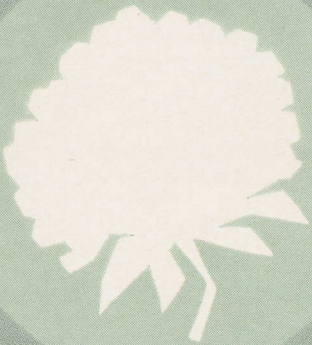
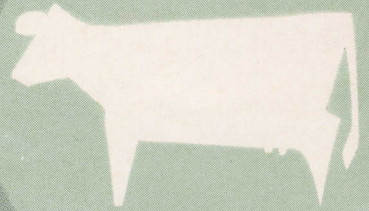
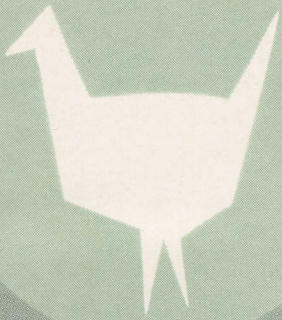
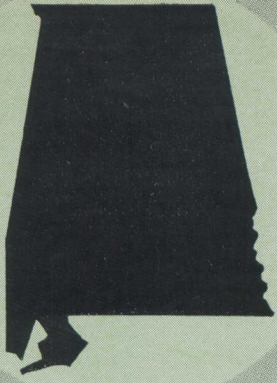


ALABAMA AGRICULTURE

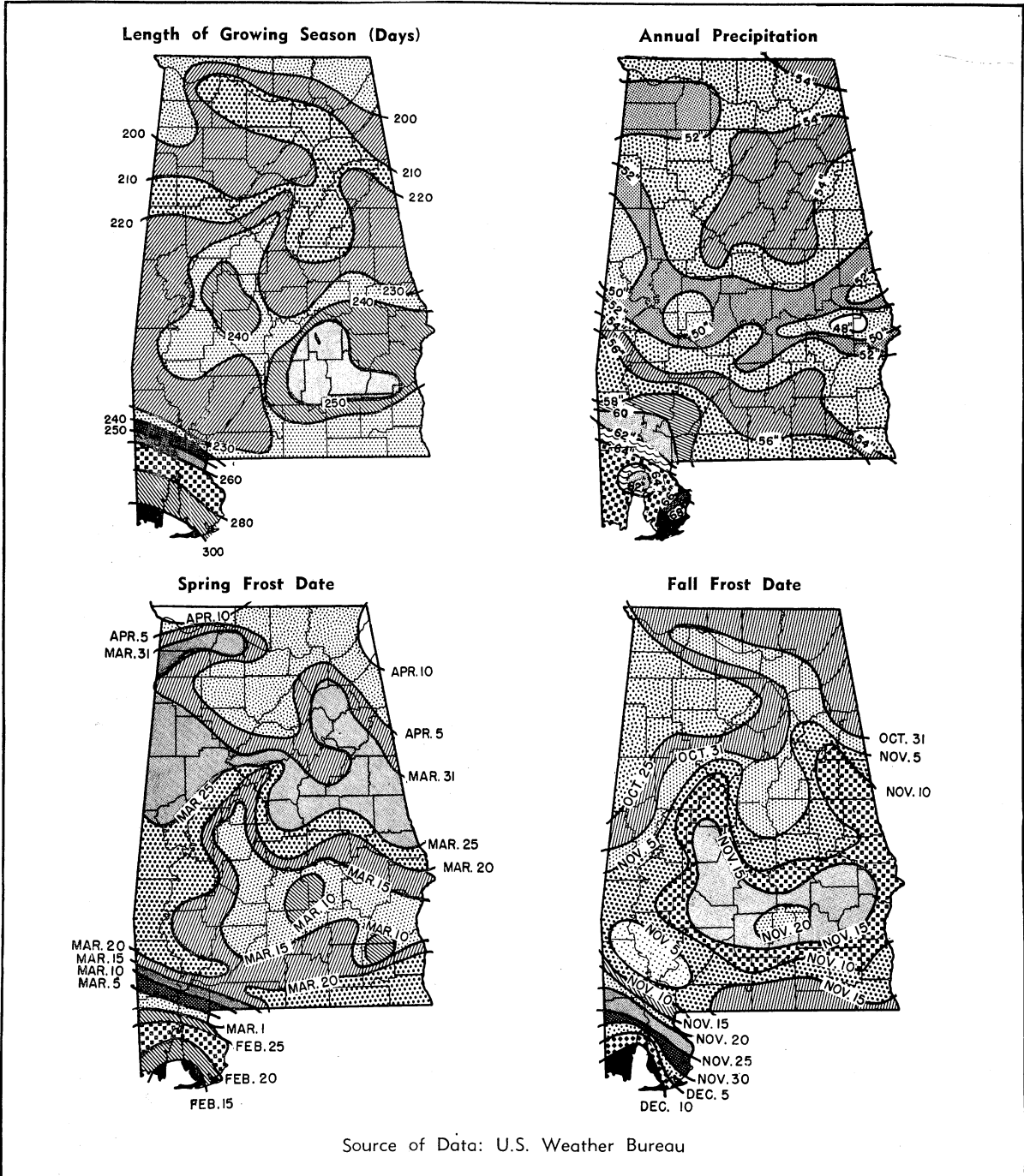
ITS RESOURCES AND THEIR USES



Circular M-8
Extension Service
Auburn University
Auburn, Alabama



GROWING SEASON and RAINFALL



Alabama's climate ranges from temperate in the north to subtropical in the south. The growing season averages 200 days in the northern part of the state, 240 days in the central and 300 to 320 days near the Gulf Coast. The average annual minimum temperatures vary from about 5° above zero in the northern part to

about 30° above at the coast. Average annual precipitation, mainly rainfall, is ample for most crops, but is not uniform in distribution throughout the seasons nor is it uniform in amount throughout the state. It averages 50 inches in the north and 60 inches near the Gulf Coast.

ALABAMA AGRICULTURE

Its Resources and Their Uses

By Foy Helms*

This publication hopes to serve a double purpose: one, to bring those who work closely with Alabama Agriculture up to date on its present status and condition; two, to acquaint the stranger with the general characteristics of Alabama agriculture and its resources.

FARMING AREAS

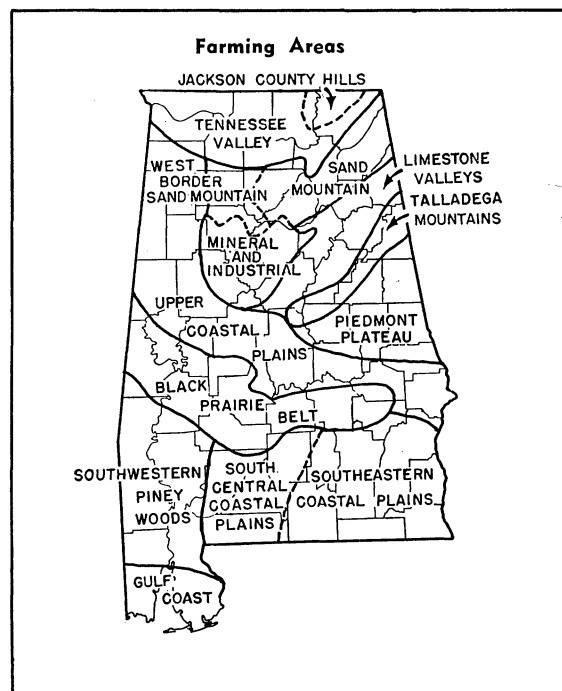
Alabama may be divided into nine major farming areas based on variations in soils, topography, elevation and climate. Other factors affecting types of farming include tenure, proportion of total land area in farms, proportion of farm land in crops, and relative importance of crop and livestock enterprises.

1. **TENNESSEE AND LIMESTONE VALLEYS.** Level lands in these areas were organized into plantations as early as 1810. The valleys' heavy soils, reasonably level topography and numerous large holdings have encouraged mechanization. Cotton, corn and hay are the principal harvested crops. Yields of cotton and corn are relatively high. With proper management, these areas produce excellent pasture and forage crops.

2. **SAND MOUNTAIN.** This area includes all the Appalachian Mountain region in Alabama. Farms are small and farmers are relatively self-sufficient in food and feed. The leading crops in number of acres are cotton, corn and hay, with oats, sweet-potatoes, irish potatoes and vegetables next in importance. Dairying and raising poultry and hogs are becoming increasingly important cash enterprises. Farming in the mineral and industrial portion of the Sand Mountain area is largely a self-sufficient or part-time operation.

3. **TALLADEGA MOUNTAINS.** The topography of the Talladega Mountain area is generally rough and rugged. Agriculture is of little importance; most of the area is in timber.

4. **PIEDMONT PLATEAU.** Much of the Piedmont Plateau is unsuitable for row crops. In recent years some of the eroded land no longer used for crops has been converted to pasture. Fencing, filling ditches, some leveling and re-terracing, as well as fertilizing, liming and seeding are often necessary to reclaim such land. Beef and dairy cattle are



the livestock best adapted to the area. Commercial broiler production is expanding in certain localities. A large part of the rural population works in cotton mills or in other non-farm industries.

5. **UPPER COASTAL PLAIN.** Some parts of the area are almost level; others are rugged and hilly, with farming done in small, irregular fields. Cotton, corn, oats and hay are the principal harvested crops. Production of beef and dairy cattle, as well as hogs, is becoming increasingly important.

6. **BLACK BELT.** Large land holdings are typical of the Black Belt. If well managed, pastures provide grazing nine months a year or more. Johnsongrass, dallis grass, bermudagrass, Caley peas, and white and other clovers are the principal pasture plants. The Black Belt area has long been the major beef- and milk-producing area of Alabama.

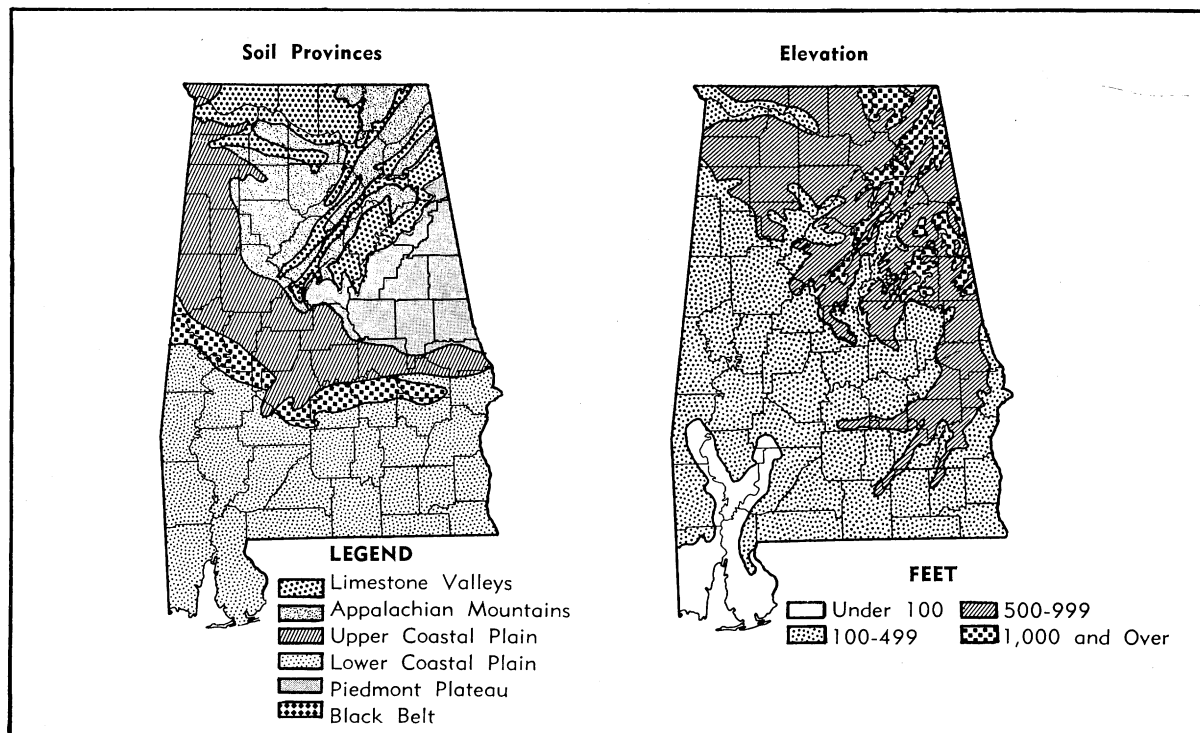
7. **SOUTHWESTERN PINEY WOODS.** Good farming tracts are few. Topography varies from flat woods to rugged hills; forests cover most of the area.

8. **LOWER COASTAL PLAIN.** In the eastern part of the Lower Coastal Plain, peanuts, hogs and cotton are the most important products. Cattle are raised and corn, hay and some vegetables are also produced. Topography, which ranges from nearly level to rolling, is slightly rougher in the western part of the area where a larger percentage of the land is in woods.

9. **GULF COAST.** The long growing season in this area favors production of irish potatoes, sweet-

* Mr. Helms, until his retirement in May 1964, was economist of the Auburn University Extension Service.

SOIL PROVINCES and TOPOGRAPHY



potatoes and other vegetables. In heavily fertilized soils, irish potatoes are usually followed the same season by soybeans. Livestock production is intensive in parts of the area.

Alabama has more varied geological formations than any other southern state. Its six broad soil provinces have approximately 300 soil types. These vary from deep sands to heavy clays. Some of the sandy soils are so deficient in organic matter that they are almost sterile; others are highly productive. The clay soils range from heavy, plastic, sticky and poorly drained types to clays that are easily worked and highly productive. Some soils respond better to fertilization and good management than others. Erosion control problems are more serious on some soils than on others.

Elevations range from sea level in southwestern Alabama to more than 1,600 feet in the northeastern part of the state. The average elevation is about 600 feet. The highest point, 2,407 feet, is in Cheaha State Park in Cleburne County.

A brief discussion of soils and topography in the various provinces follows:

1. **LIMESTONE VALLEY** soils are considered good. They vary in color from gray to brown and red. Texture ranges from sandy loams to clay loams. Generally the soils are well drained and nearly level to undulating in topography.

2. **APPALACHIAN MOUNTAIN** soils are gray to brown silt and fine, sandy loams. They are well drained and are easy to till where topography is not too rugged. These soils respond readily to good management and high fertilization.

3. **UPPER COASTAL PLAIN** soils are extremely variable in type and texture. Most soils are sandy, but in some sections they are stiff red and gray clay. Inherently rich soils that respond readily to fertilizing are in the river terraces and flood plains that cut across the area. Soils in the area generally are well drained.

4. **LOWER COASTAL PLAIN** soils vary from nearly pure sand to heavy clays that seldom make first-class farm land in their natural condition. Some of these soils are as productive as any in the state.

5. **PIEDMONT PLATEAU** soils, geologically the oldest in the south, are brown to red in color. The rolling, variable topography presents a problem of erosion control where row crops are grown.

6. **BLACK BELT** soils are predominantly heavy clays ranging in color from gray to red to black. The gray and black lands are lime soils well suited to grassland farming. Topography is nearly level to gently rolling.

BASIC DATA on ALABAMA'S AGRICULTURE*

(Compared to averages for selected areas)

	Alabama	Ala., Miss., Ga. and Tenn.	East North Central	United States
Number of farms (average per state)	115,788	140,651	133,239	77,302
Acres per farm	143	121	155	303
Per cent of farms less than 100 acres	67	65	41	46
Per cent:				
Land in farms	51	59	66	49
Land rented	27	24	39	36
Tenants	28	23	18	20
White farm operators	75	82	97	93
Operators working off farm 100 days or more	71	66	68	67
Per cent of farms with:				
Telephone	34	40	81	65
Tractor	46	47	89	72
Per cent of farm land used for:				
Crops (includes cropland used only for pasture)	36	46	70	40
Pasture (includes cropland and woods pastured)	42	44	24	56
Woods	47	37	16	15
Per cent of harvested cropland in corn	50	37	40	26
Yield of corn per acre, bushels	25	34	64	53
Per cent of harvested cropland in cotton	21	17	0	5
Yield of cotton per acre, pounds lint	413	499		456
Number of livestock per farm:				
All cattle and calves	18	17	29	35
Milk cows	4	5	13	10
All hogs and pigs	16	15	61	37
Chickens	96	69	174	162
Sales per farm	\$3,578	\$3,506	\$7,810	\$8,218
Per cent from crops	47	53	37	44
Per cent livestock and livestock products	53	47	63	56
Per cent forest products	3	2	.3	.6
Value, farm land, buildings, per acre, 1960	89	115	239	115
Index of farm real estate value, 1961 (1947-49 = 100)	180	156	117	175
Taxes levied on farm real estate per acre, 1960	\$.33	\$.55	\$2.75	\$1.22
Taxes levied on farm real estate per \$100 full value, 1960	\$.35	\$.45	\$1.27	\$.97
Rate of interest (per cent) charged on outstanding farm mortgage debt, 1959	5.4	5.5	5.21	5.4
Cost per \$100 insurance, farmer's mutual fire insurance, 1960	\$.78	\$.58	\$.24	\$.25
Farm wage rate per day without board or room, 1960	\$4.75	\$4.75	\$8.80	\$6.60
Farm wage rate per hour without board or room, 1960	\$.62	\$.62	\$1.08	\$.97

* Based on 1960 Census and various USDA reports.

Until 1956, crop sales made up the largest proportion of Alabama's farm income. Since 1956, receipts from livestock, including poultry, and livestock products have exceeded receipts from crops. This change has been rapid. For example, in 1950 sales of livestock and livestock products made up only 36 per cent of the total receipts. In 1962 livestock, including poultry, and livestock products accounted for 60 per cent of the total receipts.



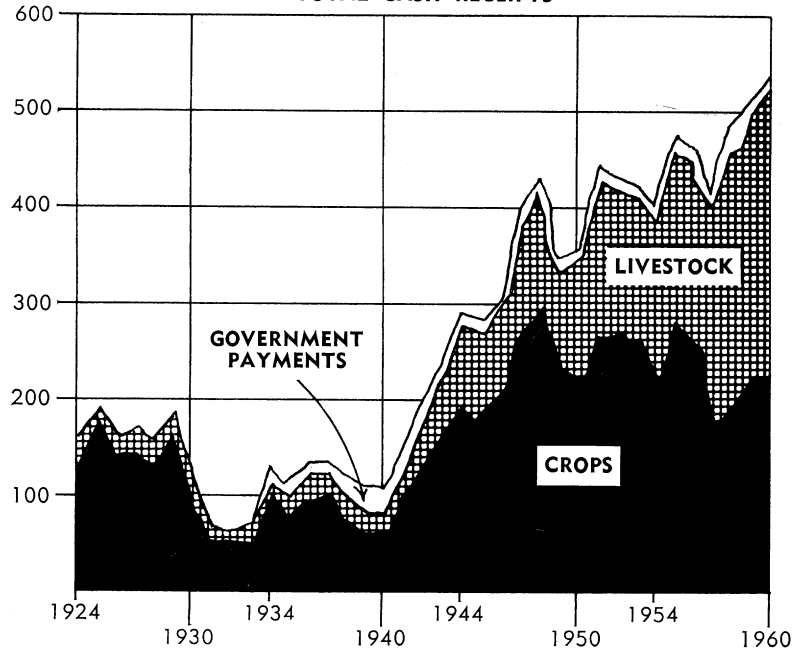
During the 1957-61 period, poultry and poultry products accounted for 23.7 per cent of the total sales of farm products. Receipts from cotton and cottonseed accounted for 22.5 per cent and were, until 1961, the chief source of income from farm marketings.



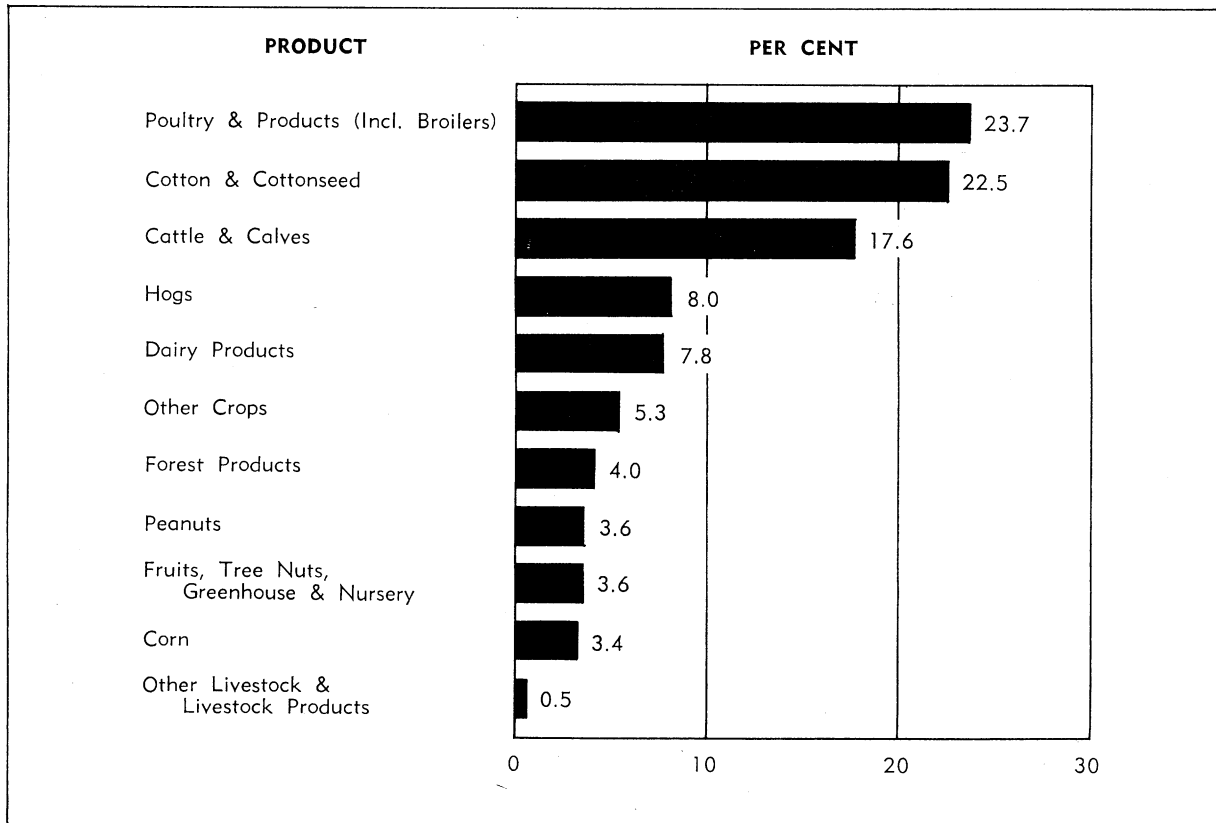
CASH FARM INCOME—ALABAMA, 1924-60

MILLION DOLLARS

TOTAL CASH RECEIPTS



PER CENT of TOTAL SALES from VARIOUS FARM PRODUCTS, ALABAMA, 1957-61 AVERAGE

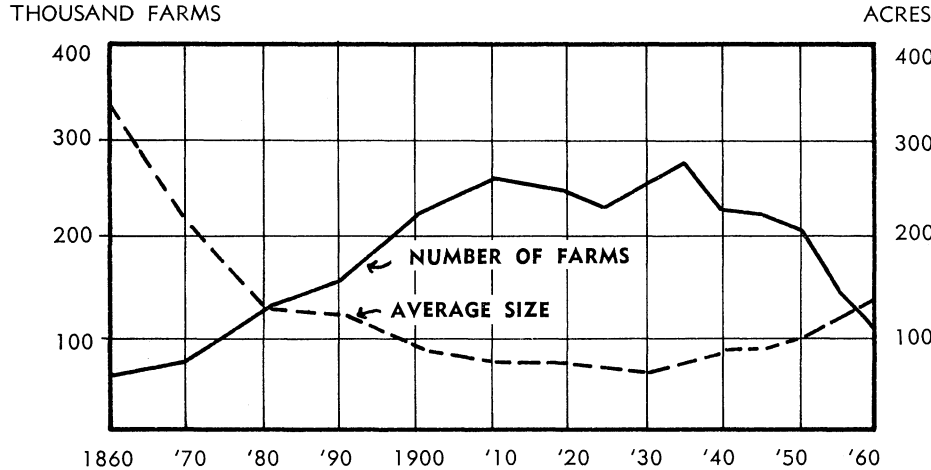


TRENDS

Mechanization, pushed ahead by science and technology, has advanced rapidly in recent years.

Moreover, with the increasing importance of livestock and its products, land use has changed greatly.

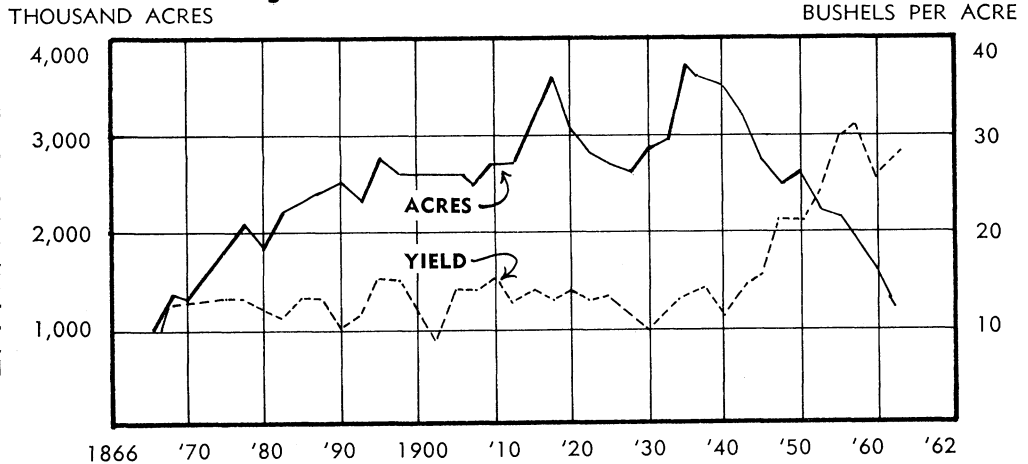
Number and Size of Farms, Alabama, 1860-1960



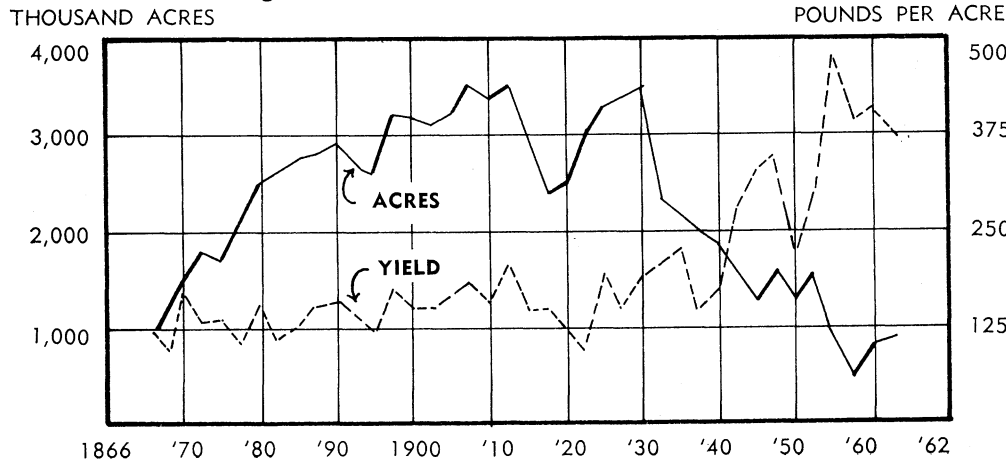
The following graphs show some of these changes: Farm size and number have changed continually since 1860. The number of farms increased until there were 273,455 in 1935; since then the number has decreased and is presently 114,000. Conversely, size decreased from 1860 to 1930; then it began to increase steadily.

Acreage and Yield of Corn, Alabama, 1866-1962

The trend in Alabama's corn acreage was upward until 1940. Average yields changed little from 1866 to the mid-1940's. Since then corn yields have increased due to the use of adapted hybrids, high fertilization, thick spacing and other improved practices. In the last decade this acreage, however, has declined by more than half.



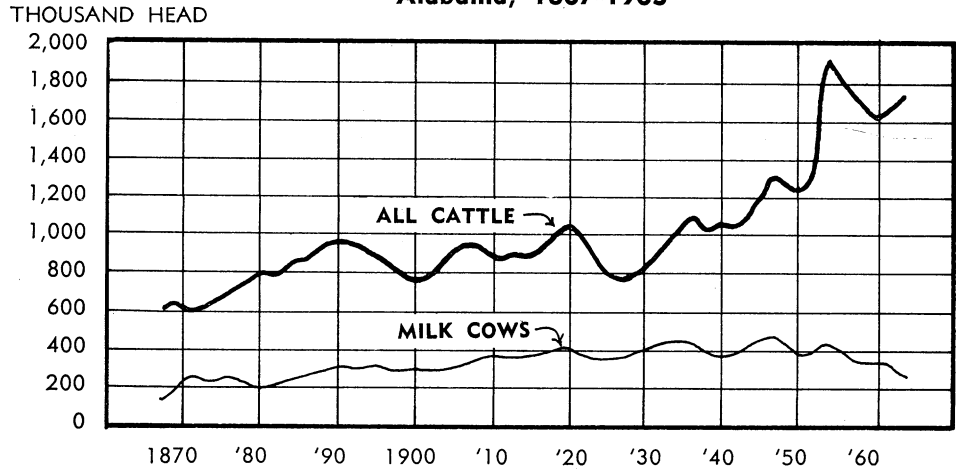
Acreage and Yield of Cotton, Alabama, 1866-1962



While corn acreage rose from 1915 to 1935, cotton acreage changed little. Since 1935 both corn and cotton acreages have declined. Cotton now occupies only 850,000 acres.

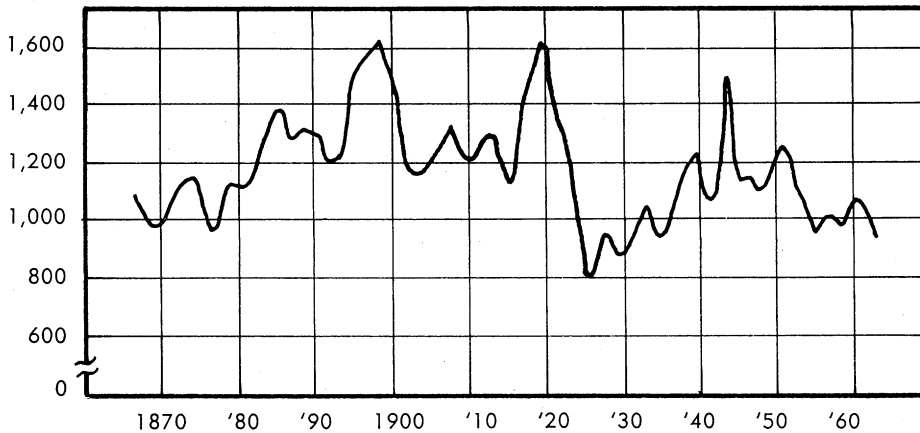
Milk Cows and Cattle: Number on Farms, Alabama, 1867-1963

While the number of all cattle has increased, the percentage of milk cows has declined. In 1950 there were approximately 1.3 million head of cattle and calves on Alabama farms. Of this number more than 365,000 were milk cows. By 1963 the total number of cattle had increased to 1,723,000 head, and slightly more than 1.25 million head of these were beef cattle.



Hogs: Number on Farms, Alabama, 1867-1963

THOUSAND HEAD

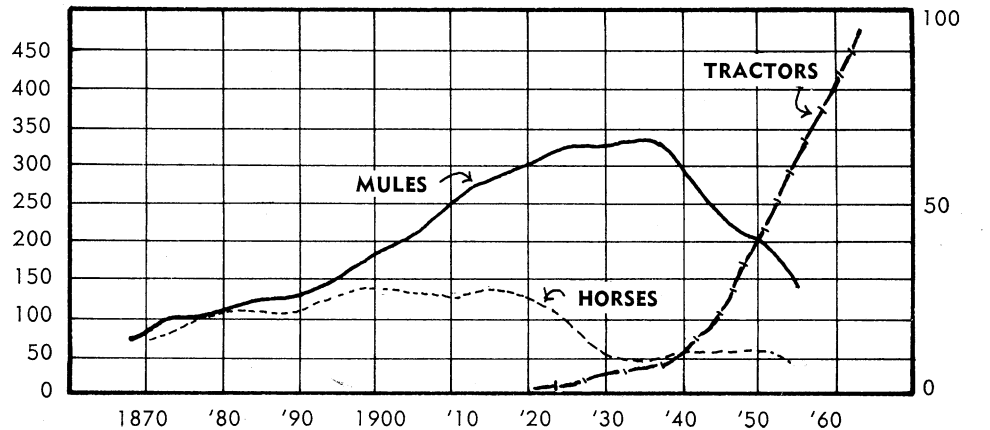


Number of hogs on Alabama farms has fluctuated from a low of about 775,000 head in 1926 to a high of 1,640,000 head in 1898. The current average number is about 933,000 head.

Tractors and Workstock: Number on Farms, Alabama, 1867-1963

Since 1940 tractors have largely taken the place of work stock on Alabama farms. There were more than 90,000 tractors on Alabama farms in 1963. Mechanization, although not yet complete, is increasing rapidly.

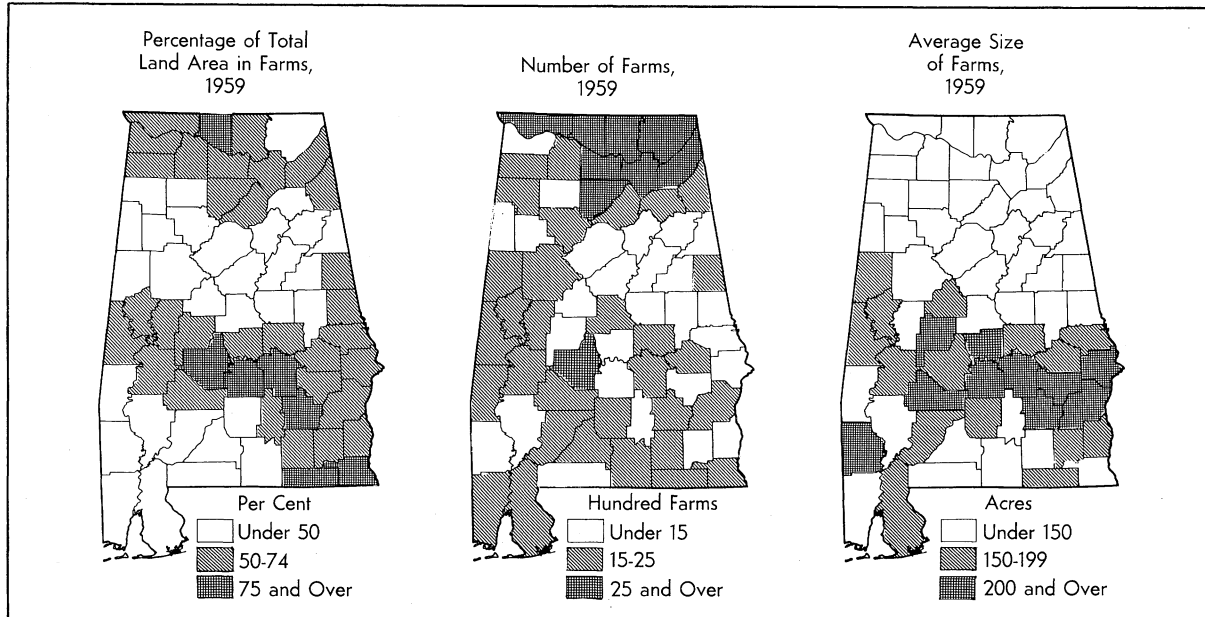
THOUSAND HEAD



FARM CHARACTERISTICS

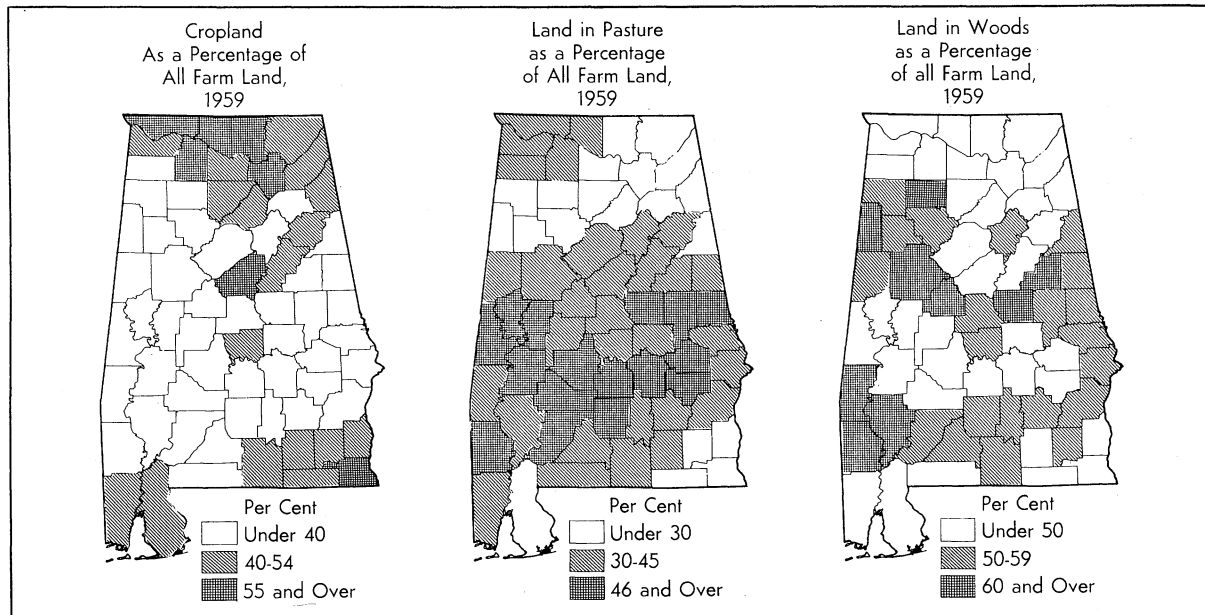
Maps on the following pages illustrate on a county basis the state's farm distribution, farm land use, crop yields, livestock production patterns, other

related facts and points of interest. (To locate counties by name, see the key map with county names on the outside of the back cover.)



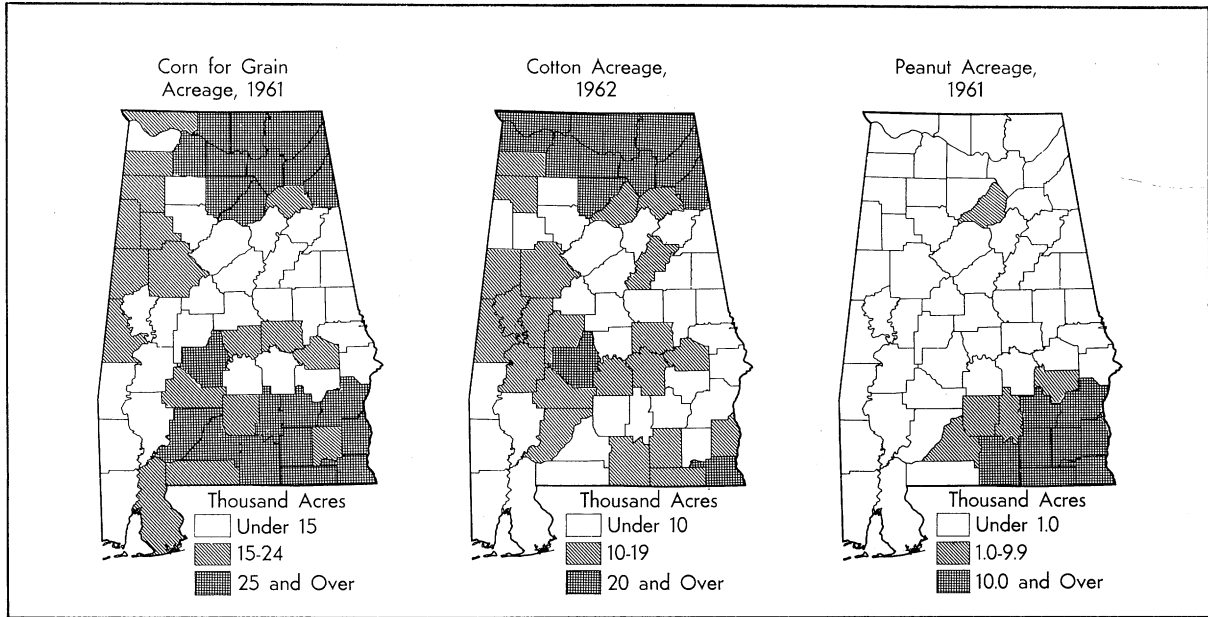
The greatest proportion of farm land is found in the northern, southeastern and central areas of Alabama. North central counties have the greatest number of

farms. Average farm size in the northeastern area is somewhat below the state average. Size of farms, however, is increasing throughout the state.



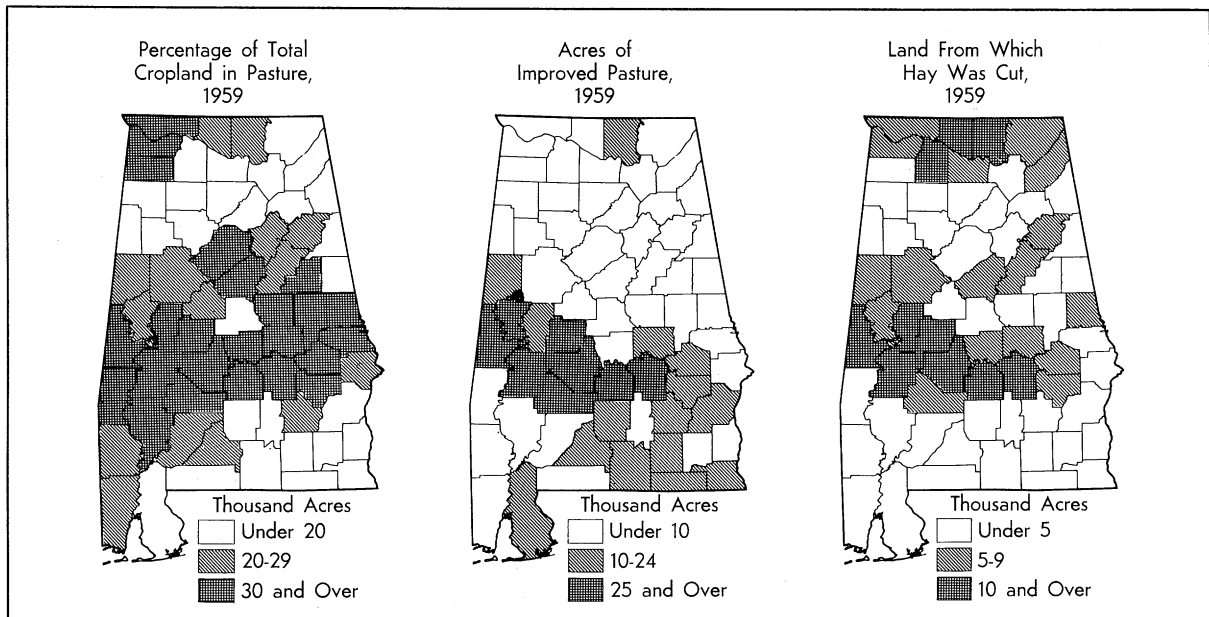
Counties in the northwestern and southeastern parts of the state have the highest percentages of farm land in crops. Using land for pasture is more predominant in

the Black Belt than in other areas. Highest proportions of farm land in woods are found in southwestern Alabama and in certain central Alabama counties.



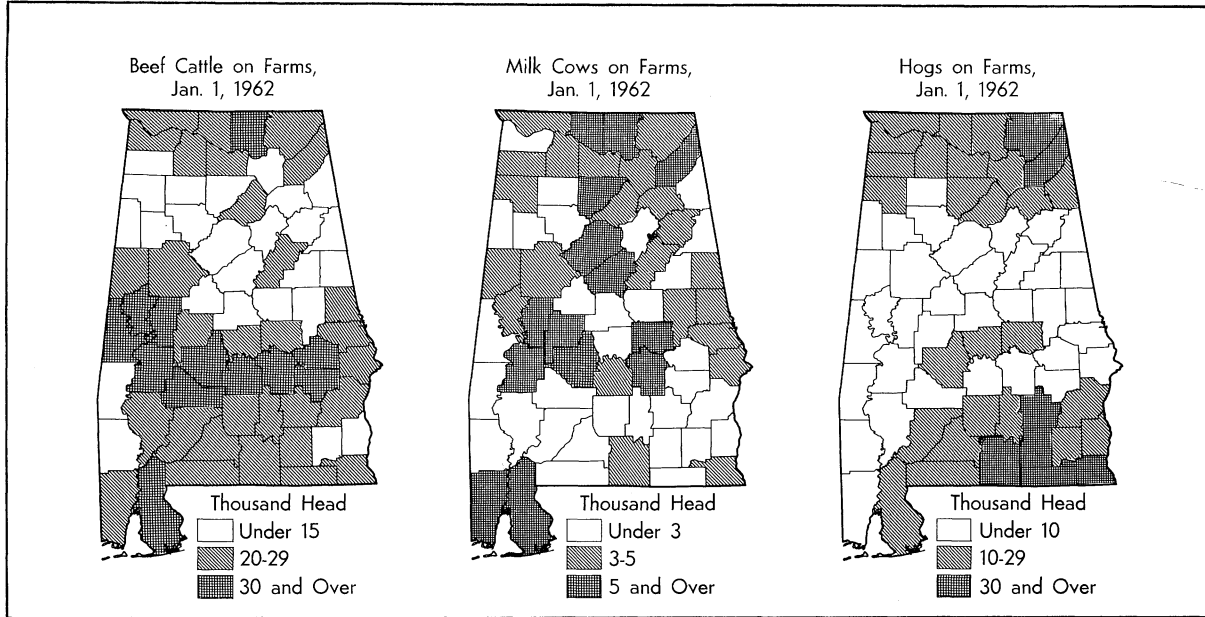
Corn is Alabama's principal grain crop. All counties produce corn, but the highest acreages in 1961 were in the northern and southeastern counties. Cotton is grown in all parts of the state. In 1962 counties in north Alabama had the greatest cotton acreages. South

Alabama counties also plant large cotton acreages. Peanut production is concentrated in southeastern Alabama where soils, climate, markets and other factors are most favorable.



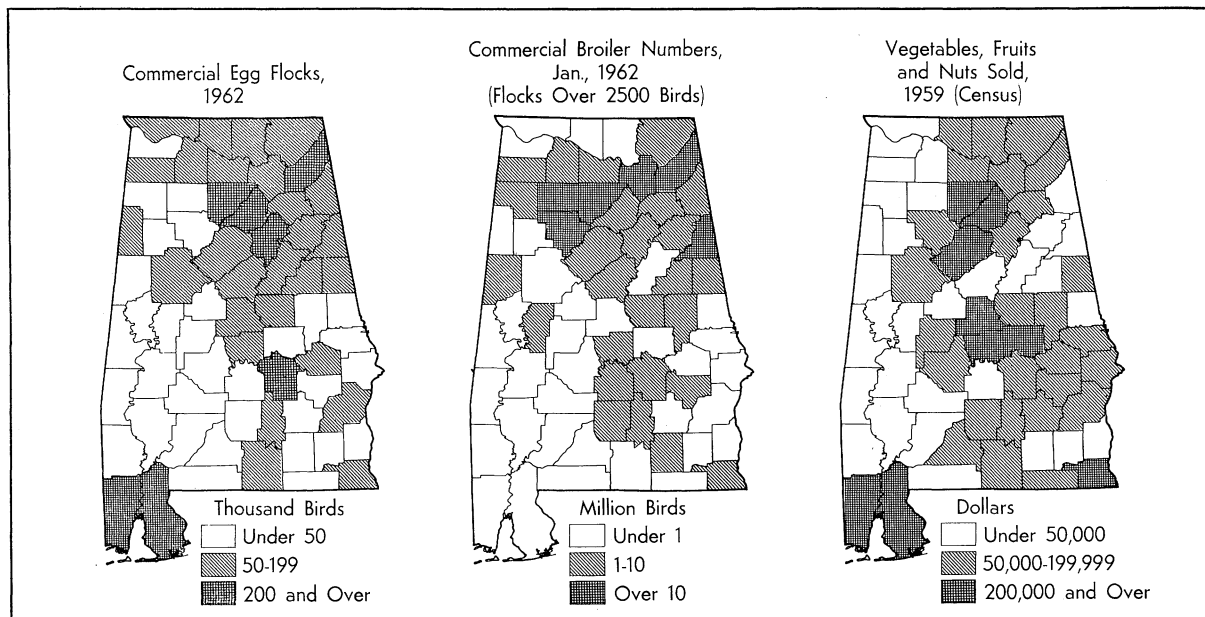
Natural advantages have encouraged the development of pastures in the Black Belt area of the state. In this area are found the highest percentages of cropland (as classified by the United States Census) in pasture as well as the greatest acreages of improved clover-grass pasture. The concentration of hay production in south-

eastern Alabama results from saving peanut vines for hay. Since about 1940 acreage devoted to perennial hay crops, such as alfalfa and lespedeza, has expanded. Acreage planted in annual hay crops has decreased since 1940.



Distribution of cattle and calves on Alabama farms closely follows the pattern of pasture land. Heaviest concentration is in the Black Belt. Dairy cattle are concentrated in areas close to the major markets. Hogs

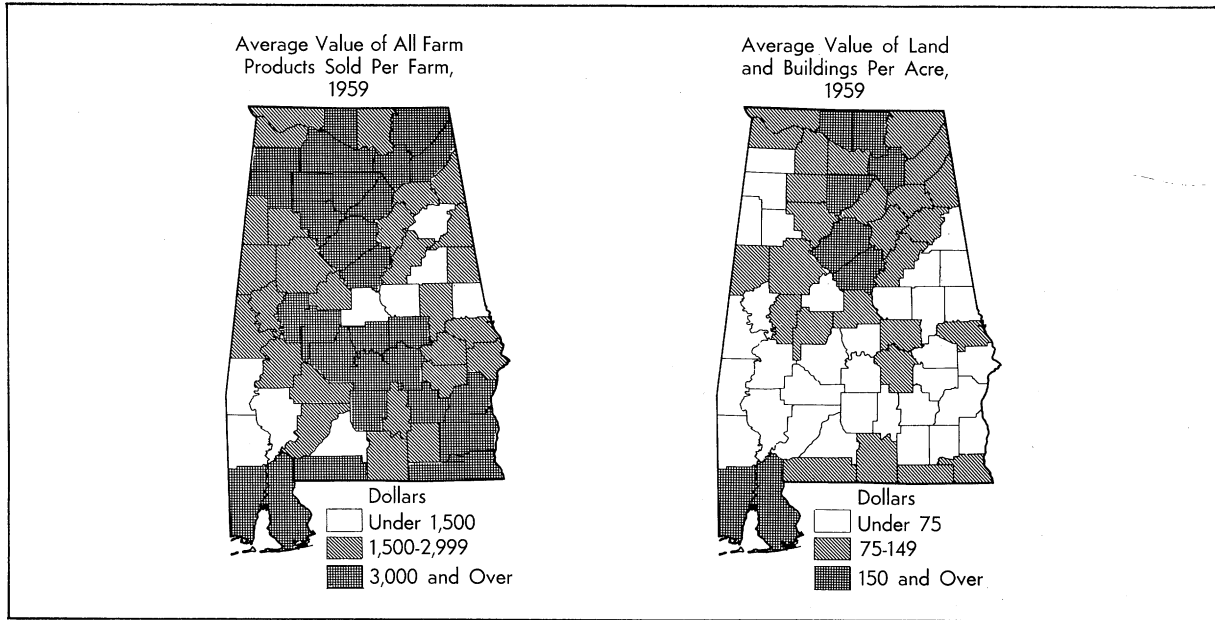
are more numerous in the commercial peanut counties. Total livestock population in relation to harvested crop acreage is greater in the Black Belt and southwestern counties.



Egg production about meets state needs. Alabama is becoming a commercial egg state.

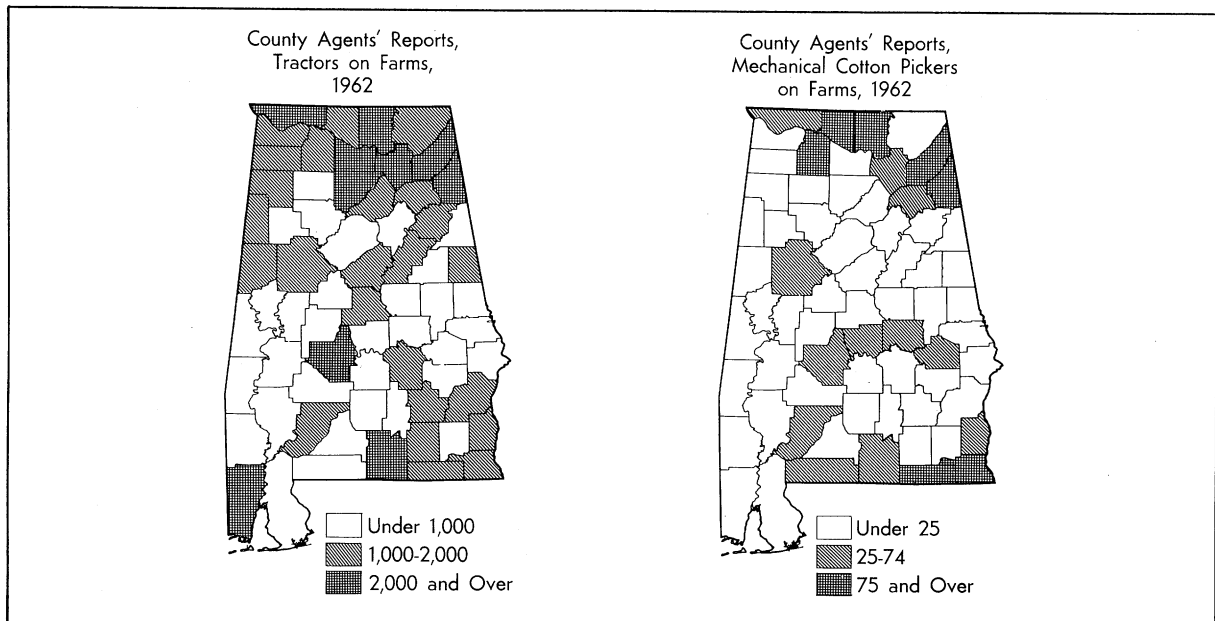
Broiler production in Alabama ranks third in the nation. Production is largely concentrated in the north-eastern section.

Most vegetables, fruits and nuts in Alabama are produced for the fresh market. A higher percentage of the pecan crop is processed than any other crop in this category.



The average value of all farm products sold per farm in Alabama was \$3,579 in 1959. The state average value of land and buildings per

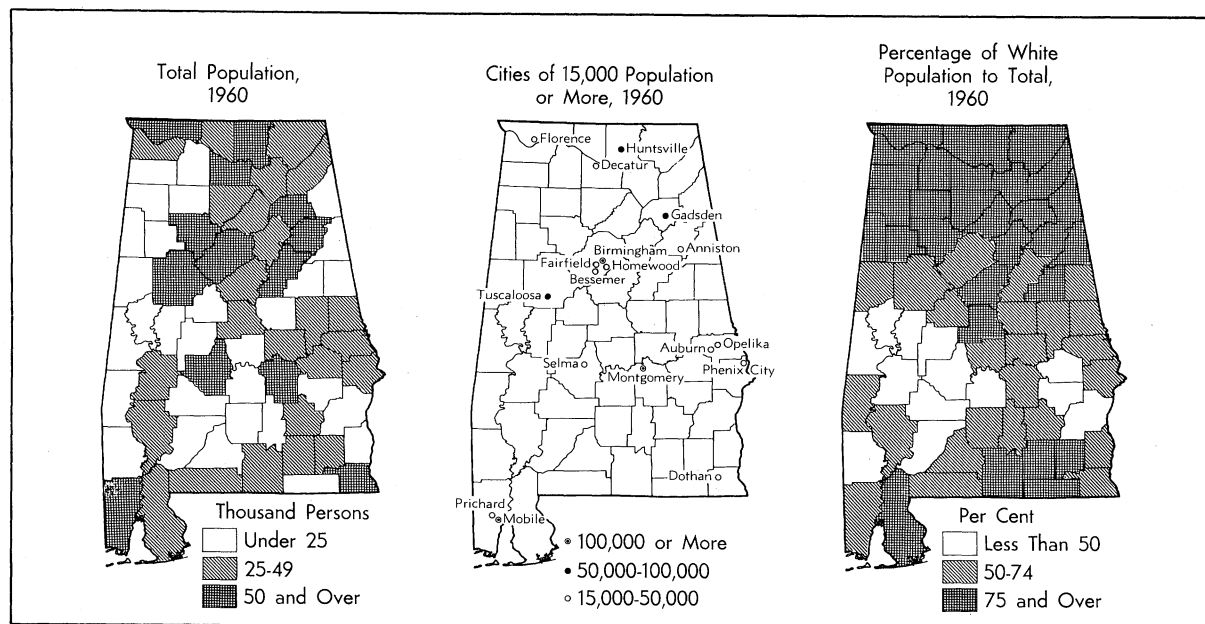
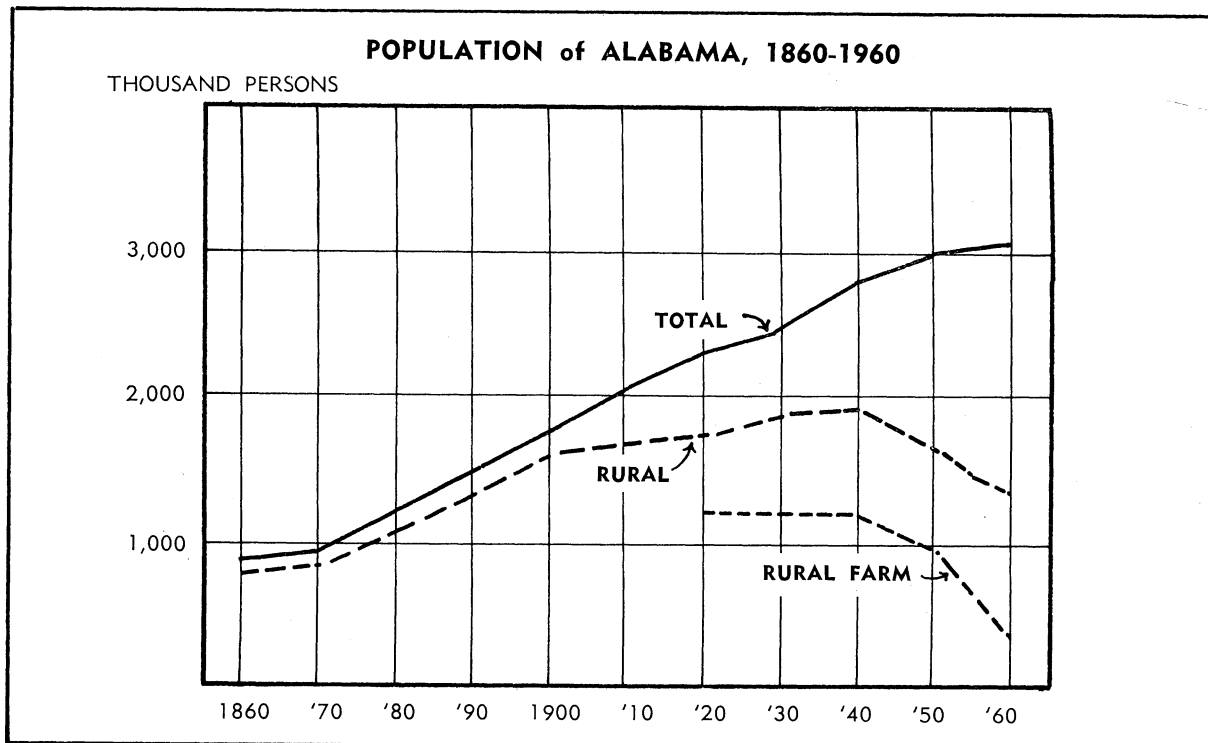
acre was \$92.26 in 1959. However, there was considerable variation among counties.



Mechanization has greatly increased during the last 10 years. According to the 1959 Census, 46.3 per cent of all Alabama farms have tractors and practically all commercial farms have tractors. There are now approximately 90,000 tractors on Alabama farms.

During the last 10 years, mechanical cotton pickers have become a common sight throughout Alabama. About 35 per cent of the cotton is now harvested with mechanical pickers and more cotton is harvested mechanically each year.

POPULATION

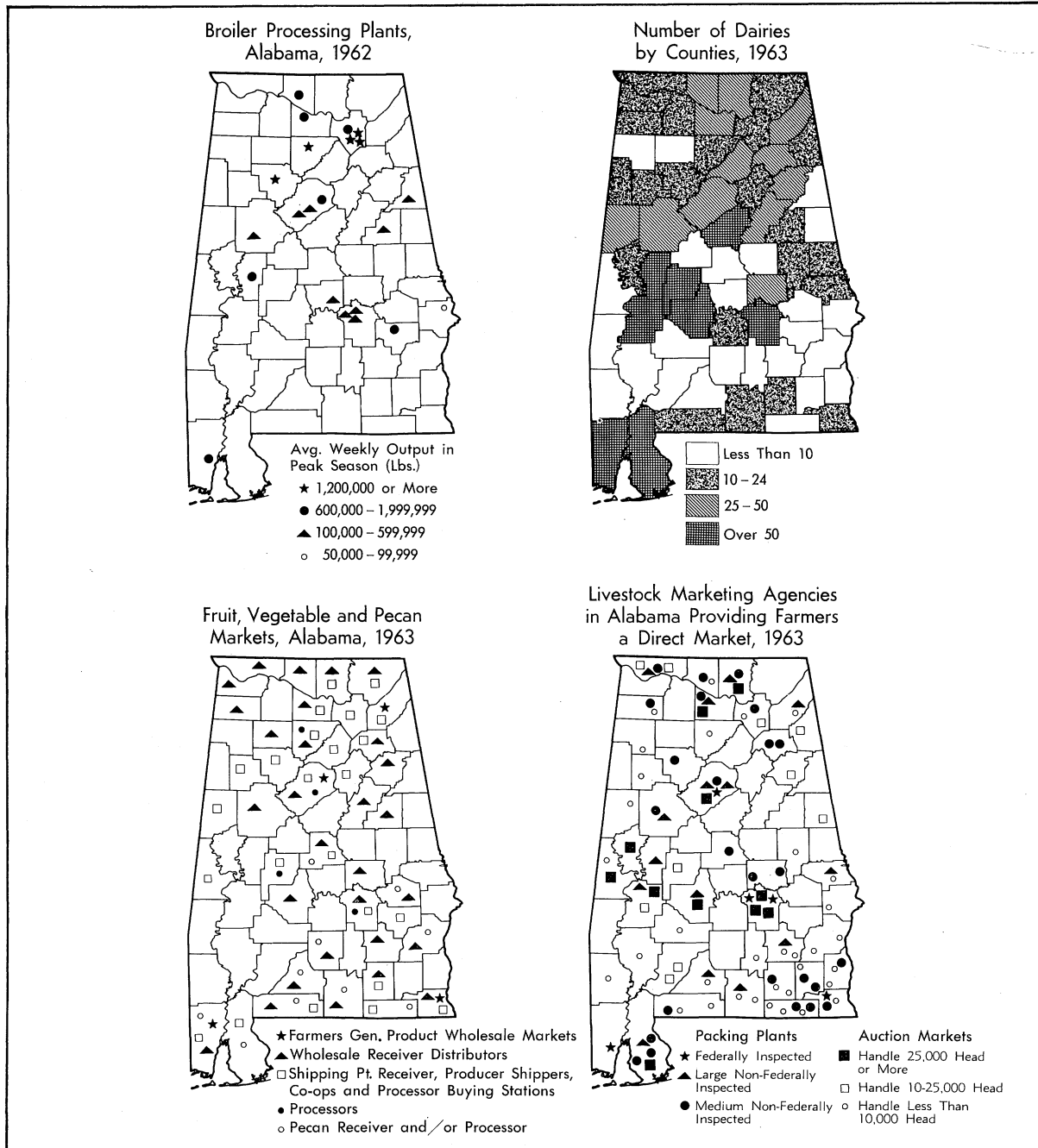


Alabama population increased from less than 2 million in 1900 to 3.2 million in 1960. Ninety per cent was rural in 1900 as compared to 46 per cent in 1960.

Population, particularly in the last 10 years, has shifted to those counties with concentrated industrial development. These urban areas offer excellent op-

portunities for marketing many Alabama farm products. The number of cities with a population of 15,000 or more has increased by one-third during the last 10 years. With a few exceptions, counties in northern Alabama have the highest percentage of white population.

MARKETS and AREAS of PRODUCTION



Since most of the broiler production is centered in north and northeast Alabama, most of the processing plants have developed in that area. Wherever production spreads, plants naturally follow.

The number of commercial dairies has declined in recent years but the dairies are still concentrated in the old producing areas. This corresponds with the distribution

of cows kept for milk shown previously in this publication.

Major fruit and vegetable markets are located where fruits, berries and truck crops are of commercial importance. Highest numbers of livestock auction markets are in southeastern and northern parts of the state.

OTHER RESOURCES

WATER SUPPLY. Alabama is one of the 19 soft water states. It has large rivers and numerous small streams, as well as various underground water sources. Good, pure water is available at low cost to almost every farm and city in the state. However, geological formations somewhat limit the water supply in the Piedmont region of northeast central Alabama.

TRANSPORTATION. Alabama's inland water transportation is excellent, and the miles of navigable streams are rapidly being increased by developments along the major streams. There are also outstanding port facilities at Mobile. Railroads serve every important section of the state. Hard-surfaced roads are adequate, and many miles of interstate highway are being constructed.

ELECTRIC POWER. Alabama is one of the leading producers of electric power. Practically all farms now have electricity.

MINERALS. Alabama is rich in mineral resources. There are vast deposits of coal and iron ore. Other important deposits are limestone, sand, gravel, marble, clay, kaolin, graphite, bauxite, sandstone, mineral waters and oil.

MANUFACTURING. An increasing number of manufacturing industries have situated in Alabama in the last 10 years. Steel and other hard goods are the most important industries. Others include steel products, textiles, lumber and allied groups, chemicals, foods, railway, building stone, clay products, paper and fertilizer.

SCHOOLS. The consolidated elementary and high schools available throughout the state are constantly being improved. Attendance is compulsory from 7 to 16 years of age. There are many private, denominational schools and several normal schools, state colleges and universities.

YOUTH. Alabama's young people are its greatest resource. Four-H Club work today helps develop 132,000 young people's talents, leadership abilities and work habits. Future Farmers and Future Homemakers of America add another 25 to 30,000 to this number. These boys and girls will be better prepared to accept responsibilities as farmers, homemakers and leaders in agribusiness fields and to be honest, dependable, hardworking citizens.

TAXATION

In general, taxes levied on farm real estate in Alabama are low compared to other states. In all years for the period shown in the following table, Alabama taxes per acre were below U.S. average.

TAXES ON FARM REAL ESTATE, ALABAMA AND U.S., SPECIFIED YEARS

Year	Alabama		U. S.	
	Dollars per acre	Dollars per \$100 full value	Dollars per acre	Dollars per \$100 full value
1909-13	0.09	0.60	0.21	0.50
1920	.19	.82	.51	.79
1925	.21	.81	.56	1.07
1930	.25	.98	.57	1.30
1935	.21	1.07	.37	1.15
1940	.20	.93	.38	1.22
1945	.22	.65	.41	.90
1948	.23	.51	.57	1.00
1949	.24	.56	.61	1.10
1950	.25	.53	.64	1.01
1960	.33	.35	1.22	.97

Personal as well as real property is taxed in Alabama. Taxes are due October 1, but no penalty for nonpayment is incurred until after January 1. A homestead is exempt from Alabama state taxes to the extent of \$2,000 assessed value provided the homestead does not exceed 160 acres in size.

Alabama has a net income tax similar to the Federal income tax but with lower rates. Single persons must file if their net income from salaries, wages, interest, rents, businesses, professions or other sources is \$1,500 or more. Married persons living with husband or wife must file if net income is \$3,000 or more. Itemized deductions similar to those of the Federal government or standard deductions are allowed. Rates range from 1½ per cent on the first \$1,000 or fraction of net income (above exemptions of \$300 for each dependent and deductions) to 5 per cent on net income over \$5,000.

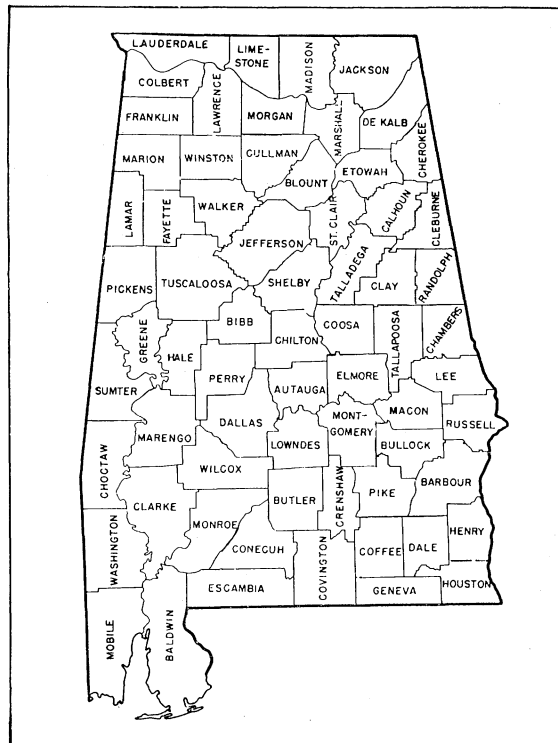
THE FUTURE of ALABAMA AGRICULTURE

Agricultural production is being increased, and the use of land, labor, capital and management is becoming more efficient. There are still opportunities for advancement, however, and production practices can be improved.

Livestock, poultry and poultry product enterprises make more money than all other state crops combined. Broiler, egg and beef cattle industries are still expanding rapidly. The increased production of livestock and poultry shows that Alabama farmers are taking advantage of the long growing season for pastures and other feed crops. Livestock and poultry industries are making better use of labor, buildings, machinery and equipment on Alabama farms.

Progress is being made in field crop production. Better maintenance practices, especially proper use of fertilizers, are making Alabama land more productive. Yields and quality are being improved through use of recommended hybrid seed. In 1940 less than 1 per cent of the state's corn acreage was planted to hybrid seed of adapted varieties. Now practically all the acreage is planted to hybrid seed. Mechanization and other technological and scientific developments are also being used on Alabama farms.

These steps forward and the prospect for good markets and fair returns on products indicate an encouraging future for Alabama agriculture. The potential is still far above the production now being achieved on Alabama farms.



KEY TO COUNTIES

Issued in furtherance of cooperative extension work in agriculture and home economics, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Dr. Fred R. Robertson, Director of Extension Service, Auburn University.

5M 8:64 Circular M-8