, are the most important and most permanent factors leading to differences in agriculture in various parts of Alabama. Farmers often enhance changes in soils and topography through their farming practices, but fundamental differences in both soils and topography in various areas of the State may be expected to exist for centuries. No method of controlling climate is known, although practices and farming methods may be varied somewhat to minimize its effects. Major variations in characteristics of these factors are pointed out so that differences in farming may be better understood.

Soils and Topography

The soils and topography of Alabama are extremely variable. This is traceable mainly to different geologic formations that occur within the State. These extremes in soils and topography make the State adaptable to various crops and systems of farming. Elevations, as shown in Figure 1, range from sea level in south-

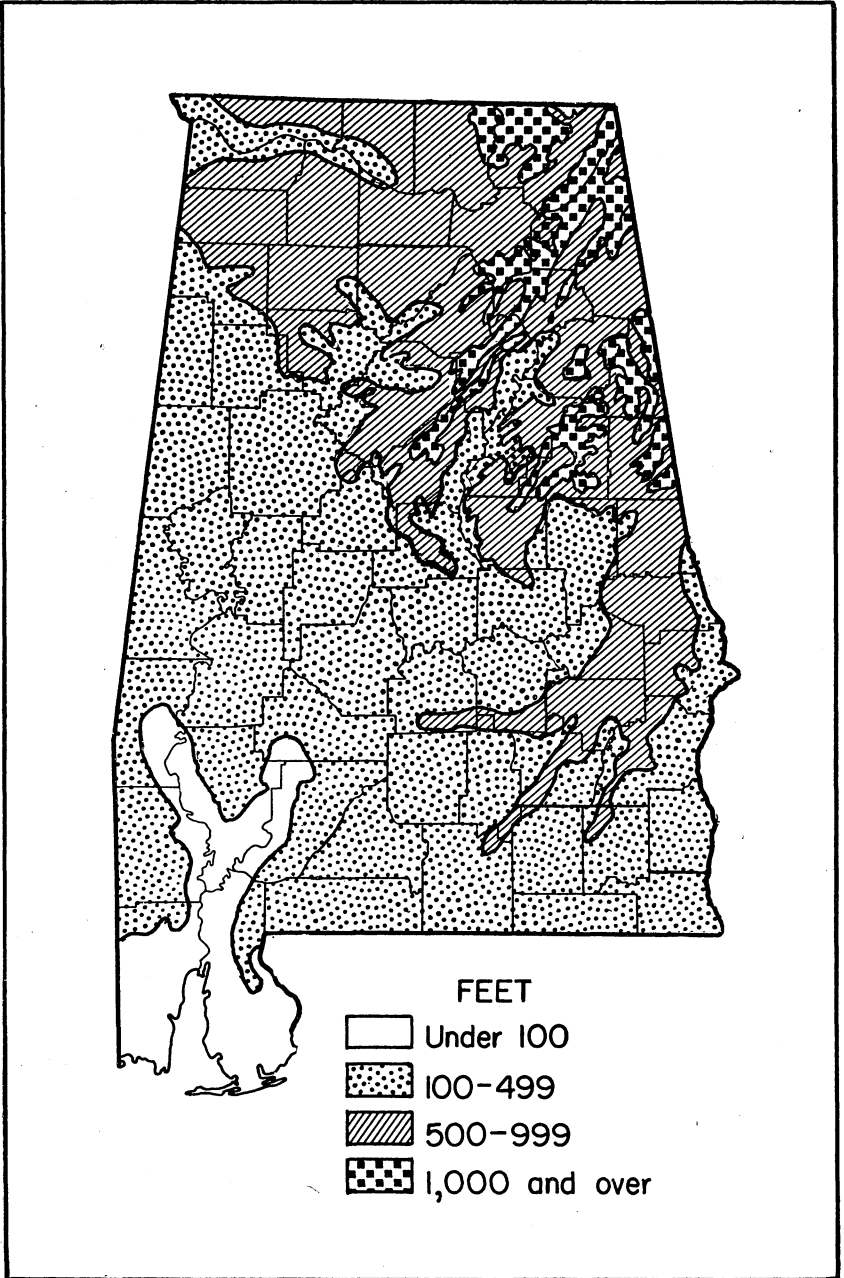


FIGURE 1. Elevation, Alabama.

western Alabama to more than 1,600 feet in northeastern Alabama. The mean elevation of the State is about 600 feet. The highest point is in Cheaha State Park in Cleburne County, which rises to an altitude of 2,407 feet. Detailed information relative to topography and elevation is indicated in the discussion of Alabama's major soils areas.

Alabama's soils vary widely in texture, consistency, and fertility. They range from deep porous sands to heavy, sticky, impervious clays. Some sands are so deficient in organic matter and plant nutrients as to be almost sterile; others are highly productive. Clay soils range from types that are heavy, plastic, sticky, and poorly drained to permeable clays that are easily worked and highly productive. Some soils are responsive to fertilization and good management; others are difficult to cultivate and respond poorly to fertilizers. Some soils have been severely damaged by erosion; others have been damaged little in this way. With these wide variations in soils, coupled with wide differences in topography and climate, it is obvious that the kinds of farming would differ between various parts of the State.

For purposes of this report, the soils of Alabama are discussed by major soils areas, as shown in Figure 2.¹ This classification is based on the geologic character of the material from which the State's soils were formed. It does not mean, however, that all of the soils in each area or subdivision are alike. Detailed soil surveys indicate that each area is made up of a number of soil types. Soils for the State as a whole are classified into more than 300 different types, which means that Alabama has more varied geologic formations than does any other southern state.

The Limestone Valleys include mainly the Tennessee and Coosa River Valleys. Soils in these areas are of limestone origin, derived from the gradual decay and weathering of limestones and some impure limestones. Soils are predominantly brown to red silt and clay loams. Some of the soils located on the southern border of the Tennessee Valley and in the northern part of the Coosa Valley are gray sticky soils. Soils in the Limestone Valleys are generally well drained. Topography ranges from nearly level to gently rolling, with elevations usually between 500 and 750 feet above sea level. Most of the land is open and in a high

¹This discussion of soils and the accompanying soils map (Figure 2) are adapted from material prepared and published by the Alabama Department of Agriculture and Industries in cooperation with the Agricultural Experiment Station and Extension Service of the Alabama Polytechnic Institute in 1951.

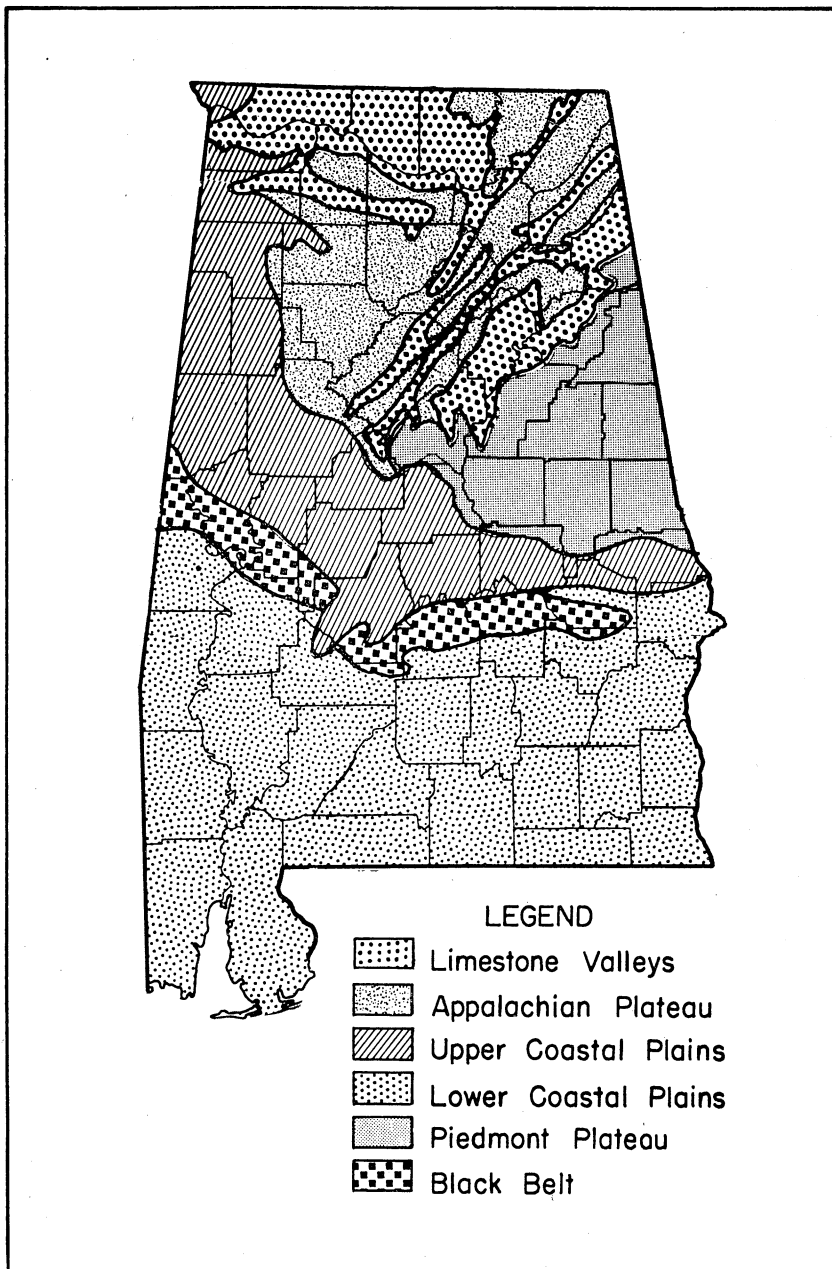


FIGURE 2. General soils areas of Alabama.

state of cultivation. These areas are highly productive and are suited to many different crops and livestock. Cotton, beef cattle, and dairying are the chief enterprises. High yields of grain and forage crops are usually obtained. Tractor-drawn farm machinery is used extensively.

The Highland Rim Uplands are slightly higher than the associated Limestone Valleys, with elevations ranging from 650 to 800 feet above sea level. Except adjacent to streams where slopes are as great as 40 per cent, these areas are nearly level and are chert-free. Soils are derived from impure and cherty limestones, and are mainly gray and cherty silt loams. Most soils have yellow subsoils with hardpans at 18 to 26 inches. These soils are generally deficient in plant nutrients, particularly phosphate, lime, and potash, but they respond readily when these nutrients are added. Soils are easily worked and are well suited to diversified agriculture. Cotton and corn are the principal row crops. Much of the land in these areas is suited to pasture and livestock production. Sloping to rolling portions are generally used for pasture production. Both large and small equipment can be used satisfactorily.

The Sandstone Plateaus are the more nearly level portions of the Appalachian Plateau and are derived from sandstone. Soils have mainly gray, fine, sandy-loam surface soils and yellow to brown, friable, fine, sandy-clay subsoils. Approximately 40 per cent of these areas have slopes of less than 5 per cent; the remainder have slopes of 5 to 10 per cent. Slope of the land is conducive to erosion; however, most areas are well terraced and erosion is not a serious problem. Average elevation is about 1,300 feet above sea level; elevations range from 900 to 1,600 feet. Soils are easy to till, are suited to many crops, and respond to proper fertilization and good management practices. Cotton and corn are the main row crops. Hogs, chickens, and dairying are important livestock enterprises. Medium- to small-sized farm equipment is most common.

The Shale and Sandstone Hills include the more broken and rugged portions of the Appalachian Plateau, in which is found the State's great coal and mineral resource belt. Soils are mainly of shale origin. They have a gray, silt-loam surface soil, and heavy, dense, compact, clay subsoils. Elevations range from 300 to 700 feet above sea level. Although most of these areas are too rough and hilly to use for agricultural purposes, small areas

of good sandy loam soils are scattered throughout. Terracing is difficult, and when land is used for cultivated crops erosion is severe. Coal mining, timber production, and grazing are important in this area.

The Piedmont Plateau is the oldest geologic formation in the State. Its soils are derived from granite, quartz, hornblend, and mica schists. Soils are generally made up of brown to red surface soils and red, friable subsoils. They are mainly red sandy loam and clay loams. These soils are inherently strong, but the topography is rolling to hilly. Frequent outcropping of surface rocks presents a serious problem of erosion control and efficient operation where row crops are grown. Elevations of the area usually range from 700 to 1,000 feet above sea level. Extensive row cropping in the past, coupled with rolling topography, has resulted in severe soil erosion and depletion of once-available soil nutrients. The area, however, has excellent possibilities for future development of the production of grazing crops to be utilized through dairy and beef cattle as a supplement to the area's present income from cotton and other enterprises.

The Talladega Hills along the northwestern border of the Piedmont Plateau have soils that are similar to those of the Piedmont Plateau. Soils in these areas were developed mainly from various kinds of schists and shales. These areas represent the most rugged portions of Alabama. Hills are steep, and elevations range from 900 feet above sea level near Sylacauga to 2,407 feet (highest point in Alabama) in Cheaha State Park in the southwestern corner of Cleburne County. Most of these areas are devoted to timber production; however, cotton, corn, and livestock are important on less broken areas.

The Upper Coastal Plains represent the oldest portion of the Coastal Plains² area of the State. This area was laid down by a prehistoric stream or as marine deposits, from which its soils were formed. Soils are generally made up of gray, fine, sandy-loam surface soils, and yellow to brown, friable, sandy-clay subsoils. The area occupies the highest elevations of the Coastal Plains; it is 1,000 feet above sea level in the northern part and 200 feet

² The State's entire Coastal Plains Area was formed by sediments from geologic erosion of the Appalachian and Piedmont Plateaus that were laid down in the ocean during various geologic periods. This area extends a total distance of 300 miles from north to south; its soils have the widest range of any area in the State.

in the southern part, although for the most part, it ranges from 700 to 900 feet. Most soils respond readily to proper fertilization and good management practices. A high percentage of the area's cultivated land is terraced, and when well managed, good crop yields are obtained. A large portion of the area has a rough, broken topography, and, as a result, cultivation is "patchy." The area has numerous small gently rolling ridge tops of sandy loam soils which are used for cropland, and equally numerous rolling to hilly gravelly slopes which are used mainly for timber production and as range land. Small stream bottoms in some areas constitute important farming areas. Most of the soils in this area are farmed with relatively small machinery.

The Black Belt differs from most of the Coastal Plains in that it was formed mainly from Selma chalk and heavy clays. At one time it was an inland lake, with a high ridge on the south which prevented drainage to the coast. Later, the area was drained by the Alabama and Tombigbee rivers. Marine animals grew in the lake and formed beds of chalk. In general, this area consists of dark colored, calcareous clay soils, and gray to red acid clay soils. The dark clay soils are the result of decomposition of grasses that thrived on chalk soils, which are alkaline. Most of the soils in this area are sticky when wet and hard when dry. Heavy machinery is needed for best land preparation. The area is nearly level. Elevations range from 200 to 300 feet above sea level. Grasses and legumes thrive on soils in this area, making it especially suited to livestock production. Grazing and hay production are primary land uses. Cattle, both beef and dairy, are the major livestock found in the area. The Black Belt is now considered the center of livestock production in the State.

The Clay Hills border the Black Belt. Soils in these areas were formed from deposits of heavy clays that later were covered with a deposit of fine sand. These were laid down as marine deposits to form these areas. In most areas, much of the sandy cap has been removed by erosion; as a result, clay soils predominate. Soils are mainly rolling to hilly; however, some portions of these areas are practically level. Elevations range from 250 to 500 feet above sea level. About 80 per cent of these areas are hilly and are used mainly as timber and range land. The gently rolling portion has a fine sandy loam topsoil and is adapted to the production of row crops or pastures. Most soils are difficult to cultivate, however, and are subject to severe erosion.

The Lower Coastal Plains, like other parts of the Coastal Plains, were formed by marine deposits. These deposits weathered to form the soils that are now present. Most of the soils are gray to red sandy loams or loamy sands. With proper fertilization and good management practices, good yields can be obtained. The relief of the agricultural portion of this area ranges from 2 to as much as 10 per cent. In the main, the area is nearly level to gently rolling, with elevations ranging from sea level to 500 feet above. Elevations of from 250 to 400 feet above sea level are most common. Production of peanuts, corn, cotton, and hogs constitute the major farming enterprises, except in the Gulf Coast Area where potatoes, soybeans, corn, dairying, poultry, and hogs are important enterprises. Production of timber products and extensive grazing are important, particularly in southwestern Alabama. Tractor-drawn farm machinery is used extensively in most parts of this area.

Precipitation

Average annual precipitation, largely rainfall, in Alabama is ample for most crops, but it is not uniformly distributed throughout the seasons nor is it uniform in amount throughout the State. It varies from about 50 inches in central areas to 68 inches in southeastern Baldwin County, Figure 3. Mountainous areas tend to have higher precipitation than plains areas where both are equally distant from the coast. Extreme variation in normal summer rainfall (June-September, inclusive) is from 15 to 29 inches. High summer precipitation in southern counties increases the risk of poor fruiting and boll weevil damage in cotton production. The contrast in fall precipitation as represented by average September rainfall is even greater. The extreme variation is from about 3 inches in much of central Alabama to 7 inches in Baldwin County. This difference indicates a definite increase in weather-damage hazards during the cotton-picking season in southern counties. Very little snow falls in the southern half of the State, but it commonly falls each winter in the mountainous regions and in all areas north of Birmingham. Snow usually melts rapidly and is of little value in protecting winter crops.

Frequent variations from normal precipitation occur. Often they are detrimental to farming interests. Occasional "downpours" promote soil wastage through erosion. Droughts are usually of short duration, but, when they are combined with relatively high temperatures, soils with poor water-holding capacities, and

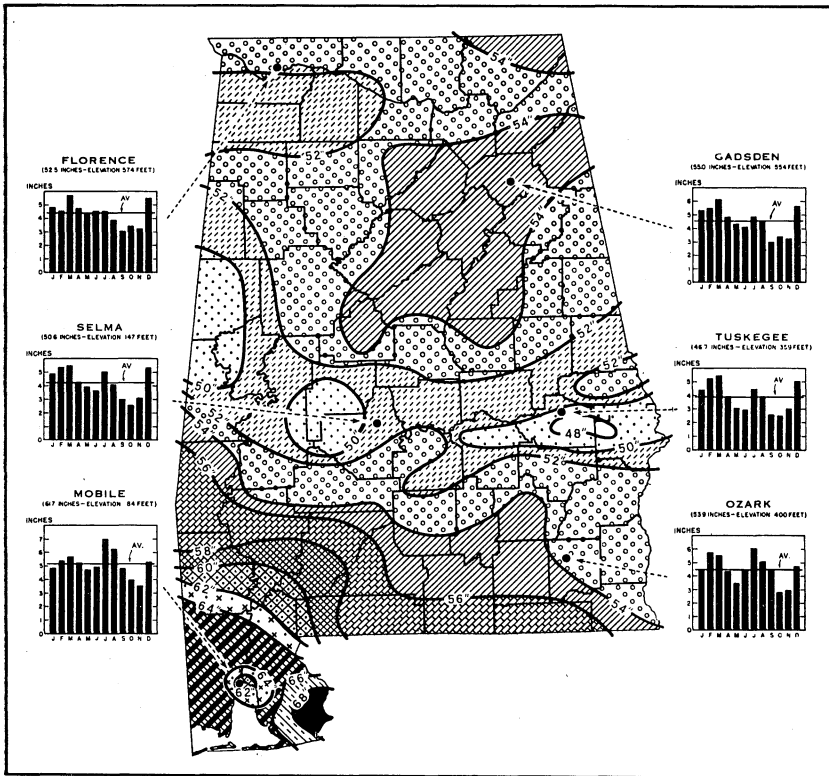


FIGURE 3. Average annual precipitation and average monthly distribution of rainfall at selected stations in Alabama.

crops that need large amounts of moisture usually reduce total production out of proportion to their duration.

Temperature

Alabama extends 330 miles northward from the Gulf of Mexico, covering nearly 5 degrees of latitude. Thus, latitude, altitude, and nearness to a large body of water have varying influences upon temperatures that in turn help to determine the kinds of farming followed.

Alabama has a relatively mild climate. Extreme summer heat and extreme winter cold very rarely occur. The average annual minimum temperature varies from about 5 degrees above zero in the northern part of the State to about 30 degrees above at the coast. Temperatures seldom remain below the freezing point for

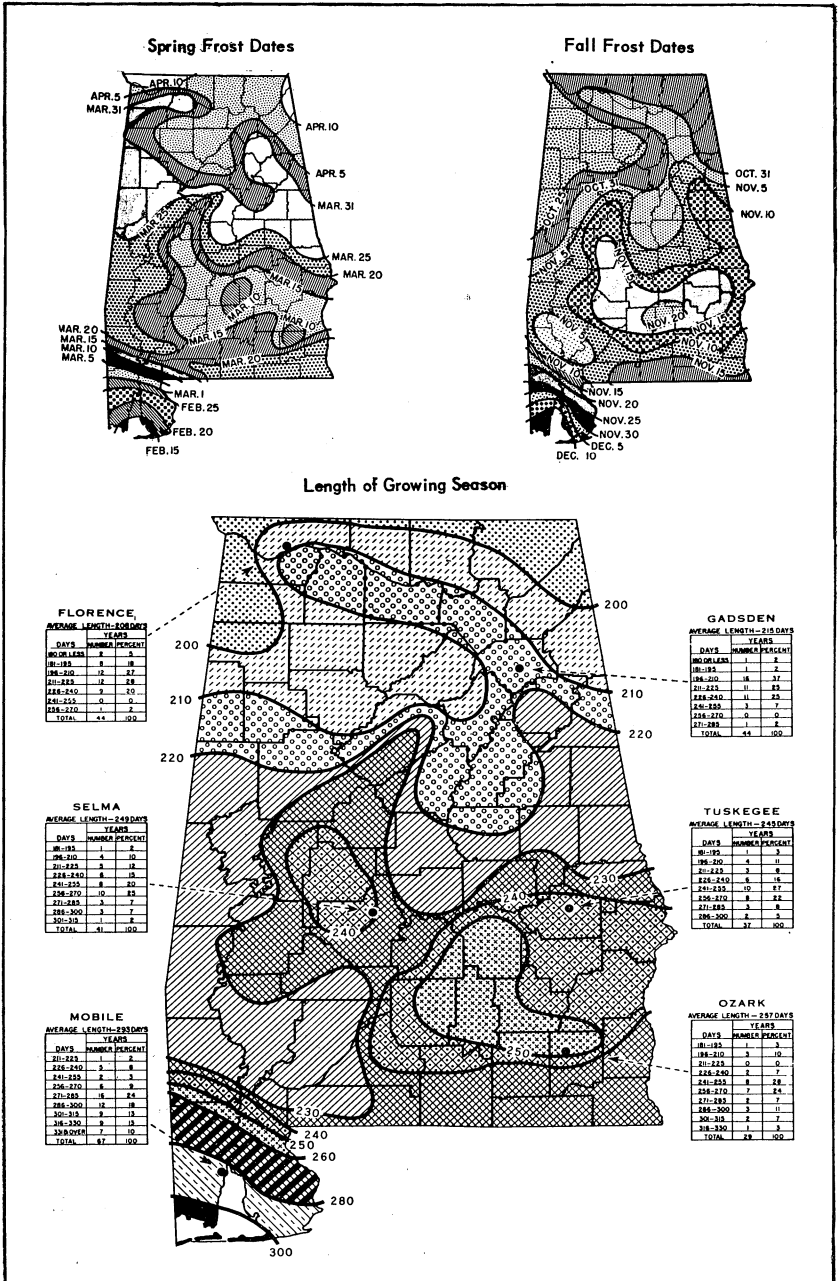


FIGURE 4. Average dates of first and last killing frosts and average lengths of growing seasons in Alabama.

a full day in the southern third of Alabama; in the central and northern areas, sub-freezing temperatures are maintained on an average throughout 1 to 5 full days each winter. Average dates of last killing frosts in the spring and first killing frosts in the fall are shown in Figure 4.

Hardy winter vegetables usually live in gardens and grow slowly throughout the winter in the southern half of the State. Winter legumes and small grains are seldom killed or seriously injured in winter in most parts of the State if proper practices are followed. Some citrus fruits are grown near the coast but the risk of freezing is high. Growing seasons vary from about 200 days near the Tennessee border to about 300 days at the coast, Figure 4.

Mild temperatures present certain problems that might be less severe if winters were more rigorous. The ground is seldom frozen long enough or deep enough to check erosion. Temperatures often are not low enough in winter to kill many insect pests and disease organisms, and mild winters are often detrimental to fruit crops.

BIOLOGICAL FACTORS

Not only have biological factors been significant in determining the character of Alabama's agriculture, but, in many instances, they have been responsible for a substantial reduction in farmers' incomes. Insect pests, plant diseases, and weed infestations, in some instances, have prevented normal development, and consequently limited production of certain crops, which over a period of time have caused changes in the actual or relative importance of crops. Likewise, production of livestock and the relative importance of various classes of livestock have been affected by animal diseases and parasites.

Specific biological factors that limit farming in Alabama are not always readily apparent. Biological factors have influenced acreages devoted to various crops in the State, but they are more difficult to measure or to evaluate than are physical factors. Constantly changing conditions other than those of a biological nature have also made it difficult to isolate changes due to biological factors from those due to non-biological factors. In addition, farming in any given area is so constituted as to hold these factors and their influences in check at or near the economic minimum. Biological factors would become potent forces should cropping or livestock organizations in such areas deviate from this

optimum. Biological factors generally can be controlled wholly or in part; their influence on choice of enterprises, therefore, may depend largely upon the costs of control and its relative effectiveness.

The detrimental effects of biological factors on crops and livestock are difficult to measure. In some instances, as in the case of cotton, data are available which show the reduction from "normal" or "full" yield from specific causes, some of which are biological, Figure 5. A "normal" or "full" yield is that yield per acre which is expected when the growing season is favorable and insects and diseases have caused little or no damage. During the 42 years 1909 to 1950, insects and diseases were responsible, on the average, for a 17.5 per cent reduction in cotton yields, or slightly more than half the reduction due to all causes. Of the 17.5 per cent reduction from "full" or "normal" yields due to all biological factors, 13.9 per cent was due to the boll weevil, 2.0 per cent to plant diseases, and 1.6 per cent to other insects. Of the 15.6 per cent reduction resulting from non-biological causes, 5.4 per cent was due to excessive moisture, 5.3 per cent to defi-

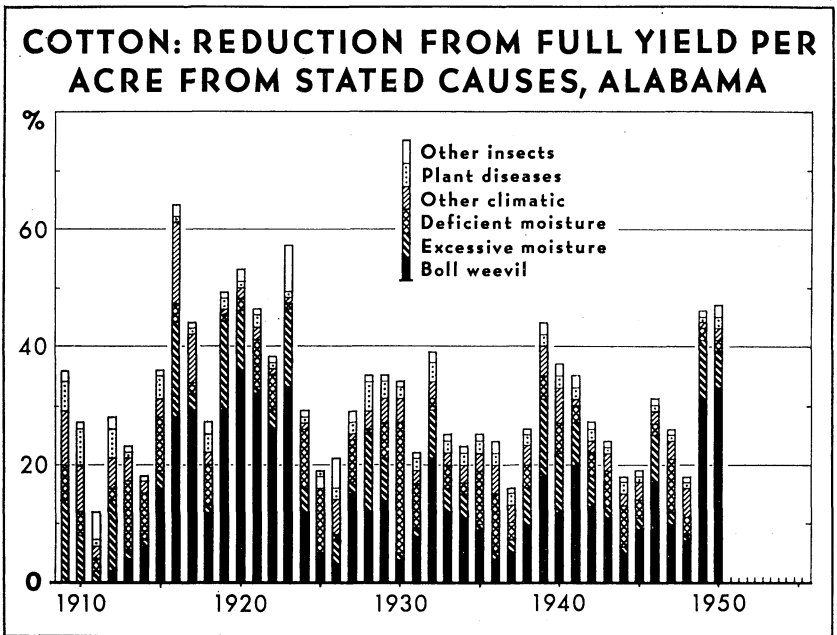


FIGURE 5. Reduction from normal yield of cotton per acre from specified causes, Alabama, 1909-1950.

cient moisture, 3.4 per cent to other climatic conditions, and 1.5 per cent all other causes. In terms of yields per acre, therefore, plant diseases and insects alone were responsible for an average annual reduction of 43 pounds of lint cotton per acre from 1909 to 1950. On the basis of cotton acreage harvested annually for this period, this reduction amounted to 223,000 bales per year in Alabama.

In the case of shifts from cotton to corn and from corn to cotton in Alabama from 1909 to 1929, non-biological difficulties apparently were sufficiently unimportant to permit an analysis of the effects of the boll weevil on these shifts. Thus, from 1909 to 1914, when normal cotton yields were reduced only 2 per cent because of the boll weevil, cotton acreage was 32 per cent larger than corn acreage; from 1915 to 1923, when the boll weevil reduced cotton yields by 27 per cent, acreage in cotton was 22 per cent smaller than corn acreage; and from 1924 to 1929, when cotton yields were reduced 10 per cent by the boll weevil, cotton acreage was 22 per cent larger than corn acreage.

Since the early 1930's, trends in cotton and corn acreage have behaved in a pattern quite different from those of earlier years. (See Figure 7.) Effects of the boll weevil on these trends, therefore, have not been as important as in earlier years.

Although data on reductions in yields from biological factors for crops other than cotton are not available, the evidence that exists indicates that losses in yields of other Alabama-produced crops because of insects and diseases were substantial during the last half century.

Damage to most crops resulting from weed infestations has been relatively small. In most instances, weeds can be controlled. During recent years, losses in cotton yields attributable to weeds and certain other miscellaneous causes averaged only 1.5 per cent. Data on losses from weeds in other crops are not available, but it is probable that such losses were less important than those due either to plant diseases or to insects.

Diseases and parasites are hazards that must be reckoned with in the production of livestock. In general, a relatively warm and humid climate increases these hazards. Undoubtedly, internal parasites, lice, screw worms and other species of flies, and mosquitoes have substantially decreased the income from livestock in Alabama. Available data, however, do not permit any valid assessment of their total damage. The effects of unfavorable biological factors are significantly conditioned by management, sani-

tation, and nutrition practices. Consequently, the results of local combinations of unfavorable factors sometimes provide the basis for unwarranted statewide or area generalizations as to the amount of damage caused by such biological factors.

Application of the results of agricultural research has led, in recent years, to a shift of livestock from swamps and ranges onto improved pastures that are integral parts of the farm, to a general improvement of sanitation and nutrition practices, to development of more effective parasiticides and insecticides, and to adoption of systematic spraying and treatment programs. These changes materially lessen the hazards of unfavorable biological factors provided that other good management practices are followed.

ECONOMIC AND SOCIAL FACTORS

Economic factors influence the choice of enterprises that will contribute most to a farmer's earnings from among those enterprises adapted to prevailing physical and biological conditions. Modern agriculture is becoming highly commercial. Many commodities and services used by farmers are purchased or hired; a large share of the farm's production is sold. Economic factors influencing Alabama's agriculture, therefore, include supply and demand relations as affected by markets, geographic locations, transportation facilities available, and other influences, and as expressed in costs and selling prices. Costs include actual outlays for goods and services, or their imputed values. Selling prices are prices received or expected for goods and services produced on the farm, and for which the above costs have been incurred.

Prices received for farm products in Alabama are influenced by the extent and location of available **market outlets**. Only 31 per cent of the State's population was classified as rural-farm population in 1950; the remaining 69 per cent depended upon farm producers to supply their needs in farm products. But even after the needs of this 69 per cent have been satisfied, a large share of the commercial production of farm products of the State remains to be sold in other markets. Growth of large consuming centers gives farmers an opportunity to produce a wide variety of products, particularly perishable or semi-perishable products. Such centers are often responsible for truck crop and milk producing areas near cities. Orchards and small specialized fruit farms may develop for the same reason. Specialized potato, peanut, tomato, or fruit areas often owe their origins to favorable

market situations, but once developed, these specialized areas may reach out for market outlets beyond local market opportunities.

Accessibility of **transportation facilities** to certain areas of Alabama, in some instances, has influenced the types of farming carried on in these areas. This influence was perhaps of greatest importance in determining the location of many of the State's present fruit and vegetable areas. For example, it was a factor in the location of the production area in Chilton County near the main railroad and highway between Birmingham and Montgomery. It was also a factor in locating producing areas on Sand Mountain, particularly in Cullman County. No major areas of the State, however, are entirely without some hard-surfaced highways. In most of the State, the principal county roads are impassable only a relatively few days of the year, although wet weather often handicaps travel on dirt roads in heavy clay soil areas such as the Black Belt and Limestone Valley areas.

Automobiles and trucks on farms, in relation to crop areas, are less numerous in Alabama than in the United States as a whole. In 1950, automobiles were reported on only 30 per cent and trucks on 22 per cent of the farms in Alabama. Concentrations of trucks were in commercial vegetable-growing areas.

Railway mileage is proportionally greater in Alabama in relation to crop acres than in the United States as a whole. Alabama's farmers are fairly well served by railroads. Every county has some railway mileage within its borders; the State's railway network performs a highly valuable service to farmers throughout the State. Prior to the development of improved highways and the introduction of motor trucks, it was difficult, expensive, and often impossible for farmers to find satisfactory market outlets for their perishable or semi-perishable products unless they were near railroads that provided frequent service. Even though extensive highway facilities exist in most parts of the State, the main commercial fruit and vegetable production areas are located near railroads that can provide fast through-service to important northern and eastern markets. This, however, does not minimize the importance of motor trucks. In recent years, trucks have been of increasing importance in the distribution of fruits and vegetables, to both nearby and distant markets. They have tended to encourage expansion of production areas to points beyond those adjacent to railroads.

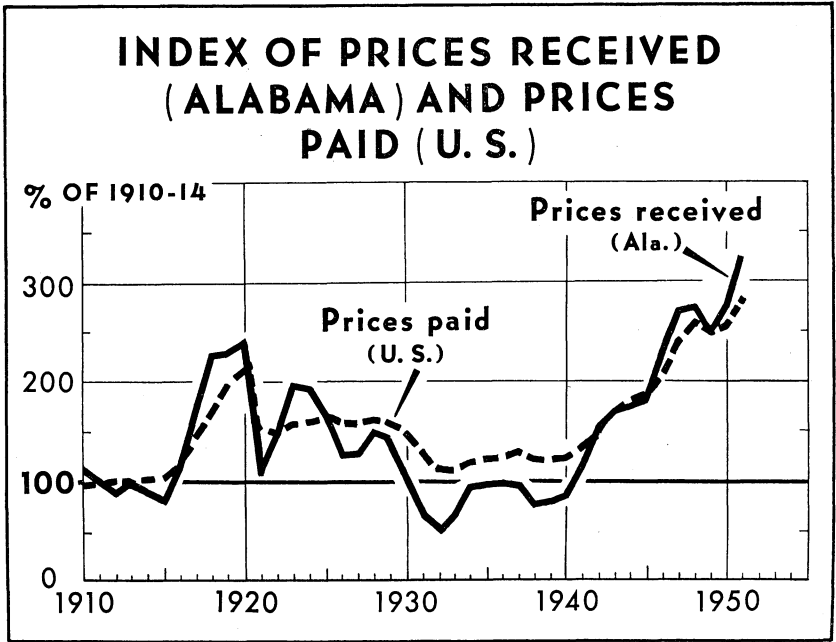


FIGURE 6. Index of prices received and prices paid, Alabama, 1910-1951.

In the case of certain staple and non-perishable agricultural commodities such as cotton, transportation has been a minor problem and has not affected the production area to any marked extent. The same has been true in the production of cattle and hogs. It is largely with perishable and semi-perishable products marketed at distant points that the time element is of such importance that transportation facilities have greatly affected the location of areas where such crops are produced.

The economic factors of **costs and returns** are closely inter-related with physical and biological factors in determining commercial enterprises in different parts of the State. The relative profitableness of various enterprises adapted to an area is determined by relative yields or production obtainable; by relative amounts of land, labor, and materials needed to produce a given unit of each product; and by relative costs incurred and prices received for products. The relationship between prices received by Alabama farmers and prices paid by farmers³ for the period 1910 to 1951 is shown in Figure 6.

³ Prices paid refer to the index of prices paid by farmers for the United States as a whole.

Because modern civilization is characterized by specialization and exchange, **farm population** is a better indication of the agricultural importance of an area than total population. Even this may be misleading, however, because the effects of standards of living are not considered. When farm population is expressed as a percentage of total population, a better measure of the prominence of agriculture is obtained.

Table 1 indicates a consistent decrease in the relative importance of agriculture as a source of employment in Alabama since 1920. In 1920, 57 per cent of the State's total population lived on farms; in 1950, only 31 per cent lived on farms.

TABLE 1. TOTAL POPULATION AND FARM POPULATION, BY CENSUS YEARS, ALABAMA, 1920-1950

Year	Total population	Farm population	Percentage that farm population is of total
	<i>Number</i>	<i>Number</i>	<i>Per cent</i>
1920	2,348,000	1,335,000	56.8
1930	2,646,000	1,336,000	50.5
1940	2,833,000	1,339,000	47.3
1950	3,062,000	961,000	31.4

Change in **number of farms** is another index of the attractiveness of agriculture in an area. When agriculture is comparatively more profitable than industry, unsettled persons move to farms. Correspondingly, when industry affords a more favorable wage, unsettled farm people seek employment off the farm.

Changes in numbers of farms may or may not affect total acres of crops. If increases or decreases in numbers of farms are accompanied by corresponding contractions or expansions in **sizes of farms**, then total acreage of all crops would remain the same. Changes, however, do not usually occur in this manner. The typical farm in Alabama is a family farm on which the major portion of all work is done by the operator and his family, with some additional help during periods of peak labor requirements. Over a period of time, farm operators tend to adjust their business units so that they can be handled conveniently with family labor.

When an increase in number of farms is accompanied by a decrease in size of farms, an intensification of farm enterprises often results. Intensification may be accomplished by growing a higher acreage of cotton or other intensive crops or livestock enterprises. This process requires more labor, which would not likely be available because of the increased desires of workers to become operators. When a decrease in number of farms is accompanied by

an increase in size of farms, more extensive farm enterprises are made possible. This may be accomplished by growing more grains, forage, pasture, and other crops that require less labor. Such a process, however, depends upon the introduction and use of farm machinery, which is not well adapted to unskilled labor, rough topography, and small irregular fields.

Table 2 indicates the number of farms, the total acreage operated per farm, and acreage of improved land per farm in Alabama for census years 1900 to 1950.

TABLE 2. TOTAL NUMBER OF FARMS, ALL LAND AND IMPROVED LAND IN FARMS, AND ACREAGE OF ALL LAND AND IMPROVED LAND PER FARM, BY CENSUS YEARS, ALABAMA, 1900-1950

Year	Number of farms	All land in farms	Improved land in farms ¹	Acreage per farm	
				All land	Improved land ¹
	(1,000)	(1,000 acres)	(1,000 acres)	(Acres)	(Acres)
1900	223	20,685	8,655	92.7	38.8
1910	263	20,732	9,694	78.9	36.8
1920	256	19,577	9,893	76.4	38.6
1930	257	17,555	8,318	68.2	32.4
1940	232	19,143	10,397	82.6	44.8
1950	212	20,889	8,722	98.8	41.2

¹ As defined by the U. S. Census Bureau.

Other economic factors affect types of farming in various parts of the State, but some of them, particularly legislation and inventions, appear to aid in intensifying differences already existing in types of farming rather than in altering types. Laws for encouragement of forestry aid most in natural forest districts. Agricultural legislation, on the whole, tends to encourage pasturage where it is best adapted and intensive cropping where crops are best adapted. Tractor developments and mechanization usually encourage more intensive cropping where such cropping already exists because of topography and soil conditions. Scientific information regarding fertilizer adaptability has undoubtedly led to rapid expansion of cropping in some areas that would otherwise have been more slowly developed, or that might have been left to a greater extent to forestry uses. Further development along comparable lines may change types of farming in the future, but it seems probable that such factors will not introduce sudden and radical changes in many areas of the State.

The agricultural development of any area and the choice of enterprises in that area are to some extent affected by the **human factor** of farm people themselves, and by the economic and **social**

forces and institutions associated with them. Important among these are the effects of customs and traditions that are frequently associated with nationality differences. Local or personal skills, preferences, and aptitudes may lead to the adoption of types of organization on some farms that differ considerably from those of the surrounding area. In some cases, tenancy is both a cause and an effect of the types of farming followed. Relatively high real estate values, taxes, mortgage indebtedness, and similar associated factors may necessitate types of farming too exploitative to safeguard the continued productivity of land. Leadership of outstanding farmers, professional agricultural workers, or others may influence the adoption of certain enterprises or practices in local areas. In general, however, social factors tend only to cause or to promote development of local variations in types of farming.

HISTORICAL BACKGROUND OF ALABAMA'S AGRICULTURE

EARLY SETTLEMENT

During the sixteenth century, Spanish explorers, notably De Soto, made explorations along the Gulf of Mexico and inland into what is now Alabama. The first permanent settlement in Alabama was in 1711 at what is now Mobile. Few settlers made their homes in interior Alabama until after the Revolutionary War when a number from the Atlantic seaboard began to settle along the Alabama and Tombigbee rivers. The first great influx of settlers started shortly before Alabama became a State in 1819.

The wealthier settlers who owned slaves usually occupied river terrace lands and later black prairie lands, while others resided in adjoining hillier sections. In 1820, Alabama's population numbered 127,901, of which about a third were Negroes; by 1840, population had increased to about 590,000, of which nearly half were Negroes; and in 1860, it was approximately 964,000, with about the same proportion of Negroes as in 1840. During this period, population density per square mile increased from 2.5 in 1820 to 11.5 in 1840 and to 18.8 in 1860.

In 1820, Alabama's population was 100 per cent rural. By 1860, about 5 per cent of the State's population was urbanized due principally to the rise and growth of small towns and to some extent to a general migration from rural to urban centers. With the exception of the mountainous areas, some slaves were held

in most parts of Alabama, but they were more numerous in the level river terrace and black land areas of the State, where the colored population often outnumbered the white.

EARLY AGRICULTURE IN ALABAMA⁴

The first farmers in Alabama were Indians. Their principal crops were corn, beans, peas, pumpkins, and squash. In his expedition through the Indian country in 1540, De Soto left hogs and cattle at some of the villages, thereby laying the foundation for future production of these animals. The early white settlers produced vegetables, grains, and livestock for home use, and indigo, tobacco, and corn for export. For several years subsequent to 1777, exports from Mobile consisted principally of indigo, indigo seed, corn, tobacco, rice, cattle, tallow, raw hides, salted wild beef, salt fish, and such forest products as squared timbers and cedar posts. Cotton was not listed as an export at that time but some mention was made of its being grown. Before the end of Spanish rule, however, cotton and corn were listed as principal exports.

After invention of the cotton gin in 1793, cotton production increased tremendously, especially on the fertile valley lands of the Alabama, Tennessee, and Tombigbee rivers. Slave owners settled principally in these river basins where large tracts of land suitable for production of cotton were available. Small farmers formed a majority of the population but were concerned chiefly with producing meat and bread for home use. Black prairie land was shunned at first because of its sticky soil and dense growth of canebrake, but between 1830 and 1860, when most of the desirable land in the river terraces and adjacent ridges had been occupied, planters settled on the black prairie land which later became the principal cotton-producing section of the State.

The bulk of the small farm owners occupied the less desirable lands of the State. "The small farmer's economic motives and methods of living made expansive fields and access to market much less important than to the planter. . . . Access to the cross-roads store and a few trips to a plantation town sufficed his needs for commercial contact."⁵ Small farmers soon succumbed to the allurements of cotton. In fact, the crop lien system made it im-

⁴ This discussion is based on "History of Alabama and Her People" by Albert Benton Moore; "Alabama" by W. Brewer; and "History of Alabama" by Albert J. Pickett.

⁵ "History of Alabama and Her People," by Albert Benton Moore; pp. 389 and 390.

possible for some, perhaps a considerable number, to make a choice of crops, because the village merchant who had advanced their supplies often forced them to grow cotton, even to the practical exclusion of food and feed crops.

AGRICULTURAL TRENDS SINCE 1860

The Civil War impoverished the State, disrupted its agriculture, and left many new and difficult problems for Alabama's agricultural industry to solve. Following the reconstruction period, the sharp upward trends in population, production, and related factors were resumed. The nature and extent of agricultural production and data on population, number and size of farms, land in farms, and other related data are shown in Table 3 and Figures 7 through 13 for the period 1860 to 1950 inclusive.⁶

Population and Related Data

From 1860 to 1950, Alabama's total population increased from less than 1 million to more than 3 million persons. Population density per square mile increased steadily throughout this period. From an average of 18.8 persons per square mile in 1860, population density increased to 60.0 persons per square mile in 1950. At the same time, the percentage of white population increased from 55 to 68 per cent of the total, Table 3. The decrease in percentage of rural population from 95 per cent in 1860 to 56 per cent in 1950 indicates the rate and extent of urbanization in Alabama throughout this period.

Even though the increase in rural population did not keep pace with that of the total, the actual number more than doubled between 1860 and 1940, but decreased somewhat in 1950. Acreage of land in farms, though fluctuating, showed little change; thus, rural population per 100 acres of farm land increased from 4.8 in 1860 to 10.8 in 1930, and then decreased to 8.2 in 1950. The percentage of total farm land area that was improved increased from 33 per cent in 1860 to 42 per cent in 1950. Rural population per 100 acres of improved farm land increased from 14.3 in 1860 to 22.9 in 1930, then declined to 19.7 in 1950. Vast increases in scientific and technological developments in agriculture since 1860, and particularly during the last two decades, coupled with these facts, indicate that Alabama's farm labor supply was relatively more efficient, more effective, and produced a greater out-

⁶ For some of the items discussed in this section, trend data do not begin with 1860 because such data were not reported for earlier years.

TABLE 3. POPULATION, LAND IN FARMS, NUMBER AND SIZE OF FARMS, TENURE, TRACTORS ON FARMS, AND OTHER RELATED DATA, ALABAMA, 1860-1950

Item	Unit	1860 (June 1)	1870 (June 1)	1880 (June 1)	1890 (June 1)	1900 (June 1)	1910 (Apr. 15)	1920 (Jan. 1)	1930 (Apr. 1)	1940 (Apr. 1)	1950 (Apr. 1)
Total population	1,000 persons	964	997	1,263	1,513	1,829	2,138	2,348	2,646	2,833	3,062
Population per square mile	Number	18.8	19.4	24.6	29.5	35.7	41.7	45.8	51.8	55.5	59.9
White population	1,000 persons	526	521	663	834	1,001	1,229	1,446	1,701	1,850	2,080
Per cent of total population that was white	Per cent	54.6	52.3	52.5	55.2	54.8	57.6	61.6	64.3	65.3	67.9
Rural population	1,000 persons	915	934	1,194	1,361	1,612	1,768	1,839	1,902	1,977	1,721
Per cent of total population that was rural	Per cent	94.9	93.7	94.6	89.9	88.1	82.7	78.3	71.9	69.8	56.2
Rural-farm population	1,000 persons	---	---	---	---	---	---	1,335	1,336	1,343	961
Persons engaged in agriculture (10 years old and over)	1,000 persons	---	---	---	370	513	665	500	493	403 ¹	325 ¹
Per cent of gainfully employed persons in agriculture	Per cent	---	---	---	68.3	67.2	66.6	55.0	48.0	45.1 ¹	30.6 ¹
All land in farms	1,000 acres	19,105	14,961	18,855	19,853	20,685	20,732	19,577	17,555	19,143	20,889
Per cent of total land area in farms	Per cent	58.2	45.6	57.4	60.5	63.0	63.2	59.7	53.5	58.6	63.9
Improved land in farms ²	1,000 acres	6,386	5,062	6,376	7,698	8,655	9,694	9,893	8,318	10,397	8,722
Per cent of total farm land area improved	Per cent	33.4	33.8	33.8	38.8	41.8	46.8	50.5	47.4	54.3	41.8
Total number of farms	1,000 farms	55	67	136	158	223	263	256	257	232	212
Average size of farms	Acres	346	222	139	126	93	79	76	68	83	99
Rural population per 100 acres farm land	Number	4.8	6.2	6.4	6.9	7.8	8.5	9.4	10.8	10.3	8.2
Rural population per 100 acres improved land	Number	14.3	18.4	18.7	17.7	18.6	18.2	18.6	22.9	19.0	19.7
Persons engaged in agriculture per 100 acres farm land	Number	---	---	---	1.9	2.5	3.2	2.6	2.8	2.1	1.6
Persons engaged in agriculture per 100 acres improved land	Number	---	---	---	4.8	5.9	6.9	5.1	5.9	3.9	3.7
Per cent of farmers who were owner-operators	Per cent	---	---	---	51.4	41.9	39.5	41.8	35.1	41.2	58.6
Per cent of farm land operated by owner-operators	Per cent	---	---	---	---	65.6	64.1	61.9	53.6	50.8	77.4
Number of tractors on farms	Number	---	---	---	---	---	---	811	4,664	7,638	45,962

¹ Based on persons employed over 14 years of age.

² Includes all land regularly tilled or mowed, land in pastures that has been cleared or tilled, land lying fallow, land in gardens, orchards, vineyards, nurseries, and except in 1930, land occupied by farm buildings.

put per worker during the last two decades than during any similar period in the history of the State.

The number of persons employed in agriculture in Alabama increased to 1910 when a total of 665,000 people 10 years old or over were so employed; since 1910, the number has steadily declined and in 1950 it was less than half that reported in 1910. As a percentage of all gainfully employed persons in the State, Alabama's agricultural employment has decreased from 100 per cent in the State's early days to only 30 per cent in 1950.

The total number of farms in Alabama in 1860 was 55,000. This number increased to a peak of 263,000 in 1910, and has since decreased to 212,000 in 1950. The average size of farm, however, decreased from a total of 346 acres of farm land per farm in 1860 to 68 acres in 1930; since 1930, farm land acreage per farm has steadily increased and in 1950 averaged 99 acres per farm. Closely associated with recent changes in size of farms has been the tremendous rate of change in farm mechanization on Alabama farms. Evidence of this mechanization is the number of tractors on farms. In 1920, Alabama farmers reported only 811 farm tractors; in 1950, the number reported had increased to 45,962.

Acreages of Major Crops

Acreages devoted to specific crops and trends in these acreages are shown in Figures 7 through 9. Variations in acreages of the crops shown can be largely attributed to several or all of the following factors: relative comparative production advantages, relative prices received, scientific and technological changes and developments, customs or habit, yields, insect and disease damage, and more recently, governmental control programs and public price policies affecting agriculture.

From the standpoint of acreage, **cotton** and **corn** have long been the most important crops produced in Alabama. Their combined acreage occupies more than two-thirds of the harvested cropland acreage of the State, Figure 28. The acreages in cotton and corn increased at about the same rate from 1867 to 1895, and then cotton acreage increased much more rapidly than corn until 1914, after which the acreage devoted to the two crops varied inversely, the one about offsetting the other, until the late 1930's, Figure 7. Beginning in the late 1930's and continuing to the present, acreages of both crops have declined at about the

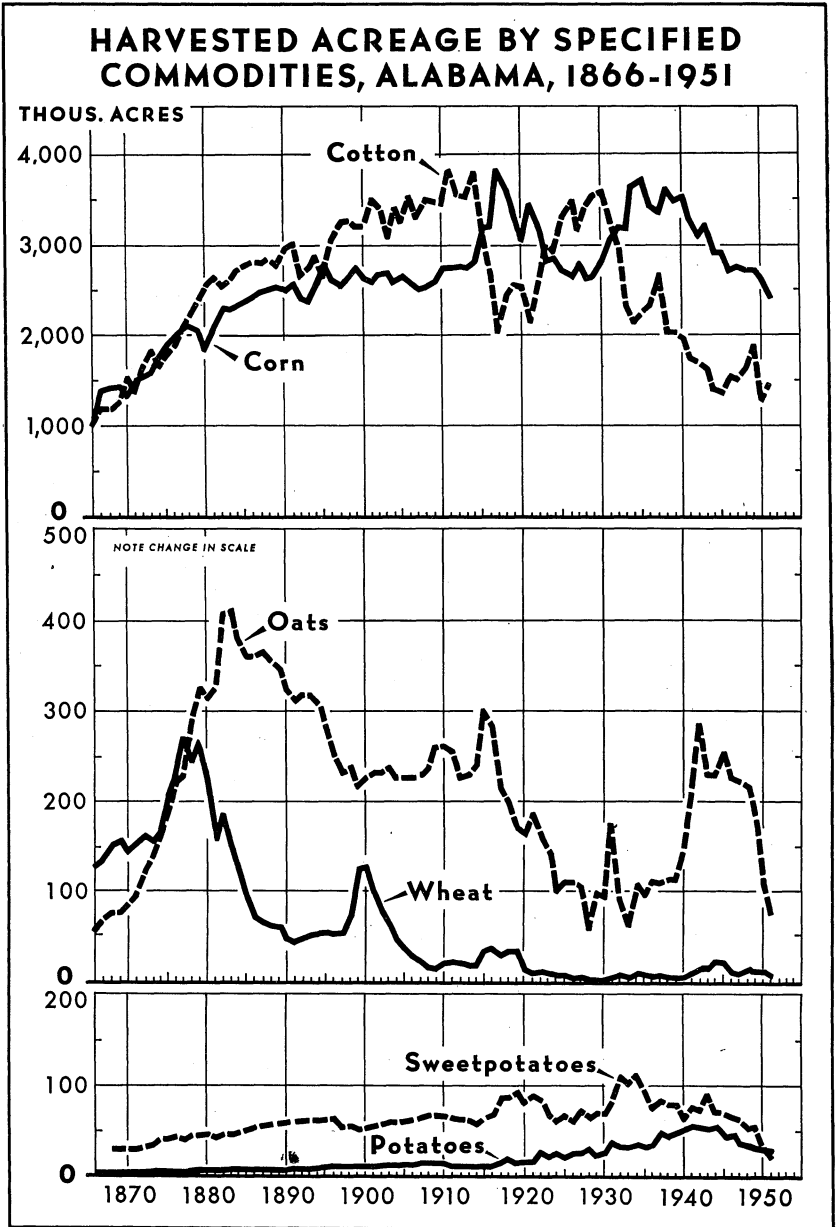


FIGURE 7. Harvested acreage of specified crops, Alabama, 1866-1951.

same rate and by about the same amount. In recent years, cotton acreage has averaged about 1.5 million acres, the lowest point since around 1870; corn acreage has averaged about 2.7 million acres in recent years.

The total acreage of land devoted to **all hay** crops was negligible until about 1900. Since that date, acreage has increased from about 100,000 acres to nearly a million acres annually. Individual crops contributing to this increase and their relative importance are shown by the data in Figure 8, covering principal hay crops from 1924 to 1950. These data emphasize recent important changes in the composition of Alabama's total hay crop. Apparently a shift in the types of hay crops grown has been underway since about 1940. Acreage devoted to perennial hay crops such as alfalfa and lespedeza has expanded. At the same time, acreage devoted to annual hay crops such as soybeans and cowpeas has been sharply reduced. Peanut hay, an important by-product of harvested peanuts in southeastern Alabama, fluctuates with the acreage of peanuts harvested annually, Figures 8 and 9.

Small grain acreage has never been high in Alabama, Figure 7. **Oats**, the principal small grain grown in the State, supplement corn as an important feed for workstock and also for cattle. The annual acreage of oats harvested reached a peak of 410,000 acres in 1883 and after that date declined to an average of 109,000 acres for the 10-year period 1929-38. Since that time, oat acreage harvested has about doubled, averaging nearly 200,000 acres in most recent years. **Wheat** acreage also declined rapidly after reaching a maximum of 270,000 acres in 1877. The average acreage in wheat for the period 1929-38 was only 5,400 acres. As in the case of oats, wheat acreage harvested has increased in recent years. Most of Alabama's wheat is grown as a farm family maintenance crop.

Sweetpotato acreage increased steadily, with little annual fluctuation, from less than 30,000 acres in 1868 to nearly 70,000 acres in 1916; since that time annual fluctuations in acreage have been more violent and more responsive to changes in economic and physical conditions, Figure 7. In recent years, sweetpotato acreage has averaged about the same as 30 years earlier. Sweetpotatoes are important as a farm family maintenance crop in Alabama, although in recent years, part of the State's production has been commercial. **Irish potatoes**, important in all sections of the State as a farm family maintenance crop, and particularly im-

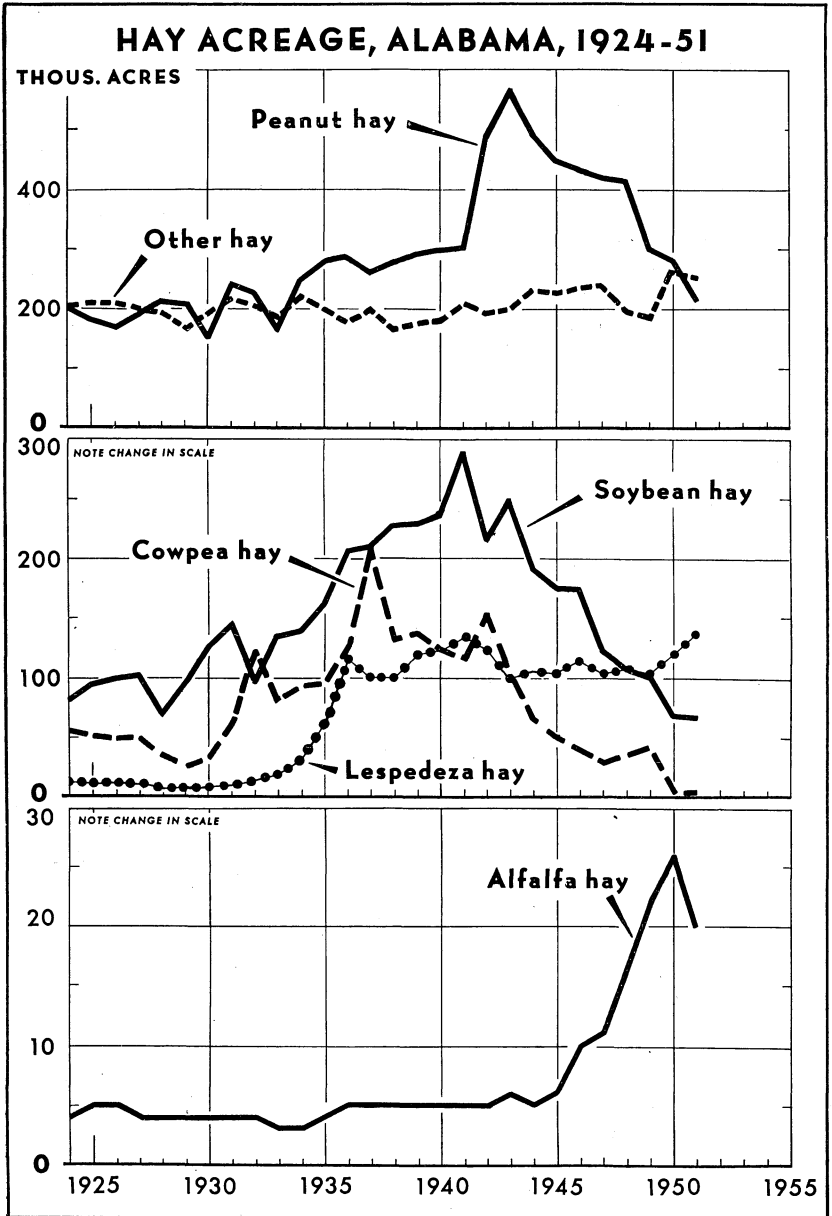


FIGURE 8. Harvested acreage of specified hay crops, Alabama, 1924-1951.

portant as a commercial crop in the Gulf Coast Area, occupied in recent years about two-thirds as much land as sweetpotatoes. Acreage devoted to the crop has steadily increased from about 2,000 acres per year prior to 1870 to an average annual acreage of about 40,000 acres in recent years. The rate of increase was more rapid after 1920 than before. Most of the increase since 1920 has been in commercial production.

Historical data on acreages of most **legume crops** are not available prior to 1924, Figures 8 and 9. Most legume crops, both annual and perennial have many uses. These include seed production, grazing, hay, green manure, and silage production, or a combination of these uses. Some legumes are winter crops; others are grown only in the summer. Data in Figures 8 and 9 indicate the trends in acreages of major legume crops grown for seed production and those used for hay production. **Peanuts**, important as a cash crop in southeastern Alabama, is a dual crop; peanut hay is an important by-product of commercial peanut production in this area. The acreage of peanuts steadily increased in Alabama from about 360,000 acres in 1924 to about 750,000 during World War II; since that time acreage has declined to about 500,000 acres annually. Figure 9 indicates the wide expansion in acreage during World War II, as a result of war-time demands for oil crops. **Soybeans for beans**, also an important oil crop during the war, expanded from about 10,000 acres prior to the war to about 30,000 acres annually during the war-time period, Figure 9. Since the war, soybean acreage planted for beans has continued to increase. **Cowpeas for peas**, long a general purpose crop in all sections of Alabama, more than doubled in acreage harvested between 1924 and the period 1930-42, Figure 9. Since 1942, however, the acreage of cowpeas for peas has declined to less than the acreage reported in 1924. Changes in cowpeas for peas acreage are closely associated with acreages of cowpeas planted for hay the following year, Figures 8 and 9. **Velvetbeans**, once an important summer annual legume crop, expanded in importance from 1924 to 1940, but since 1940 has decreased in importance to the extent that the acreage in recent years was the lowest since prior to 1924, Figure 9.

Hay crops that contribute to Alabama's total hay acreage, Figure 8, have not all shown the same trends in acreage during recent years. As indicated in Figure 8, acreage of all legumes harvested for hay showed a general tendency to increase from 1924 to about 1940; the most significant increases during this period were in

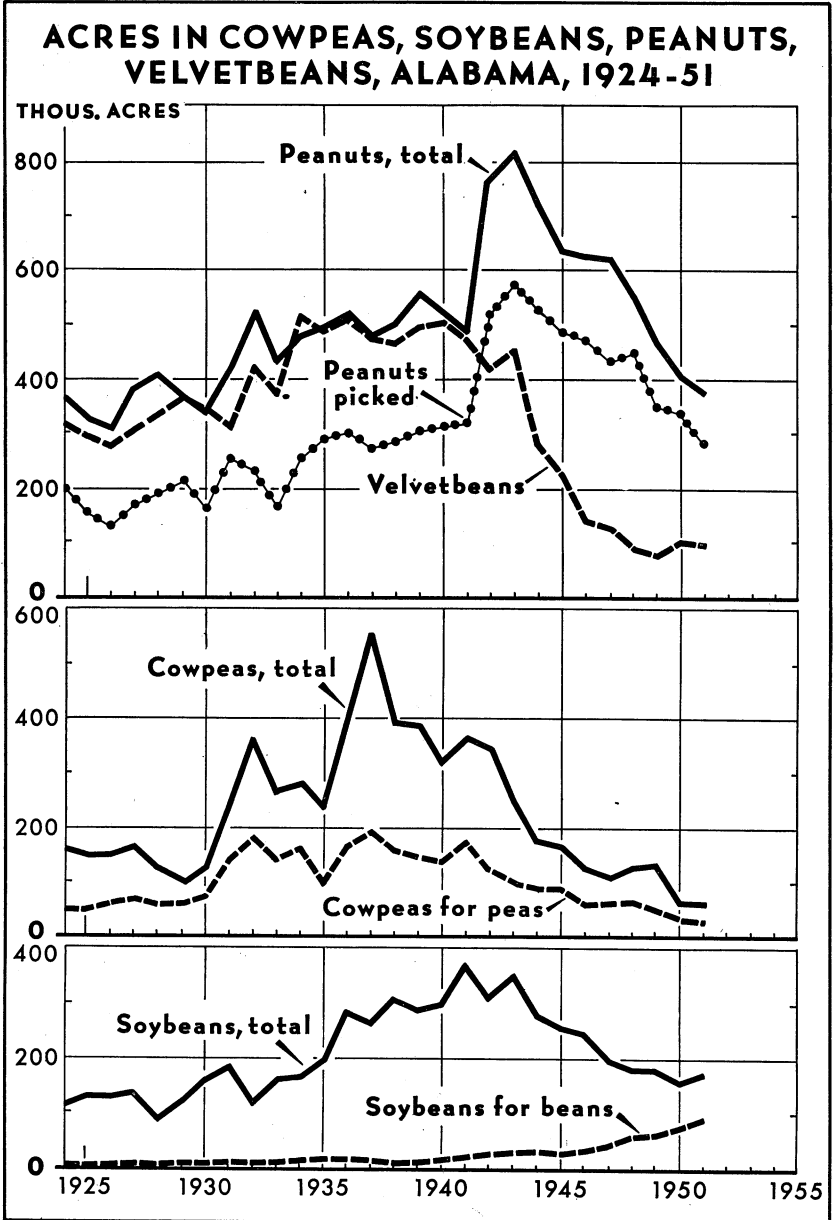


FIGURE 9. Harvested acreage of specified crops, Alabama, 1924-1951.

cowpeas, soybeans, and lespedeza for hay. Since about 1940, however, acreage of both soybeans and cowpeas planted for hay has declined tremendously. To some extent, this decrease in acreage of annual legumes harvested for hay has been offset by increases in acreages of perennial legumes cut for hay. **Winter legumes**, principally crimson clover, Austrian winter peas, and vetch, were of negligible importance in 1924; since that time, the acreage of these and other winter legumes has greatly expanded. Most perennial legume crops were of relatively minor importance until recent years. With the introduction of new and improved perennials, such as kudzu, lespedeza sericea, alfalfa, and others, acreages of perennials in Alabama are now increasing and probably will continue to expand in future years.

It is difficult, if not impossible, to ascertain the reasons for the various shifts and trends in the acreages of all of the crops mentioned. There do appear, however, to be certain plausible explanations for some of the shifts from one crop to another and for the trends in acreages of some crops. The rather rapid increase in both cotton and corn acreages from 1867 to 1895, appears to have been a part of the general agricultural expansion that took place in this period of rapidly increasing population. Continued expansion of cotton acreage from 1896 to 1914, as compared with the relatively constant corn acreage, appears to have been stimulated by increasing yields and rising cotton prices during this period. Furthermore, there was little or no increase in corn requirements for feeding livestock since a substantial reduction in hog numbers about offset the increase in horses and mules from the standpoint of feed requirements. From 1915 to the late 1930's, cotton and corn acreages varied inversely. During the first 9 years of this period, cotton acreage was substantially reduced because of damage from the boll weevil, Figure 5, and corn acreage increased rapidly. From 1924 to 1932, damage to cotton resulting from the boll weevil was reduced and cotton displaced part of the acreage previously devoted to corn. In 1932, acreage in corn was approximately equal that of cotton, but, beginning in 1933, government-control programs and other factors were largely responsible for corn acreage exceeding cotton acreage by about a third during most of the 1930's. Beginning in the late 1930's and continuing throughout World War II and post-war years, acreages of both cotton and corn have greatly decreased. Production of both crops, however, has been maintained due to increased yields per acre, Figure 10. Most of the

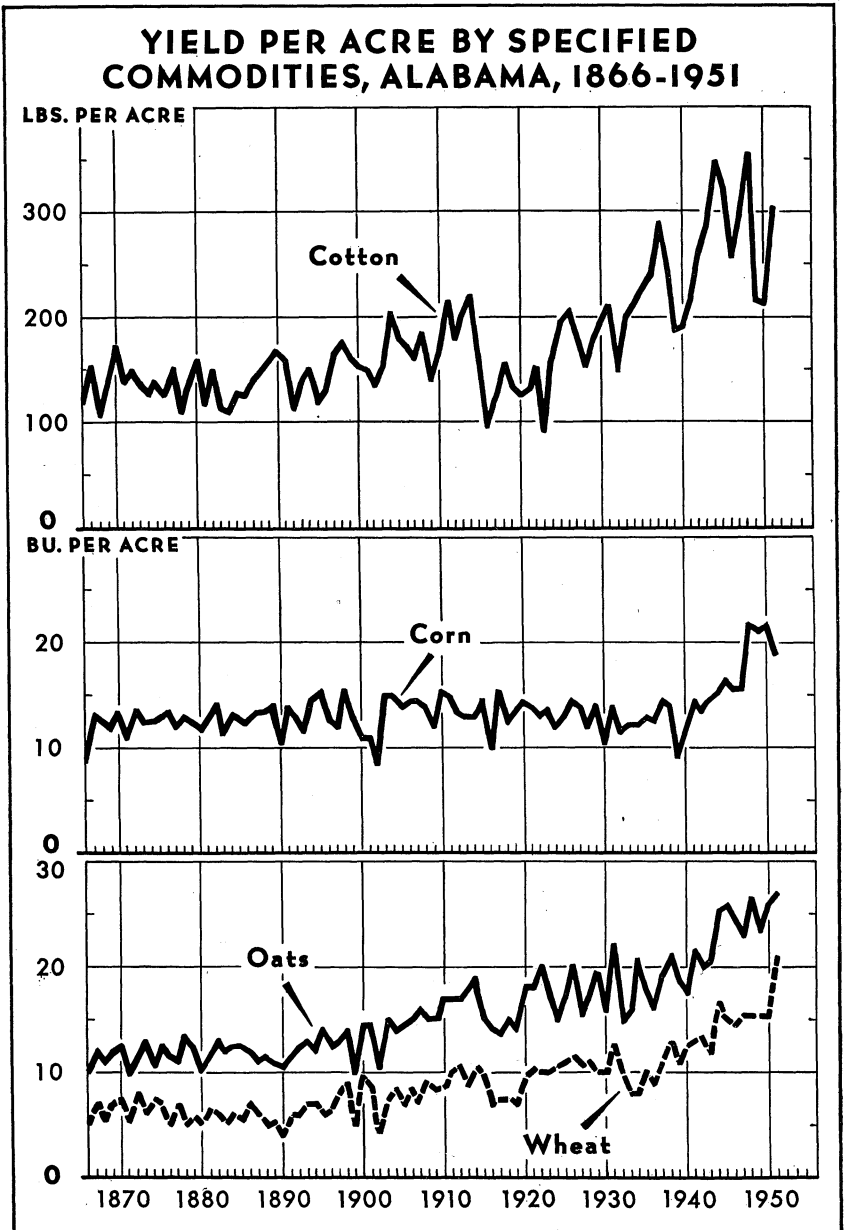


FIGURE 10. Yield per acre, specified crops, Alabama, 1866-1951.

acreage released in recent years has gone into production of feed crops other than corn.

Yields of Major Crops

Yields of most crops, for which data are available, fluctuated widely from 1867 to 1950, and certain crops showed marked trends in yields. Between the two 10-year periods 1868-1877 and 1941-1950, average **cotton** yields increased 101 per cent; **oats** 104 per cent; **wheat** 121 per cent; and **corn** 34 per cent, Figure 10.

Data on yields of some crops were not available previous to 1924; thus, it is not possible to compare the trends in yields of these crops with those of crops, the yields of which were available for the period beginning in 1867. There were, however, definite trends in the yields of certain of these crops when computed on the basis of the 5-year periods 1924-28 and 1946-50. From 1924-28 to the latter period, average **peanut** yields increased from 561 to 754 pounds per acre, or 34 per cent. Other crop yield increases between these two periods included **velvetbeans** 11 per cent; **soybeans for beans** 200 per cent; and **all hay** 11 per cent. **Cowpeas for peas** increased 5 per cent and **lespedeza hay** 13 per cent. **Alfalfa for hay** increased 38 per cent in yield per acre between the two periods. This was the largest increase of any individual hay crop.

The most important long-time factor that has tended to reduce yields has been the continuous depletion of soil fertility. There is also some evidence that insects and diseases have been responsible for a greater reduction in yields in recent than in earlier years, Figure 5. Of the several factors that have tended to maintain or to increase yields, the more important have been new and improved varieties, more extensive use of minerals and fertilizers, and improved cultural practices. Available data indicate that no climatic changes have affected the trend of crop yields over a long period of time.

Figure 11 shows the average percentage variation of annual cotton and corn yields from normal yields, by counties, for selected years.

Numbers of Major Classes of Livestock

Numbers of the principal classes of livestock in Alabama fluctuated widely from 1867 to 1950, with certain classes displaying marked trends in numbers during these years, Figure 12.

There was a definite upward trend in number of **horses and**

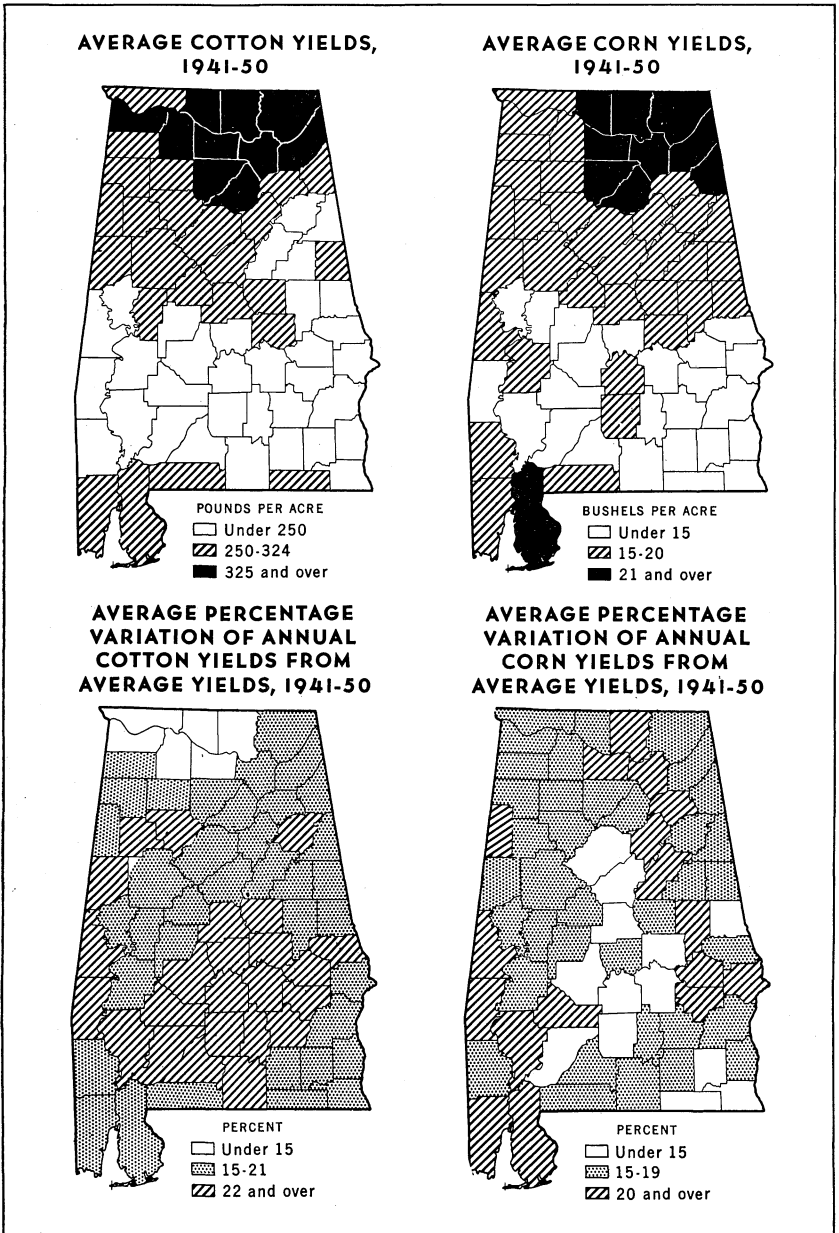


FIGURE 11. Average yields per acre and percentage variation in yields, cotton and corn, Alabama, 1941-1950.

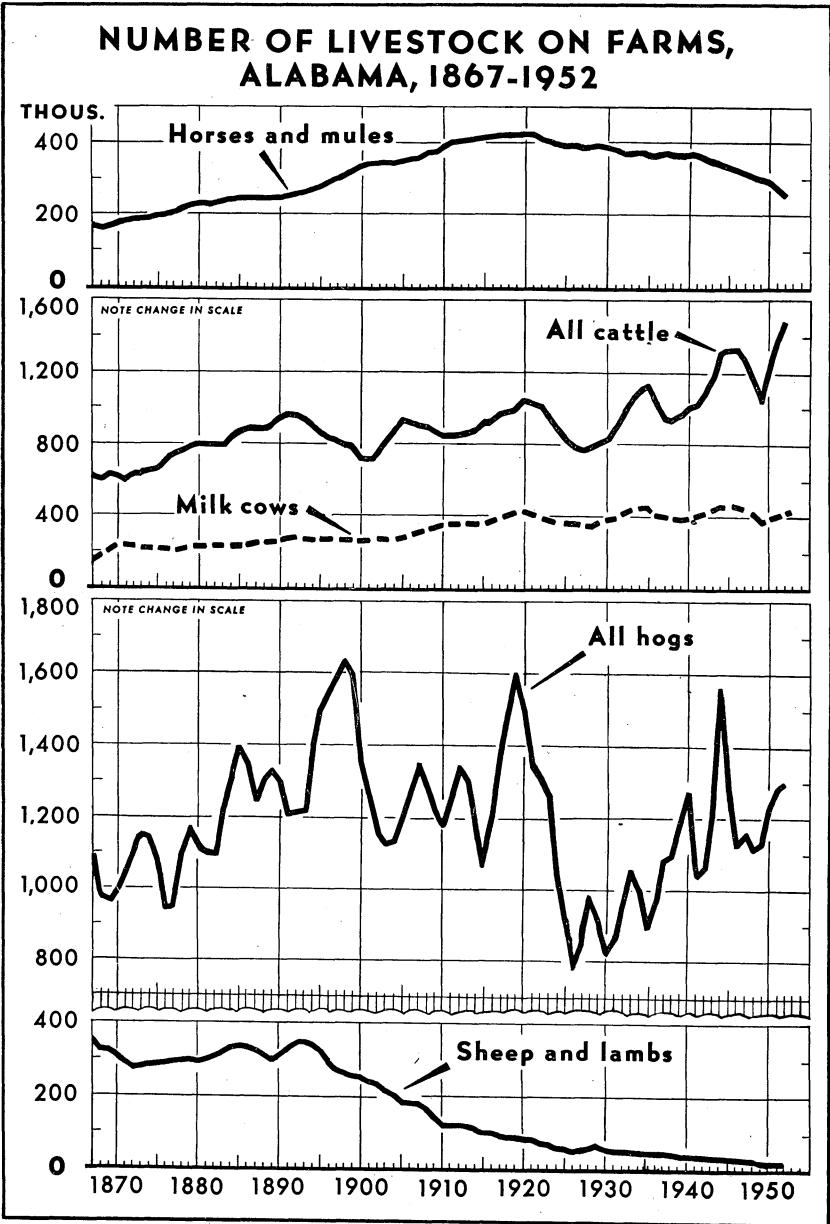


FIGURE 12. Numbers of principal classes of livestock on farms, Alabama, 1867-1952.

mules until 1917, after which the number gradually decreased to 291,000 head as of January 1, 1950, the smallest number since before 1900. This decrease in workstock may be, at least partially, attributed to introduction of tractors, trucks, and automobiles.

The trend in numbers of **cattle and calves** was upward from 1867 to 1950, with an all-time high of 1,327,000 head in 1945-46. There were marked cyclical fluctuations in cattle numbers beginning with the year 1890. The cycles ran from 14 to 16 years and followed the cycles for the United States. Numbers of **milk cows** increased somewhat more rapidly than did numbers of all cattle and calves. From 1868 to 1887, milk cows comprised an average of 30 per cent of all cattle as compared with an average of 38 per cent from 1931 to 1950.

The number of **hogs** on Alabama farms increased rapidly from 1867 to 1898, at which time a peak of 1,640,000 head was reached; after this date the number declined to a low of 776,000 head in 1926, then increased cyclically to date. From the standpoint of numbers, **sheep and lambs** were more important in Alabama than milk cows before 1899. Since that time they have declined to an average of less than 20,000 head in recent years.

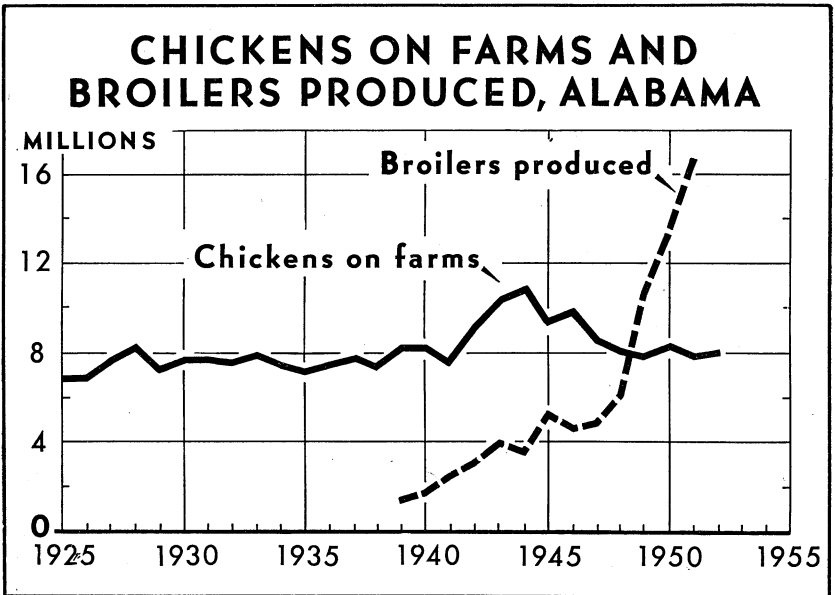


FIGURE 13. Number of chickens on Alabama farms, 1924-52, and number of broilers produced in Alabama, 1939-51.

Data on number of **chickens** on farms are not available for the years prior to 1924. For the period 1924-51, the number of chickens on farms fluctuated very little from year to year, and except for the years 1942-46, averaged about the same throughout this 27-year period, Figure 13. Production of **broilers**, a new poultry enterprise beginning in the early 1940's, has expanded tremendously during the last decade. Annual production of commercial broilers increased from less than 2 million before 1940 to more than 17 million in 1951, Figure 13.

Numbers of all classes of livestock in Alabama increased less rapidly than did population from 1870 to 1950, as shown by the fact that for the two census years 1870 and 1880 there was an average of 94 hogs, 63 cattle, 20 milk cows, and 27 sheep per 100 persons, as compared with an average for the census year 1950 of 35 hogs, 41 cattle, 12 milk cows, and less than 1 sheep per 100 persons. Alabama was less self-sufficient in regard to livestock production in 1930 than in any other previous census period following the Civil War.

CHARACTERISTICS OF ALABAMA'S AGRICULTURE

A graphic presentation of current data on population, tenure, number and size of farms, land ownership and value, farm and cropland use, crop and livestock distribution, farm costs and prices, and other related data evidences the types and variations in types of agriculture in various parts of the State. Modern economic life is characterized by frequent and rapid changes which result in shifts in the relative importance of different industries and agricultural enterprises in different areas. Farmers, however, are generally slow in adjusting their farm businesses to such changes. An analysis, therefore, of the major trends in agriculture, and of the existing situation in agriculture and in related industries, should better enable farmers to take stock of and to accelerate desirable changes already underway.

The relative prominence of different enterprises in the farm organization is determined by farmers who devote most of their efforts to the production of those commodities for which they have maximum advantages in physical and economic resources.

Early settlers, lacking first-hand knowledge on which to rely, eventually arrived at their most profitable enterprises by trial and error. Each generation passed on the fund of agricultural knowledge it had accumulated. Farmers as a whole generally

rely upon tried and known practices and seldom hastily adopt schemes of unknown merit. Shifts that occur from year to year and over a period of time are gradual and result from changes in comparative returns of competing enterprises. When these changes occur rapidly, relatively stable farm groups are often unable to make necessary adjustments, and agitation for farm relief frequently arises.

POPULATION AND RELATED DATA

Alabama's **total population** in 1950 was 3,061,743 persons. Of this number, 960,846 were classified as rural-farm. Total farm population made up only 31 per cent of the State's total population. The population density of Alabama in 1950 was 60 persons per square mile. This was somewhat less than that of most surrounding states; it varied considerably within the State.

Counties of western and southern Alabama, in general, have relatively sparse populations. In 1950, Mobile County in southwestern Alabama was second in population density with 185 persons per square mile, and Houston County in southeastern Alabama was ninth with 80 persons per square mile. Montgomery County, which is more centrally located in the State, was third in population density with 176 persons per square mile, and Jefferson County in the north-central part of the State, was first with 500 persons per square mile. All other of the first 15 counties in population density were located in the northern or eastern parts of the State.

Population estimates for Alabama for 1950 indicate that total population increased 8.1 per cent between 1940 and 1950. During this period, urban population increased 43.5 per cent while rural population decreased 13.0 per cent and farm population decreased 28.4 per cent.

The areas of most rapid increases in population have been city areas, industrial areas, some of the more level mountainous areas, and the Gulf Coast Area. Decreases have taken place in several Black Belt counties, and, since 1920, in practically all rural sections of the Piedmont counties. Population changes in rural areas appear to reflect changing farming conditions. A trend toward livestock farming has lessened the need for farm labor in the Black Belt. Soil erosion and increased opportunities for employment in local cotton mills, probably have led many of the younger members of the farm population to leave farms in the Piedmont. Adaptability of some of the more level ridge tops of the Appa-

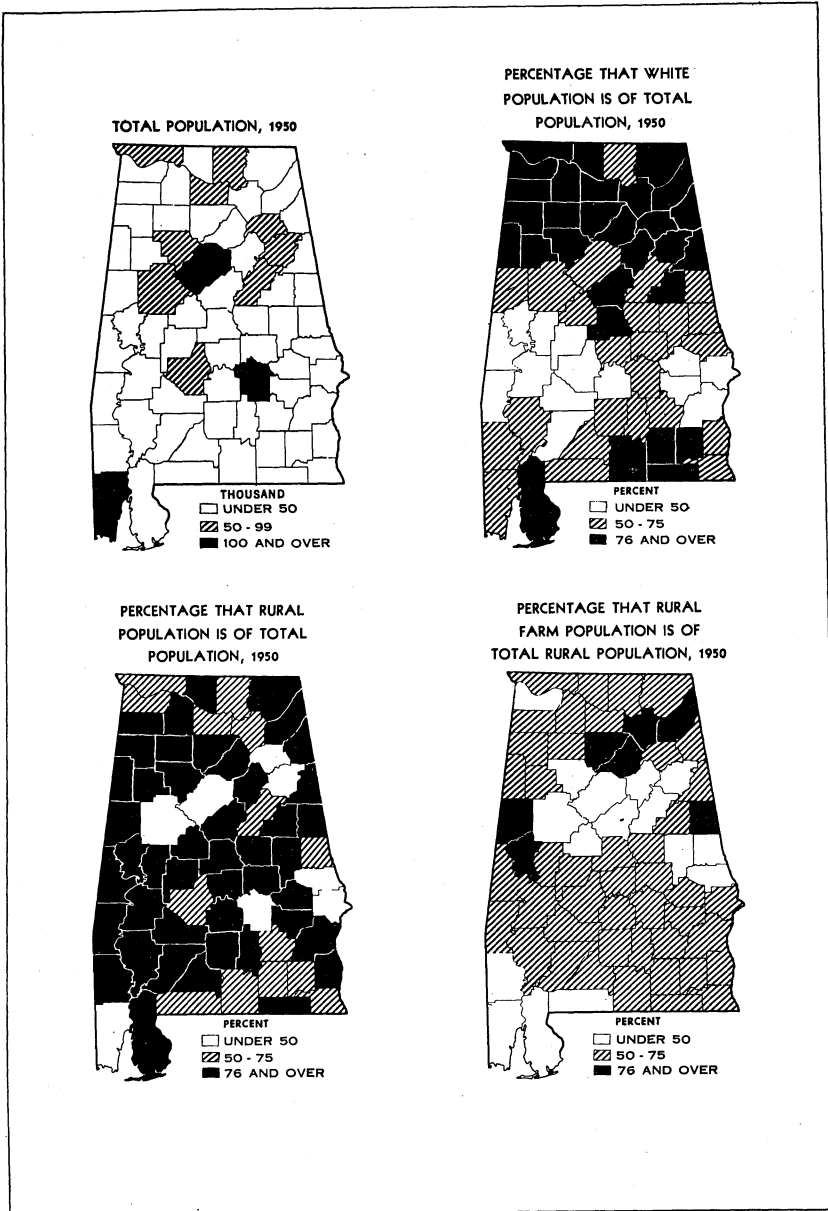


FIGURE 14. Total production, and specified characteristics of population, Alabama, 1950.

lachian Mountains to intensive farming practices has led to increases in farm population in these areas. Industrial development has been largely responsible for the State's marked increase in urban population.

The total population increase in recent years has been very largely due to an excess of births over deaths. Relatively little immigration from foreign countries has occurred.

Alabama is predominately **rural**. In 45 of the 67 counties, 76 per cent or more of the population in 1950 was rural, Figure 14. Only Jefferson, Lee, Montgomery, Russell, Mobile, Tuscaloosa, Etowah, and Calhoun counties had populations which were more than 50 per cent urban. Even Jefferson County, which led in urban population, was 20 per cent rural. The density of rural, as well as that of total population, tends to be greatest in northern Alabama. Increases in rural population from 1940 to 1950 were distributed widely over the State. Centers of rapid increases during this period were Mobile, Colbert, Jefferson, Madison, Shelby, Calhoun, and Baldwin counties. Decreases in rural population from 1940 to 1950 were confined principally to the southern part of the State.

Fifty-six per cent of the rural population in 1950 was **rural-farm** population, Figure 14. In 16 counties, rural farm population was less than 50 per cent of the total rural population. These counties were mainly in the mineral area including Jefferson and surrounding counties and the Gulf Coast Area including Escambia and Washington counties. In seven counties, the rural-farm population was 76 per cent or more of the total rural population. These counties were mainly in the mountainous sections outside the mineral districts and in the Black Belt.

Negroes comprised about 32 per cent of the population of Alabama in 1950. They were most numerous in the Black Belt and in adjacent counties, Figure 14. Mountainous sections outside of the mineral districts and the Tennessee Valley were occupied largely by whites. In many rural mountainous sections there were no Negroes, but in most towns a few found employment and made their homes.

FARM TENANCY AND RELATED DATA

In 1950, Alabama had 211,512 farm operators of whom 87,613 or 41 per cent were tenants. Of the total number of tenants, approximately 28 per cent were croppers. The proportion of tenant operators varied from 6 per cent in Baldwin County to 71 per

cent in Greene County. Tenants comprised more than 50 per cent of all operators in 22 counties and less than 33 per cent in 22 counties, Figure 15. The prevalence of tenants varied widely by geographic areas; the Black Belt, an area of heavy concentration of Negroes, had the highest percentage of tenancy, while the southwestern section of the State had the lowest. There also were marked variations between different parts of the State in prevailing types of tenants. For example, in 4 of the 67 counties, 50 per cent or more of the tenants were croppers, while in 33 counties, less than 25 per cent of all tenants were croppers, Figure 16.

Many factors affect the tenure of farm operators but most of these are difficult to measure in quantitative terms because of lack of data or because of the interrelationships of factors associated with tenure. Seventy-three per cent of all farm operators in 1950 were white, and of these, 68 per cent were either full or part-owners, 8 per cent were croppers, and 24 per cent were other tenants. Twenty-seven per cent of all farm operators were colored, and of these, 34 per cent were full or part-owners, 21 per cent were croppers, and 45 per cent were other tenants. Thus, the proportion of croppers and other tenants was nearly two times as large for colored as for white operators. The proportion of white operators who were full and part-owners was twice that of colored operators.

The degree of concentration of colored operators is associated with their tenure. In areas in which colored operators represented a small proportion of all operators, a much larger proportion of colored farmers were owner-operators.

The proportion of colored operators who were tenants was greater than that of white operators in 1950 because lack of proper training and associated factors made them less capable of successfully managing farms, and because they also usually lacked the necessary capital to become land owners. At the time of emancipation, many white operators were already owners while most Negroes had to start their farming operations as tenants. The fact that larger proportions of colored than of white tenants were croppers was probably due to the greater inability of colored tenants to finance themselves to the extent necessary to become share or cash tenants, and also to their inability to become successful farm operators without the constant and close supervision that is usually given croppers.

There were marked differences in the average amounts of all

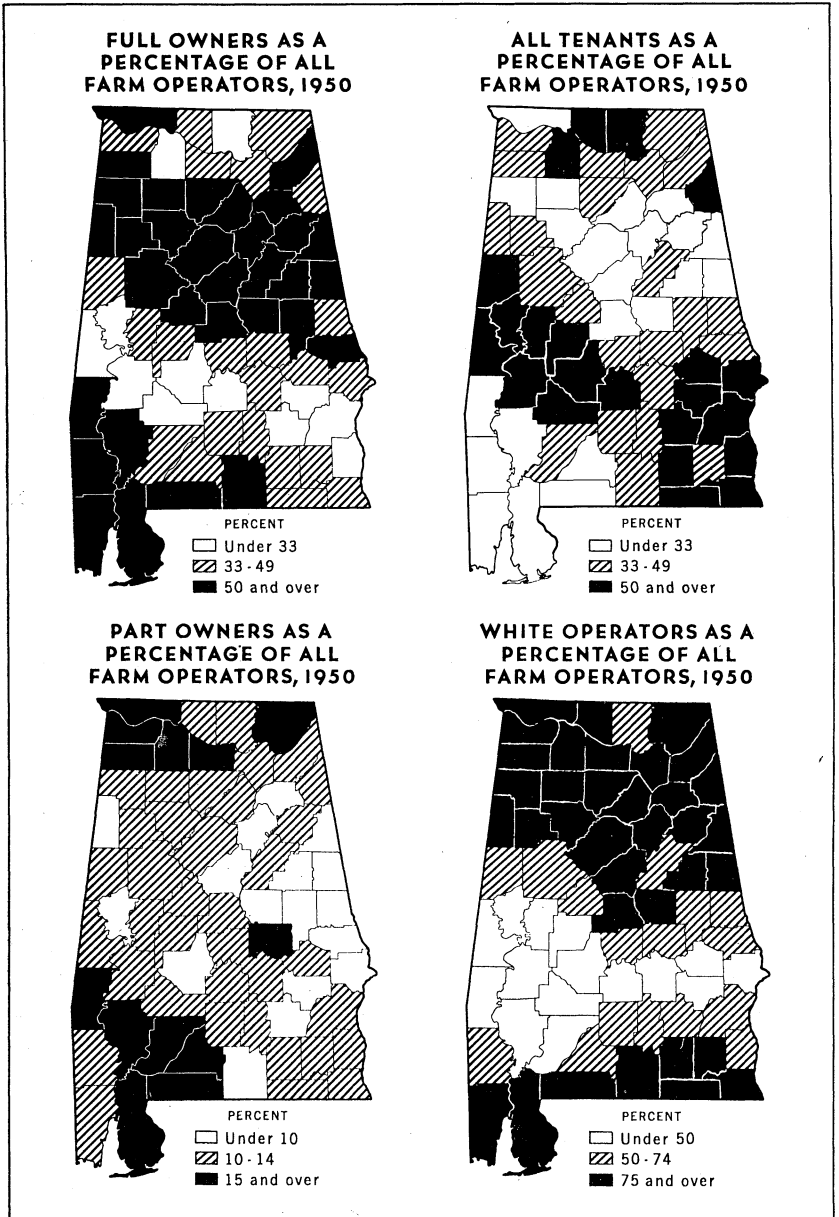


FIGURE 15. Specified tenure and racial characteristics of farm operators, Alabama, 1950.

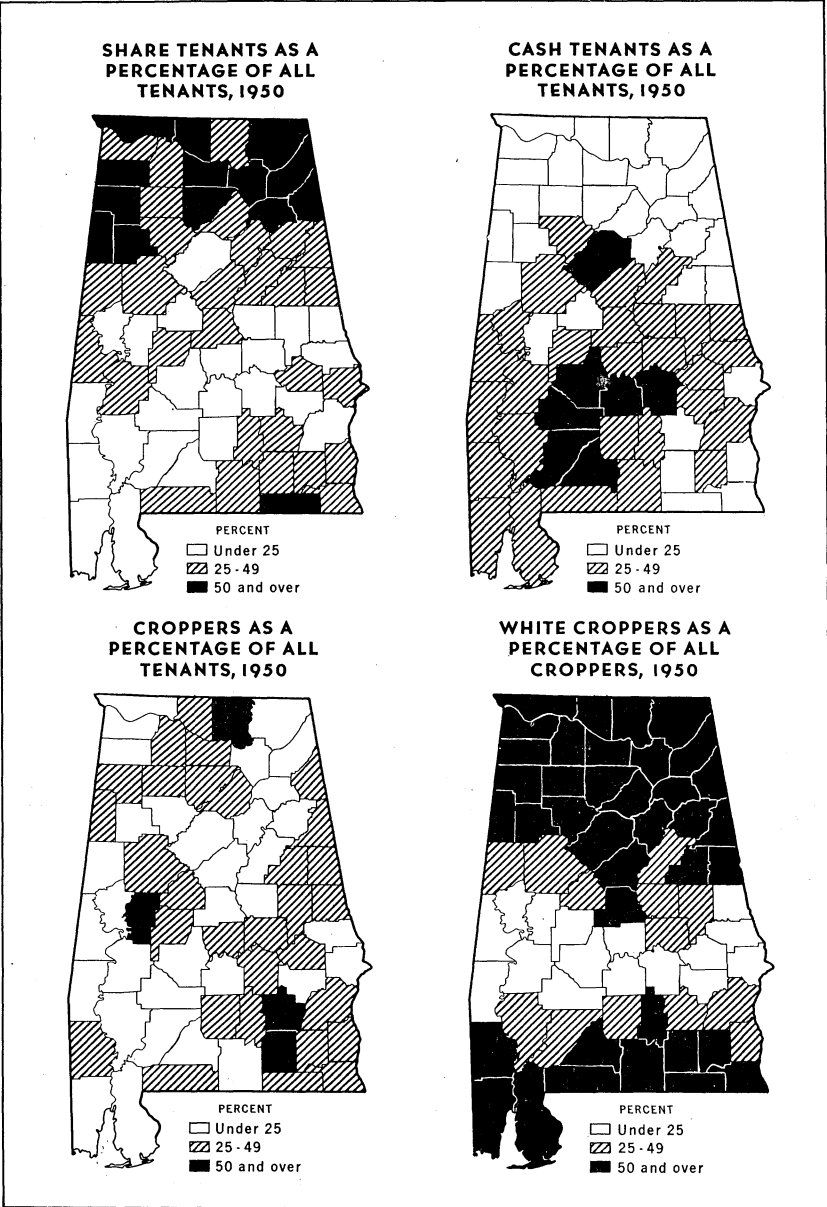


FIGURE 16. Relative importance of specified tenure and racial groups, Alabama, 1950.

land per farm on the basis of color of operators. White operators averaged about 117 acres while colored operators averaged about 51 acres. Colored croppers, with an average of 34 acres each in 1950, had the smallest amount of all land in farms, while white full and part-owners had the largest with an average of 132 acres each. The average size farm of all operators of all descriptions was approximately 99 acres. On the basis of tenure of operator, full and part-owners had an average of about 122 acres each, croppers had 44 acres, and other tenants had 64 acres. The largest farms operated by full owners were located principally in the Black Belt and surrounding counties. The largest farms operated by tenants were generally located in the Piedmont Area, and in the counties of southeastern Alabama.

Only minor variations by tenure of operator appeared in the acreages of cropland harvested in 1950, but noticeable variations by color of operator existed; these, however, were much less pronounced than were those of land in farms. Apparently the excess of land in farms held by owner-operators over that held by tenants was in pasture, woods or wasteland not used for crops. All land in farms operated per tenant averaged only 53 per cent of that operated per full or part-owner; whereas, cropland harvested per tenant averaged 92 per cent of that operated per full or part-owner. The average of cropland harvested per operator in 1950 varied from an average of 21 acres per colored owner to 32 acres per white tenant, the average for all operators being 27 acres. Croppers in 1950 harvested more cropland per farm than did owner-operators but less than did other tenants. Cropland harvested by white operators averaged 29 acres or approximately a third more than the 22 acres harvested by colored operators.

In 1950, the value of farm land and buildings averaged \$45.82 per acre for full and part-owner operators, and \$56.11 per acre for all tenants. This difference was largely due to the difference in percentage of total land in harvested crops.

Tenants in Alabama are highly mobile. The average number of years reported on the same farm by tenants in Alabama in 1950 was 6 and by owner-operators 16. Colored tenants generally move less frequently than do white tenants because of their financial liability to landlords which frequently must be cleared before they are permitted to move, and also because, as a group, they are not inclined to be as aggressive as white tenants.

Such factors as the prevalence of verbal rental agreements, disagreements between landlord and tenant, and failure of landlord

or tenant to live up to rental agreements are frequently used to explain the mobility of tenants. Other factors, however, such as the nomadic tendencies of tenants, forces of habit, and common mirages of "greater greenness of pastures across the fence" are in many instances of equal or greater importance in causing tenants to move repeatedly from one farm to another.

NUMBER AND SIZE OF FARMS

In 1950, Alabama had a total of 211,512 farms, the smallest number reported for the State since 1900. Generally, the number of farms per county is highest in those areas where size of farm is smallest, and lowest in those areas where size of farms is largest, Figure 17.

The largest farms in the State, in terms of acres of farm land per farm, are in the Black Belt; smallest farms are in the Sand Mountain Area of northern Alabama. Differences in size of farms in different parts of the State emphasize differences in types of agriculture practiced in different areas of the State.

The relative frequency of different sizes of farms in the various parts of the State is closely associated with land use and systems

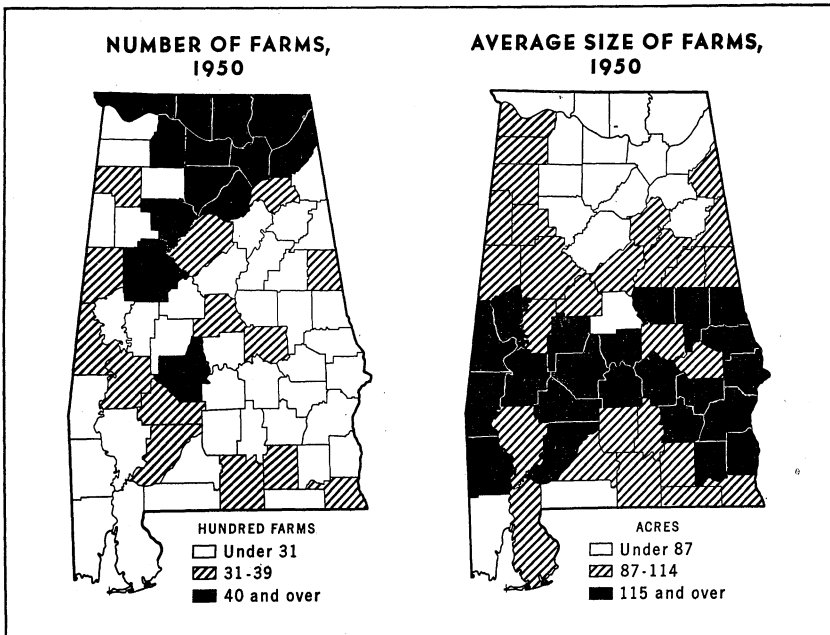


FIGURE 17. Number of farms and average size of farms, Alabama, 1950.

of farming followed in each area and with the number of acres of specified crops that the average farm worker or farm family can physically and economically operate under production conditions prevailing in each area. In most parts of Alabama, farms are predominantly small because of high labor requirements for cotton, the State's principal cash crop. Labor requirements for cotton are high because of the physical and economic difficulties of adapting labor-saving machinery to the needs of small farms; much of the labor used in producing cotton in the State is hand labor, particularly for operations such as chopping, hoeing, and harvesting.

FARM INVESTMENTS AND FARM TAXES

The percentage of total land in farms is relatively high in northern Alabama, in the Black Belt, and in much of southeastern Alabama. For the State as a whole, 64 per cent of the total land area was in farms in 1950; in individual counties, this percentage varied from less than 25 to more than 90 per cent, Figure 26.

On a farm basis, the average **value of farm land and buildings** per farm in 1950 was \$4,624 for the State as a whole. Farm values were highest in northern Alabama, extreme southeastern Alabama, the Gulf Coast Area, and in counties containing or adjoining major urban centers. Lowest values were in the Upper Coastal Plain Area, parts of the Piedmont Area, and in southwestern Alabama, exclusive of the Gulf Coast Area, Figure 18.

Since the major portion of the investment in land and buildings is actually in land, these data are closely associated with land values. Because of variations in size of farms, however, average values per acre are better indicators of farm land values than values per farm, Figure 18.

Investment in implements and machinery is directly associated with systems and types of farming in individual areas. Considerable variations exist in the amounts of such investments by counties. Power and equipment investments are high, for example, in Baldwin County, a major commercial truck-crop area. They are also relatively high in much of northern Alabama where tractors and tractor equipment are used extensively, Figure 19. In many central Alabama counties, investments in farm power and equipment are low; this is particularly true in those counties whose principal businesses are in connection with lumbering and mining interests. A high investment in farm power and in farm imple-

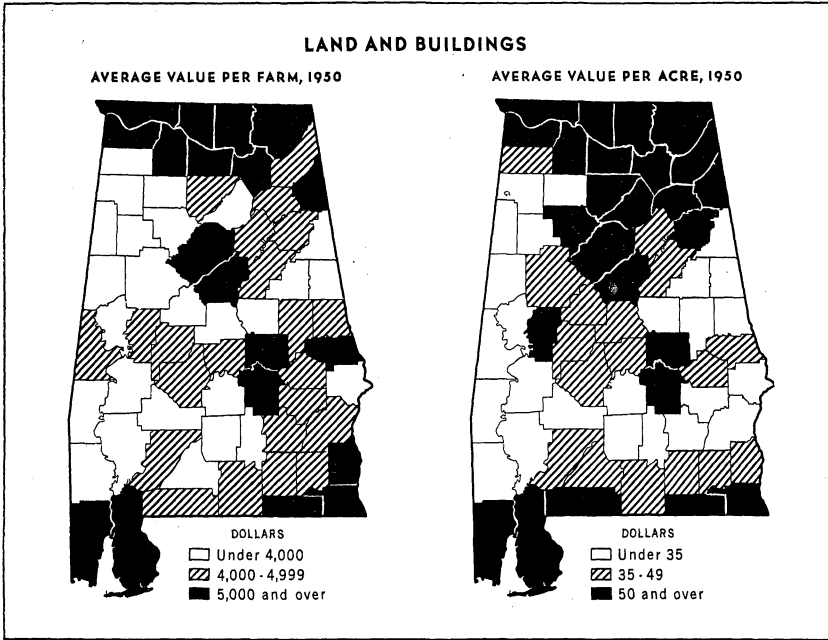


FIGURE 18. Average value of land and buildings per farm and per acre, Alabama, 1950.

ments and machinery is usually associated with a relatively high degree of farm mechanization.

Investment in livestock per farm has been higher in recent years than during any other period in the history of the State. This has been due partly to high prices during recent years, but the major factor responsible has been the increased numbers of various classes of livestock on Alabama farms, Figures 12 and 13. Investment in livestock varies widely by counties. In general, livestock investments per farm are highest in major livestock-producing areas such as the Black Belt; they are lowest in cash-crop areas such as the Sand Mountain Area and much of the Upper Coastal Plain Area. County variations normally reflect the relative importance of livestock in the over-all agricultural economy of individual counties.

The value per acre of farm real estate has increased tremendously since prior to World War II. This increase, however, has been principally due to increases in prices rather than to actual improvements in farm real estate.

The value of farm land in Jefferson, Mobile, and Montgomery counties and in some adjoining counties has probably been influenced by proximity to the cities of Birmingham, Mobile, and Montgomery, Figure 18. Farm land in the Tennessee Valley and Sand Mountain areas of northern Alabama, as well as in the intensively farmed sections of the southern part of the State, is generally of moderate to high value apparently because of the inherent productivity of the soils in these areas. Low farm land values are reported in the hilly regions northwest of Birmingham, in the rougher sections of the Piedmont Area, in the thinly populated area of the southwestern part of the State — excluding the Gulf Coast counties — and in the eroded areas on or near the northern border of the peanut area in the southeastern part of the State.

Farm taxes in relation to farm values are much lower in Alabama than the average for the United States. Taxes per acre decreased generally over the State after 1929, due in part to the State's Homestead Exemption Law. Since the beginning of World War II, however, taxes have increased, and they are now at about the same level per acre as in 1930. Taxes in relation to farm values are still decreasing. Current taxes per \$100 of full value are less than half the rate paid by Alabama farmers during the 1930's.

Most of the counties in which taxes per acre exceed the State average are in the more productive agricultural areas of northern Alabama or are counties in which major cities are located. In general, there is a close association between land values and taxes per acre over the entire State. The ratio of taxes to value, however, varies considerably from county to county. In Alabama, there is no consistent relationship between the amount of taxes per acre and the ratio of taxes to value.

MOTOR VEHICLES ON FARMS

Farm tractors are most numerous and their concentration in relation to cropland is largest in northern and southeastern Alabama, and in the Gulf Coast Area. In these areas of the State, a high percentage of the farm land is open and is level or gently rolling; crops are grown with little hand labor except for such operations as hoeing and harvesting. Tractors are adapted to these areas, and the types of farming practiced are adaptable to the use of tractors. In these areas mechanization of farm production has progressed most and fastest in Alabama, particularly

during the last decade, Figure 19. In 1950, there were 45,751 tractors on Alabama farms as compared to 16,882 in 1945. In 1940, there were only 7,638 tractors on Alabama farms.

The average age of all farm tractors in use on Alabama farms in 1950 was 5.2 years. Of the total number, 13 per cent were more than 10 years old, 19 per cent were from 6 to 10 years of age, and 68 per cent were 5 years of age or less.

The number of tractors reported per county or per unit of cropland may not be entirely representative of the relative importance of tractors in different areas, because of differences in acreage handled per machine or per head of workstock in different parts of the State. Workstock, although decreasing in number and in relative importance in recent years, were still, in 1950, an important source of farm power on Alabama farms. Data on farm tractors, however, indicate the large use that is being made of farm tractors in areas of the State where physical, economic, and social conditions favor their adoption.

Motortrucks, a factor closely related to the development of other marketing facilities, and particularly other transportation facilities, have about the same pattern of distribution over the State as farm tractors, Figure 19. They were most numerous in 1950 in northern Alabama and the Gulf Coast Area. The smallest numbers of motortrucks per county were in the Piedmont Area, the Black Belt, and that part of southwestern Alabama between the Gulf Coast Area and the Black Belt.

Total number of motortrucks on Alabama farms in 1950 was 52,743. This was more than twice the number reported in 1945, and nearly four times the number reported in 1940.

Automobiles on Alabama farms in 1950 had a somewhat different pattern of distribution than motortrucks and farm tractors, Figures 19 and 20. As both automobiles and motortrucks, in many cases, are used for both business and pleasure by Alabama farmers, the total number of such vehicles better indicates their extent of use for the State as a whole. In 1950, Alabama farmers reported nearly 50 per cent more automobiles on farms than motortrucks. The total number of automobiles was 71,212 and that of motortrucks 52,743.

The average age of all automobiles on Alabama farms in 1950 was 9.8 years. The average age of farm motortrucks was 6.9 years. More than 50 per cent of all farm automobiles were more than 10 years of age; whereas, only 28 per cent of the motortrucks

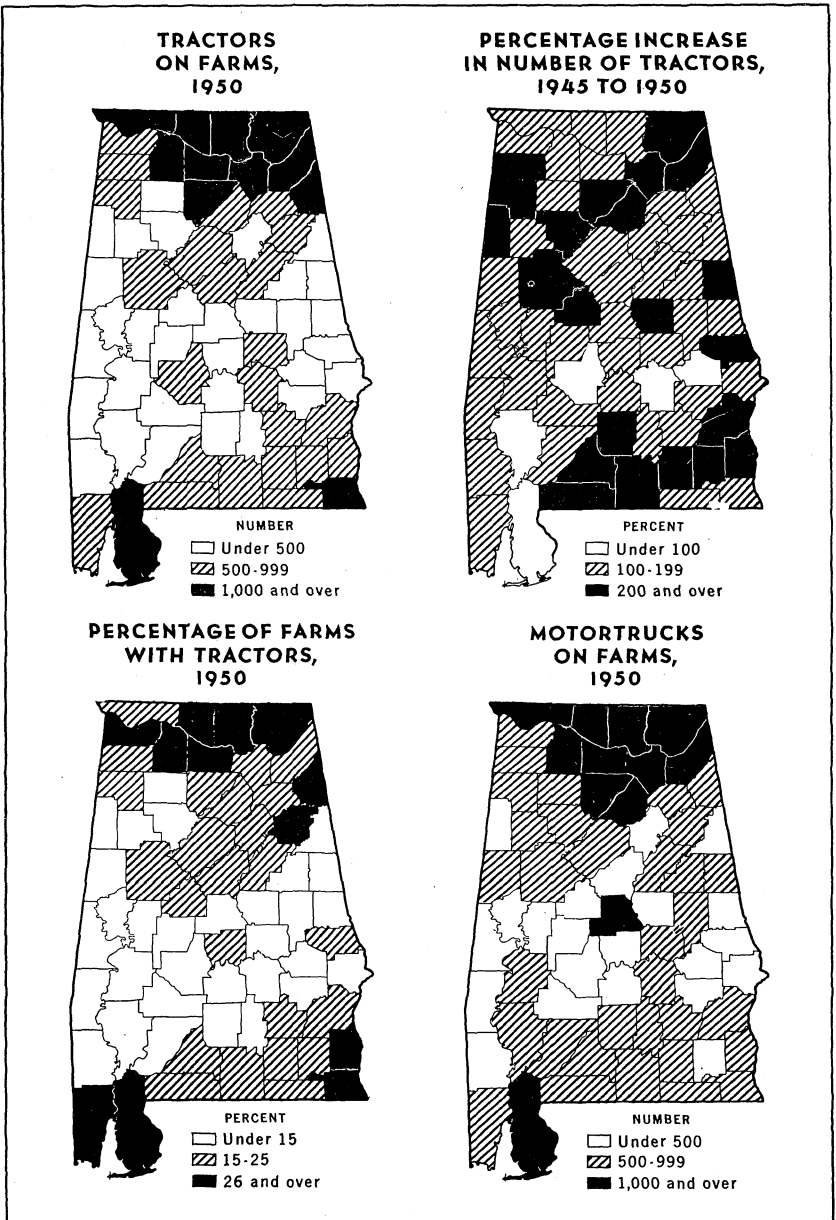


FIGURE 19. Tractors and motortrucks on farms and related data, Alabama, 1950.

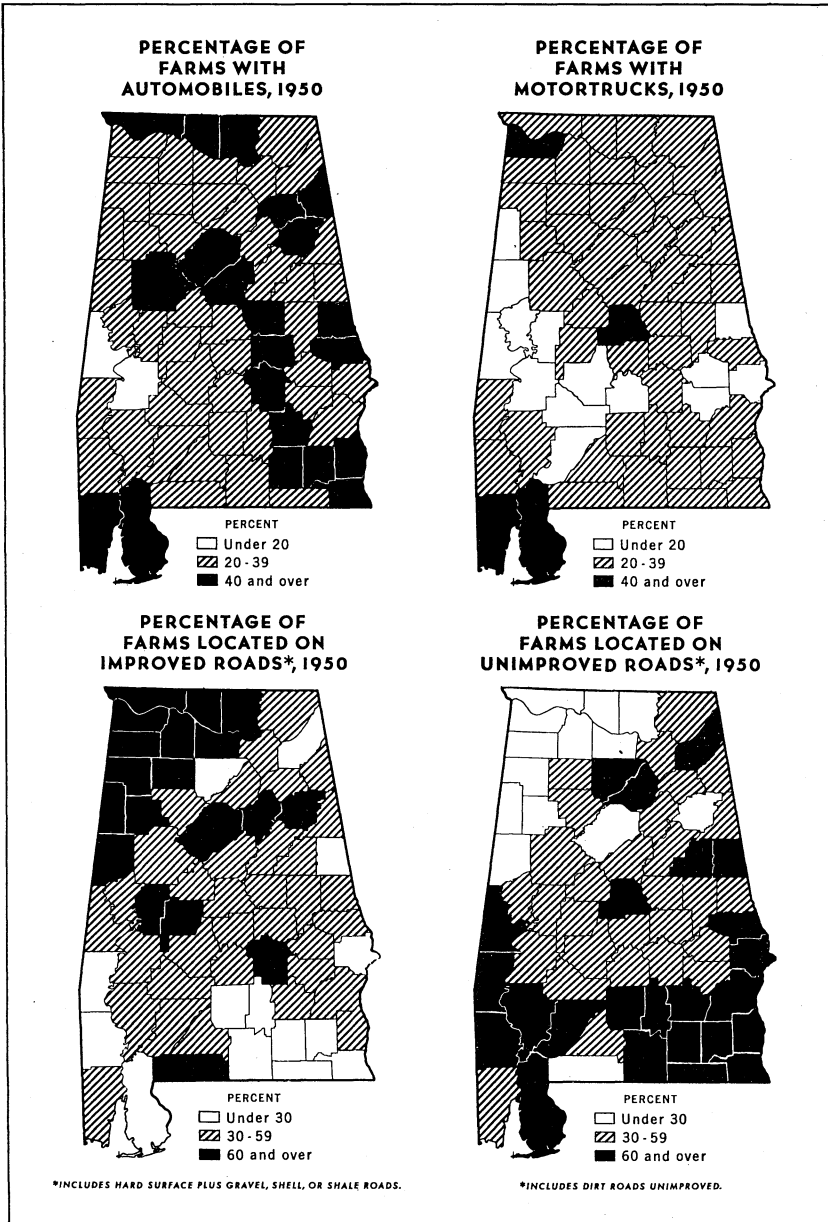


FIGURE 20. Percentage of farms with automobiles and motortrucks, and types of farm roads, Alabama, 1950.

were more than 10 years old. A third of the automobiles but 56 per cent of the motortrucks on farms in 1950 were 5 years of age or less.

The type and condition of **farm road facilities** available to farmers are closely associated with numbers, age, and relative importance of automobiles and motortrucks on Alabama farms. The highest percentages of farms located on improved roads in Alabama in 1950 were in northern and northwestern Alabama, Figure 20. Highest percentages of farms located on unimproved roads were in southern Alabama. Types of roads in various parts of the State are apparently associated with types of soils, some of which are better adapted to development of good dirt roadbeds than others.

IMPROVED FACILITIES ON FARMS

An indicator of living standards and of the cultural development of rural areas is the extent to which rural people take advantage of the use of certain improved facilities available to them. Figure 21 shows the percentage of Alabama farms reporting the use of some of these facilities in 1950.

Electricity, because of its many and varied uses and adaptations, is increasing in use on Alabama farms faster than any other major improved facility of this nature. Although only 68 per cent of Alabama's farms reported using electricity in 1950, it has been estimated by the Rural Electrification Administration and by the Alabama Power Company that within the next few years, every farmer in the State will have electricity available to him through either privately or publicly constructed lines. Within the State in 1950, the highest percentages of farms reporting the use of electricity were in Sand Mountain and surrounding counties, in extreme southeastern Alabama, and the Gulf Coast Area. Lowest percentages were in the Black Belt and in southwestern Alabama north of the Gulf Coast Area, Figure 21.

Radio use followed the same pattern of distribution as that of the use of electricity on Alabama farms in 1945. Radio use and electricity use, however, are not necessarily associated with each other, because for the State as a whole, the percentage of farms reporting the use of radios in 1945 was nearly twice as large as the percentage reporting the use of electricity. The percentage of farms with radios was not reported in the 1950 Census. In

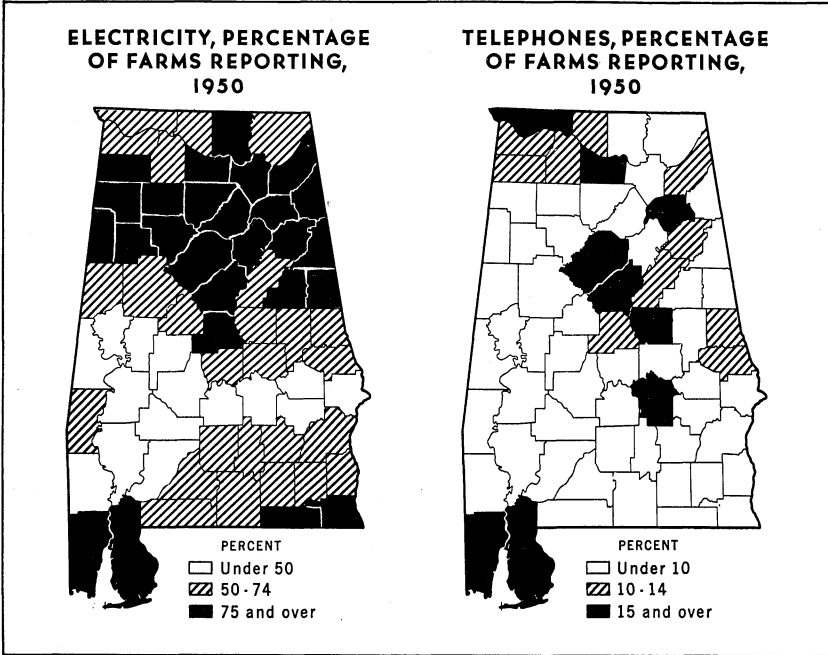


FIGURE 21. Specified improved facilities used on Alabama farms, 1950.

1950, however, this percentage was probably somewhat higher than the 53 per cent reported for the State as a whole in 1945.

Telephones are not used in large numbers by Alabama farmers. Only 8 per cent of the State's farms reported the use of telephones in 1950. By counties, this percentage varied from only 1 per cent in some counties to more than 15 per cent in others. Telephones were most numerous on farms in northern Alabama and in the Gulf Coast Area, and least numerous in the Piedmont and the Upper and Lower Coastal Plains areas, Figure 21.

Running water in dwellings was reported by only 12 per cent of Alabama's farms in 1945. In rural counties, exclusive of Jefferson, Mobile, and Baldwin counties, this percentage varied from less than 5 in some counties to more than 25 in others. There appeared to be no particular pattern of distribution for different areas of the State in 1945. Comparable data were not reported in the 1950 Census, but the percentage of farms with running water in 1950 was probably somewhat higher than that reported

in 1945, since electric water pumps were reported by 18 per cent of the farms in 1950.

SELECTED PRODUCTION EXPENSES

Farming in most of Alabama is characterized by heavy expenditures for **commercial fertilizer**, particularly for cotton, corn, peanuts, commercial vegetables, and frequently for feed crops. Farmers have increased the amount of fertilizer used from an average of 12 pounds per acre of tilled land in 1937-38 to 368 pounds per acre in the 1950-51 season. Highest expenditures for fertilizer in 1950 were in the more highly developed cash-crop farming areas of the State, including parts of northern Alabama, southeastern Alabama, and Baldwin County, Figure 22. In all, 14 of Alabama's counties spent more than 1 million dollars per county for fertilizer in 1950.

Labor supply on Alabama farms has become relatively scarce since the early 1940's. Most farmers work their farms with family labor or with tenants. Nevertheless, farmers who operate on a large scale usually employ some help on a wage basis especially to grow feed crops, and many employ occasional day labor during rush periods. Highest expenditures for hired labor in 1950 were in northern Alabama, the Gulf Coast Area, and in Montgomery County, Figure 22. Hired labor expenditures were relatively high in many Black Belt counties and in parts of southeastern Alabama.

In recent years, livestock production has become important on many farms, but on most farms in the State it is still based largely upon home-produced feeds and tends to be limited by this production. Protein and mineral supplements are purchased to some extent throughout the State. Heaviest **feed purchases** are made by farmers who specialize in market milk and in commercial poultry and egg production. Figure 22 indicates that only four counties made expenditures of 1 million dollars or more for purchased feed in 1949. In addition to these four counties, however, feed purchase expenditures were relatively high in most Sand Mountain and Black Belt counties.

Expenditures in 1949 for **livestock and poultry purchases** did not follow the same pattern of distribution as did expenditures for feed purchases, Figure 22. Montgomery County was the only county in the State that reported expenditures for livestock and poultry purchases in excess of 1 million dollars. Other counties with high expenditures for the purchase of livestock and poultry

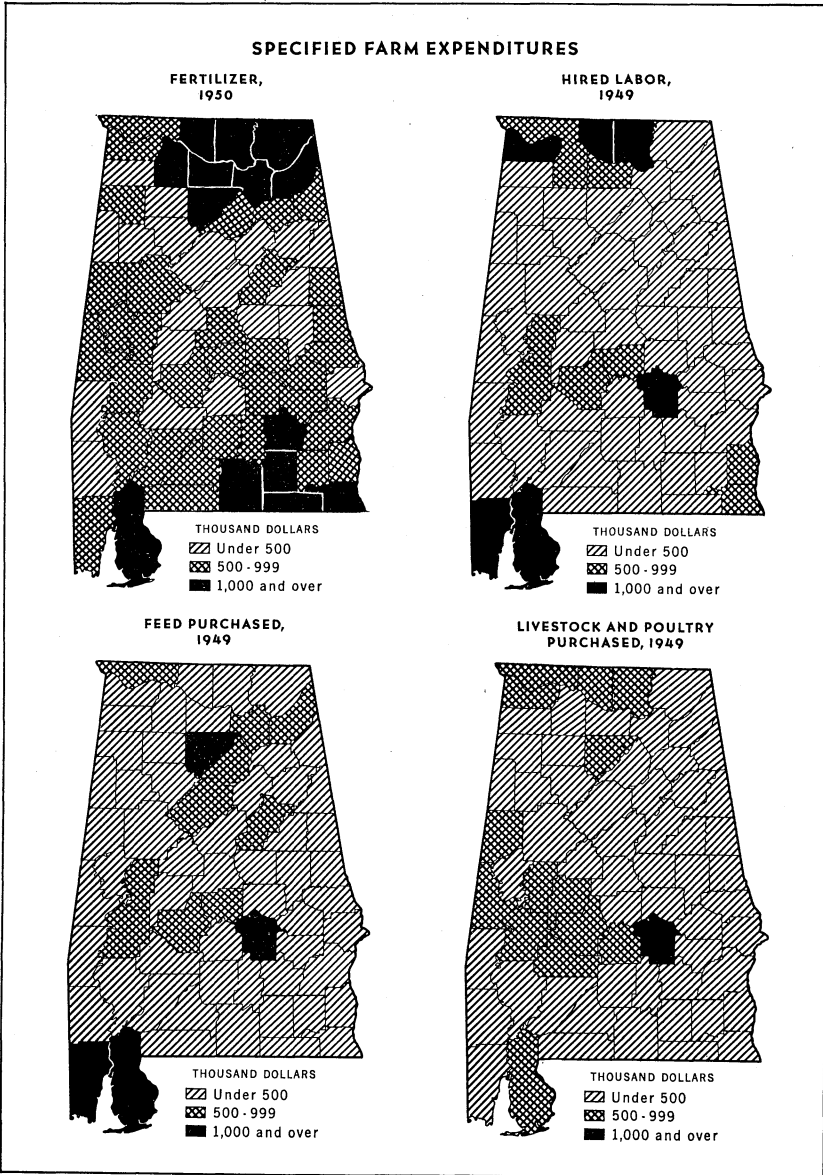


FIGURE 22. Specified farm expenditures, Alabama, 1949 and 1950.

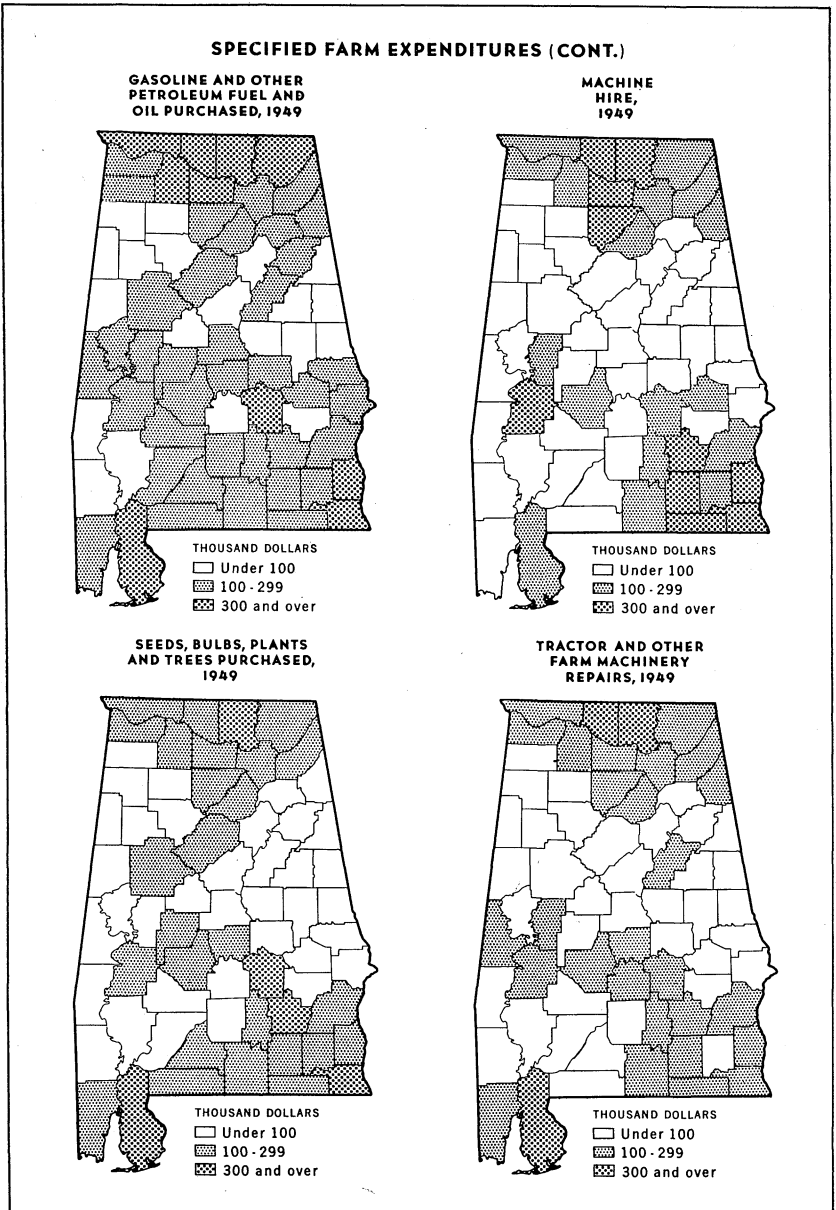


FIGURE 23. Specified farm expenditures (continued), Alabama, 1949.

were Cullman and Baldwin counties, most of the counties in the Black Belt, and some of those in the Tennessee Valley Area.

Scarcity of farm labor, shortage of feed supplies, increase in feed needs due to livestock expansion, and the high costs of labor, feed, and supplies have encouraged many farmers to buy **tractors and tractor equipment** in recent years. The number of tractors on Alabama farms increased 168 per cent from 1945 to 1950, Figure 19, and the number of farmers reporting tractors increased 157 per cent during the same period.

As tractors are concentrated in certain areas of the State, expenditures for **gasoline and oil** are highest in these areas. Also, tractor and other farm machinery repair costs are highest in these areas. Expenditures for all of these items are relatively high in Tennessee Valley, Gulf Coast, and southeastern Alabama counties, Figure 23. They are relatively low in Piedmont and Upper Coastal Plain areas and in southwestern Alabama, exclusive of the Gulf Coast Area.

Many Alabama farmers who do not own tractors and tractor equipment have found it profitable in recent years to hire such machinery on a custom or rental basis. Expenditures for **machinery hire** in 1949 were generally highest in the same areas that tractor numbers were highest. Highest machine hire expenditures were in northern Alabama, southeastern Alabama, Baldwin County, and parts of the Black Belt, Figure 23.

Expenditures for **seeds, bulbs, plants, and trees purchased** in 1949 were highest in northern Alabama, southeastern Alabama, and the Gulf Coast Area, Figure 23. They were also relatively high on most of Sand Mountain and in many Black Belt counties. The Piedmont, Upper Coastal Plain, and southwestern Alabama counties, exclusive of the Gulf Coast Area, made relatively small expenditures in 1949 for seeds, bulbs, plants, and/or trees.

VALUE OF FARM-PRODUCED PRODUCTS

On the basis of value, about three-fourths of all farm products produced by Alabama farmers is sold; the remainder is used or consumed on farms where produced. In recent years, gross farm incomes in Alabama have averaged about 480 million dollars annually; cash receipts from farm marketings have averaged about 350 million dollars annually. These levels of income were more than twice as much as those reported by Alabama farmers 20 years earlier. The increase has been due partly to higher prices

during recent years and partly to the increase in volume of agricultural products produced for sale.

A number of significant changes have been made in the relative importance of farm enterprises as contributors to the State's farm income since the late 1920's. Some of these changes are indicated by the data shown in Table 4. During the period 1925-29, crop sales made up 85 per cent of the State's total cash farm receipts and livestock and livestock product sales made up the remaining 15 per cent. During the period 1945-49, however, crop sales had declined to 68 per cent of the total while livestock and livestock product sales had increased to 32 per cent. Of particular significance has been the decline in the relative importance of cotton and cottonseed as an income producer in the State. During the earlier period, this enterprise made up nearly three-fourths of the total, but by 1945-49, had decreased to less than half the total. About half of the decrease in cotton was made up by other crops and the other half by livestock and livestock products. Each of the major classes of livestock in the State — beef, dairy, hogs, and poultry — increased in relative importance during this period, and all four increased by approximately the same amount.

TABLE 4. PERCENTAGE OF CASH FARM RECEIPTS FROM SPECIFIED SOURCES FOR SPECIFIED PERIODS, ALABAMA, 1925-49

Source	Five-year average				
	1925-1929	1930-1934	1935-1939	1940-1944	1945-1949
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
Cotton and cottonseed	73	65	59	47	45
Peanuts	2	3	4	9	7
Corn	1	1	2	3	3
Truck crops	2	2	1	2	2
Irish potatoes	1	2	1	2	1
Sweetpotatoes	1	1	1	1	1
All hay	¹	1	1	1	1
All other crops	5	6	8	6	8
ALL CROPS	85	81	77	71	68
Cattle and calves	3	3	6	7	9
Dairy products	4	7	7	7	7
Hogs	4	3	5	8	8
Chickens and eggs	4	6	5	7	7
All other livestock	¹	¹	¹	¹	1
ALL LIVESTOCK AND LIVESTOCK PRODUCTS	15	19	23	29	32
TOTAL CASH RECEIPTS FROM MARKETINGS	100	100	100	100	100

¹ Less than 0.5 per cent.

Source: Official estimates, Crop Reporting Board, Bureau of Agricultural Economics, U. S. Department of Agriculture.

The value of all farm products sold per county in 1949 was highest in those counties located in northern Alabama, southeastern Alabama, the Gulf Coast Area, and parts of the Black Belt, Figure 24. Twenty-two of the State's 67 counties sold farm products valued at more than 5 million dollars per county in 1949. In the same year, 27 counties sold farm products valued at less than 3 million dollars per county.

Of the total value of farm products sold for the State as a whole, 65 per cent was income from crops, 31 per cent was from livestock and livestock products, and 4 per cent was from farm forest products, Figure 24. Values of crops sold as a percentage of all farm products sold were highest in northern and southeastern Alabama and lowest in the Black Belt. Values of livestock and livestock products sold as a percentage of all farm products sold were highest in the Black Belt and in some counties in the Piedmont and Gulf Coast areas; they were relatively low in northern and southeastern Alabama. Values of forest products sold as a percentage of all farm products sold were of major importance only in that part of southwestern Alabama north of the Gulf Coast Area.

The average **value per farm** of all farm products sold in 1949 was about \$1,300 for the State as a whole. Counties with highest average values per farm were those in northern Alabama, southeastern Alabama, the Black Belt, and the Gulf Coast Area, Figure 25. Considerable variation existed between individual counties in the State as shown in Figure 25.

In general, the average **value per harvested acre** of all farm products sold showed no particular pattern of distribution in 1949, Figure 25. Nineteen of the State's 67 counties reported values of more than \$50 per harvested acre of all products sold, and 23 counties reported values of less than \$40 per harvested acre of all products sold.

All crops sold per farm in 1949 averaged \$848 for the State as a whole. Values of all crops sold were highest per farm in northern Alabama, southeastern Alabama, and in the Gulf Coast Area, Figure 25. They were lowest in counties in the Piedmont, in much of southwestern Alabama, and in Jefferson and surrounding counties.

All livestock and livestock products sold averaged \$400 per farm in Alabama in 1949. Values for these items were highest per farm in the Black Belt, the Gulf Coast Area, and a few other scattered counties, Figure 25. Livestock and livestock product

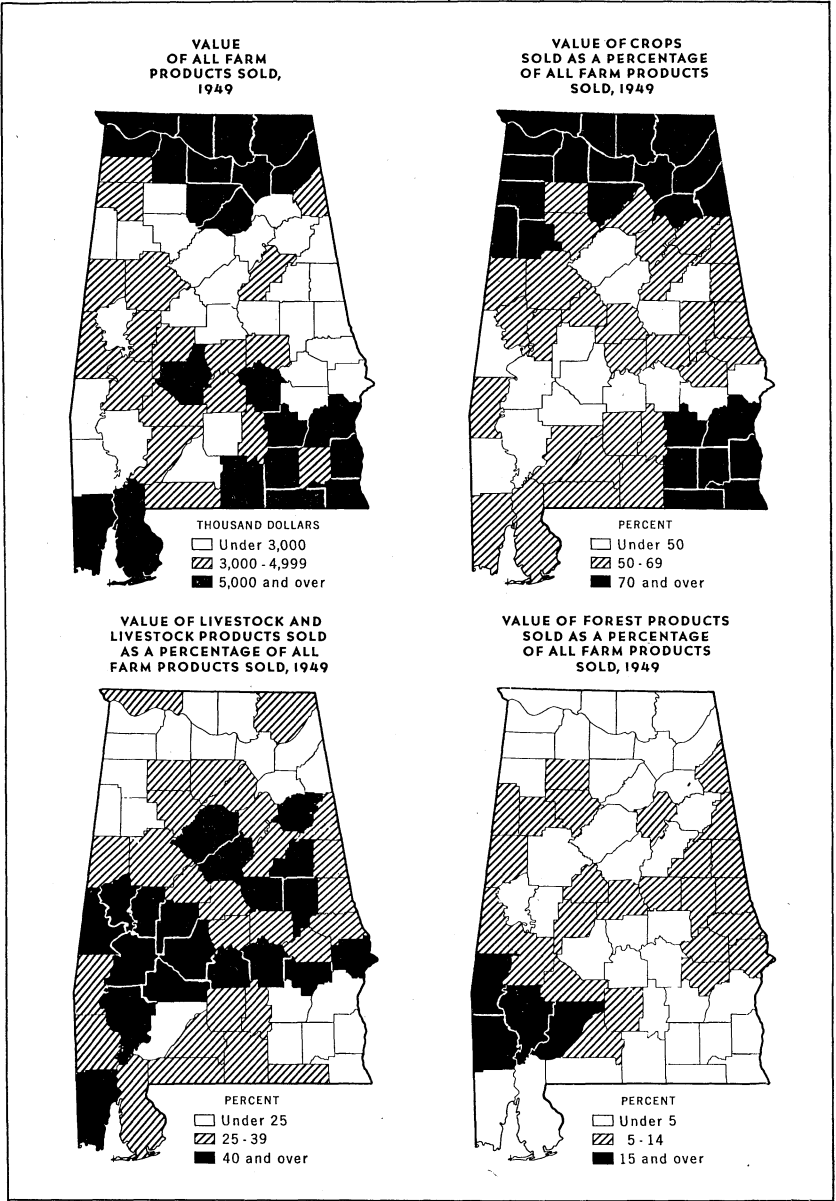


FIGURE 24. Value of all farm products sold and related data, Alabama, 1949.

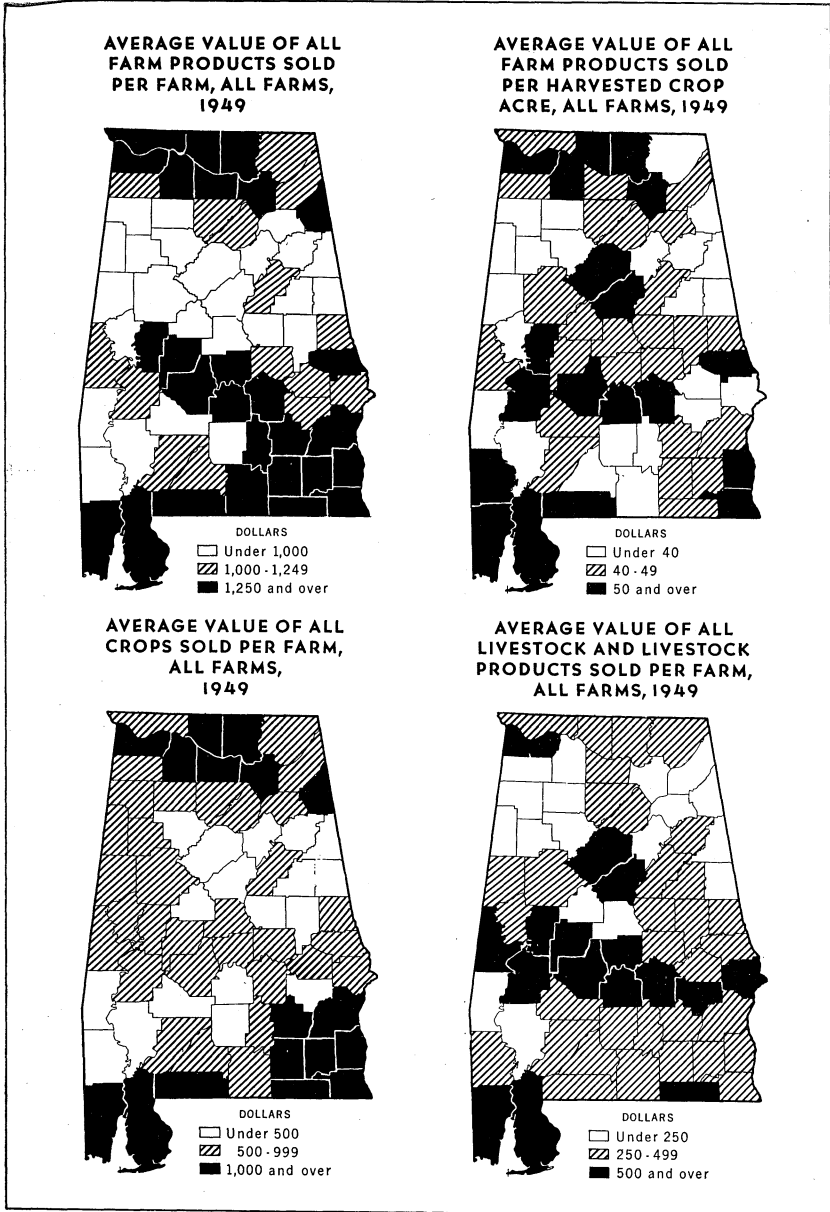


FIGURE 25. Average value of all farm products sold per farm and related data, Alabama, 1949.

sales per farm were relatively low in most counties in the Sand Mountain Area, and in the northern half of the Upper Coastal Plain Area.

Products used on farms where produced make up a relatively high percentage of the value of all farm products produced in Alabama. A larger percentage of the value of farm products produced is used on farms where produced by farm families in southwestern Alabama and in most counties in central Alabama than in other sections of the State. The only area that shows a consistent variation from the State average is the Black Belt; practically all counties in this area are below the State average.

FARM FAMILY LIVING

In 1950, about 84 per cent of the "census" farms in Alabama reported vegetables harvested for home use while 47 per cent reported farm orchards, groves, and/or vineyards. In addition, 39 per cent reported Irish potatoes and 38 per cent reported sweetpotatoes on farms. For livestock and livestock product production, 87 per cent reported chickens, 76 per cent all cattle and calves, 70 per cent hogs, and 69 per cent reported milk cows on farms. Of the total number of farms in the State, 69 per cent reported that they butchered hogs and 4 per cent reported that they butchered cattle and/or calves on farms in 1950. A total of 34 per cent reported firewood cut and used on farms. Apparently, those Alabama farmers who attempt to produce for home use and home consumption are able to provide an abundance of some items. Within the State, however, there are wide variations between counties and areas in the percentages of these products produced on farms. Generally, farmers in the mountainous counties and in counties in southeastern Alabama, most of which have a high percentage of white population, tended, on the average, to produce more products for home use than the State average. Those sections of the State in which farmers produced relatively few products for home use and home consumption included the Black Belt and adjacent counties as well as some of the counties in southwestern Alabama and a few of those in the Piedmont Area.

FARM LAND USE

The present pattern of the use of farm land in the State is the result of a long period of experimentation and adjustment on the part of Alabama farmers. The intensity of land use normally

affords a fair index to land values and roughly indicates the ability of farmers to hire labor, to buy feed, seed, fertilizers, and farm machinery, to pay interest and rent, and to provide the other needs of farm production. It indicates generally the returns one may expect from farming as a business.

The agricultural industry of Alabama, viewed as a whole, presents a broad and heterogeneous picture. The approximate land area of the State is 32,689,920 acres, of which 64 per cent was in farms in 1950. Utilization of land in farms in Alabama in 1950 is shown in Table 5.

Approximately 27 per cent of Alabama's farm land was in harvested crops in 1950. An additional one-third of the State's farm land was classified as pasture land, and most of the remaining farm land in the State was woodland. The value placed upon farm land (including buildings) in Alabama in 1950 was nearly 1 billion dollars; this represented an average value per farm of \$4,624 or roughly \$50 per acre.

The data shown in Figure 26 picture land utilization in the State by counties for 1950. The extreme variation in land use between individual counties and areas of the State is evident. These data indicate, however, fairly definite areas of intensity of land use. The proportion of total land area in farms is an index of the agricultural importance of the different counties. This percentage varies from less than 25 per cent in some counties to more than 90 per cent in others.

TABLE 5. DISTRIBUTION OF FARM LAND BY MAJOR USE, ALABAMA, 1950

Land use	Acres	Per cent of total
	<i>Acres</i>	<i>Per cent</i>
Cropland harvested	5,729,421	27.4
Cropland idle or fallow	1,393,726	6.7
Cropland used for pasture ¹	1,598,354	7.7
TOTAL CROPLAND	8,721,501	41.8
Cropland used for pasture ¹	1,598,354	7.7
Woodland pastured ¹	3,712,094	17.8
Other land pastured	1,706,362	8.1
TOTAL PASTURE LAND	7,016,810	33.6
Woodland pastured ¹	3,712,094	17.8
Woodland not pastured	6,029,600	28.9
TOTAL WOODLAND	9,741,694	46.7
All other land in farms	719,227	3.4
TOTAL LAND IN FARMS	20,888,784	100.0

¹ Dual classification.

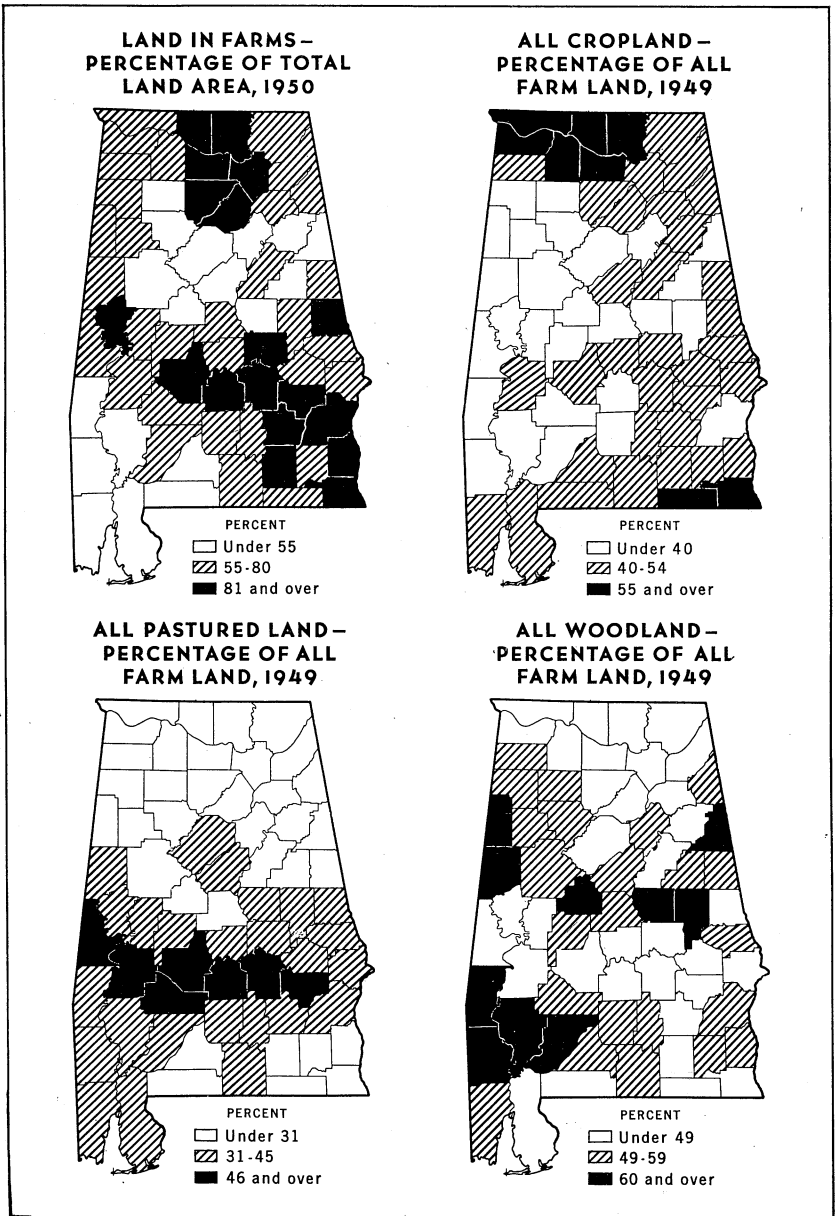


FIGURE 26. Land in farms and farm land use, Alabama, 1949-50.

Total cropland acreage made up 42 per cent of the farm land area of the State in 1950. This percentage was highest in northern and southeastern Alabama and lowest in western Alabama, Figure 26.

All pasture land comprised a total of 34 per cent of the State's farm land area in 1950. The proportion of farm land pastured was comparatively high in the Black Belt Area and in some of its surrounding counties; this area is currently the center of the State's livestock industry.

All woodland represented 47 per cent of the State's farm land area in 1950. The proportion of farm land that was wooded was largest in southwestern Alabama and in parts of the Upper Coastal Plain Area, Figure 26. Much of the present acreage of forest land in the State is cut-over land now covered with second-growth trees of varying quality and condition.

CROPLAND USE

Land in harvested crops amounted to 5,729,421 acres in 1950; this represented 66 per cent of all cropland in the State. Harvested cropland averaged 27 acres per farm in Alabama in 1950. This figure varied from less than 10 acres per farm in some counties to more than 40 acres per farm in others. Southeastern and northeastern Alabama counties used a larger share of their available cropland for crops, and Piedmont and Black Belt counties a smaller share, than did counties in other areas of the State, Figure 27.

Idle land made up 7 per cent of all cropland in the State in 1950. This percentage was comparatively high in practically all counties in the east-central part of the State. The lowest percentages of idle land were in scattered counties in the extreme southern part of the State, the Black Belt, and the Tennessee Valley.

Pastured cropland represented 8 per cent of the total cropland area in the State. This percentage was relatively high throughout most of central Alabama and relatively low in most of both northern and southern Alabama. The lowest percentages in the State were in the extreme southeastern and extreme northeastern counties.

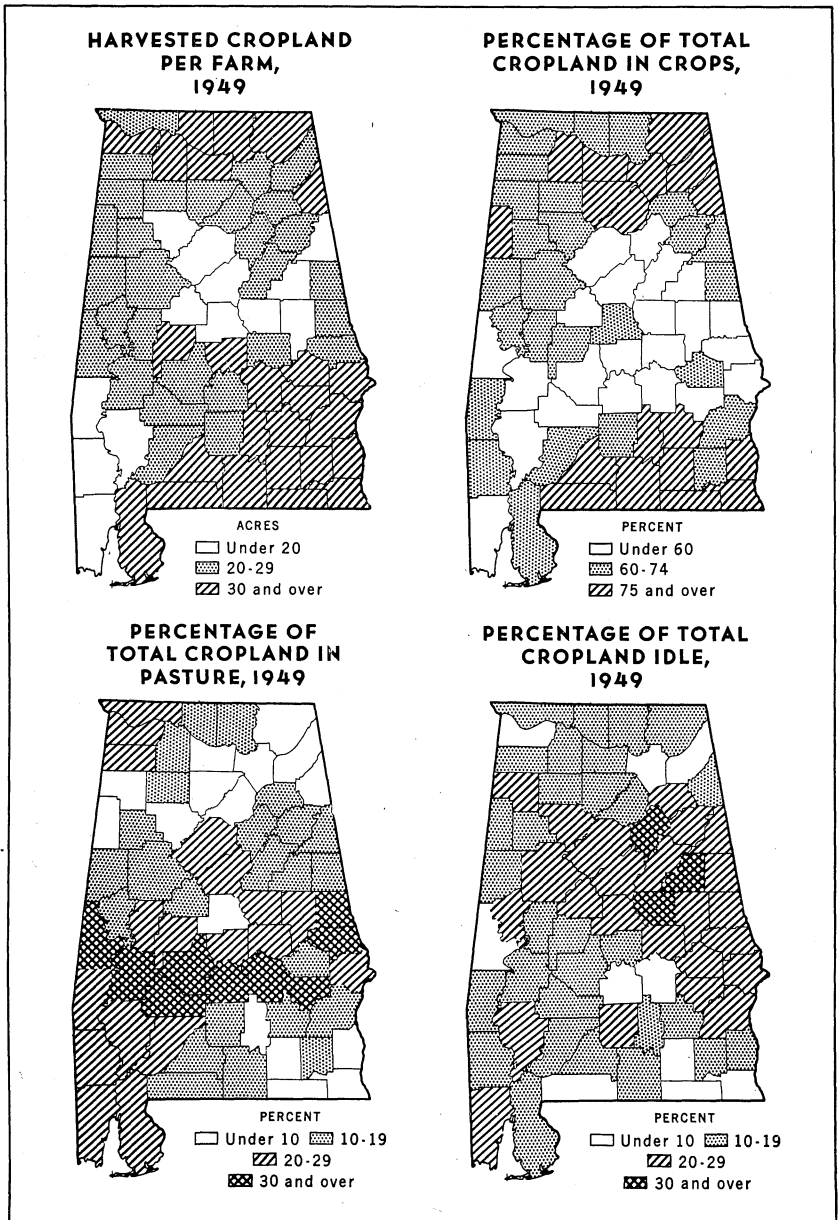


FIGURE 27. Cropland and cropland use, Alabama, 1949.

DISTRIBUTION OF CROPS

The relative acreages of harvested cropland devoted to different crops as between different areas of the State are important determinants of the types-of-farming in each area. A description of the major aspects of such uses, therefore, will contribute materially to an understanding of the agriculture of the State and its various areas.

Many different crops are grown in all sections of the State. Certain crops or combinations of crops, however, tend to predominate in each particular area. A wide variety of factors influence this situation.

Soil characteristics and prevailing climatic conditions determine to a large extent the level of yields for crops grown in each area. Soil characteristics and topography strongly influence the costs of producing each crop, while prices influence both costs of production and value of crops. The value of a crop relative to the cost of producing it influences the choice of crops.

The profitability of farming operations may frequently be increased by use of certain combinations of crops, for these may (1) help to maintain or increase yields, (2) permit a more complete utilization of land, labor, and equipment, and (3) provide a more balanced supply of feed for livestock.

Field Crops — Cotton, corn, and hay are the major crops grown in Alabama. Until about 1930, these three crops normally occupied more than 90 per cent of the total acreage of harvested crops. Cotton prior to about 1930, usually occupied from 45 to 50 per cent of the harvested crop acreage, corn from 37 to 42 per cent, and hay crops about 5 per cent. However, due to government control and soil conservation programs, low prices, an expansion in livestock production, and other factors, there has been a considerable change in the relative proportion of land devoted to these three major crops since 1930. Figure 28 shows that their combined acreage has decreased from 94 per cent of all harvested cropland in 1929 to 89 per cent in 1949. Cotton's relative importance from the standpoint of acreage has been reduced tremendously since 1929, whereas hay crops have doubled in relative importance.

Peanuts is a major crop in southeastern Alabama. Sweetpotatoes are grown in all parts of the State and Irish potatoes are commercially important in certain sections. Truck crops and fruits are important in some sections. Acreages of these and other

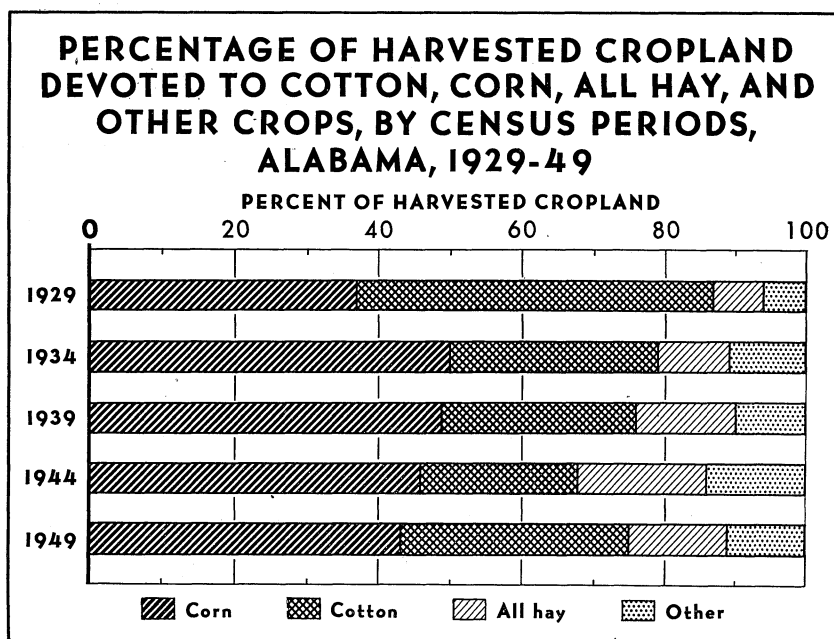


FIGURE 28. Percentage of harvested cropland devoted to cotton, corn, all hay, and other crops by Census periods, Alabama, 1929-49.

crops, however, are small in comparison with those of cotton, corn, and hay.

Cotton is the principal money crop in Alabama. It is grown to some extent in all parts of the State, Figure 29. In soil, temperature, and length of growing season, practically all of the State is adapted to cotton production. The intensity of production, however, varies considerably between different areas. Boll weevil infestation and weather-damage during the picking season make cotton production extremely hazardous near the Gulf Coast where heavy rainfall occurs from June to September. Normally, cotton acreage is materially influenced by price. Years of low prices usually are followed by decreased plantings, and years of high prices by increased plantings.

Cotton acreages are higher in northern Alabama counties than in other parts of the State, Figure 29. In addition, cotton yields are higher and are less variable in this section than in other sections of the State, Figure 11.

The State's cotton acreage has averaged 1,500,000 acres annually in recent years. This is about half the acreage that was grown

during the 1920's. Cotton production, however, has been about the same in recent years as during the 1920's. The decrease in cotton acreage over this period has been offset by an increase in lint yield per acre.

Corn is the principal feed and food grain grown in Alabama, and, before the cotton acreage reduction programs of the 1930's, normally ranked next to cotton in acreage; since 1934, however, corn acreage has exceeded that of cotton by a considerable margin, Figure 7. Corn acreage in Alabama in 1949 was 2,471,589 acres, or slightly less than 50 per cent of the total acreage of harvested crops. This amounted to a decrease of approximately 28 per cent below the 1939 acreage. This decrease in corn acreage during the past decade has been associated with a decrease in grain feed needs for workstock due to a decline in the number of workstock on farms. In addition, corn yields per acre have increased during the last decade because of increased use of new and improved varieties including hybrids, increased fertilization, and improved cultural practices. In 1952, nearly 40 per cent of the State's total corn acreage was planted with hybrid seed.

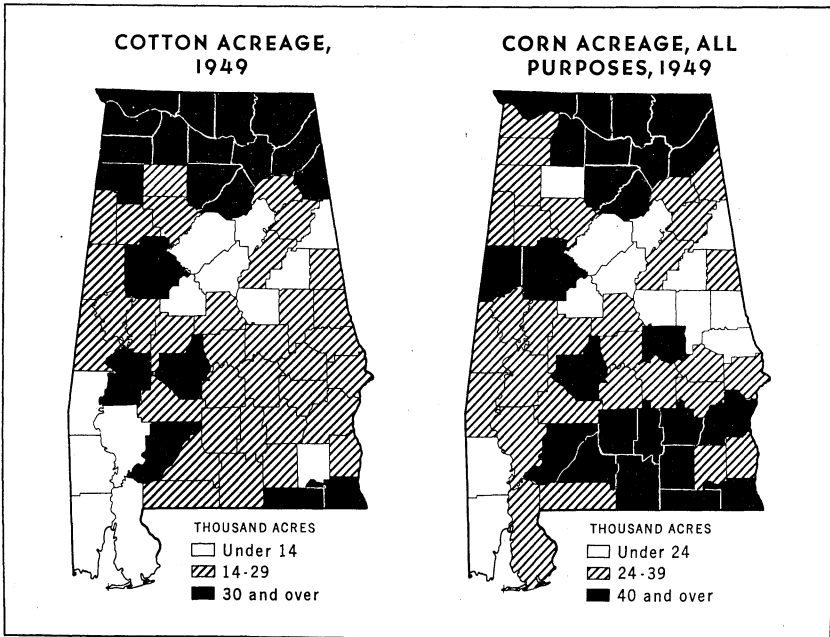


FIGURE 29. Acreage of cotton and corn, Alabama, 1949.

Highest corn acreages are in northern and southeastern Alabama counties, Figure 29. Lowest acreages are in the Piedmont and Gulf Coast areas and in Jefferson and surrounding counties. Highest corn yields are obtained in northern Alabama and lowest yields in southern Alabama, Figure 11. High acreages of corn in southeastern Alabama are associated with commercial pork production in this area.

All hay, including sorghum for forage, utilized 750,000 acres of Alabama's harvested cropland area in 1949. This comprised slightly more than 13 per cent of the total acreage of harvested crops in 1949. Because commercial peanut production is centered in southeastern Alabama and because peanut vine hay is a by-product of peanuts harvested for market, the heaviest concentration of all hay and sorghums for forage in Alabama is also centered in this area, Figure 30. Other areas with relatively high acreages of hay crops are the Black Belt and the Tennessee Valley.

Alabama is on a deficit hay basis in that usually less hay is produced than is needed by the livestock in the State. This is partly due to weather conditions which make it difficult to save hay of good quality, and partly because perennial hay crops that are adapted to the soil and climatic conditions of Alabama have not been widely adopted by Alabama farmers. As a consequence, Alabama depends largely on annual crops for the production of hay; less than 25 per cent of the total acreage in hay crops is accounted for by perennial crops. In 1949, annual legumes, principally cowpeas, soybeans, and peanuts, made up 43 per cent; tame and wild grasses 29 per cent; and sorghums for forage 2 per cent of the total acreage of hay harvested. Lespedeza, small grains cut for hay, timothy or clover; and alfalfa accounted for the remaining 26 per cent. Lespedeza was by far the most important crop in the latter group.

As cowpeas and soybeans grown for hay frequently are grown after oats or other small grains, there is some duplication of the acreage in hay crops. Duplication also occurs to some extent with peanut hay, which is a by-product of peanuts harvested for market.

Peanut hay was important only in southeastern Alabama, Figure 30. Cowpeas and soybeans for hay were more important in northern Alabama than in other areas of the State. Alfalfa that was cut for hay was more important in the Tennessee Valley and Piedmont areas, Figure 30. Sweet clover and lespedeza, small grains cut for hay, and timothy and clover for hay were confined

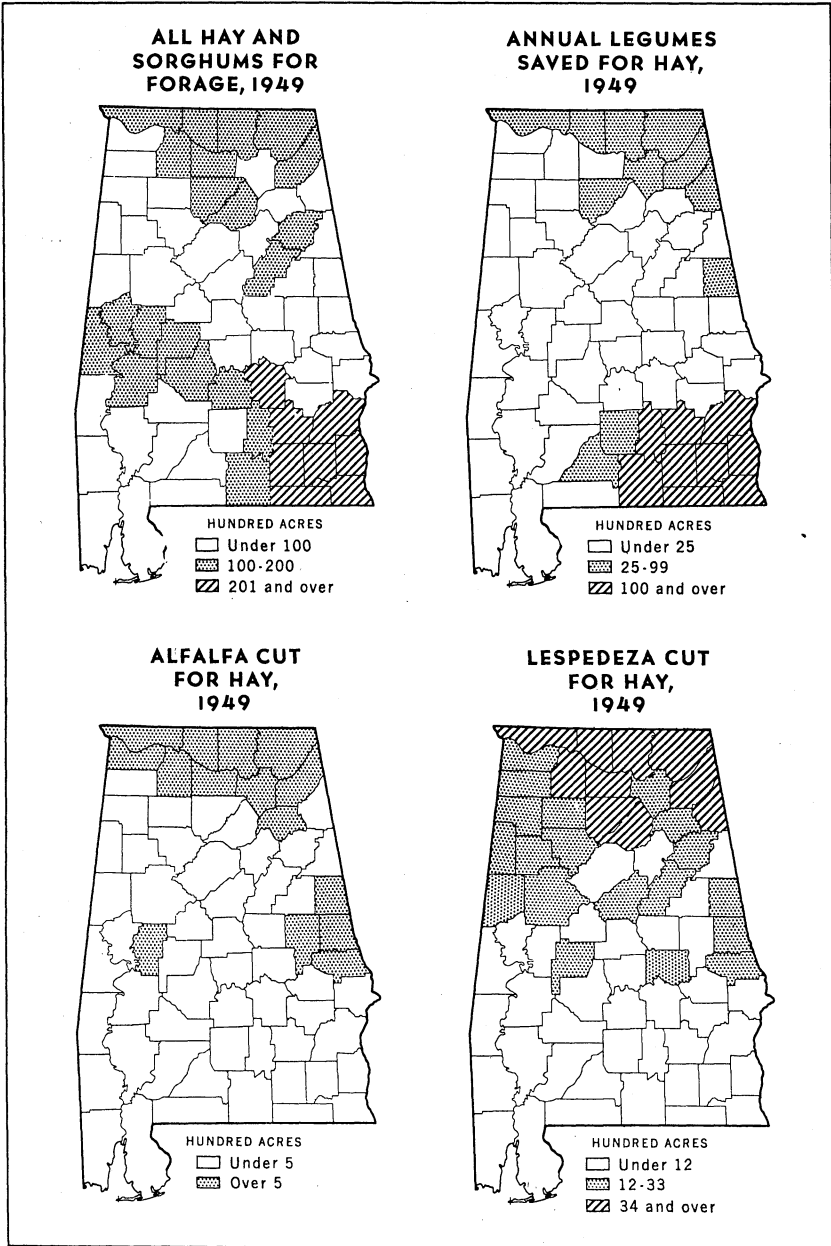


FIGURE 30. All hay and specified hay crops, Alabama, 1949.

principally to the northern half of the State, with a major concentration in Tennessee and other Limestone Valley counties.

Peanuts were reported on 41,142 Alabama farms in 1949. These farms had a total of approximately 418,000 acres. Peanuts are grown to some extent in all parts of Alabama, but commercial production is concentrated in the southeastern part of the State, Figure 31. The heavy concentration of peanut production in this area is largely due to soil adaptation which, together with market considerations, permitted a decided shift to this crop as a substitute for cotton during the heavy boll weevil infestation period beginning in 1912. Similar soils in south-central and southwestern Alabama appear to be well adapted to peanut production, but these sections were more sparsely settled, farming was less commercialized, cotton production was less important, and the need for a crop to take the place of cotton was not so strongly felt during the period of early boll weevil infestation. Consequently, commercial peanut production did not develop to the same extent in this area as in southeastern Alabama.

Peanuts are usually grown alone when intended for market. This practice predominates in all of the southeastern Alabama commercial peanut-producing counties. Principal Alabama markets for harvested peanuts are in Coffee, Dale, Henry, and Pike counties.

Until recent years, when peanut prices were favorable relative to hog prices, a considerable proportion of the crop was hogged rather than harvested for market. Conversely, when hog prices were favorable relative to peanut prices, a larger proportion of the total acreage was hogged. Presently, only a small part of the total crop is hogged.

Of the 1949 crop, 415,115 acres were grown alone and 4,695 acres with other crops, Figure 31. In 1939, nearly a third of the peanuts were grown with other crops.

Velvetbeans are important both as a source of feed and as a soil-improving crop in southern Alabama. They usually are grown with other crops, principally corn, or corn and peanuts. Velvetbeans are heavily concentrated in the southeastern part of the State, Figure 31. The usual practice is to pick a sufficient quantity of beans for an ample supply of seed and some reserve feed, and graze the remainder with cattle or hogs after corn and/or peanuts have been harvested. In 1949, Alabama farmers pro-

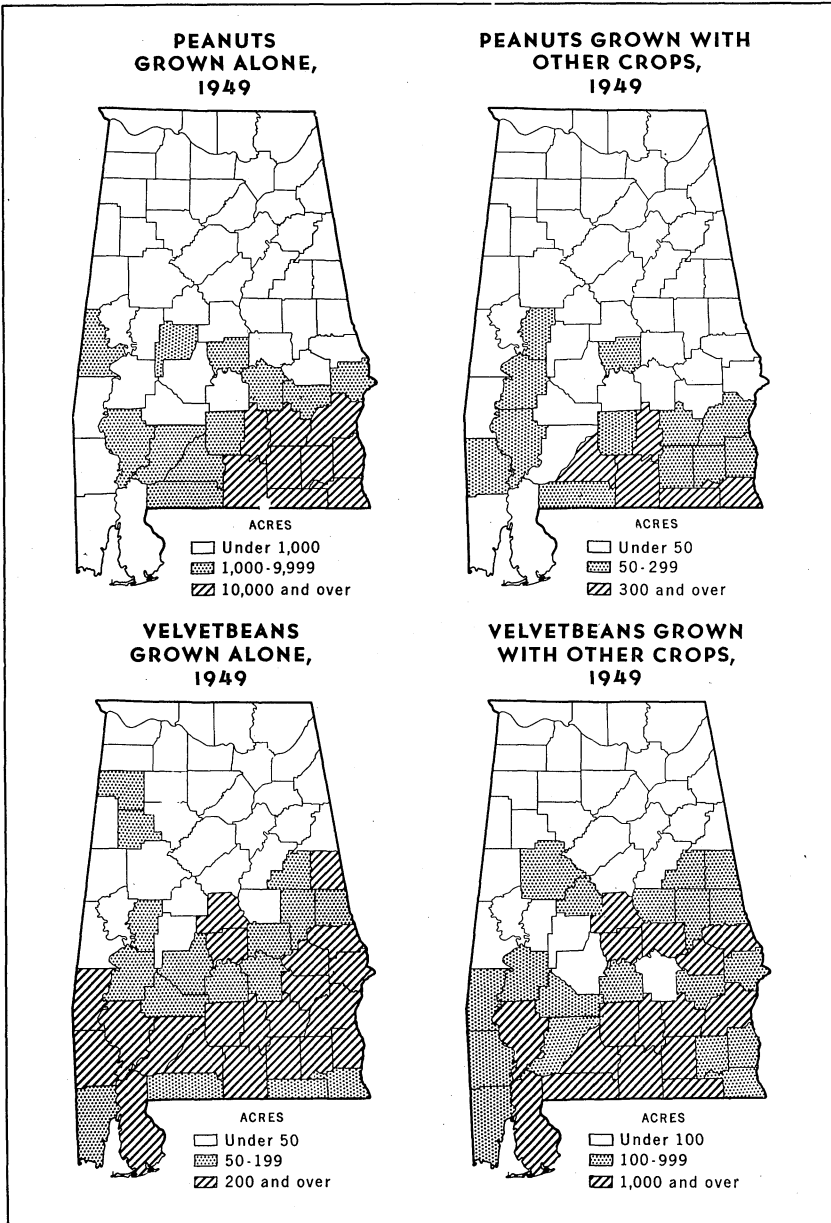


FIGURE 31. Peanuts and velvetbeans grown in Alabama, 1949.

duced 50,203 acres of velvetbeans with other crops and 12,404 acres alone.

Production of **soybeans** is confined mainly to the Gulf Coast Area and to northern Alabama, Figure 32. Approximately 92 per cent of the acreage in 1949 was grown alone. A large percentage of the soybeans grown alone is included in the acreage of annual legumes saved for hay, Figure 30. The acreage grown with other crops was confined principally to the Gulf Coast Area in 1949, and was used primarily as a grazing crop for cattle and/or hogs. Total soybean acreage has declined more than 50 per cent since 1939; most of this decrease has resulted from the decrease in acreage of soybeans used for hay, Figure 8. The acreage of soybeans harvested for beans has increased tremendously since 1939; The center of soybeans for bean production is in Baldwin County where soybeans are used as a supplementary cash crop to early commercial Irish potato production. Of the approximately 125,000 acres of soybeans grown in Alabama in 1939, about 53 per cent were cut for hay, 40 per cent were harvested for beans, 5 per cent were grazed, hogged, or cut for silage, and the remaining 2 per cent were turned under for green manure.

The acreage of **cowpeas** was distributed over the State somewhat in accordance with harvested cropland, Figure 32. Some concentration occurred in areas where the crop was grown primarily for soil improvement. Cowpeas are grown either alone or with other crops. Of the total acreage reported for 1949, 75 per cent was grown alone and 25 per cent with other crops, principally corn. The acreage of cowpeas grown alone in Alabama in 1949 was only a third as much as that reported in 1939. A large part of this decrease was due to the decrease in the acreage of cowpeas used for hay, Figure 8. Acreages of cowpeas grown with other crops in 1949 was only 6 per cent as much as the 360,000 acres reported in 1939. Interplanting cowpeas in corn is not common practice today. Of the 86,000 acres of cowpeas grown in Alabama in 1949, approximately 32 per cent were harvested for dry peas, 29 per cent were harvested for green peas, 16 per cent were cut for hay, 17 per cent were grazed, hogged, or cut for silage, and the remaining 6 per cent were plowed under for green manure.

The total acreage of **oats** harvested for grain in Alabama in 1949 was 112,588 acres. This included both oats threshed or combined and oats cut for feeding unthreshed. Oat acreage in 1949 was only half as much as was reported in 1944 but was about 5

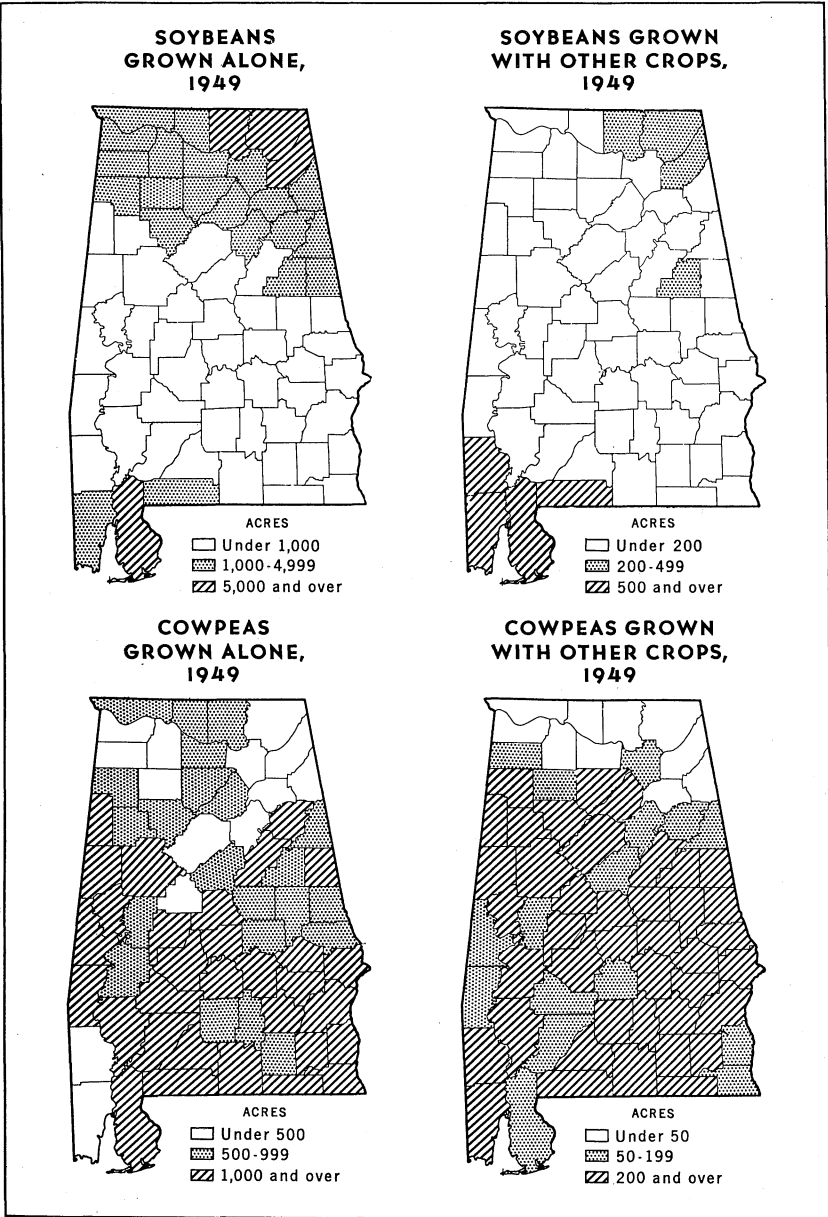


FIGURE 32. Soybeans and cowpeas grown in Alabama, 1949.

per cent greater than the acreage reported in 1939. With the exception of the 1940's, the trend in oat acreage in Alabama has been downward since about 1885, Figure 7.

In 1949, approximately 50 per cent of the crop was cut and fed unthreshed. Most of the threshed or combined oats in the State were produced in the Black Belt and Piedmont areas, Figure 33. With the exception of Baldwin County in the Gulf Coast Area, very few oats are grown in southern or northern Alabama; highest acreages are in central Alabama counties.

Oats as produced in Alabama are frequently double-cropped with cowpeas, soybeans, grain sorghum, and other similar crops; consequently, there is some duplication in the acreage of oats and those crops that follow oats as double crops. Oats cut green for hay are not included in the acreage reported as harvested for grain.

Sweetpotatoes are produced to some extent in all parts of the State. They are important as a commercial crop in only two areas, the Gulf Coast and Sand Mountain areas. In these areas, production is most concentrated in Baldwin and Cullman counties respectively, Figure 33. In other parts of the State, the crop is grown principally for home use. Nearly 40 per cent of the farms in the State reported sweetpotato production in 1949. Total acreage in 1949 was 28,651, exclusive of the acreage on farms that produced less than 15 bushels per farm. The 1949 acreage was less than half that reported in 1944 and only a third of the acreage reported in 1939.

Much of the **Irish potato** crop in Alabama is grown in small patches for home use. About 40 per cent of the farms in the State reported some Irish potato production in 1949. Total acreage for the State, exclusive of the acreage on farms that produced less than 15 bushels per farm, was 22,023 acres in 1949. Irish potatoes are commercially important in Baldwin, Escambia, Cullman, Jackson, and DeKalb counties, Figure 33. Each of these counties has more than 1,000 acres devoted to the crop. Baldwin County leads all counties in the State in early Irish potato production; reported acreage in 1949 in this county was 9,450 acres. Irish potato acreage for the State as a whole in 1949 was less than half that reported in 1944 and in 1939.

Vegetables harvested for sale in 1949 occupied only about 1 per cent of the total acreage of harvested crops in Alabama, yet they were of importance in certain sections, Figure 33. Principal

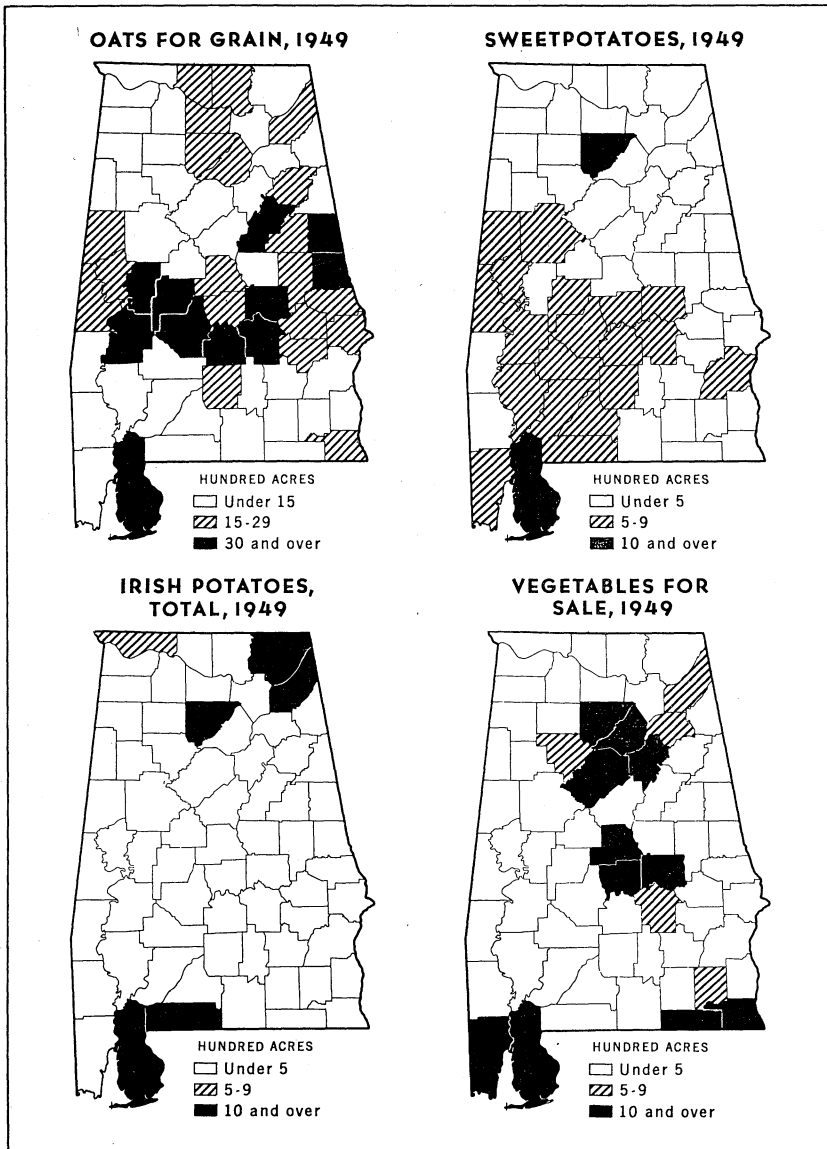


FIGURE 33. Oats, sweetpotatoes, Irish potatoes, and vegetables for sale, Alabama, 1949.

truck crops in Alabama in 1949, based on acreage devoted to each, in order of relative importance were watermelons, sweet corn, tomatoes, green beans, green lima beans, okra, cantaloupes, turnips, cucumbers, and cabbage. These ten crops made up more than 90 per cent of the total acreage devoted to production of vegetables for sale in 1949.

Watermelons are grown for home use to some extent in all parts of the State. Commercial production in 1949 was most heavily concentrated in Mobile and Baldwin counties on the Gulf Coast, in Geneva and Houston counties in southeastern Alabama, in Autauga, Chilton, and Elmore counties in central Alabama, and in Blount and DeKalb counties in the Sand Mountain Area.

More than three-fourths of the sweet corn acreage in 1949 was in Baldwin County. Other major producing counties were Mobile, Escambia, Chilton, Elmore, and Montgomery.

Heaviest concentration of commercial tomato production was in Sand Mountain and adjacent counties, including Blount, Cullman, Etowah, Marshall, St. Clair, Jefferson, and Chilton. Tomato production was also important in Houston County in 1949.

Green bean production was most concentrated in Blount, Chilton, Cullman, Sumter, and St. Clair counties. Counties leading in green lima bean production were Blount, Cullman, Elmore, Houston, Lee, Mobile, and Jefferson.

Highest acreages of okra in 1949 were in Wilcox, Marengo, Dallas, and Blount counties. Cantaloupes were important in Blount, Jefferson, Elmore, Houston, and Mobile counties. Turnips were of major importance in Jefferson, Baldwin, and Mobile counties. Cucumbers were important truck crops in Baldwin, Butler, and Houston counties. Commercial cabbage production was confined largely to Mobile and Baldwin counties; other areas of some importance were those adjacent to Birmingham and Montgomery.

Perennial legumes, in recent years, have to some extent replaced some of the annual legumes used for grazing, hay, and/or forage. The most widely adopted perennial legume in 1951 was sericea lespedeza, Figure 34. Three-fourths of the counties in the State in 1951 each reported more than 3,000 acres of this crop in production. With the exception of some counties in the southwestern part of the State, sericea lespedeza was an important crop all over the State.

Kudzu, an important perennial legume in the southern two-thirds of the State, was of major importance in about half of

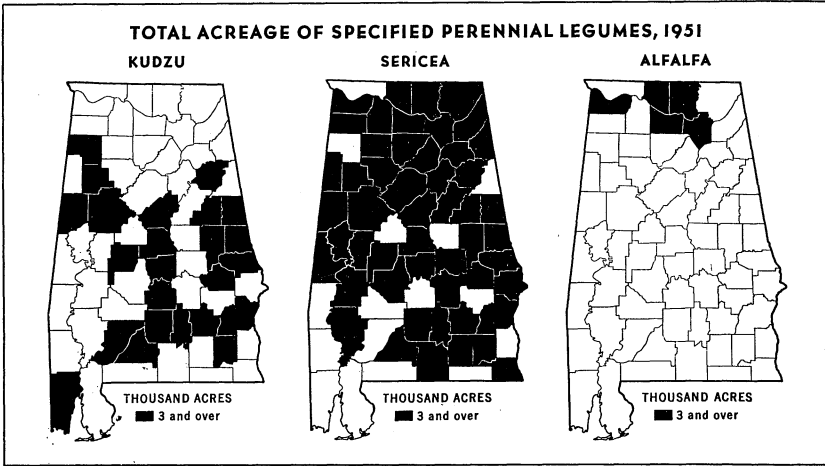


FIGURE 34. Acreage of specified perennial legumes, Alabama, 1951.

the counties in this area. It was most heavily concentrated in counties located in the Piedmont, the Upper Coastal Plains, and the northern part of the Lower Coastal Plains, exclusive of most of southwestern Alabama, Figure 34.

Some alfalfa was grown in most parts of the State, but its acreage was highest in the Tennessee Valley, Figure 34.

Winter legumes planted in 1951 indicate that Alabama farmers are taking advantage of the opportunities afforded by these crops of providing cover, preventing erosion, producing feed, increasing soil fertility, and making better over-all use of land, labor, and capital. Figure 35 indicates that most of the winter legumes planted are best adapted only in certain areas. Farmers, in general, are planting winter legumes on this basis. As shown in Figure 35, reseeding crimson clover was planted primarily in central Alabama, with a heavy concentration in Black Belt and surrounding counties. Annual or common crimson clover was more important both to the north and south of the reseeding crimson clover area. Common crimson clover was most important in terms of acreage in the Tennessee Valley, on Sand Mountain, and in the Gulf Coast Area.

Vetches were planted in 1949 generally in every area of the State with the exception of the Piedmont and the Lower Coastal Plains areas. Blue lupine was of major importance only in southeastern Alabama. Its pattern of distribution follows that of the State's commercial peanut production area. Caley peas were of

most importance in the Black Belt; some Tennessee Valley counties also produced a considerable acreage of this crop. Plantings of Austrian winter peas were scattered and followed no particular pattern of distribution. Most counties with high acreages, however, were in either the Upper or Lower Coastal Plains areas.

Grazing crops planted in 1951, as shown in Figures 36, 37, and 38, are an indication not only of the relative importance of different crops used for grazing, and the geographic location of production areas for these crops, but also of the reliance that Alabama farmers are placing on year-around grazing programs in the development and expansion of commercial livestock enterprises in the State.

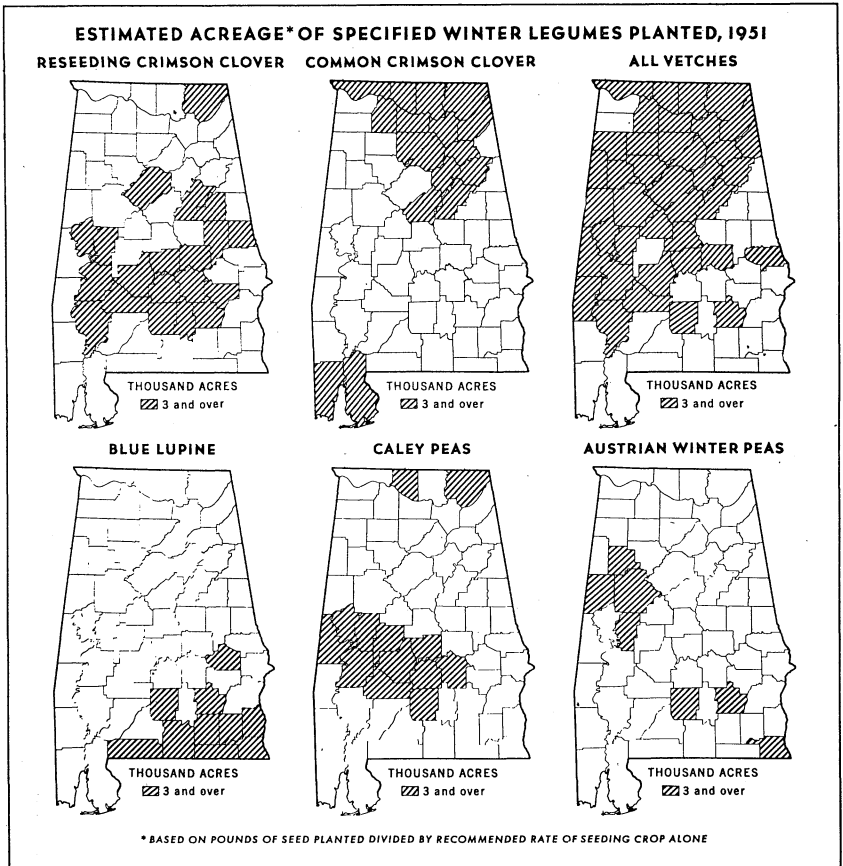


FIGURE 35. Estimated acreage of specified winter legumes planted, Alabama, 1951.

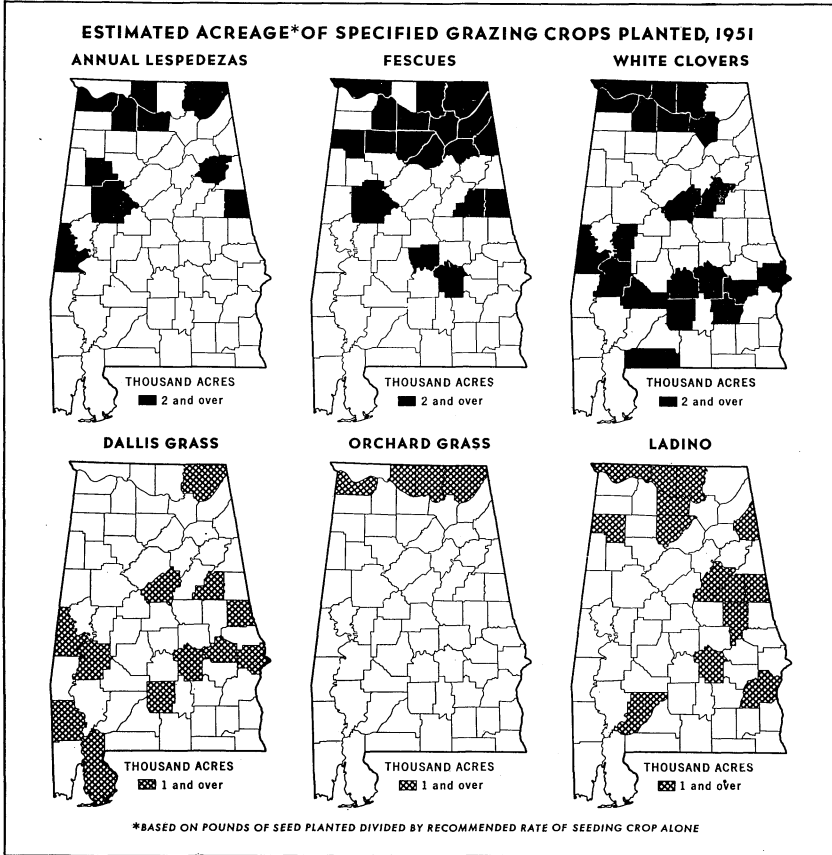


FIGURE 36. Estimated acreage of specified grazing crops planted in Alabama, 1951.

Annual lespedezas planted for grazing in 1951 were of major importance in about a fourth of the counties in the northern half of the State, Figure 36. Fescues were planted primarily in the northern half of the State, with heaviest plantings in the Tennessee Valley and on parts of Sand Mountain. White clovers were planted in relatively large acreages in both the Tennessee Valley and in the Black Belt.

Dallis grass plantings were scattered over most of the State, with some concentration in Black Belt counties, Figure 36. Orchard grass plantings were important only in the Tennessee Valley Area. Ladino clover was planted in every area of the State; heaviest plantings were in scattered counties in the Piedmont, and in the Tennessee Valley Area.

Crimson clover-ryegrass mixtures were planted for grazing in all Alabama counties in 1951. Heaviest plantings were in northern and southern Alabama, Figure 37. Plantings of crimson clover alone to be used primarily for grazing were heaviest in central Alabama. Plantings of Caley peas for grazing were limited to counties in the Black Belt and adjacent counties. Relatively large acreages of small grains were planted primarily for grazing in some counties in all parts of the State. Heaviest concentrations of such plantings were in Black Belt counties and in some counties in the northern half of the Upper Coastal Plains Area. Small grain mixtures with vetch were also planted in most areas of the State, but such plantings showed no particular pattern of distribution.

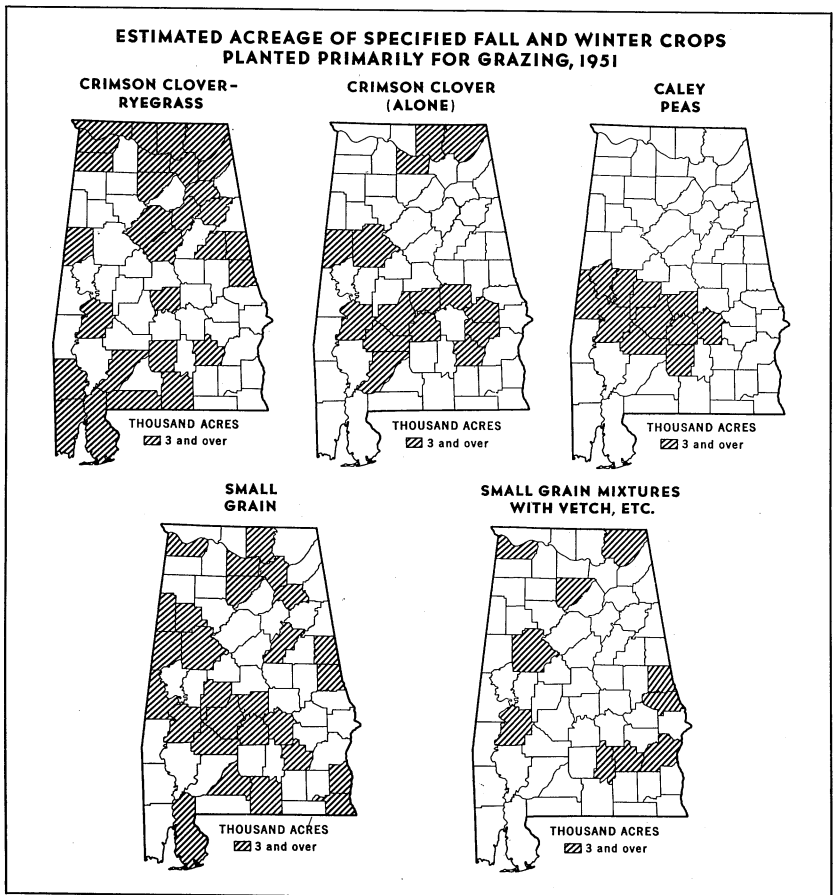


FIGURE 37. Estimated acreage of specified fall and winter crops planted primarily for grazing in Alabama, 1951.

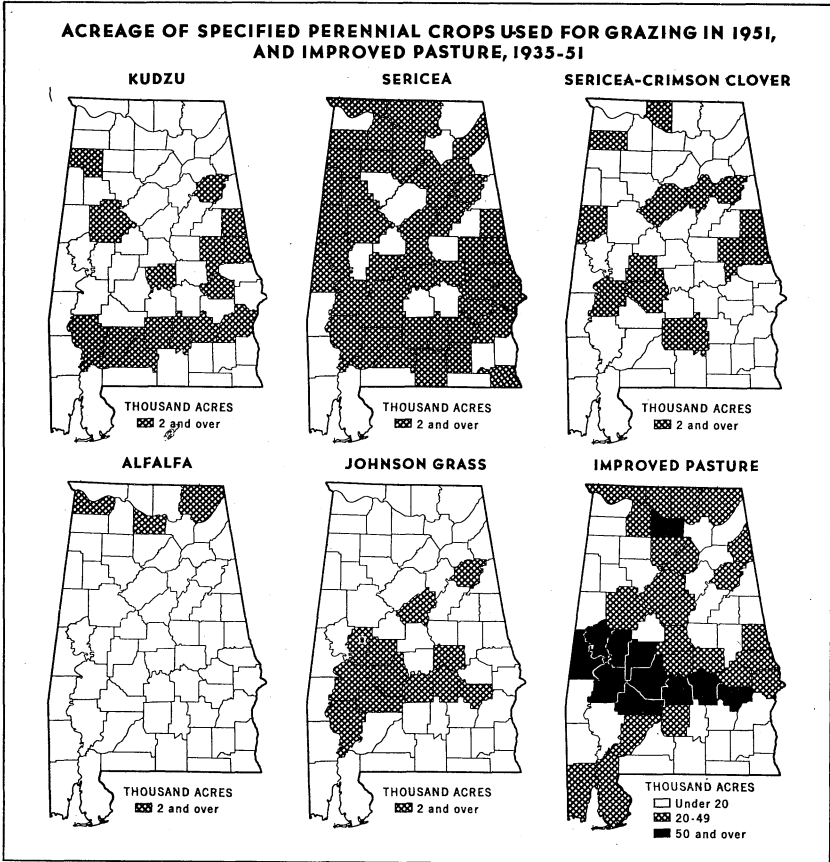


FIGURE 38. Acreage of specified perennial crops used for grazing in 1951, and acreage of pastures improved in Alabama, 1935-51.

A number of perennial crops were used for grazing in 1951. Sericea lespedeza was of major importance in nearly all counties of the State, with the exception of the extreme southwestern Alabama counties, Figure 38. Kudzu was important in most of the Piedmont counties and in counties in the northern half of the Lower Coastal Plains Area. Combinations of sericea lespedeza and reseeding crimson clover were used in most areas, but were important in only 13 of the State's 67 counties. Alfalfa is primarily a hay crop, but was of major importance as a grazing crop in 1951 in at least three counties in the Tennessee Valley. Johnson grass was a major grazing crop in most Black Belt counties and in some adjoining counties.

Acreages of pastures that have been improved in the different areas of the State are closely associated with the relative importance of these areas as producers of forage-consuming classes of livestock. Highest acreages of pastures that were improved during the period 1935-51 were in the Black Belt counties, Figure 38. This area has the highest forage-consuming livestock population density of any area in the State, Figure 41. Lowest acreages of pastures that were improved during this period were in counties in southeastern Alabama, the Piedmont, the northern half of the Upper Coastal Plains, and that part of southwestern Alabama north of the Gulf Coast Area.

Field seed crops, in recent years, have become an important contributor to cash farm incomes on many Alabama farms. The relative importance of some of these crops for the different areas of the State is shown by Figure 39.

Fescue seed production was important in northern Alabama counties, as was the production of vetch seed. Hybrid seed corn was produced commercially in eight counties; these were well scattered over the State. Caley pea seed production was of major importance in Black Belt and adjoining counties and in some Tennessee Valley counties. Seed from annual or common crimson clover was harvested principally in northern Alabama and in the Gulf Coast Area, while seed from reseeding crimson clover was harvested primarily in central Alabama counties. White clover seed production was confined mainly to Black Belt counties. Some seed were harvested from sericea and annual lespeza in nearly all counties in the State. Heaviest seed-production counties were located in the northern two-thirds of the State.

Other minor crops include sugarcane, wheat, grain sorghum, rice, tobacco, mixed grains, and barley. The total acreage of these crops in 1949 amounted to less than 1 per cent of the total acreage of harvested crops in the State. Sugarcane was restricted chiefly to the southern half of the State and was grown principally for sirup. Wheat was confined almost entirely to the Tennessee Valley, Limestone Valleys, and the Piedmont. Grain sorghums are of growing importance. Tobacco was grown to a limited extent in nearly all parts of the State but the crop as a whole was comparatively unimportant. Rice was limited principally to the southern part of the State and was grown almost entirely for home use.

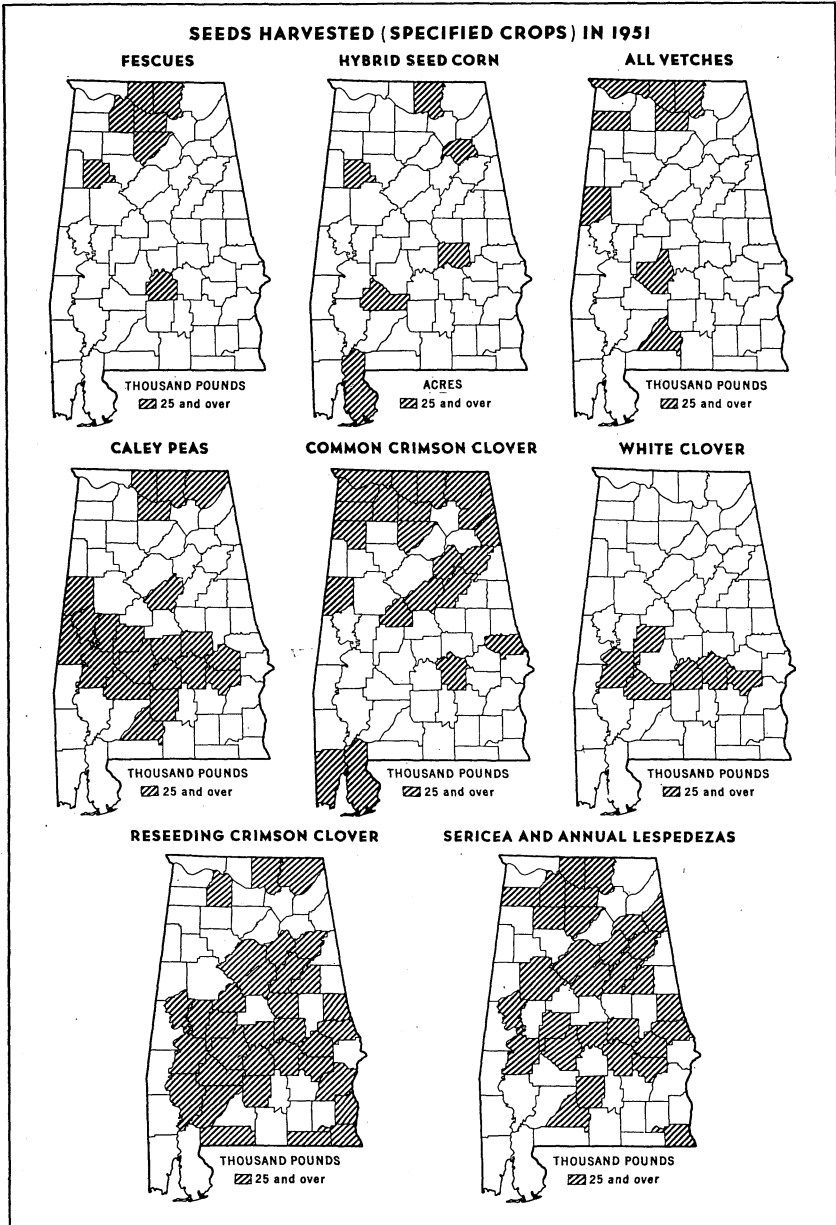


FIGURE 39. Seeds harvested from specified field crops in Alabama, 1951.

Tree fruits, grapes, berries, and nuts, with a few exceptions, are grown mostly for home use in Alabama. Peach trees were reported on 34 per cent of the State's farms in 1950, most of which were in the northern half of the State. Chilton County reported the largest number of trees of any county in the State, Figure 40. Commercial apple orchards were most numerous in Alabama on Sand Mountain farms. For the State as a whole, about 33 per cent of all farms reported some apple trees in 1950; most of these farms were in the northern half of the State. Production from fruit trees other than apple and peach was scattered throughout the State, with some concentration in the Sand Mountain and Gulf Coast areas, Figure 40. Pear trees were evenly distributed over the State except for a slight concentration in Mobile County. Plums and cherries were found mainly in the northern part of the State. Orange production was limited to the more hardy varieties, such as the Satsuma and Mandarin, and nearly all of the State's orange groves were located in Mobile County. Orange production has declined tremendously in Alabama since the mid-1930's. Grapes are grown principally for home use; only 17 per cent of the farms reported grape production in 1950. Most of these farms were in the Tennessee Valley and the more mountainous sections of the northern part of the State. Small plantings, principally of the scuppernong varieties, were found in Mobile and Baldwin counties.

The only berry crop of major commercial importance in Alabama is the strawberry. Its commercial production in 1949 was largely concentrated in three areas — in Butler and Conecuh counties, where the industry developed from the momentum of an early start, in Chilton County in central Alabama, and in Cullman County in the north-central part of the State. The latter two areas cater somewhat to the Birmingham market, but Cullman County, particularly in recent years, has sent much of its crop to northern markets.

In 1950, about 18 per cent of the farms of the State reported improved pecan trees, and about 7 per cent reported wild or seedling pecan trees. Most of these farms were in the southern half of the State, Figure 40. Heaviest concentrations of pecan trees in 1950 were in Mobile, Baldwin, Conecuh, Covington, Barbour, and Pike counties; all of these counties are in the Lower Coastal Plains Area. A total of 864,474 pecan trees of all ages was reported on Alabama farms in 1950. More than 80 per cent

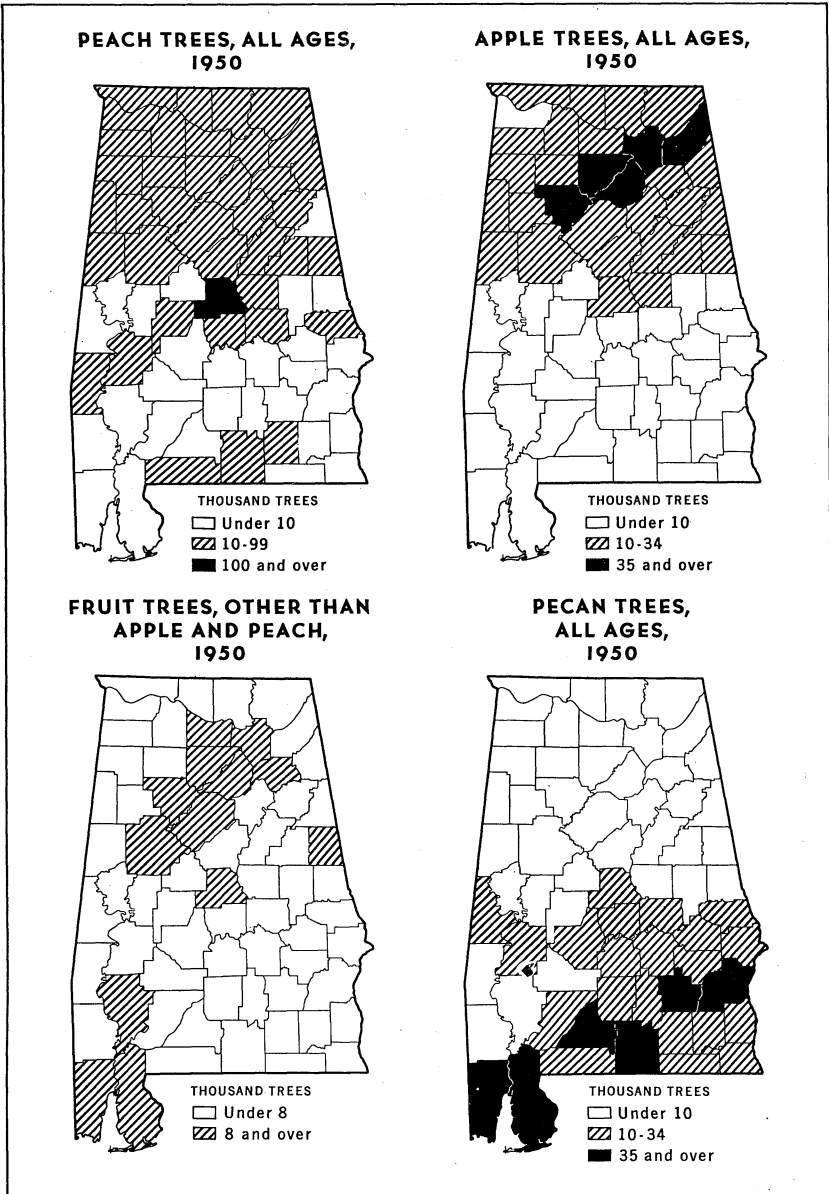


FIGURE 40. Specified fruit and nut trees on Alabama farms, 1950.

of these trees were of bearing age, and about 85 per cent were improved trees which had been budded, grafted, or top-worked.

DISTRIBUTION OF LIVESTOCK

Farm labor supplies in Alabama have long been such that more emphasis has been placed upon crops than upon the production of livestock and livestock products. Where special market demands exist or where special production advantages predominate, however, livestock and livestock products constitute an important source of income.

Livestock enterprises often help to provide a fuller utilization of farm resources and should contribute to more satisfactory farm incomes. Livestock enterprises frequently provide market outlets for many farm products that would otherwise be wasted. Livestock also provide profitable employment during the winter months, distributing the farm work more uniformly throughout the year. Livestock production, therefore, should help to develop and maintain a more balanced agricultural economy.

In general, the State of Alabama may be thought of as having four principal areas from the standpoint of livestock production. In southeastern Alabama, commercial hog production prevails; in the southwestern part of the State, livestock including cattle, hogs, sheep, and goats, relatively few of which are of high quality, are produced commercially. Animals of better quality are frequently produced on some farms in this area. In the Black Belt, both beef and dairy cattle, as well as turkeys and some sheep, are produced commercially. Finally, north of the Black Belt, production of livestock and livestock products is chiefly for home use, but a considerable quantity is diverted to local markets. The total livestock population of the State, in terms of animal units in relation to harvested crop acres, is greatest in the Black Belt and in southwestern Alabama. Otherwise, the relationship tends to be somewhat uniform, except for a tendency for the number of animal units to be large in relation to cropland where crops utilize relatively small portions of the total farm land in an area.

Cattle and calves in 1950 were most numerous in the Black Belt of Alabama and least numerous in the thinly populated and rough areas, Figure 41. Sales of cattle and calves were also highest in the Black Belt. Lowest volumes of sales were in counties in the Piedmont, on Sand Mountain, in extreme southeastern Alabama, and in most of the Upper Coastal Plains Area.

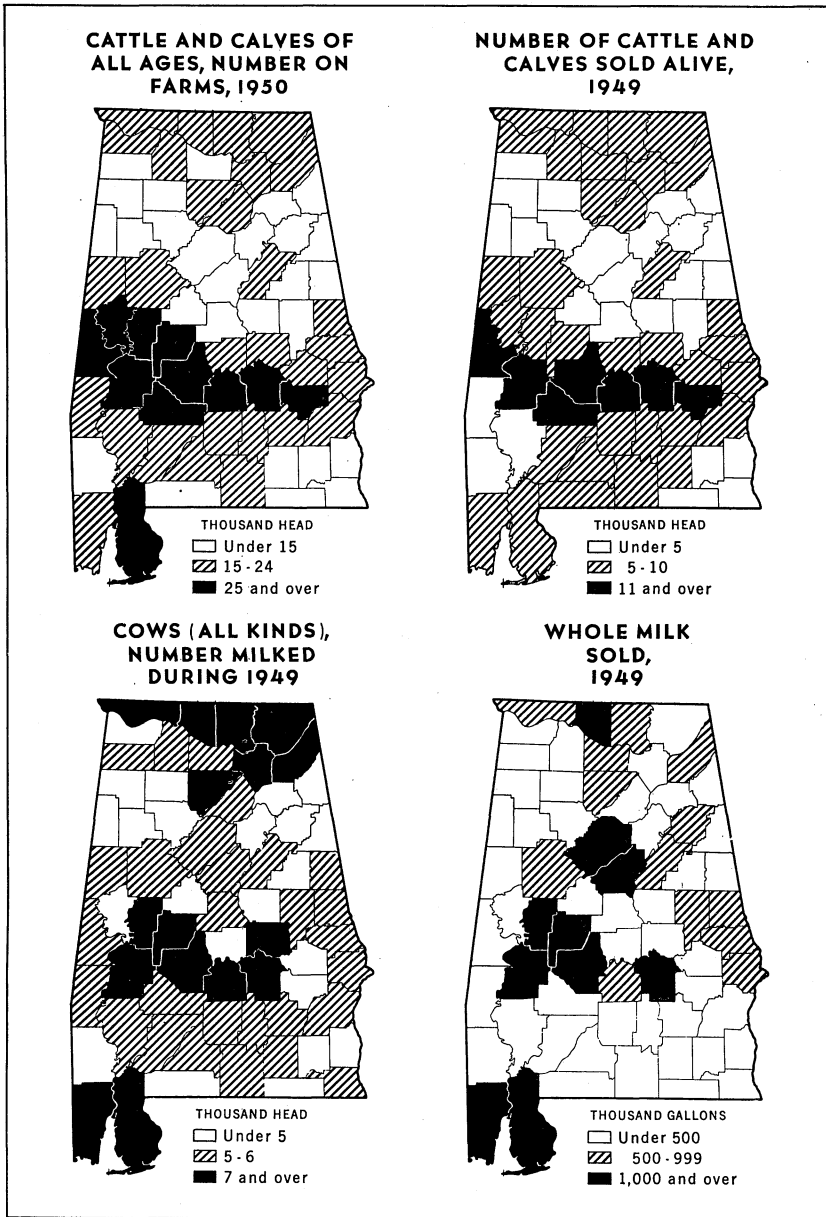


FIGURE 41. All cattle and calves, all milk cows, all cattle sales, and milk sales, Alabama, 1949-50.

Milk cows appeared in largest numbers in the Black Belt, Tennessee Valley, and Gulf Coast areas, Figure 41. Smallest numbers appeared in north-central Alabama counties. Whole milk sales followed a somewhat different pattern of distribution than numbers of milk cows. Highest areas of milk sales included major consuming centers such as Birmingham, Mobile, and Montgomery. Consequently, high milk sales counties included Jefferson, Mobile, Montgomery and some adjacent counties. Sales were also high in several Black Belt counties west of Montgomery and in Limestone County in the Tennessee Valley.

Hogs of all ages were most numerous in southeastern Alabama, Figure 42. Areas of secondary importance were southwestern Alabama, the Black Belt and adjoining counties, and the Tennessee Valley. Hog sales in Alabama were highest in southeastern Alabama; this area corresponds with the southeastern peanut-producing section of the State, Figure 31. Hog sales were also relatively high in the Tennessee Valley, particularly in Jackson and Madison counties, Figure 42. Hogs, although sparse in southwestern Alabama, were numerous in relation to the total number of farms, but their size and quality were below average and sales quantity was low. The number of sows and gilts bred for spring farrowing followed the same general pattern of distribution as that of all hogs sold, Figure 42.

Sheep were few in number in Alabama in 1950. Commercial flocks were concentrated in western Black Belt counties, in southwestern Alabama, and to some extent in the Tennessee Valley. Some sheep and lambs of good quality were produced, but many of the range flocks were of poor quality and were inefficient as producers. Wool production was confined largely to Black Belt and southwestern Alabama counties. The average clip was usually light and the quality poor.

Chickens were most numerous in Sand Mountain counties and in Baldwin County, Figure 43. These areas are farmed largely by white operators, and the percentages of tenancy in these counties are relatively low. Most northern Alabama counties had more chickens on farms than did most southern Alabama counties. Egg production and egg sales were also relatively greater in northern than in southern Alabama, Figure 43. Highest numbers of eggs sold were in Sand Mountain and Gulf Coast counties. Lowest numbers were in the Black Belt and Lower Coastal Plains counties that are north of the Gulf Coast Area. The patterns of dis-

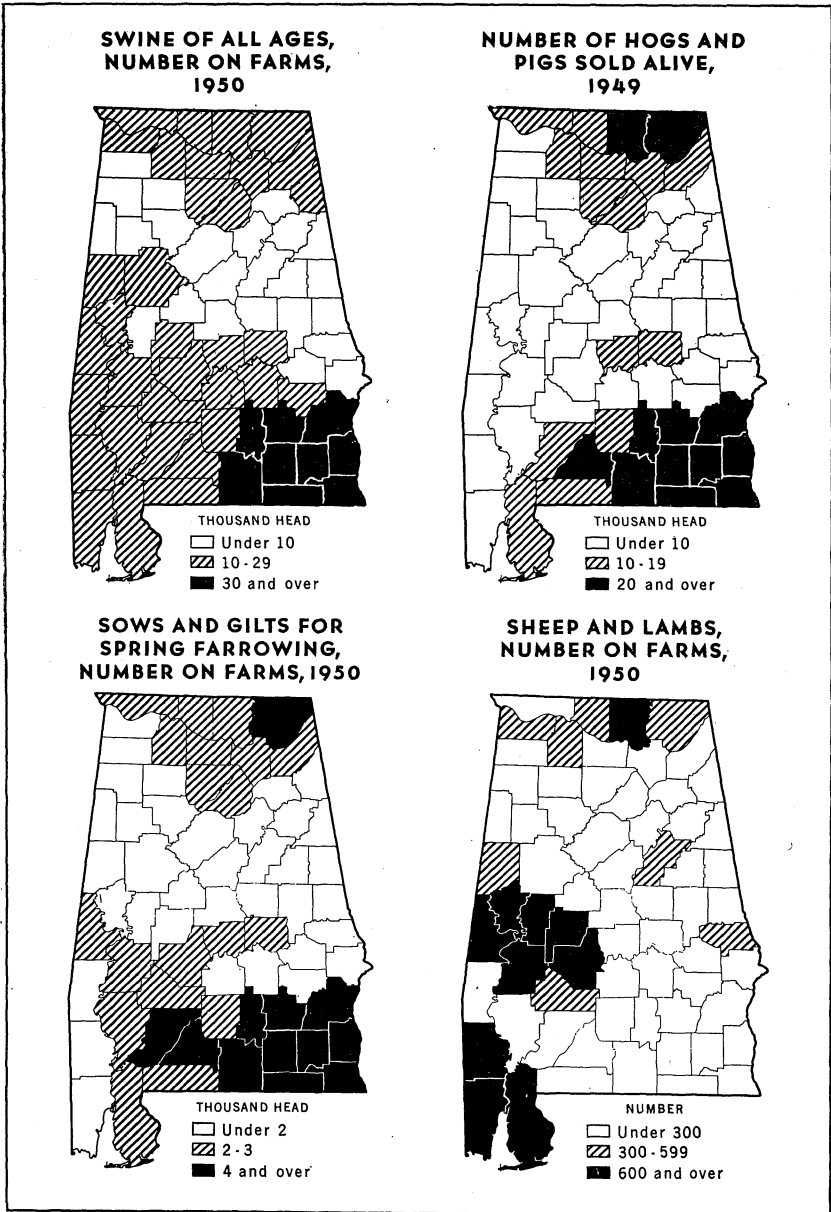


FIGURE 42. All hogs, hogs sold, sows and gilts bred, and all sheep, Alabama, 1949-50.

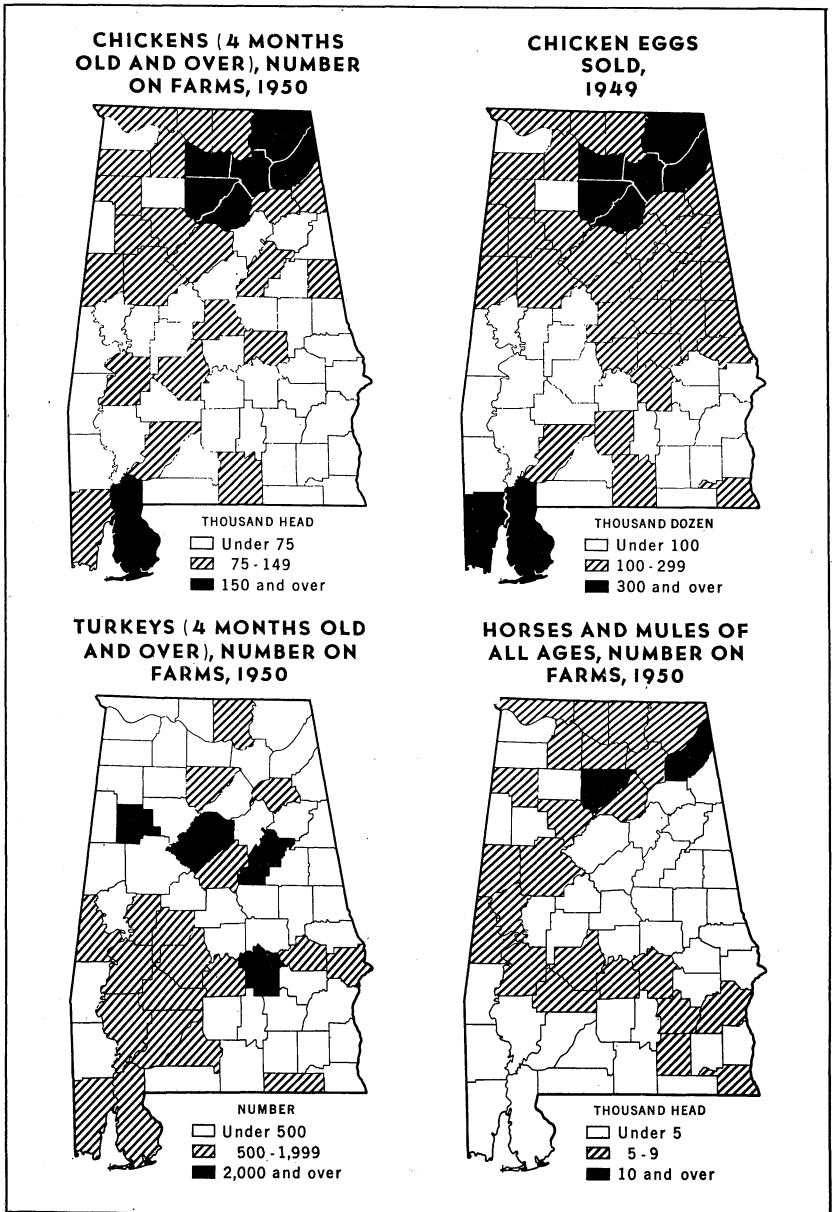


FIGURE 43. Poultry on farms, workstock on farms, and related data, Alabama, 1949 and 1950.

tribution for chickens on farms and for eggs sold were very similar.

Turkeys were grown to some extent in all counties in the State in 1950. They were of major importance in four counties — Fayette, Jefferson, Talladega, and Montgomery. They were also grown in relatively large numbers in most Black Belt counties and in most of the counties in southwestern Alabama south of the Black Belt.

Workstock were more evenly distributed over the State in relation to cropland than were any other class of livestock. Numbers of workstock tended to be relatively large, however, in intensive farming areas, and in the regions of heavy lime soils, Figure 43. They tended to be relatively small in lighter soil areas. While nearly all of the horses and mules in Alabama were work animals, a few colts were reported in all counties, but these were reported in noticeable numbers only in some Black Belt and Tennessee Valley counties.

TYPES OF FARMS

Alabama's 211,512 farms, if classified on the basis of percentage of cash receipts from sales of specified farm products, can be grouped into four general types of farms. Cotton farms would constitute the largest single group. Heaviest concentration of cotton farms in 1950 was in northern Alabama and lightest concentration was in southern Alabama, Figure 44. In terms of numbers, the second most important group would be livestock and poultry farms. In general, these farms were more prevalent in southeastern Alabama and in the Gulf Coast Area than in other sections of the State; they were least prevalent in northern Alabama. A third group, whose income is largely from field crops other than cotton or cash-grain, was concentrated in southeastern Alabama. Farms in this group were primarily peanut-producing farms. A large part of the remaining number of farms in the State are general farms, Figure 44. Because of the nature of incomes on these farms, they too were concentrated primarily in southeastern Alabama. A large percentage of the general farms in this area were producers of cotton, peanuts, hogs, and other products — none of which contributed as much as 50 per cent to the farms' total income.

Alabama's farms, if classified on the basis of the value of farm products sold and off-farm employment, can be grouped into

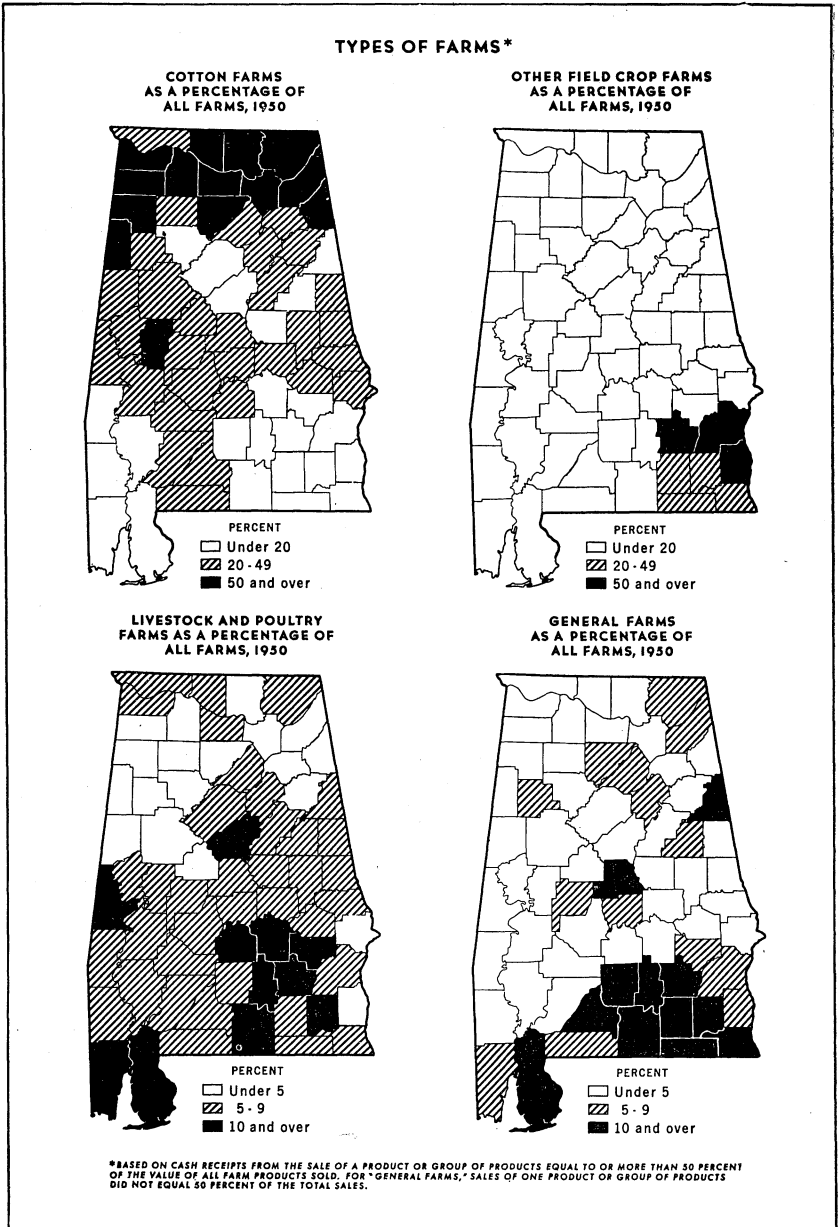


FIGURE 44. Types of farms, Alabama, 1950.

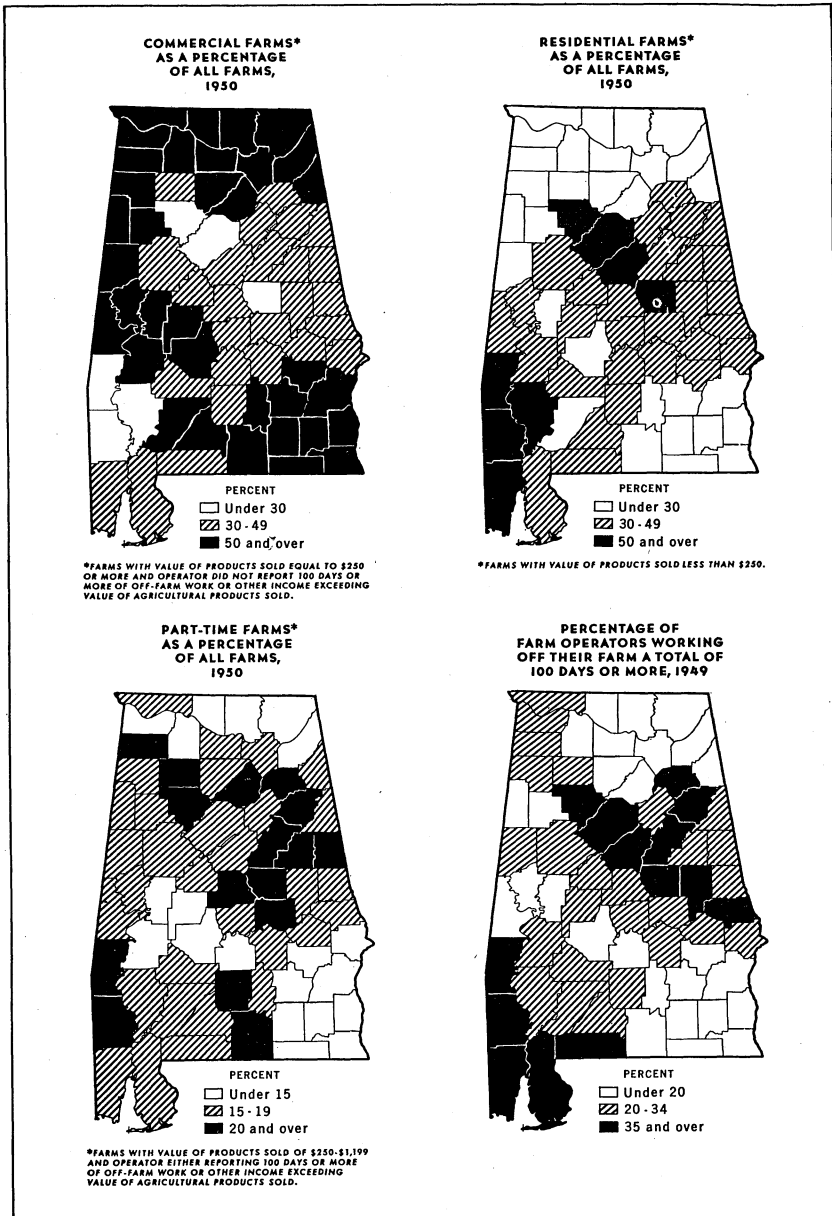


FIGURE 45. Commercial, residential, and part-time farms, and related data, Alabama, 1949-50.

three general groups. The largest and most important group consists of the State's commercial farms. More than 56 per cent of all farms in the State in 1950 were in this group. Commercial farms were relatively more numerous in northern Alabama, southeastern Alabama, the western part of the Black Belt, and the northwestern part of the Upper Coastal Plains, Figure 45. They were least numerous in Jefferson and adjoining counties and in southwestern Alabama north of the Gulf Coast Area. The second largest group consists of residential farms. This group made up about 28 per cent of all farms in the State. Residential farms were most numerous in Jefferson and adjoining counties and in southwestern Alabama; they were least numerous in the State's most intensive farming areas — the Tennessee Valley, parts of Sand Mountain, and southeastern Alabama. The third group, part-time farms, made up 16 per cent of the farms in the State. Part-time farms were scattered all over the State with some concentration in Piedmont and Coosa Valley counties, Figure 45. Part-time farms were least numerous in the Tennessee Valley and Black Belt areas, and southeastern Alabama. The percentage of farm operators who worked off their farms a major part of the year followed the same general pattern of distribution as that of the number of part-time farms in the State, Figure 45.

DESCRIPTION OF ALABAMA'S FARMING AREAS

The discussion thus far has dealt mainly with the early history of Alabama's agriculture, and the physical, biological, social, and economic forces that have influenced its past and present agricultural development. The maps and charts presented herein picture these various forces and show the geographic distribution of the State's population, land in farms, crops and livestock, and related data.

Differences in all of these factors formed the basis for delineating the different farming areas of the State shown in Figure 46. Variations in physical factors such as soils, topography, elevation, and climate, all of which are relatively permanent, were given most consideration in this delineation, but differences in other factors such as the proportion of total land area in farms, the proportion of farm land area in crops, the tenure, and the relative importance of crop and livestock enterprises, were sufficiently great within physically comparable areas to affect the location of the borders. On the basis of these considerations, the State was

divided into nine major farming areas, three of which were divided into sub-areas.⁷ Cotton occupied slightly more than 32 per cent of the harvested crop acreage for the State as a whole in 1949. Although there were considerable differences in the proportion of harvested crop acres in the various crops, as well as in the numbers of livestock per 100 harvested crop acres, cotton was the most important cash farm enterprise in most areas and sub-areas. Corn, which is the most important feed and one of the most important foods, occupied more land than any other crop in every area of the State except the Tennessee Valley. For the State as a whole, it occupied 43 per cent of the harvested cropland in 1949.

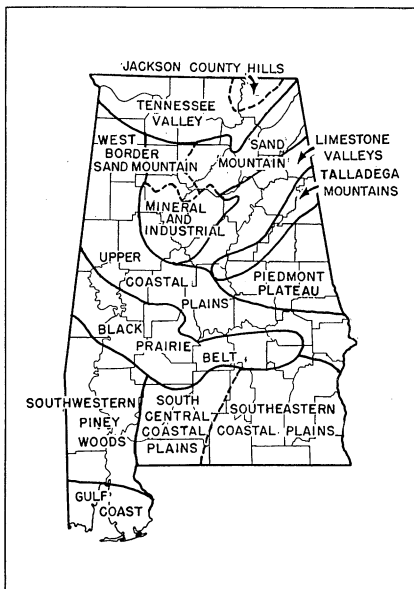


FIG. 46. Farming areas of Alabama.

AREA 1 — TENNESSEE AND LIMESTONE VALLEYS

Area 1 is composed of two sub-areas, 1a — the Tennessee Valley, and 1b — the Limestone Valleys, Figure 46. It is named for the limestone-derived soil which covers much of the area and which is above average in inherent fertility. The level lands in this area were organized into plantations at an early date and many farms still maintain plantation characteristics although much of the land is now held in smaller units. Negro farmers are quite numerous on the larger holdings, but there are relatively few on the smaller units. The existence of heavy soils, reasonably level topography, and numerous large holdings of land have encouraged the use of tractors and other types of labor-saving farm implements in this area.

⁷ The 1950 Census of Agriculture contains a series of special tabulations based on "State economic areas." Such areas, as used in the 1950 Census, correspond roughly with the nine major farming areas shown in Figure 46. A map showing the Census' State economic areas and a summary of statistical data as presented for these areas in the Census is included in the Appendix of this report.

Sub-area 1a, the Tennessee Valley, is situated in the Tennessee River Basin. In Alabama, it starts as a gently rolling valley of moderate width between the Cumberland Plateau in Jackson County on the northwest and the Sand Mountain Plateau on the southeast. As it curves westward, it broadens and flattens out into a relatively wide valley about midway of the State only to narrow somewhat between broken hills near the northwestern corner.

In 1949, cotton, corn, and hay crops together occupied more than 92 per cent of the harvested crop acreage; oats, Irish potatoes, sweetpotatoes, and miscellaneous minor crops comprised the remaining crops. Tree fruits, which are grown principally for home use, occupied less than 1 per cent of the cropland. The proportions of harvested cropland in cotton and hay exceeded State averages, while the proportions of cropland in other crops were below.

Numbers of all classes of livestock per 100 harvested crop acres were below State averages.

Yields of cotton and corn were relatively high in this area. Average corn yields were not sufficiently high, however, to bring returns comparable to those from cotton. This fact has been of major importance in the persistence of cotton as the highly favored cash crop. This area was one of the first in the State to be developed for cotton production. Moreover, the weight of custom, of organization of plantations for cotton production, of financing habits, and of familiarity with production methods also tend to influence the preference for cotton production.

With fair treatment, much of the area will produce excellent pasture and forage crops. For this reason, it is looked upon as an important potential livestock area. It possesses unusual possibilities for diversification, which may be acted upon if the comparative advantage in cotton production declines sufficiently.

Colored farmers are much more numerous on the lower level lands than on the rougher transition lands on the margin of the area, probably because holdings in the more level sections are larger and more generally operated with tenants. For the area as a whole, however, white farmers predominate.

Sub-area 1b, the Limestone Valleys, consist of a series of limestone valleys of moderate width lying between wooded hills and ridges. This area is somewhat more broken and has a higher altitude than that of **Sub-area 1a**. It also has a slightly longer

growing season, probably more variability in soil texture and plant food, and slightly lower yields of both cotton and corn. However, crops and production practices are quite similar in the two sub-areas. The proportions of cropland in cotton are below, while the proportions of cropland in corn, hay, oats, and vegetables for sale are above those in **Sub-area 1a**. This greater emphasis on feed crops and vegetables for sale, as well as cows milked, probably reflects the closer proximity of farms in **Sub-area 1b** to more favorable local markets in relation to total productive capacities.

Many colored farmers may be found in the older plantation sections of Talladega County but in general the proportion of colored farm operators is less than in **Sub-area 1a**.

AREA 2 — SAND MOUNTAIN

The Sand Mountain Area includes most of the Appalachian Mountain areas in Alabama. The topography varies from rugged mountains to gently rolling plateaus. The soils are largely sandy being derived chiefly from acid shales and sandstone. Deep sands, however, are not common and the water-holding capacity of the soil is fairly high. Nearly all soils of the area are responsive to good treatment. Commercial fertilizers, compost, stable manure, and green manures bring quick and favorable responses in increased crop yields. Pastures are usually poor. Native pastures are not naturally productive, but lend themselves to improvement by means of fertilization, seeding, and other good treatment. The area varies so much in topography and nearness to markets that it has been divided into four sub-areas, all of which have similar productive advantages from the standpoint of soil but have other important varying characteristics.

Sub-area 2a, the Sand Mountain proper, occupies the larger mountain plateaus and extends westward from the Alabama-Georgia State line slightly more than half way across the State. The area has an elevation ranging from 500 to well over 1,000 feet and consists largely of stretches of gently rolling to rolling land well suited for careful cultivation.

Farms in the area tend to be small, and, as a rule, farmers are relatively self-sufficient in food and feed production. Cotton, corn, and hay occupied more than 90 per cent of the harvested crop acreage in 1949. Oats, sweetpotatoes, Irish potatoes, and vegetables for sale occupied most of the remaining cropland.

Fruit trees, principally apples and peaches, occupied 1 per cent of the cropland. The proportions of harvested cropland in cotton and corn were above State averages.

Cotton yields were higher in this than in any other area of the State and feed crop yields were above average. Cotton was the most important cash crop but acreage was somewhat limited by the feed and food crops necessary to maintain the existing degree of self-sufficiency.

With the exception of hogs and poultry, livestock is kept largely for home use. Sales of poultry and poultry products are of considerable importance.

Farmers of the area are white. As a rule, they are industrious and thrifty and have been able to take advantage of nearby markets to dispose of their small surpluses of dairy products, fruits, and vegetables.

Sub-area 2b, the Jackson County Hills area, occupies about half of Jackson County and a small part of Madison County. This sub-area is rougher than **Sub-area 2a**. Much of the land is heavily wooded and is not used for farming. Soils generally respond to good treatment, but the acreage of cropland per farm is small and the small irregular fields tend toward inefficient use of man and mule labor. This results in a self-sufficing type of agriculture. The acreage of cotton is relatively small and that of feed crops large. As a consequence the number of livestock per 100 harvested crop acres is relatively large.

Sub-area 2c, the Mineral and Industrial area, is generally rugged in topography but includes sections that are comparable in farming capacity to **Sub-area 2a**. It also contains some narrow limestone valleys that are more or less similar to **Sub-area 1a**. The sandy lands respond to fertilizers and the limestone soils produce good pastures and feed crops. A large proportion of the sub-area is in woodland, much of which is owned by mining and industrial interests.

The type of farming is influenced by the proximity of local markets. Cotton was relatively unimportant in 1949 as compared with feed crops, Irish and sweetpotatoes, vegetables, fruits, and livestock and livestock products. Fruits, vegetables, and livestock are produced to help supply the demand of Birmingham and other local markets. Cotton and corn yields were above average in 1949 but the demand for other products gave them a comparative advantage over cotton.

Sub-area 2d, the West Border of Sand Mountain, is physically similar to Sand Mountain proper except in topography. The topography is generally quite rough and the proportion of the area in cultivation is much less than farther east. However, in 1949 the use of land for crops and livestock was quite comparable to that of Sand Mountain.

AREA 3 — TALLADEGA MOUNTAINS

The Talladega Mountain Area is a narrow, mountainous belt lying between the Limestone Valleys (**Sub-area 1b**) and the Piedmont Plateau. It is rough and rugged, and, for this reason, is of little agricultural importance. Most of the area is covered with timber and a large proportion is now included in the Talladega National Forest. Soils and topography limit farming to small areas in which the land surface is level enough to be cultivated. Slightly more than one-fourth of the harvested crop acreage is devoted to cotton but a self-sufficing type of agriculture is the general rule where farming is practiced. The proportion of cropland in food and feed crops is generally above the State average. Poultry appears to be the most important class of livestock kept and the number per 100 acres of harvested cropland was considerably above the State average in 1949.

AREA 4 — PIEDMONT PLATEAU

The Piedmont Plateau is a rolling area containing much land of questionable topographic adaptability for cultivation. A considerable proportion of land that formerly was cultivated has been taken out of crop production because of severe erosion. Topsoils are generally considered strong and productive where erosion can be prevented and a good cropping system is followed. Erosion control is difficult in many parts of the area because the small amount of level land increases the tendency to cultivate the steeper slopes, the relatively impervious subsoil tends to increase the run-off, and the proportion of cultivated land in row crops is high. Many of the rougher sections are in woods. Farm population of the area has declined during recent years.

Cotton, corn, hay, and oats were the most important crops in 1949. Hay crops occupied a relatively minor place in the cropping system; fodder, oats, and fall and winter pasturage furnished by crop residues and woodland browse were substituted for hay crops. Cattle, produced largely on pasture and browse, and poul-

try, were slightly more important than other classes of livestock but returns from all livestock were quite small.

AREA 5 — UPPER COASTAL PLAINS

The Upper Coastal Plains Area extends the entire width of the State and lies south and west of the areas previously described. This area is quite variable as to topography. In general, it is gently rolling to rolling, but it includes some sections that are quite level as well as some that are rugged and hilly. Only a small proportion of the land is in farms. In the rougher sections, land that is cultivated is mostly in small "patchy" fields.

Soils of the area are variable as to type and texture. They are largely sandy, but stiff red and gray clay soils occur in some sections. The strongest soils are found in the river terraces and flood plains that cut across the area. On the whole, in 1949, this area approximated rather closely the State average in proportion of land devoted to crops and in relative importance of various kinds of livestock. Cotton and corn, however, occupied considerably more than the average proportion of the harvested cropland, while hay and some food crops occupied less.

Local differences in marketing advantages, in part-time farming opportunities, in soil types, and in topography, are reflected in the different types of farming followed in different parts of the area. Population is largely white in the upper and north-western parts, but colored farmers are numerous where the area borders on the Black Belt.

AREA 6 — BLACK BELT

The Black Prairie Belt or more briefly the "Black Belt" was developed rapidly after the introduction of cotton. It is characterized by large holdings originally organized for extensive cotton production with slaves. Prior to the advent of the boll weevil this was the leading cotton-producing section of the State, but the heavy soil prevents cotton getting an early start in the spring and otherwise works against effective boll weevil control. Moreover, the gradual encroachment of Bermuda and Johnson grass, both of which are difficult to eradicate when once established on heavy soil, has greatly lessened the acreage of tilled land and has correspondingly increased the acreage of meadow and plowable pasture.

The area is nearly level to gently rolling. It is underlaid by a soft, chalky limestone which occasionally outcrops in ridges. In

other sections, it has been exposed by erosion. The true prairie soils belong to the Houston and Bell series. They range in color from gray to black, and normally have a high lime content. Throughout the Belt, and usually on the higher elevations, occur areas of reddish-gray to red soils that are of later geologic formation and distinctly acid in nature. These areas, as well as the bottom land, were originally heavily timbered. The area is divided by river terrace and bottom lands along the Alabama, Tombigbee, and Black Warrior rivers. These terrace and bottom lands, when properly drained, are highly productive but the bottom lands are subject to overflow during periods of high water.

Nearly all soils in the Black Belt are naturally adapted to the growing of grasses and various legumes which make the area well suited to pasturage and hay production. Grasses and other pasture plants grow fairly well without care but proper treatment results in good pastures that provide grazing for 9 to 11 months, and during mild winters may be grazed for the entire year. This area has a larger proportion of farm land in plowable pasture than any other area in the State.

The ravages of the boll weevil and the spread of Bermuda and Johnson grass have forced abandonment of some of the most productive land for cotton production and resulted in a decided shift from cotton to livestock in many sections. However, cotton still occupies an important place in the agriculture of this area, due largely to the fact that the plantations were originally organized for specialized cotton production and most of the farming is still done by colored tenants and croppers. The proportion of harvested cropland in corn is considerably below the State average due to the larger acreage in hay and pasture.

The natural adaptability of the Black Belt for production of hay and pasturage makes it the outstanding potential livestock area of the State. Beef cattle are produced largely on pasture and considerable dairying is carried on with relatively extensive methods.

AREA 7 — SOUTHWEST PINEY WOODS

The Southwest Piney Woods Area varies in topography from typical flatwoods in most of Washington County to very rough and rugged hills in Clarke County. The elevation does not exceed 500 feet above sea level. The soils vary widely in productivity but good farming areas are few, generally far apart, and small in extent. This area has the least density of farm population as

well as of total population, of any in the State, except the higher and more rugged Talladega Mountains. Woodland in various stages of growth covers most of the area. Considerable stretches of cut-over land have been systematically burned for the supposed benefit that burning gives to early spring grazing, and to the detriment of young tree growth. A considerable proportion of the land is held in large units by lumber interests.

Corn occupied about 64 per cent and cotton about 16 per cent of the harvested cropland in 1949. Hay acreage was relatively small. Rainfall distribution and mild winters tend to increase the boll weevil hazard in this area. Because of the limited area of harvested cropland, livestock numbers per 100 acres of harvested cropland were relatively large. The quality of all classes of livestock, however, was generally poor.

AREA 8 — SOUTHEASTERN AND SOUTH-CENTRAL COASTAL PLAINS

The Southeastern and South-Central Coastal Plains Area includes the greater part of the section of Alabama commonly known as the Lower Coastal Plains. The soils of the area are quite variable in quality. Some stretches of land are as productive as any in the State, and some are nearly pure sand. Heavy soils, particularly of the Susquehanna group, occur occasionally, but in their present condition are seldom first class farm land. Open winters and heavy rainfall in June, July, and August aid boll weevil development and fall rains are likely to handicap cotton picking more frequently than in areas farther north.

Sub-area 8a, the Southeastern Coastal Plains, often referred to as the Peanut or Wiregrass area, is for the most part a nearly level to rolling plain with irregular topography on the northern border. Moreover, the north-central part of the area is penetrated by a range of hills having an elevation of 500 feet or more. The principal crops of the area are cotton, corn, peanuts, and peanut hay. The proportion of harvested cropland occupied by cotton was below the State average in 1949, but that of corn, peanuts, and peanut hay was far above the State average. Peanuts occupied nearly 24 per cent of the harvested crop acreage; to some extent, this crop has replaced cotton as a money crop. The shift to peanuts occurred soon after the coming of the boll weevil and was made in an effort to provide a cash crop to take the place of cotton. Peanut hay, a by-product of peanuts harvested for market, usually eliminates the necessity of growing

other hay crops on peanut-producing farms. However, since the vines from peanuts harvested for market are usually saved for hay, there is a duplication of the reported acreage of peanuts and hay. Corn is often interplanted with velvetbeans, most of which are grazed after the corn is harvested; or corn, peanuts, and velvetbeans are grown together and all three crops are grazed with hogs or cattle. A considerable acreage of watermelons for sale is grown in Houston and Geneva counties.

Hogs are the most important class of commercial livestock in the area, and are marketed by about two-thirds of the farms. Considerable numbers of hogs are found in some parts of the area; there is considerable free ranging after crops are harvested, frequently to the detriment of winter crops that are not fenced. All other classes of livestock are grown largely for home use.

Sub-area 8b, the South-Central Coastal Plains, is quite similar to **Sub-area 8a** in respect to climate and soil, but, in general, it has a slightly rougher topography. A larger proportion of the land is in forest, which in the past at least, has provided range for considerable numbers of cattle and hogs. The total population, as well as the rural farm population, is less dense than in **Sub-area 8a**, and more farms are operated on a self-sufficing basis. Cotton, corn, and hay are the principal crops grown. Some sections produce vegetables and strawberries for sale, but the total acreage of these crops is relatively small. Cotton suffers from the same climatic disadvantages as in **Sub-area 8a**. Hogs are increasing in importance and cattle are produced in considerable numbers.

AREA 9 — GULF COAST

The Gulf Coast Area has a nearly level land surface with an elevation usually ranging from sea level to 100 feet. Most soils are fair to good but deep sands, which are practically useless except for timber production, occur rather extensively in some sections. Much of the area is uncleared, or in second growth timber and semi-wasteland which supports a poor quality of cattle, hogs, and sheep. Normally, heavy rainfall during June, July, and August makes cotton production risky while mild winters and a long growing season favor production of vegetables and Irish and sweetpotatoes for the early market. As a consequence, this group of crops occupied a relatively large percentage of the harvested cropland in 1949. Two or more crops are frequently grown on

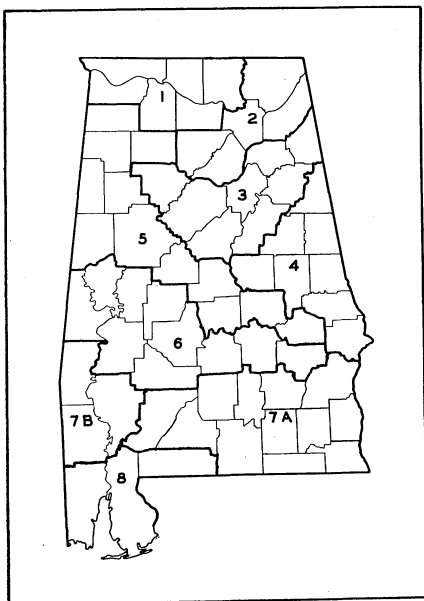
the same land during the season, especially where the first crop is heavily fertilized and the second crop is likely to benefit from the residual effects of the fertilizer; this is particularly true with crops such as Irish potatoes and soybeans for beans. Rather extensive groves of hardy citrus fruits have been set out, especially in Mobile County, but, as a rule, these have not been highly successful. There is also a rather heavy concentration of pecan trees. Chickens and eggs are produced on an intensive basis in parts of the area and the sale of poultry and poultry products adds materially to farm incomes. Farmers are white for the most part, and the proportion of farmers who are tenants is relatively small.

APPENDIX

APPENDIX

STATE ECONOMIC AREAS*

"State economic areas represent groupings of counties within a State. The counties comprising a State economic area have similar agricultural, demographic, climatic, physiographic, and cultural characteristics. Basically, State economic areas have



APPENDIX FIG. 1. State economic areas, Alabama, 1950. (Based on "U.S. Census of Agriculture, 1950.")

been established for the purpose of presenting statistics not only for the 1950 Census of Agriculture but also for the Censuses of Population and Housing. . . . (For a description of State economic areas, see the Special Report of the 1950 Census entitled "State Economic Areas: A Description of the Procedure Used in Making a Functional Grouping of the Counties in the United States.") For the purpose of presenting agricultural statistics, most metropolitan areas have been combined with adjacent economic areas when the number of farms and agricultural production of the metropolitan area are of small importance. On the other hand, in a few cases, because

of significant differences in the characteristics of the agriculture within the State economic areas, some State economic areas have been subdivided in order to present statistics for the 1950 Census of Agriculture. Outside the metropolitan areas, the State economic areas in general are the same as State type-of-farming areas. . . .

"The use of State economic areas as a unit for the presentation of statistics has made possible many tabulations, by size of farm, tenure of farm operator, economic class of farm, and type of farm, that would not have been possible by counties because of the

* An abstract of material appearing in the *U. S. Census of Agriculture, 1950*. Volume I, "Counties and State Economic Areas." Part 21, "Alabama". Bureau of the Census, U. S. Department of Commerce. U. S. Government Printing Office. Washington, D. C. 1952.

cost of tabulation, amount of clerical work required, cost of publication, and reliability of data. Since the counties comprising each State economic area may be used for describing, with reasonable accuracy, the characteristics of the agriculture in each county making up the area.”

APPENDIX TABLE 1. PERCENTAGE OF LAND IN FARMS, AVERAGE SIZE OF FARMS, AND RELATED DATA, BY STATE ECONOMIC AREAS, ALABAMA, 1950

Item	Unit	State economic area ¹									State average
		1	2	3	4	5	6	7a	7b	8	
Proportion of total land area in farms	Per cent	78.4	76.0	48.4	63.8	63.4	80.9	72.2	41.5	28.4	64.0
Average size of farms	Acres	78.4	61.4	76.3	116.1	102.2	134.8	116.9	119.8	90.9	99.0
Average value of land and buildings per acre	Dollars	86.08	75.52	62.16	32.96	38.06	36.27	40.13	29.71	78.47	48.91
Proportion of farms operated by tenants	Per cent	46.3	37.8	28.8	37.5	36.8	61.4	48.7	24.9	11.7	41.4
Proportion of farms with expenditures for hired labor	Per cent	50.1	37.7	26.2	24.8	31.3	32.3	50.1	27.8	38.2	36.7
Proportion of farms by economic class:											
Commercial farms	Per cent	71.3	69.3	37.0	39.5	51.0	52.6	71.5	27.8	41.5	55.9
Part-time farms	Per cent	12.5	15.8	19.2	21.0	18.8	13.6	13.2	19.2	18.1	16.2
Residential farms	Per cent	16.1	14.9	43.7	39.5	30.1	33.7	16.1	52.9	40.2	27.9
Proportion of farms reporting tractors	Per cent	31.4	20.1	21.6	11.3	13.2	8.8	18.5	6.4	33.7	17.9
Proportion of farms reporting horses or mules	Per cent	56.0	70.3	63.2	70.6	70.6	74.5	71.8	71.2	46.9	67.9
Average number of tractors per 100 acres harvested cropland	Number	1.1	.9	1.2	.6	.6	.5	.6	.4	1.6	.8
Average number of workstock per 100 acres harvested cropland	Number	3.8	5.7	5.4	5.8	5.9	6.7	3.5	7.4	2.8	5.0

¹ See Appendix Figure 1 for location and area boundaries of specified State economic areas.

APPENDIX TABLE 2. PERCENTAGE DISTRIBUTION OF LAND IN FARMS ACCORDING TO MAJOR USE, BY STATE ECONOMIC AREAS, ALABAMA, 1950

Item	State economic area ¹									State average
	1	2	3	4	5	6	7a	7b	8	
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	
Proportion of land in farms according to use:										
Cropland harvested	44.6	40.0	26.4	18.8	22.9	19.7	33.2	13.1	29.7	27.5
Cropland used only for pasture	9.1	3.2	5.8	9.1	5.5	14.2	4.6	5.0	8.8	7.6
Cropland not harvested or pastured	8.0	5.3	11.3	9.5	7.0	4.5	5.2	3.5	6.3	6.6
Woodland pastured	8.7	8.9	13.0	19.6	17.9	21.1	21.7	25.4	22.5	17.8
Woodland not pastured	19.5	32.4	32.0	32.7	37.3	19.1	28.3	41.7	24.6	28.7
Other pasture ²	5.1	6.0	6.9	6.9	6.4	18.3	4.1	8.9	3.6	8.2
Other land ³	5.0	4.2	4.7	3.4	3.0	3.1	3.0	2.4	4.3	3.5
Cropland, total	61.7	48.6	43.4	37.4	35.4	38.4	42.9	21.6	44.8	41.7
Land pastured, total	22.9	18.1	25.7	35.6	29.9	53.6	30.4	39.4	34.9	33.7
Woodland, total	28.2	41.3	45.0	52.3	55.2	40.2	50.0	67.1	47.1	46.5

¹ See Appendix Figure 1 for location and area boundaries of specified State economic areas.

² Not cropland and not woodland.

³ House lots, roads, wasteland, etc.

APPENDIX TABLE 3. MAJOR CROPS—PERCENTAGE OF FARMS REPORTING THE PRODUCTION OF SPECIFIED CROPS, BY STATE ECONOMIC AREAS, ALABAMA, 1950

Crop	State economic area ¹									State average
	1	2	3	4	5	6	7a	7b	8	
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
Proportion of farms reporting the production of:										
Corn for all purposes	74.5	85.7	75.6	81.0	81.6	84.2	86.5	82.7	63.4	81.2
Cotton	82.4	84.1	55.5	57.7	72.1	74.6	66.6	45.7	24.5	68.8
Hay crops ²	33.9	33.2	30.5	25.4	24.6	17.1	2.7	10.4	9.0	21.9
Peanuts (picked or threshed)	.5	1.4	3.0	6.6	7.2	14.6	62.3	5.9	4.0	15.0
Oats (threshed or combined)	2.2	1.2	2.1	2.8	1.5	1.5	.7	.7	2.5	1.6
Soybeans (harvested for beans)	.4	.6	.1	.3	.2	³	.2	.2	11.6	.7
Irish potatoes	56.4	58.1	40.1	36.8	41.3	20.1	29.5	30.6	17.2	38.8
Peaches	41.6	45.7	40.1	36.2	42.1	17.4	24.7	27.5	19.0	34.1
Apples	41.0	49.2	44.6	42.4	40.6	12.8	14.9	21.4	8.9	32.5

¹ See Appendix Figure 1 for location and area boundaries of specified State economic areas.

² Land from which hay was cut, therefore, does not include peanut hay.

³ Less than 0.5 per cent.

APPENDIX TABLE 4. MAJOR CROPS—PERCENTAGE OF HARVESTED CROPLAND DEVOTED TO THE PRODUCTION OF SPECIFIED CROPS, BY STATE ECONOMIC AREAS, ALABAMA, 1950

Crop	State economic area ¹									State average
	1	2	3	4	5	6	7a	7b	8	
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
Proportion of harvested cropland devoted to the production of:										
Corn for all purposes	32.2	44.8	44.0	49.9	47.8	36.6	46.3	63.4	42.7	43.0
Corn harvested for grain	32.0	44.4	43.5	49.1	47.1	35.9	36.1	60.7	35.4	40.0
Cotton	52.1	40.9	34.4	27.3	35.7	29.7	18.7	16.1	9.7	32.1
Hay crops ²	7.8	6.0	10.0	7.1	6.5	18.7	.4	3.6	2.4	7.0
Peanuts (picked or threshed)	³	.1	.2	1.0	.5	1.4	23.5	.5	1.0	5.9
Oats (threshed or combined)	.8	.4	1.5	1.3	1.0	2.5	.3	.4	1.5	1.0
Soybeans (harvested for beans)	.1	.3	³	.1	.1	.1	.1	.4	19.0	.8
Irish potatoes	.2	.7	.2	.1	.1	³	³	.1	5.8	.4
Fruit orchards ⁴	.5	.9	1.2	1.6	1.6	1.5	1.4	.9	9.2	1.5

¹ See Appendix Figure 1 for location and area boundaries of specified State economic areas.

² Land from which hay was cut, therefore, does not include peanut hay.

³ Less than 0.5 per cent.

⁴ Land in bearing and nonbearing fruit orchards, groves, vineyards, and planted nut trees.

APPENDIX TABLE 5. LIVESTOCK—PERCENTAGE OF FARMS REPORTING SPECIFIED CLASSES OF LIVESTOCK, AND NUMBER OF SPECIFIED CLASSES OF LIVESTOCK PER 100 ACRES OF HARVESTED CROPLAND, BY STATE ECONOMIC AREAS, ALABAMA, 1950

Class of livestock	State economic area ¹									State average
	1	2	3	4	5	6	7a	7b	8	
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	
Proportion of farms reporting:										
Cattle and calves	73.3	82.4	72.4	76.6	76.6	75.4	76.1	75.6	70.1	76.1
Milk cows	71.0	78.7	66.4	68.9	71.2	62.6	69.0	62.3	60.8	69.2
Sows and gilts ²	24.3	21.1	14.0	17.8	19.1	30.1	59.9	33.1	30.0	28.5
Hogs butchered	69.4	77.6	64.6	72.9	72.5	69.5	67.7	64.1	37.9	69.2
Chickens ³	85.9	87.1	86.3	83.6	87.6	86.1	88.0	93.6	82.2	86.7
Number per 100 acres of harvested cropland:										
Cattle and calves	12.0	11.6	17.9	25.2	19.1	56.4	13.2	40.2	31.1	22.0
Milk cows	4.6	4.8	6.9	8.1	6.0	9.5	4.0	9.8	8.7	6.0
Sows and gilts ²	1.5	1.7	1.5	1.3	1.5	1.9	4.3	3.6	2.9	2.3
Chickens ³	84.7	146.7	138.5	118.1	109.3	73.0	55.3	151.8	171.8	98.8

¹ See Appendix Figure 1 for location and area boundaries of specified State economic areas.

² Sows and gilts for spring farrowing.

³ Chickens 4 months old and over.