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Changing Patterns of Agriculture in Alabama Since 1910: Diversification to Specialization

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CHANGING PATTERNS OF AGRICULTURE IN ALABAMA SINCE 1910: DIVERSIFICATION TO SPECIALIZATION

(TITLE)

BY

Bertha J. Totten

THESIS

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Chapter 1

INTRODUCTION

Purpose

Since agricultural practices change during a given era, there will be variations in the rural landscape. The natural environment assists in defining the economic life of a state or region. Change also occurs because of the relationships between the cultural landscape and the natural environment. The purpose of this thesis is fourfold:

1. To determine the factors responsible for the changes in agricultural practices since 1910;
2. To discover and interpret changes in commodity production from 1910-1964;
3. To delineate and compare the agricultural regions in Alabama in 1910 and in 1964;
4. To trace the specific agricultural practices which have evolved, both regionally and commodity wise.

Methodology

The statistical data used as basis for supporting the purposes was the 1910 and 1964 Census of Agriculture. The

year 1910 was chosen because changes in Alabama's agricultural practices begin then.[1] Tenancy began to drop by 1910 when the boll weevil invaded Alabama. The 1964 Census of Agriculture was used for comparison because it is the most recent official census which contains agricultural data. Census data were used for both the state and county levels for comparison. Since there is an inconsistency in Census data forms for the amount of production, the value of each commodity was converted to dollars so each product would have a common comparability. The dollar value was computed by multiplying the average value per unit times the number of units produced.

Information and factors pertaining to 1930 were also included since this year was a definite turning point in agricultural practices in Alabama. The effects of the boll weevil and the Depression of 1929 had caused increasingly rapid modifications of farming practices by Alabama farmers.

The computation of the index of diversification was done to detect regions of specialization in Alabama's agricultural practices. To calculate the index of diversification, the steps involved included the conversion of production amounts into dollar value, determination of the percentage of the total production valued for each commodity, ranking each

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[1]Interview, J. H. Yeager, Chairman of Economic Geography, Auburn University, Auburn, Alabama, June 1, 1972.

commodity according to its value and percentage of the total value, computation of the "progressive totals" of the percentages of all commodities, addition of the "progressive totals" which resulted in the crude diversification index, and conversion of the crude index to the refined index to an average or norm. The formula used to convert the crude index to the refined index of diversification is:

$$\frac{\text{crude index figure-norm or average figure}}{\text{difference of crude index for least diversity-index for average}}$$

equals

refined index of diversification

The higher refined index indicates more specialization while the lower refined index denotes more diversification in the county. The index of diversification is used to disclose or reveal the amount of change per county compared to the state for the same year or time period.[2]

Where is the average ratio point between heavy yielding areas of a commodity and the less productive districts? To derive the points for plotting the mean location for the top ten commodities in Alabama, the procedure used was to make a grid with numbered tiers of the state, enter the county production figures to the nearest thousand or million units, add numbers across for the tier sum, add the tier sums to

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[2]John W. Alexander, Economic Geography (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1963), adapted from Alexander's Index of Industrialization.

attain one total, multiply the tier sum by the tier number to get the tier moment, add the tier moment numbers for a total, and divide the tier moment by the tier sum to find the number for plotting on the map grid. The same procedure was used to determine the point on the other axis. Both points should coincide when plotted on the map grid of the state to show the location of the mean or central location of the major produced commodities. The mean location shows the concentration of production of a specific crop or product.

Reconnaissance was conducted early in June, 1971, by automobile on state roads that passed through agricultural areas. Specific attention was given to color and texture of soils, slope of the land, native or planted vegetation, man's agricultural use of land, and amount of crop growth. Information was also obtained from USDA and extension personnel and college professors through personal interviews. Photographs of important commodities and landscape were also taken in all areas of Alabama where personal observation was done.

The Census data were used primarily to determine the index of diversification and mean location to show how yields and crop priorities have changed from 1910 to 1964. The results of the analysis of the data show that special regions of agriculture have developed in Alabama. Farmers in these regions have shifted to different crops or specialized commodities during the period of study. Even though specialty agriculture is being practiced, regional boundries have not

changed from 1950 to date.[3] (Figure 1).

Review of Literature

To effectively analyze agricultural practices over a period of time, a methodological approach to the review of literature permits a historical, regional, commodity and statistical perspective. No crop in agricultural history has been so eulogized or so damned as cotton. Cotton farmers built the South and tore it down. The emphasis on cotton brought one of the most gracious civilizations and produced some of our worst slums. Prunty[4] listed these events causing a decrease in cotton acreage:

1. Boll weevil invasion which caused the "boll-weevil" depression of the early and mid-twenties;
2. Economic depression of the 1930's;
3. The first cotton acreage limitation program in 1933 under the Agricultural Adjustment Act which was in effect until World War II;
4. Subsidies for installing approved land use procedures under the incentive payment program of the Soil Conservation Service;
5. Growing of new field and forage crops in farm programs of extension services and colleges;
6. World War II created labor shortages.

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[3] Yeager, op.cit.

[4] Merle Prunty, Jr., "Recent Quantitative Changes in the Cotton Regions of the Southeastern States," Economic Geography, July, 1951, pp. 197-8.

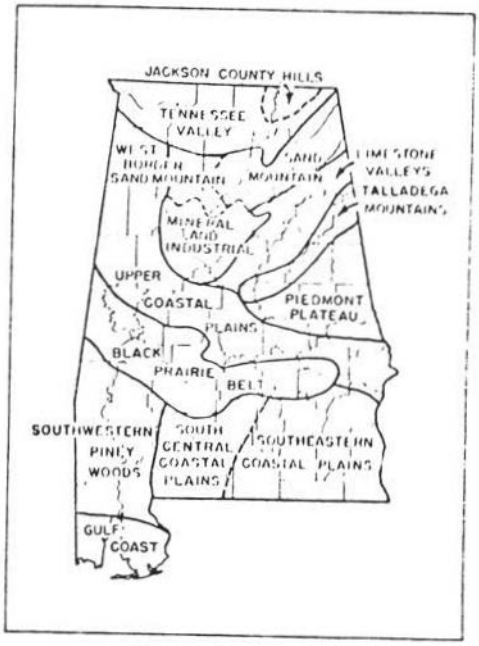

Figure 1. Farming areas of Alabama.

(Source: Lanham, Yeager, and Alvord, Alabama Agriculture, Its Characteristics and Farming Areas, p. 101.)

The result of these events was a decline in cotton plantings which were as high as eighty percent of the 1909-1910 acreages.

Gibson stated in 1941 the 'Black Belt is no longer one of the South's important cotton regions.'[5] Gibson and White accredit this change to erosion of calcareous soils, severe boll weevil ravages, unstable markets, an exodus of Negro laborers, high production costs and an expanding beef cattle industry. Cattle production increased in the Black Belt because of high prices for beef during World War II and a great increase in grass, particularly Johnson grass, and legume meadows which are for pasture. After 1945, cattle became more important than they ever had been in the history of the Southeast.

Lent[6] stipulates that other important crops in Alabama are peanuts, corn, sweet potatoes, melons and pecans. Lent also stresses that thriving livestock and poultry industries exist in Alabama. In "The Woodland Plantation as Comtemporary Occupance Type in the South," Prunty says that woodland plantations have developed in the last thirty years as a response to the growth of a market for woodstuffs, more paper-and-pulp mills, acreage restrictions on cotton and peanuts,

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[5]Ibid., p. 194.

[6]Henry B. Lent, Agriculture USA (New York: E. P. Dutton & Co., Inc., 1968), p. 44.

capital grain rather than normal income for tax purposes, a decline in sharecropping, and the soil bank.[7]

As a result of the increase in the variety of commodities produced in Alabama, a regional perspective can be persued. Chorley and Haggett[8] affirm that regionalization can be used as a "method" of investigation in simple-feature regions. Grigg further defines regions in "The Logic of Regional Systems,"[9] as a system or device for representing sections of reality. Functional regions deal essentially with interconnections between objects. An area can be termed a geographical region if there is an interrelation of geographical elements. Regions can be used to classify types of farming based upon a predominantly grown crop. "When a type of farming is fairly well concentrated in one area, so that it is the prevailing or dominant type in that area, usually associated with a set of reasonably homogeneous, natural, and economic conditions occurring throughout a definite geographic area, an area so characterized may be called a type of farming area."[10]

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[7]Merle Prunty, Jr., "The Woodland Plantation as a Contemporary Occupance Type in the South," Geographical Review, Vol. LIII, No. 1 (January, 1963), p. 1.

[8]Richard J. Chorley and Peter Haggett, Integrated Models in Geography (London: Methuen, 1967), chapter 12.

[9]David Grigg, "The Logic of Regional Systems," Annals, September, 1965, pp. 465-491.

[10]U. S. Department of Commerce, "Types of Farming in the United States," Statistical Abstract of the United States, (Washington, D.C.: U.S. Government Printing Office, 1933), p. 1.

Regionalization may be determined as a form of classification if a geographer uses statistical methods in delimitation of regional boundaries. In recent years geographers have turned increasingly to statistical methods as an aid to the determination of class or regional limits.[11] Statistical analysis can stimulate further work, produce partial explanations and reveal paths to further explanations.

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[11] Op. cit., Grigg, p. 386.

Chapter 2

FACTORS INVOLVED

Natural Factors

Climate

Climate is one of the permanent factors that affects the agricultural pattern in the State of Alabama. The average annual precipitation is ample for most crops. Rainfall is not uniformly distributed throughout the state. Amounts that fall are also not uniform. The average annual rainfall is 53.87 inches,[12] but the yearly average on the coast in Mobile is 61.70 inches lowering to 52.50 inches in Florence, in northwestern Lauderdale County.[13] (Figure 2). Heavy summer rains occur in the coastal region, but the central and northern sections occasionally suffer late summer droughts. Dense fogs are a climatic phenomena of extreme Southern Alabama. Snow may fall in the northern tier of counties but rarely remains more than forth-eight hours.

Alabama has a humid subtropical climate. Extremes in seasonal temperatures are rare since the temperature remains

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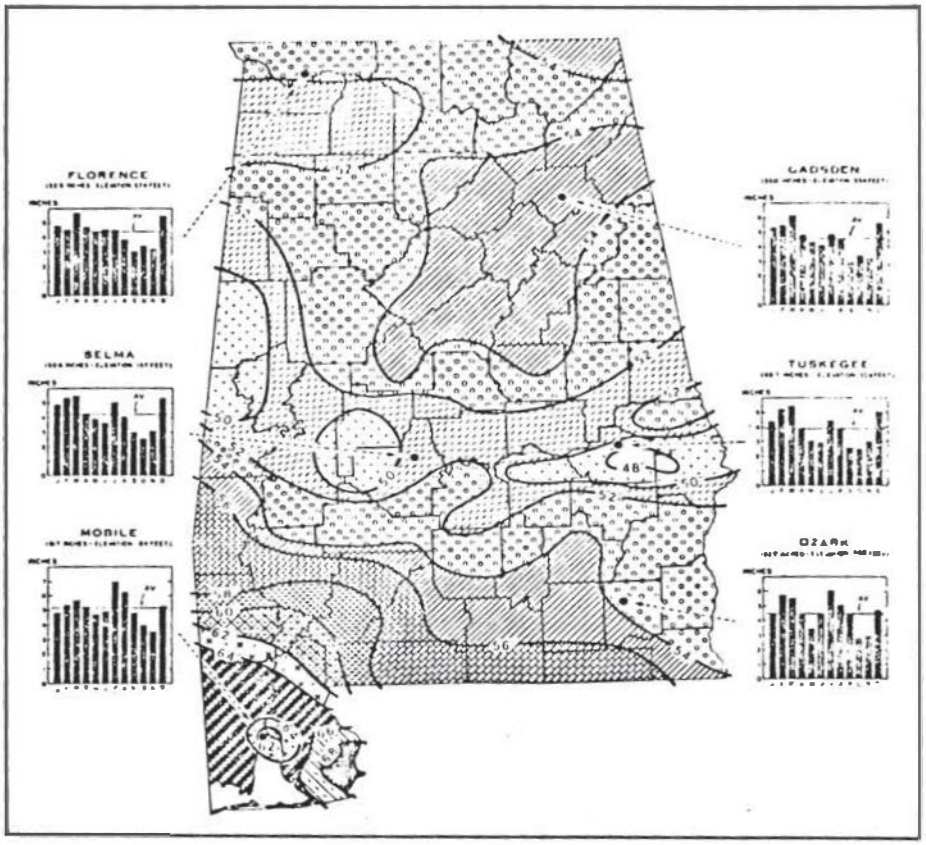
[12]Richard R. Smith, A Guide to the Deep South, (New York: Alabama State Planning Commission, 1941), p. 11.

[13]Ben T. Lanham, Jr., J. H. Yeager, Ben F. Alvord, Alabama Agriculture, Its Characteristics and Farming Areas, (Auburn, Alabama: Alabama Polytechnic Institute, 1953), p. 15.



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

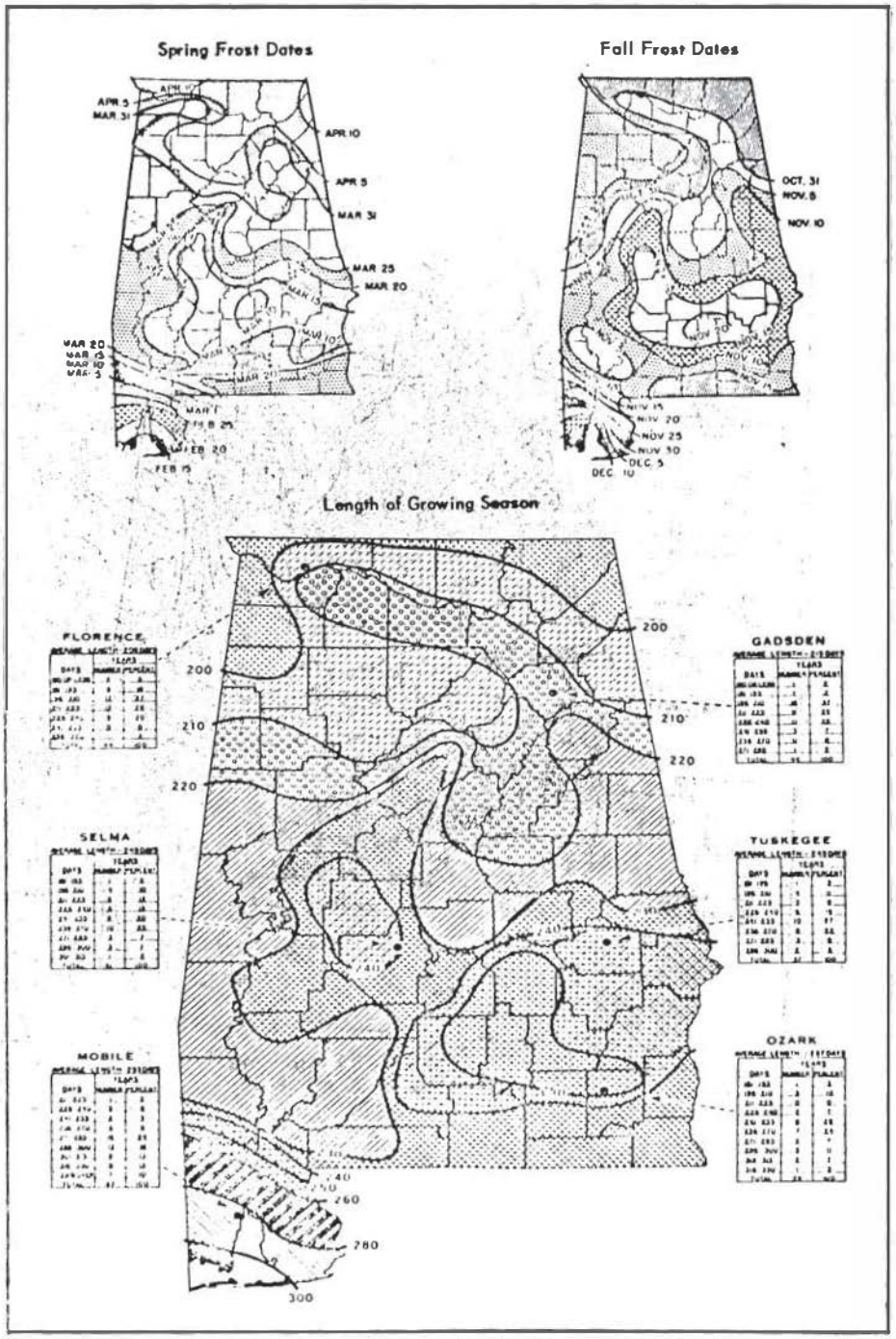
Figure 2. Annual Precipitation.

(Source: Lanham, Yeager, and Alvord, Alabama Agriculture, Its Characteristics and Farming Areas, p. 5.)

comparatively uniform. The January average temperature of northeastern Alabama is forty-three degrees, while fifty-three degrees is the average in Mobile. The last killing frost (Figure 3) in the spring occurs in mid-February in extreme southern Mobile and Baldwin Counties. Farmers in the northern tier of counties--Lauderdale, Limestone, Madison, and Jackson--expect the latest spring frost between April 5 and April 10. The first killing frost in the fall varies from December 10 in the South to October 31 in the North. The growing season lasts 300 days on the coast but is only 200 days in the northern counties. As a result of these and other variations in the climate, man has been able to develop agricultural specializations regionally.

Soils

Soil is another physical factor which affects Alabama's agriculture. The soils are extremely variable because of genetic factors--parent material, climate, vegetation, relief, and drainage. Alabama's soils vary widely in texture, consistency, and fertility. Soils range from deep porous sands to heavy, sticky, impervious clays. Some sandy and clay soils respond well to cultivation and prove to be highly productive while others are unprofitable for man's use. With wide variations in soils, coupled with wide differences in topograpgy and climate, it is obvious that the kinds of farming would differ in various parts of the state. Although the soils of



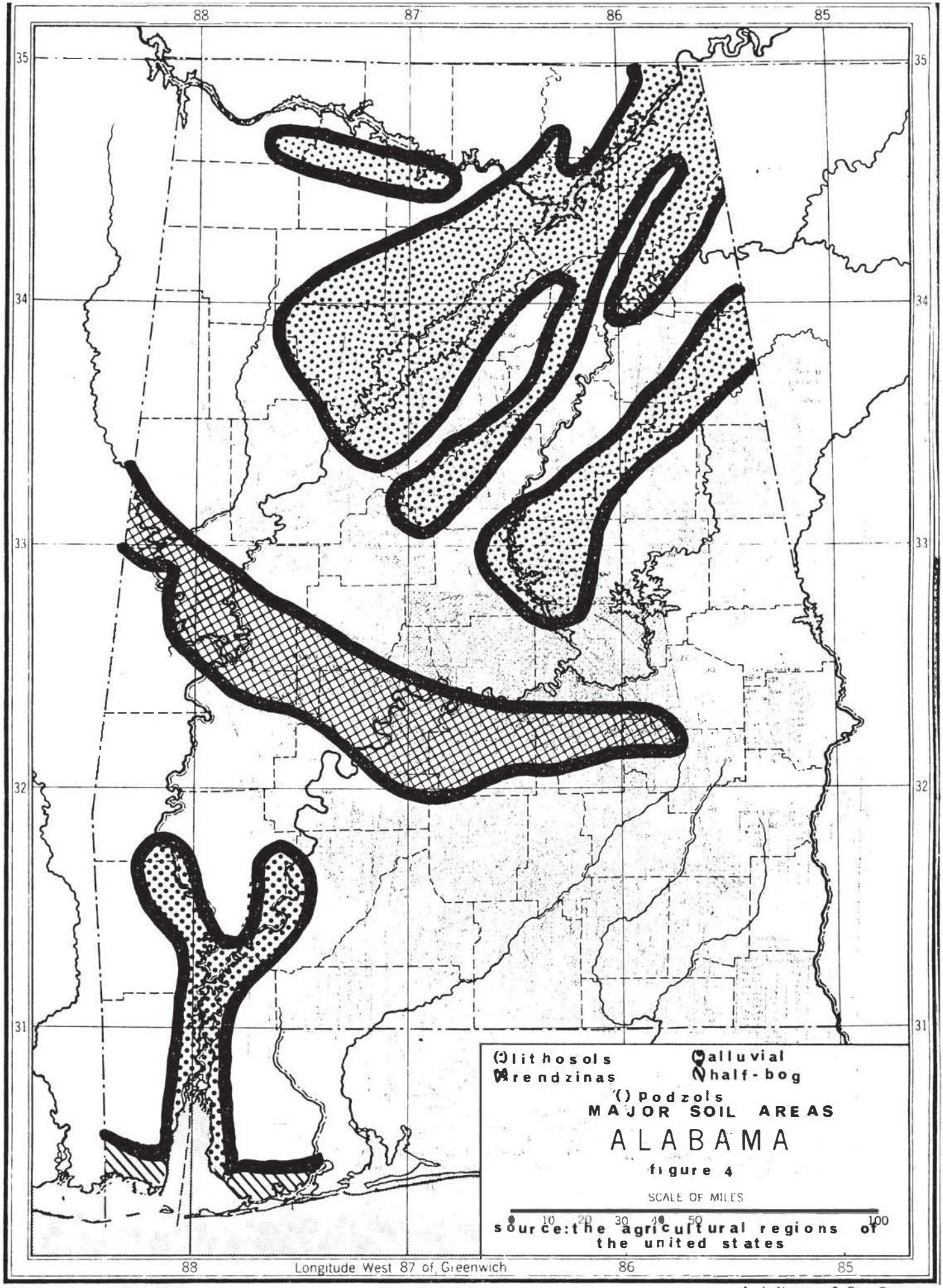
Average dates of first and last killing frosts and average lengths of growing seasons in Alabama.

Figure 3. Growing Season in Alabama.

(Source: Lanham, Yeager, and Alvord, Alabama Agriculture, Its Characteristics and Farming Areas, p. 16.)

the state have been classified into more than 300 different types, the soils of Alabama will be discussed according to great soil groups of the specialty agricultural regions in this paper (Figure 4).

The humid lithosols in the Limestone and Appalachian areas are shallow. These soils are mostly imperfectly weathered masses of rock fragments. Lithosols are usually found on steep slopes. Dark grayish-brown to black rendzina soils are found in the Black Belt. Rendzina soils are developed from soft limy materials and are found mostly under grass vegetation. In the Gulf area of Alabama, the half-bog soils are poorly drained and shallow. The dark peaty or muck soils have gray mineral soil underneath. Swamp forests cover most of the half-bog soils. Alluvial soils cover the valley bottoms of the Tombigbee and Alabama rivers near the Gulf of Mexico. The remainder of the state has soils in the red-yellow podzolic great soil group. These podzolic soils are excellent timber soils and typical cotton soils since they respond well to fertilization and good treatment. Red-yellow soils are usually found on sloping hilly lands under a natural vegetation which is primarily deciduous forests. Mild, long, warm summers and short, less severe winters allow the red-yellow soils to develop in the Deep South of which Alabama is a part.


88
87
86
85
35
34
33
32
31
lithosols
alluvial
rendzinas
half-bog
podzols
MAJOR SOIL AREAS
ALABAMA
figure 4
SCALE OF MILES
0 10 20 30 40 50 100
source: the agricultural regions of the united states
Longitude West 87 of Greenwich

Vegetation

Originally the State of Alabama had a great abundance of natural grasses primarily in the Black Belt. One of the most controversial grasses, Johnson grass, was introduced or brought to the South. It is praised by the livestock raiser for its value as a hay crop and pasture. Conservationists also praise it for being effective in erosion control because of its extensive root system. At the same time, it is damned as a weed by farmers who grow cotton, soybeans or peanuts. Johnson grass or "sorghum halepense" is a sorghum which was imported into South Carolina from Turkey in 1830. By 1961 this grass was used over most of the Southern half of the United States, including all of Alabama with its major use in the Black Belt.[14] Since Johnson grass is a perennial, it differs from other sorghums. Although Johnson grass grows only to a height of three to six feet, it resembles Sudan-grass. Otherwise, Johnson Grass is primarily a rich-land crop where moisture is abundant since it is not resistant to drought. It grows well on fine, sandy loams but not on poor, depleted or deep sandy soils.

Forests is the other major form of vegetation in Alabama. Vast primeval forests of pine and hardwoods once covered Alabama except the rolling prairie of the Black Belt.

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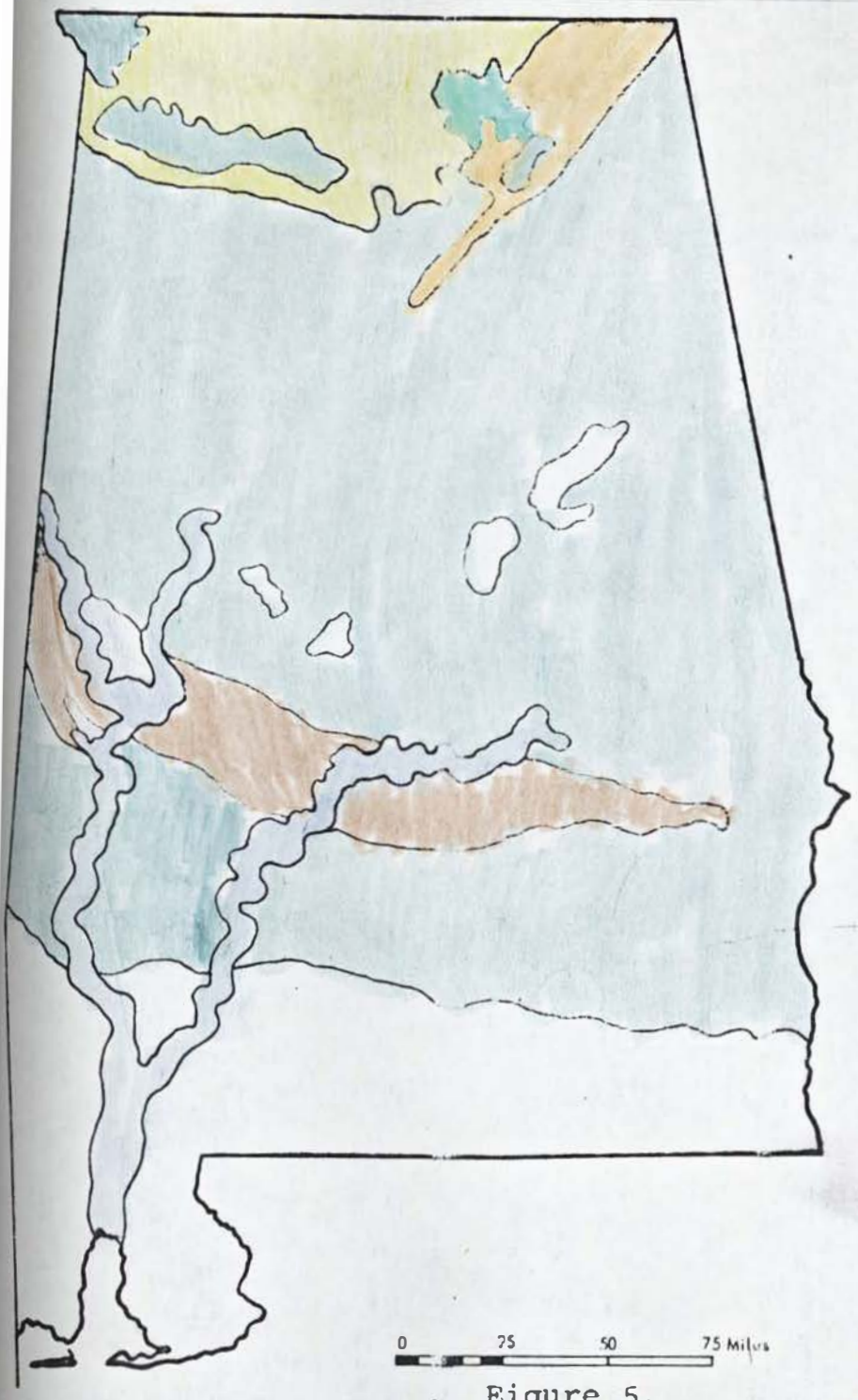
[14]Archer G. Sellers and Clarence E. Bunch, The American Grass Book (Norman, Oklahoma: University of Oklahoma Press, 1953), p. 229.

Forests now cover two-thirds or 21,000,000 of the 32,000,000 acres of land.[15] The largest proportion of the forest is pine, but there is an abundance of poplar, cypress, gum and hickory. The pine species include longleaf, shortleaf, loblolly, and upland spruce, lowland spruce, pond, slash, and sand. When these varieties are combined into a group, they are known as "southern yellow pine." Longleaf and slash pine typify Alabama's Lower Coastal Plain and dominate two million acres of commercial forest land. Extending north from the Coastal region, loblolly and shortleaf pine cover seven and four-tenths million acres. Another four and eight-tenths million acres of uplands are occupied by oak, hickory, and other hardwoods mixed with various pines. Along the Mobile, Black Warrior, Tombigbee, and various other streams throughout the state, are stands of bottom-land hardwoods that aggregate two and four-tenths million acres. Upland hardwood forests, chiefly in the northern half of the state, total five and one-tenth million acres. (Figure 5).

Landform Regions

A natural landform is the Piedmont which is a part of the Appalachian Lowland. (Figure 6). This region is located southeast of the Coosa Valley in East-Central Alabama. It is an area of small, mostly low, rounded hills. These hills are covered with sandy loam soils which are underlain by ancient

[15]Yeager interview, op. cit.



OAK . HICKORY FOREST
Species include white oak, red oak, southern red oak, black oak, shagbark hickory, mockernut, pignut, basswood, winged elm, and black walnut.

OAK . HICKORY . PINE FOREST
Species include bitternut, mockernut, and pignut hick aries, white oak, post oak, northern and southern re oak, loblolly pine, and shortleaf pine.

CEDAR GLADES
Species include cedar.

MIXED MESOPHYTIC FOREST
Species include oak, basswood, hickory, maple, beech poplar, buckeye, chestnut, ash, magnolia, sweetgum and hemlock.

BLACK BELT
Species include red cedar, overcup oak, shumard oa chinquapin oak, durand oak, laurel oak, and nutme hickory.

SOUTHERN MIXED FOREST
Species include southern magnolia, cucumber tre sweetgum, beech, yellow poplar, white oak, laurel oa swamp chestnut oak, turkey oak, red bay short leaf pin loblolly pine, long leaf pine, southern white pin white hickory and ironwood.

SOUTHERN FLOODPLAIN FOREST
Species include tupelo gum, bald cypress, pecan, sh mard oak, overcup oak, water oak, willow oak, lau oak, swamp chestnut oak.

Figure 5.

NATURAL VEGETATION

Source: A. W. Kuchler, The National Atlas of the United States of America

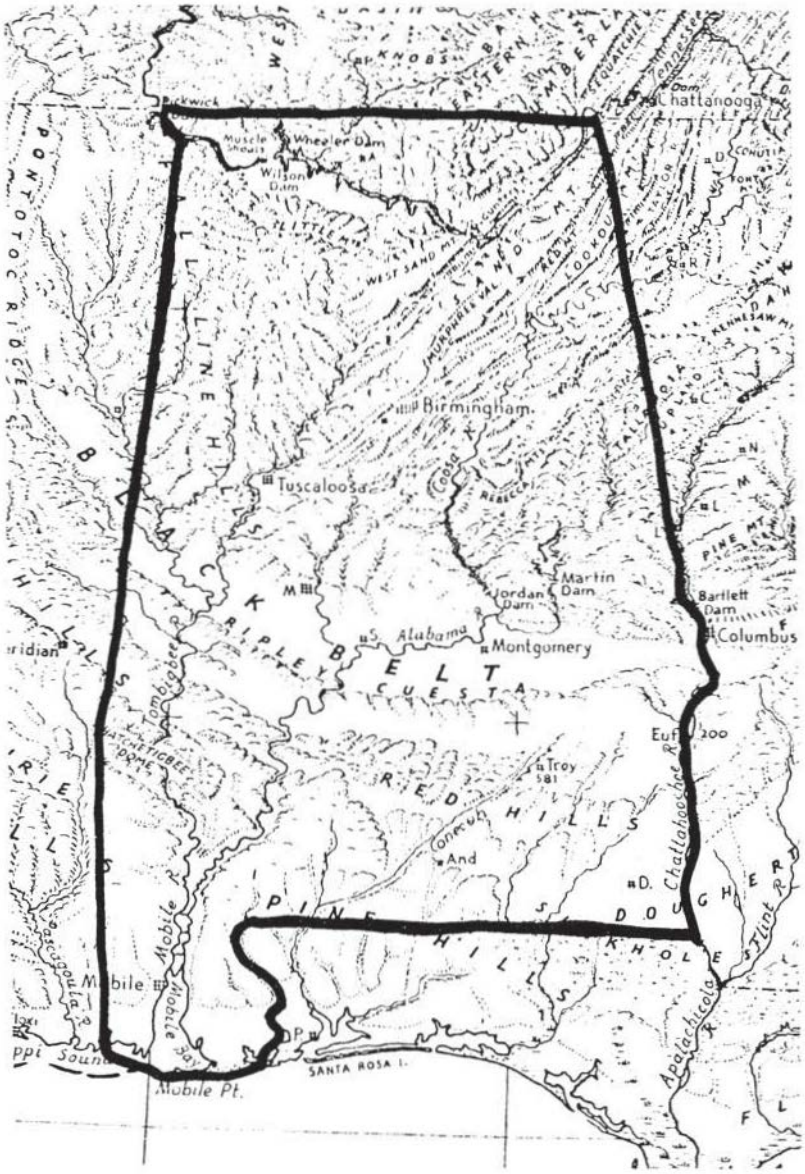


Figure 6. Physiographic Regions.

(Source: Raisz, Landforms of the U.S., 1957.)

igneous rocks and crystalline schists of the Archean and Algonkian geologic ages. The eastern part slopes toward Georgia. Pine trees grow rapidly in this area permitting reforestation to occur in a few years. The Piedmont is separated from the Coastal Plain by the Fall Line which enters Alabama near Columbus, Georgia, curves by Wetumpka and Tuscaloosa and then swings to the northwest corner of the state near the indented valley of the Tennessee River. A second landform is the Coastal Plain which was formed during all epochs of the Cenozoic or Recent Life Geological Age. The plain covers an area of 17,000 square miles from the southern state boundary to the outcrop of the Upper Cretaceous Series. Formations in the Coastal Plain dip toward the South-Southwest at rates of less than forty feet per mile.[16] Then the land flattens out and is almost level or flat along the coast.

Cultural Factors

Plantation System

Historically cotton is linked with some of our characteristic institutions, i.e., the plantation system and the rise and fall of slavery. By 1860 the agricultural pattern for Alabama was established with plantations being one part. Black Belt, with the largest cotton plantations, became the wealthiest region in the state. Plantations were either

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[16]Smith, op. cit., pp. 12-13.

owned by individuals or companies. These plantations were either cultivated by a single tenant or were divided into forty to fifty acre tracts for individual cultivation depending upon ownership.

Slave labor was used on the plantations before the Civil War to grow both cash and subsistence crops. These crops included cotton, rice, indigo, tobacco, corn, peas, beans, white potatoes, and wheat. Dairy cattle were raised for dairy products.[17] Most of these plantations were divided during the Reconstruction Period into separate tracts for sale or were converted into other farming operations such as livestock raising. Areas traditionally thought of as dominated by the plantation and monoculture have declined and cooler zone crops have gained in importance.

The plantation, though under strong individual control, was a society of its own. In its inception, and indeed in its development, the plantation was by no means merely a profitable device for the modern individualistic man. It was a copy of the landed estates of England and was instrumental in creating landed aristocracy, i.e., men with the aristocrat's sense of community and of obligation to community. To those who obtained vast acreages come the continuation or an extension of the social position of the English landed

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[17]Langdon C. White, Elmer J. Foscue, and Tom L. McKnight, Regional Geography of Anglo-America (Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1914), p. 163.

Smith, op. cit., p. 17.

gentleman who had freedom from manual labor. As late as the 1890's, the very ideal of frontier agriculture itself in the South was in the Southern plantation which had become an economic and social institution.

As spatial entities, plantations are still found in three forms--antebellum, fragmented and neoplantation. (Gregor defines as a modern plantation). For any plantation to succeed, six elements are necessary and interdependent:

1. Landholdings large enough to be distinguished from the "family" farm;
2. Distinct division of labor and management;
3. Specialized agricultural production;
4. Distinctive settlement patterns and spatial organization;
5. Relatively large input of cultivating power per unit of area;
6. Located in some area with the plantation tradition.[18]

The subtropical large farms most spectacularly illustrate the length to which plantation farmers and/or owners do capitalize on a situation in which markets are abundant and capital and technology are easily available. Southern plantations now concentrate on groups of specialties with such combinations as cattle-cotton and pecans-dairy products or one specialty such as forests. Farm acreage of more than 260

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[18]Merle Prunty, Jr., "The Renaissance of the Southern Plantation," Geographical Review, Vol. XLX, No. 4 (October, 1955), pp. 459-60.

acres is best suited for plantation farming. Subdivision of the landholding is practical to ease the managerial problems. In Alabama the township-and-range system is employed for the basis of distribution. The tenant-renter occupance system is found in the Alabama section of the Tennessee Valley similar to that practiced in the Black Belt in 1910. New practices are employed with tractors the key machinery in the mechanization of the plantation. A wage system is crowding out the traditional share arrangements. Job specialization is another mark of labor industrialization on the plantation. Quasi-plantations (Gregor defines as like the true plantations) can be expected to increase in number and variety.[19]

Population Changes

There were two major factors causing Alabama landowners to have a shortage of farm laborers in the 1960's. Workers migrated from the farm because of low returns for labor. From 1910-1915, the first shocks of the weevil invasion drove hordes of traditional cotton laborers to outside industrial centers and southern towns. During the period after 1914 there was a huge migration of Negroes from southern farms to northern cities where opportunities for industrial employment allowed the Negro to earn wages three-four times as high as they had been able to make in the South. Opportunities of industrial employment created by the two World Wars have given impetus to this movement.

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[19]Howard F. Gregor, "The Changing Plantation," Annals, Vol. 55, No. 2 (June, 1965), p. 238.

Impact of Value Structure

The status of the Negro began to change with the end of the Civil War when slavery was exchanged for tenancy. In 1910 tenancy had not increased on the farms, but the majority of the tenants were Negro farmers. This trend had not changed by 1935 when eighty-three percent of all Negro farmers were tenants as compared with fifty-five percent of all white farmers.[20] Tenancy disrupted family life since most tenant farmers occupied their farms for less than one year. Migration has not ceased since large numbers of Negroes leave annually for other sections of the country. Large masses moving have caused the Negro to become largely a town-dweller.

Agricultural island settlements, established to develop intensive agriculture, were begun between 1870 and 1900 with the conviction that immigrant farmers would somehow perpetuate a pattern of farming that was in some ways different from and more desirable than the local agricultural practices. It was found that the European peasant was most successful in adapting to the new area since each new farmer was seeking some form of diversified farming that best suited the locality where they settled. Emphasis was placed on cash crops and diversification to gain greater income per acre. The owners of these farms took an active part in the farm work since they engaged in a live-at-home program so they could have cows, chickens, and large gardens for their subsistence.

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[20] Smith, op. cit., p. 81.

Kollmorgen[21] described three cultural-agricultural islands in Alabama:

St. Florian was begun in the northwestern segment of the state on the Highland Rim during the 1870's. This area was known as the barrens because of the thin, infertile soil. With the use of commercial fertilizers and rotation schemes, the farmers developed a fairly successful plan of diversification farming with cotton as a part of the crops. This island settlement became most successful because of the nearby vegetable and produce markets in Florence, Sheffield, and Tuscumbia.

At the southern extension of the Appalachian Lowland is Cullman County, which has an elevation of 850-1,000 feet above sea level. The growing season in this sandy soil area is about 200 days. German farmers bought the land from the North and South Railroad which is now the Louisville and Nashville Railroad. Since the farmers were unable to raise livestock because of the lack of good grasses, they learned cotton farming from Georgia immigrants. In 1930, ninety-one percent of the Germans were either full or part owners of the land; whereas, only fifty percent of the farmers in the county were full or part owners of the land.[22] During the early 1940's about ninety percent of the land was terraced.

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[21]Walter M. Kollmorgen, "A Reconnaissance of Some Cultural-Agricultural Islands in the South," Economic Geography, Vol. 17 (October, 1941), pp. 409-430.

[22]Ibid., p. 423.

Farmers grew strawberries, sweet and Irish potatoes, and cotton. At this time, it was one of the most important strawberry growing centers in the South. It also ranked foremost in cotton and potato production in Alabama.[23]

The sandy soils on the Gulf of Mexico lured diverse rural cultural groups--Germans, Greeks, Scandinavians, Italians, French, and Poles--to Baldwin County, Alabama in 1900. At first the farmers produced potatoes, vegetables, and citrus fruits profitably. As time elapsed, diversification was practiced by adding more livestock and developing winter pastures and pecan orchards to compensate for fruit losses during cold waves and frost and the high costs of commercial fertilizer coupled with low produce prices. Of the three agricultural islands, most progressive farming was practiced in Baldwin and Cullman Counties, numbers two and three.

A third impact on the value structure was the "Southern Way of Life." According to Hart[24] six facets combined to form the southern image of living. One, the southern population was predominantly native-born Protestants since there were few Catholics, Cajuns and Spanish-Americans, and Jews. Secondly, a distinctive regional diet was developed in the South. This unique diet included field corn for meal and hominy grits, fried foods, staple meats of chicken and pork, hot rolls or biscuits, ice tea in summer, okra, black-eyed

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[23] Ibid., p. 422.

[24] John Fraser Hart, The Southeastern United States (Princeton, New Jersey: D. VonNostrand Co., Inc., 1967).

peas, sweet potatoes, and "salad greens." As late as 1971, Southerners still thought of potatoes as sweet potatoes rather than Irish potatoes. Third, strong class distinctions are still felt in definite aspects of Southern feeling. Class distinction is determined by church affiliation--Episcopalian, Presbyterian, Methodist, or Baptist. A Southerner has a very keen interest in kinship relations. The aristocratic plantation tradition of easy-going courtesy, hospitality, and a disdain for manual labor was very strong. The fourth facet of Southern living is the inferior status of the Negro, which is an unfortunate product of the plantation tradition. The Negro still has servile status and is limited in educational and economic opportunities. Fifth, the Southerner has the talent for self-deception. Lastly, the states in this region have been dubbed the "Solid South" since most of the voters supported the Democratic Party at the polls prior to 1948.

During the Depression years of 1929-1932 the familiar agricultural concept of the South crystallized in the American mind. This concept included such ideas as:

1. Southern agriculture was based exclusively on cotton, corn and tobacco;
2. Farmers planted the same crops on the same field year after year;
3. Southern farmers were mostly tenants;
4. This was the era of low agricultural prices, declining yields, and gully erosion about which the farmers did nothing;

5. Farm buildings fell into disrepair;
6. Mules did the work since only the fortunate had tractors;
7. The poverty of white farmers was exceeded only by that of the Negro "sharecropper."

Economic Factors

Boll Weevil

Cotton was "King" among cash crops and the bales got toted to market until the boll weevil came to dinner in 1910, 1912, or 1915 in Alabama. (Smith states 1910;[25] Haystead and Fite say 1912[26] and Dr. Yeager quoted 1915.[27]) Damage by the boll weevil was responsible for a twenty-seven percent decline in cotton production from 1915 to 1923.[28] At the same time, cotton acreage was twenty-two percent smaller than corn acreage.[29]

By the time the boll weevil invaded Alabama, progressive farmers were already planting other crops in addition to cotton. The process was hastened when extermination methods

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[25]Smith, op. cit.

[26]Ladd Haystead and Gilbert C. Fite, The Agricultural Regions of the United States (Norman, Oklahoma: University of Oklahoma Press, 1955).

[27]Yeager interview, op. cit.

[28]Haystead and Fite, op. cit., p. 112.

[29]Smith, op. cit., p. 19.

failed to kill the boll weevil. Black Belt farmers were forced to use much of their land for raising grain. Other cotton fields were converted to peach, pear, or apple orchards. Farmers in the Southern coastal region replaced cotton with citrus fruits and truck farming products. The shift from cotton to peanuts in the Wiregrass Counties in Southeastern Alabama was so successful that a monument (Figure 7) was built in Enterprise, Alabama, honoring the boll weevil. Livestock raising increased in all parts of the state. As early as 1915, crop rotation became a fairly common practice throughout the state in addition to the use of fertilizer on wornout lands. Cotton was crossbred to increase yield and develop varieties resistant to disease. Thus, the boll weevil brought many changes to Alabama agriculture.

Prices of Cotton

Even though the price paid for cotton had lagged below production costs for many years, farmers were still producing too much cotton in 1944. When the cotton exchanges closed in August, 1914, cotton prices dropped drastically. Prices rose slightly and steadily with the beginning of World War I until 1926. Cotton prices were poor in the 1930's. Government controls were placed on cotton in 1933. A result of the Agricultural Adjustment Acts was that the government paid farmers not to plant cotton.

Figure 7. Boll Weevil Statue in Enterprise, Alabama. 1971.

Depression

Another period of agricultural diversification began with the depression of 1929. Cotton prices dropped to an all-time low. More acreage was devoted to corn than cotton. Livestock raising began increasing steadily.

Use of Synthetic Textiles and Paper Instead of Cotton

At the close of World War I the demand for synthetics became a deadly and permanent form of competition with cotton. Synthetics became highly competitive since they were disease resistant, didn't suffer from drought, and encountered no decline from insect damage as did cotton. By 1954 cotton consumption was down to the 1935-39 level which was below that of 1949. The fiber market for synthetics increased from ten percent in 1939 to twenty-five percent in 1954.[30] During 1942 rayon production equalled 3,172,000 bales of cotton.[31]

Paper also hurt cotton consumption since it (paper) was used for towels, doilies, napkins, tablecloths, and multi-walled paper bags for packaging products formerly bought in cotton sacks. With large pine forests and available hardwood trees, mills or factories have been built in Alabama for the production of wood products, furniture and structural lumber.

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[30]David L. Cohn, The Life and Times of King Cotton (New York: Oxford University Press, 1956), p. 264.

[31]Haystead and Fite, op. cit., p. 113.

Pine is still used in great quantities in the paper mills near Mobile, Demopolis, and Childersburg, the biggest newsprint factory in the Gulf South. (Figure 8)

Variety and change have come, but the influence of the past continues. Towns have the same atmosphere and look much as they did decades ago. The basic social patterns and attitudes have lingered as old traditions do, especially in cotton country.[32]

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[32] Eugene Fodar, Southeast (New York: Fodar's Modern Guides, Inc.), pp. 303-330.

Figure 8. Newsprint Plant in Childersburg, Alabama, 1971.

Chapter 3

MODIFIED AGRICULTURAL PATTERNS

Types of Land Use

The land area in the State of Alabama is 32,818,560 acres. In 1910, all farmland covered 20,732,312 acres or 63.2 percent of the total acres in the state. By 1930, farmland decreased to 17,554,635 acres or 53.3 percent of the total state area. The acreage in farmland was reduced by 1964 to 15,255,797 acres or 46.4 percent of the total state area.[33] The remaining 54 percent of the area was in forests by 1964. The largest acreage was planted in cotton, corn, hay, and peanuts in 1910, 1930, and 1964 (Figure 9 and 10), which indicates that farmers were striving to produce crops that would produce a profit.

Of the four crops (cotton, corn, hay and peanuts), cotton accounted for the largest acreage in 1910 (3,456 thousand) and 1930 (3,582 thousand) but by 1964 was second (831 thousand). Corn acreage was second in value in 1910 (2,740 thousand) and 1930 (2,818 thousand) but ranked first in 1964 (1,020 thousand). Hay acreage increased from 299 thousand acres in 1910 to 521 thousand in 1930 and up to 594

[33]United States Department of Commerce, U. S. Bureau of the Census, Census of Agriculture, 1910 and 1964, Washington, D. C., 1911 and 1967.

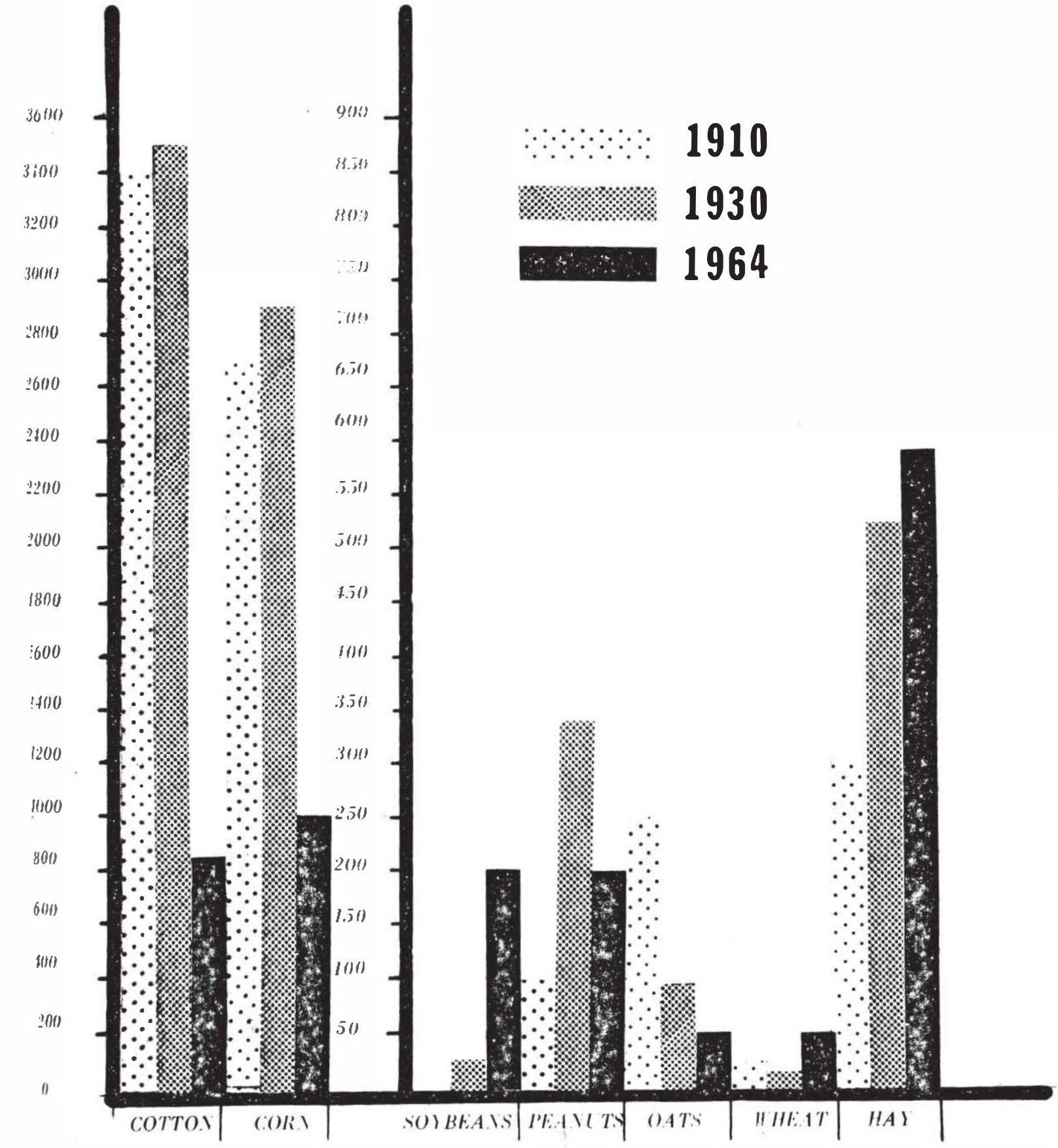
FIGURE 9

CROP ACREAGE IN THOUSANDS

CROP	1910	1930	1964
Cotton	3,456	3,582	831
Corn	2,740	2,818	1,020
Soybeans	-----	8	207
Peanuts	101	334	200
Oats	260	95	42
Wheat	18	2	64
Hay	299	521	594
TOTAL	6,874	7,360	2,958

Figure 10

CROP ACREAGE
in thousands



thousand in 1964. Peanut growers planted 101 thousand acres in 1910 with the peak acreage being planted in 1930 (334 thousand). The number of acres planted in peanuts had declined to 200 thousand acres by 1964. This one-third reduction in acreage did not hamper the yields nor the value of the crop. As a matter of fact, the value increased to $24,000,000 in 1964.[34]

The practice of maintaining permanent pasture land has become a prominent agricultural pattern of land use. In 1930 approximately nine-tenths of one percent of 267,000 acres of the state's total area was in pasture for beef ranches. All pasture land comprised thirty-four percent of the state's land area in 1950, because farmers were using natural vegetation to best advantage.[35] The proportion of farmland pastured was comparatively high in the Black Belt area and in some of its surrounding counties. The Black Belt counties had developed into the main grazing area by 1964. Large ranches were seen in 1971 in Montgomery County located near Montgomery.[36]

Larger demands for paper, veneer, and treated wood affected the state's forest resources. Thus, a third type of land use, tree farming, has emerged in the specialization of agriculture in Alabama since 1942 when the tree association was formed. Alabama has more than twenty-one million acres of commercial forest land (forest land capable of producing crops

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[34] Ibid.

[35] Lanham, Yeager, and Alvord, op. cit., p. 69.

[36] Personal observation.

of industrial wood)---66.6 percent of the state's total land area because marginal farmland and diverted cropland has become woodland. More than ninety-five percent of Alabama's commercial forest land is privately owned by individuals and private companies. Almost 15 million of Alabama's nearly 22 million forest acres are in ownerships of less than 5,000 acres. A state which once had been "written off" as a timbered state now ranks second in the South as a pulp producer. In 1966 a total of 5,291,900 cords of roundwood and woods and mill residues were harvested in Alabama forests. The 1966 output was the highest in nine years and was thirteen percent above the 1957-63 annual average. The annual production of more than 1.2 billion board feet of lumber or 3.5 percent of the U. S. total caused Alabama to rank third in the South in amount of lumber produced.[37] Two-fifths of the sawtimber growing in Alabama forests is southern pine. In addition to lumber, Alabama forests supply the wood for furniture and other wood products including pulp and paper, plywood and veneer, gum navel stores, and wood chemicals. Good management of Alabama's forests can assure the state of a healthy forest industry with sustained employment and payrolls ($199 million in 1966)[38] increased recreation opportunities, and water and soil protection.

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[37] Alabama Industries Committee and American Forest Institute, "Alabama Forest Facts," (Atlanta, Georgia, 1968)., pp. 2-3, 7.

[38] Ibid., p. 1.

Other agricultural uses of the land include specialty agriculture products grown mainly in the region. Specialty agricultural enterprises incorporate orchards--mainly peaches, and pecan groves (Figure 11), truck farming and broiler industry. Nursery and horticulture businesses are also a part of the agricultural landscape in Alabama.[39] Specialty agriculture expanded in southern Alabama by 1964 since 1910.

1910 Index of Diversification Analysis

Specialty regions are delineated in this thesis in Alabama disregarding crop limitations in county regions. To obtain the boundaries of such specialty regions, a study was made by the writer of the state commodity date for 1910 and 1964. The data were used to find the Index of Diversification as defined in Chapter 1. The index was determined for each county. The result showed the comparison to the United States Commodity average for both 1910 and 1964. The index was also computed to compare each county with the Alabama Commodity average for the same years. The interpretation of the specialization/diversification regions on figures 12, 13, 15, and 24 starts with the northern tier of counties in Alabama and continues in a southerly direction across the state.

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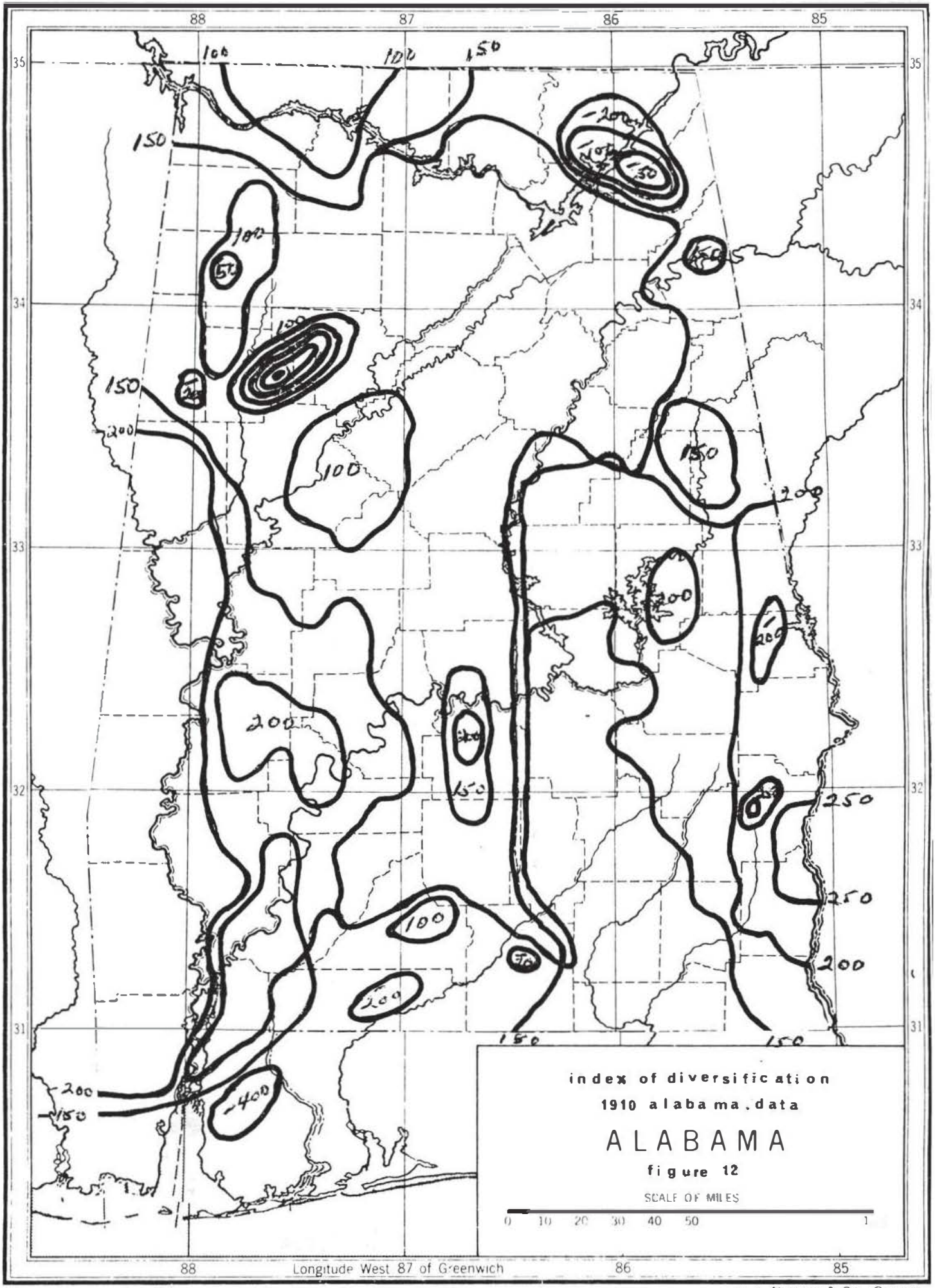
[39] Commodity Yearbook, (Commodity Research Bureau, Inc., New York, 1964), commodity map.

Figure 11. Pecan grove in Baldwin County, Alabama, 1971.



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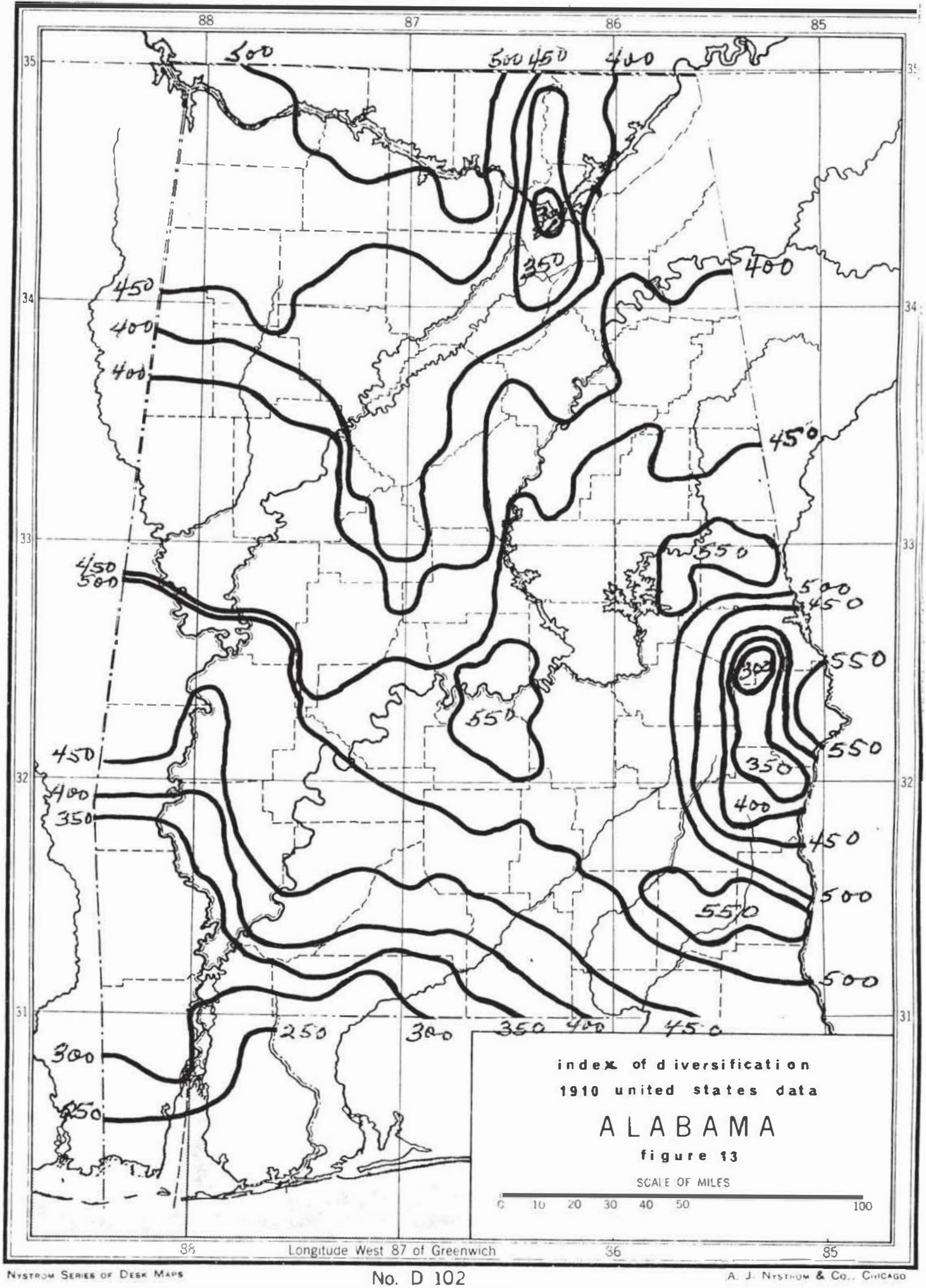
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The areas with the greatest amount of specialization in Alabama in 1910 (Figure 12) when compared with the United States average for 1910 were widely scattered in the State of Alabama. These areas of specialization were in the Tennessee Valley, Lowndes and Montgomery Counties in the Black Belt, the southern part of the Piedmont, and a portion of the Wiregrass Counties. These areas have high specialization of agriculture because farmers grew cotton as a specialty crop. None of the above areas appears when the county data were compared with the Alabama average. The Alabama data (Figure 13) gives the overall picture of more diversification than specialization in 1910, and indicates that farmers diversified crops before the boll weevil arrived. Farmers had already begun to plant and harvest less cotton acreage. "Old" cotton fields were being converted to other cash crops such as corn, peanuts, forests, and others. As a result, cotton was already becoming a specialty crop.

In 1910 the east-central one-third of Alabama had an average index of 500 which reveals a greater amount of specialization in the remainder of the state except those areas discussed previously. The east-central section of Alabama includes part of the Black Belt, most of the Piedmont, and a portion of the Wiregrass Counties. The farmers in these areas diverted part of their acreage to products other than cotton after 1910. Farmers were growing corn, peanuts, forage crops, small grains and vegetables also. On the

north and south of this area of high specialization are tracts which have moderate amounts of both diversification and specialization. The northern tract encompasses the northern Upper Coastal Plain, the entire mineral and industrial belt, and the mountain areas in northeastern Alabama (Figure 16). A pocket of highly diversified farming was located in the Jackson Hills area of the Tennessee Valley. The index for this vicinity was quite low when compared with both the United States and Alabama indices. This region has mountains and the soils are less productive.

The southwestern portion of Alabama in 1910 was an area of highly diversified farming. The area of general and vegetable farming covers most of the Lower Coastal Plain and all of the Gulf Coast. Diversification was practiced in the locale because there were few large population centers. Mobile and Baldwin counties were more highly diversified in 1910 when compared with Alabama averages for 1910 than with the United States average for 1910. The expanse of extremely high diversification was a long narrow band projecting northward from Mobile and Baldwin counties on the Alabama Index Map. The map depicting these regions is more representative of the actual farming practices in Alabama in 1910 than the United States Index Map.

1964 Index of Diversification Analysis

The 1964 index of diversification showed higher indices revealing much more specialization than in 1910 in all of

Alabama. The amount of specialization increased because farmers switched to producing commodities such as cattle, poultry, peanuts and forest which are best suited for the soils, hilly terrain, and vegetation. (This is discussed in the introduction of the chapter). All the traditional farming regions in Alabama such as the Black Belt, Wiregrass counties, Limestone Valley counties (Figure 14) aren't apparent on the 1964 United States Index Map (Figure 15). Instead of the farming regions traversing east and west across Alabama, the index farming regions disect the state into areas going from north to south except for the Gulf Coast. All the state had moderate specialization by 1964, with pockets of either higher or lower specialization indices which will be discussed below.

Specialty Regions

The areas with the highest amounts of specialization were found in the western and central sections of the Black Belt, the Piedmont, the South Central Coastal Plain, the eastern Wiregrass counties, and the Birmingham areas. (Figure 16) Cotton has been replaced in the Piedmont and Black Belt by hardwood forests and cattle respectively. Two-thirds of the cattle produced in Alabama are raised in the Black Belt.[40] Black Belt farmers today are specializing more in cattle-raising than cotton. Livestock farms in the area can utilize the grass and improved forage crops that grow well in the

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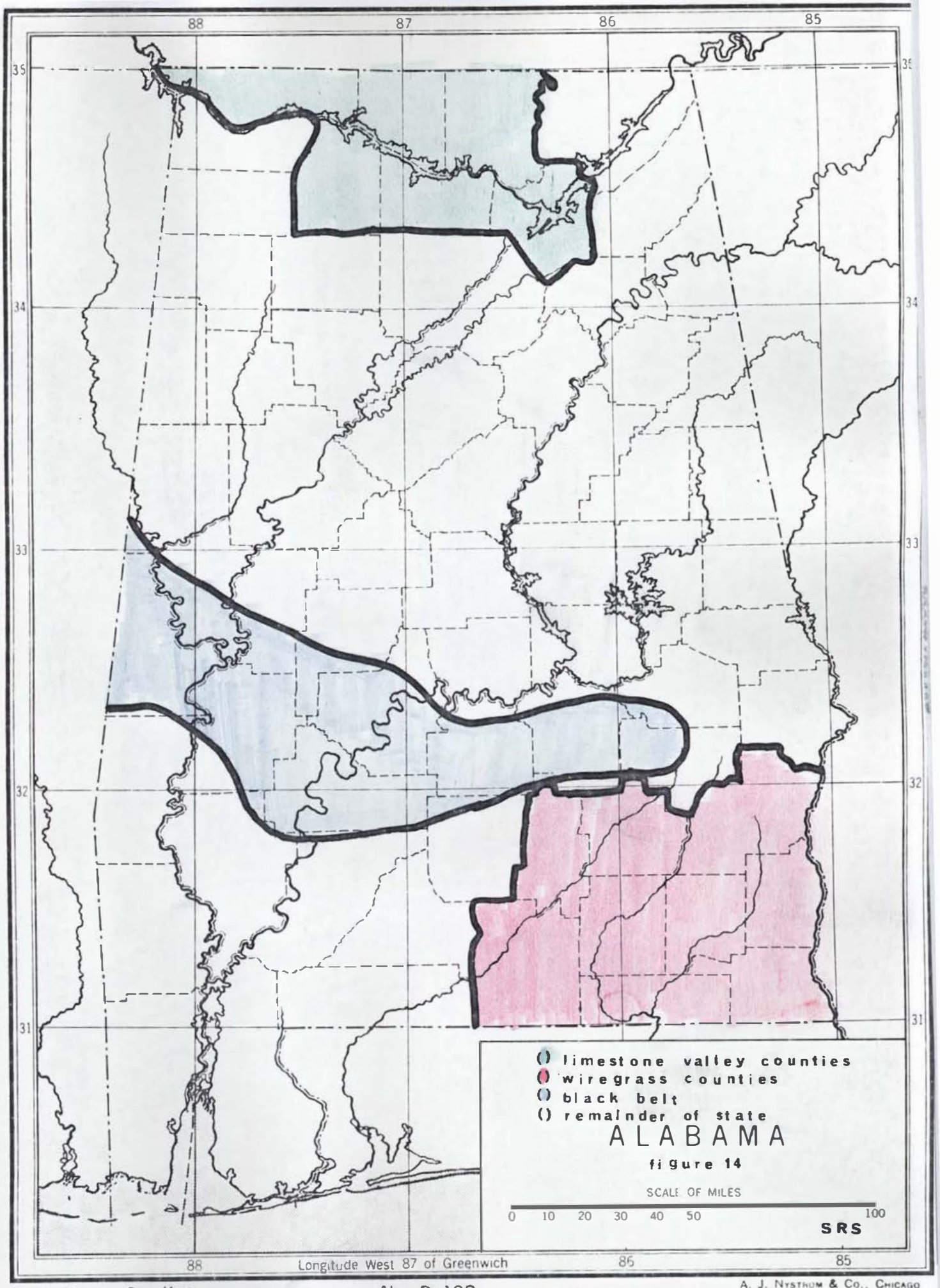
[40]Yeager interview, op. cit.



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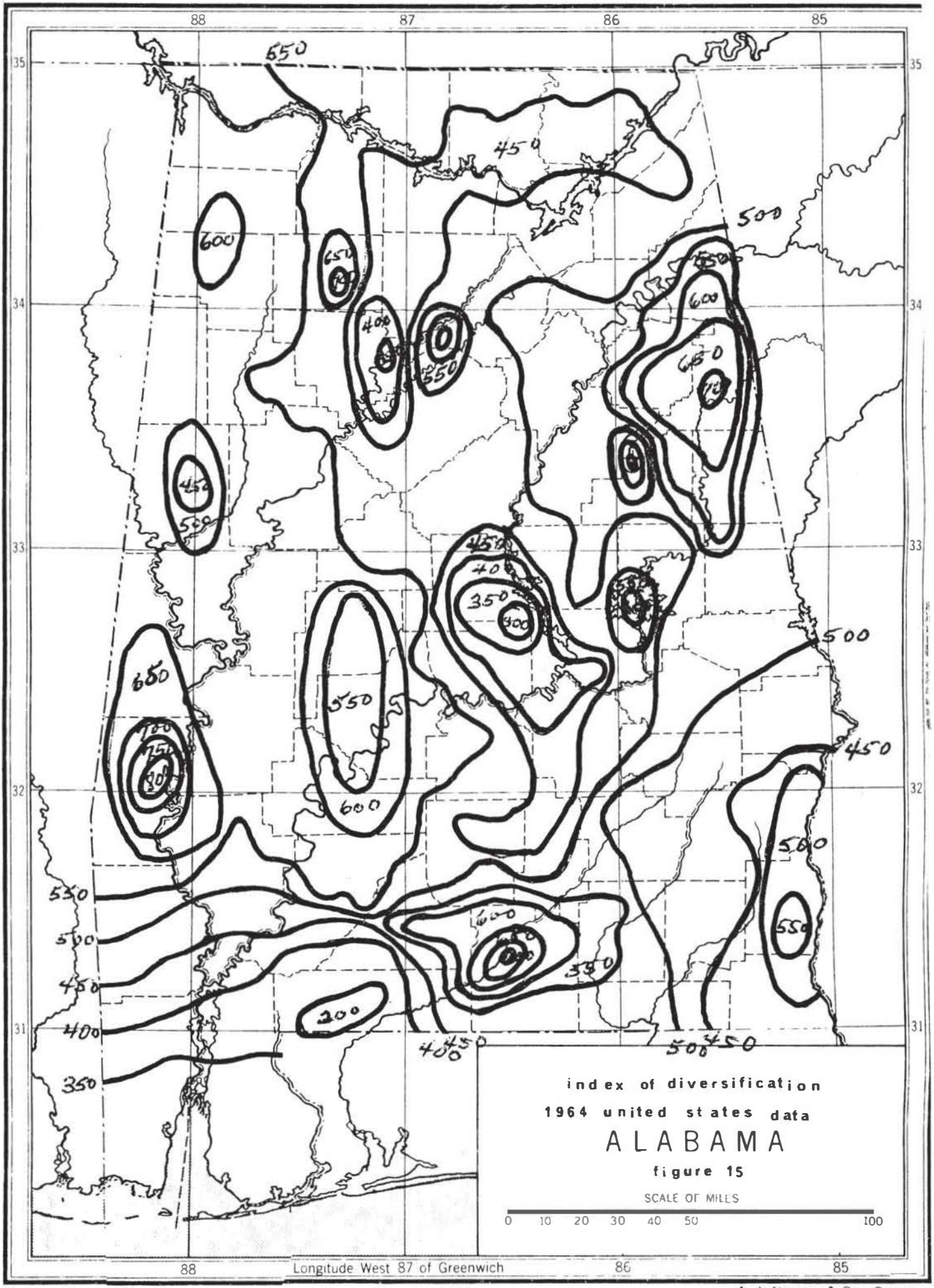
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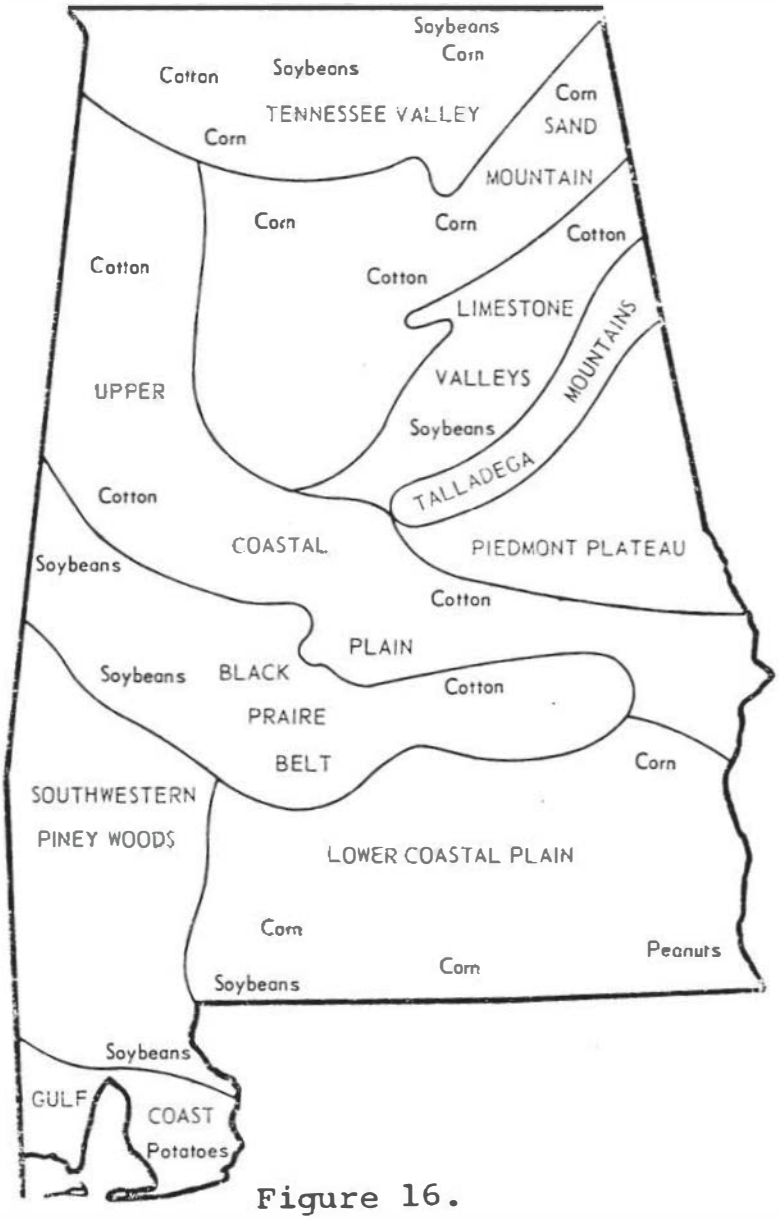

Figure 16.

AGRICULTURAL REGIONS

Source: U.S. Department of Agriculture

black soils. Johnson grass, small grains and legumes are all good grazing crops. Cool-season grazing crops are highly digestible, high in protein, and low in fiber. When the temperature is above fifty degrees, winter grazing can be allowed in Alabama. The winter grazing season begins in October, November, or December when cool-season crops make their main growth and ends in February or March. Small grains--oats, wheat, and rye--can be grazed earlier during this period and still be harvested for grain later. Good winter pastures will have a combination of crops and grasses planted in two or more fields so that livestock can be rotated from one field to another to avoid over-grazing. Throughout the year the Black Belt area is also well suited for winter grazing since buildings (Figure 17) are not required to protect the cattle from any severly inclement weather.

Because of the demand for more and better timber, it was attractive for private forest landowners, such as those in the South Central Coastal Plain in Alabama, to develop their forestland into tree farms. Tree farming is the business of growing trees as a cash crop. Tree farmers follow practices that allow production at high growth rates and high quality trees by breeding new varieties. Good forestry practices also provide for future tree crops by selective cutting and planting trees on idle or understocked areas. More than seven million acres of privately owned Alabama forests have been enrolled in the American Tree Farm System.[41]

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[41] "Alabama Forest Facts," op. cit., p. 4.

Figure 17. Shelter for Cattle in Alabama, 1971.

Tree farming has continued to be a profitable farm enterprise since 1942. By 1964 the value of forest products sold in Alabama was $12,906,000.[42] This large amount of revenue was earned by farmers in Alabama because the farmers used the natural environment to their advantage. Hilly lands were allowed to reforest naturally or were seeded by hand. Trees grow well even though the surface zone of the soil has been depleted of its inherent characteristics that allow crops to be grown. Because of the almost continuous growing season, tree farmers can maintain a ceaseless supply of mature trees.

Because of the increases in pulp and paper company holdings, the amount of commercial forest land held by wood-using industries, rapidly increased, totaled 4.1 million acres or about nineteen percent of the state's woodland acreage by 1963.[43] Since corporations involved in the paper and pulp industry own their own woodland, they can maintain a dependable supply of raw material and increasing profits by growing timber crops in the southern pine region. One large corporation, Kimberly-Clark in Talladega County on the Coosa River, harvests about sixteen million seedling trees a year, nearly one-half times as many as it uses, since its Coosa River nursery. Of the sixteen million seedlings produced at the nursery every year, about half are transplanted on Kimberly-Clark lands. Others are sold to tree farmers and other paper

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[42] Census of Agriculture, op. cit.,

[43] Herbert Sternitzke, Alabama Forests (New Orleans, Louisiana: USDA Forest Service, Southern Forest Experiment Station, 1963).

paper companies. A fifty-acre seed orchard and 160-acre experimental forest are being utilized to develop loblolly and Virginia pine of superior characteristics. Because of the progressive forest management and tree improvement programs, tree farmers are continually upgrading pulpwood quality and results in the production of more wood per acre in a shorter length of time.

Alabama is one of the top ten states in reforestation of idle and understocked lands in the United States. There is a continuing need for reforestation work in Alabama on lands which have been abandoned from farming and on areas where timber harvesting has not resulted in reforestation from seed trees or from seed from adjacent areas. In recent years, there has been a steady increase in the proportion of reforestation accomplished by direct seeding, either by hand, seed drill, or aerial distribution. In 1966, almost 76,728 acres in Alabama were planted to forest trees or recently seeded. Forest industries own 38,994 acres of the 67,117 acres of privately-owned land that were seeded.[44]

Changes in types of crops raised have also occurred in the Wiregrass counties. During the past fifty years, farmers in these southeastern counties of Alabama have been sowing and harvesting more and more peanuts and less cotton. The trend started with the invasion of the boll weevil in the early

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[44] Alabama Forest Facts, op. cit., p. 11.

1900's. Farmers began growing peanuts to offset losses in cotton yields. Cotton acreage in Houston County alone has dropped from 40,000 acres fifty years ago to 8,000 acres in 1971.[45] By 1930, peanuts brought in as much income in Enterprise, Alabama, as cotton had prior to this date.[46] The increased peanut production in the surrounding counties brought about the phrase "Goober Land." In 1949, on 415,115 acres, Alabama produced 279,809,580 pounds of peanuts, which had a total value of $28,000,000--nearly one-fourth the value of the state's cotton crop.[47] Peanuts thrive well in the Wiregrass counties because of the light sandy soils in that area. Well-drained sandy soils are essential for a successful peanut crop. The loose soils allow the pegs (pointed tentacles on plant) to enter the tilled soil easily for the pod to develop. Harvesting is also easier where sandy soils exist. Peanuts proved to be a successful small farm crop since federal acreage allottments are small. Evidence of the small acreage allottments were seen in Houston County in 1971 when 2,000 farmers grew peanuts on 30,000 acres or fifteen acres per farm.[48] (Figure 18).

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[45] M. H. Roney, Peanut Specialist, interview (Dothan, Alabama: Houston County Farm Center, May 31, 1971).

[46] John Samuel Ezell, The South Since 1865 (New York: Macmillan Company, 1963), p. 131.

[47] Haystead and Fite, op. cit., p. 123.

[48] Roney interview, op. cit.

Figure 18. Dusting Peanuts in Houston County, Alabama, 1971.

By taking advantage of the climatic conditions, farmers are able to grow early seasonal crops in the Gulf Coast region, and nearby eastern county farmers practice horticulture--the art of growing fruits, vegetables, and ornamental plants. Horticulture increased in importance as a phase of specialty agriculture in Alabama in the last thirty years. Production of a large variety of vegetables, fruits, nuts, and landscape plants, which thrive well in a frost-free climate, has become a multi-million dollar enterprise. Most of the horticultural commodities are grown in the far southern tier of counties. Of this tier of counties, Mobile and Baldwin have the largest overall production.

During 1931-51, more than four-fifths of the total Irish potato acreage was in Baldwin and Escambia counties. Mobile County had more than half of the remaining acreage.[49] (Figure 19) Farmers in Baldwin County, Alabama, use double-cropping by planting potatoes in time to be harvested in early June (Figure 20) so they can plant and harvest a mature stand of soybeans in early June of the same year. Although soybeans are most commonly used, vegetables and grain sorghum also are planted after the potatoes are harvested.

Sweet potatoes have become a commercial crop in the Gulf Coast area. Commercial production of watermelons is most heavily concentrated in Mobile and Baldwin counties on

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[49]Morris White, Early Irish Potato Production Practices in Southwestern Alabama (Auburn, Alabama: Alabama Polytechnic Institute, September, 1952), p. 4.

Figure 19

(Source: Smith, "Early Irish Potato Production Practices in Southwestern Alabama.")

Figure 20. Irish Potato Harvest in Baldwin County, Alabama, 1971.

Figure 20. (con't) Irish Potato Harvest in Baldwin County, Alabama, 1971.

the Gulf Coast and in Geneva and Houston counties in southeastern Alabama. Other vegetables grown in commercial quantities in southern Alabama are tomatoes (Figure 21), peas, lima beans, snap beans, sweet corn, and cantaloupes. Mobile County has a larger income from landscape plants, shrubs, etc., than vegetables. Azaleas and potted plants produce much of the income.[50] Much of the produce of Baldwin County is trucked out to northern cities in Alabama and the Midwest. The Gulf Coast and Wiregrass County regions can produce horticultural commodities because the light sandy soils which respond well to fertilization, a history of commercial agriculture and access to urban markets.

Only three pockets of extremely high diversification appear on the 1964 United States Index Map as opposed to the 1910 Alabama Index Map. The diversified areas were in Escambia County, central Upper Coastal Plain, and western Sand Mountain.

Both the Upper Coastal Plain and Escambia County have no large population centers in their vicinities. As a result, more diversification in farming techniques can be practiced.

Although broiler production became, during the past two decades, a specialized farming technique, it became part of the diversified farming practiced in the western Sand Mountain area. The period from 1953-63 was a decade of rapid growth of broiler production in Alabama. In 1953, Alabama

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[50]Yeager interview, op. cit.

Figure 21. Field of Tomatoes in Houston County, Alabama, 1971.

Figure 22. Poultry Farm in Cullman County, Alabama, 1971.

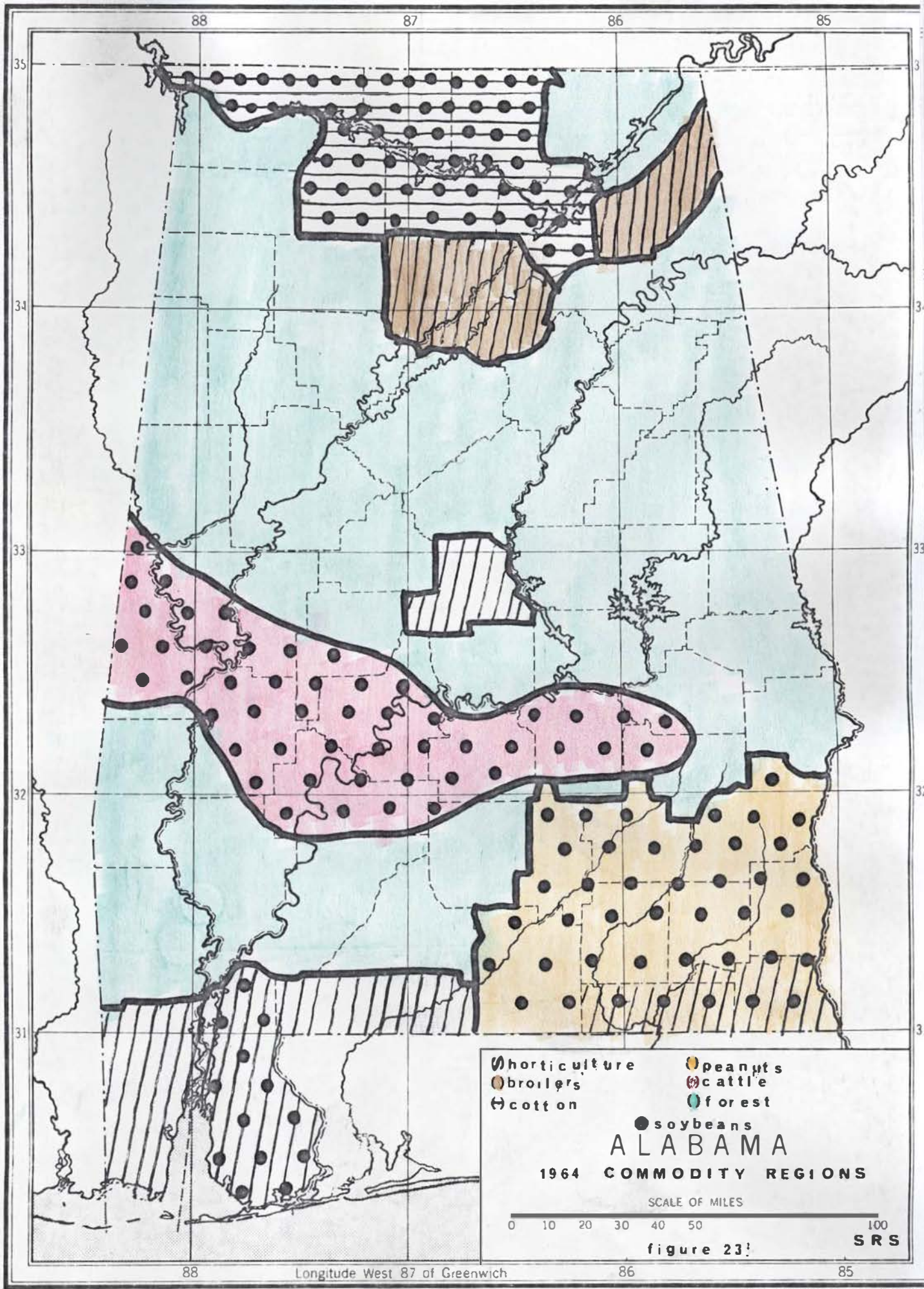

figure 23

Nystrom Series of Desk Maps

No. D 102

A. J. Nystrom & Co., Chicago

Since the indices on the 1964 Alabama Index Map (Figure 24) are in the same range as those on the 1964 United States Index Map, the Alabama Index Map also depicts high specializations of farming methods by farmers in Alabama. The areas of highest specialization were in the western Black Belt, western Wiregrass Counties, and the Piedmont (specialized in cattle, peanuts, and forests). The diversified districts were in the upper Appalachian Highlands, western Sand Mountain, and the Central Upper Coastal Plain. Diversification was prevalent in these localities because of the poor quality of soil and forest cover. The remainder of the state has moderate specialization with products being grown that are best suited for the soils in the area. Sandy soils are planted in peanuts and cotton, while clay soils are used to raise corn and heavy soils for pastures. For example, the Limestone Valley counties specialize in growing cotton. A common practice used in cotton farming is "skip-a-row" planting. The row system most commonly used is to plant two rows of cotton and leave one row fallow. (Figure 25). This practice reduces actual acreage planted but gives higher yields.[54]

Although the production of cotton still provided the largest amount of income (Figure 26) for Alabama farmers in 1964, its reign was no longer "supreme." Cotton had become a specialty crop in the diversification/specialization farming

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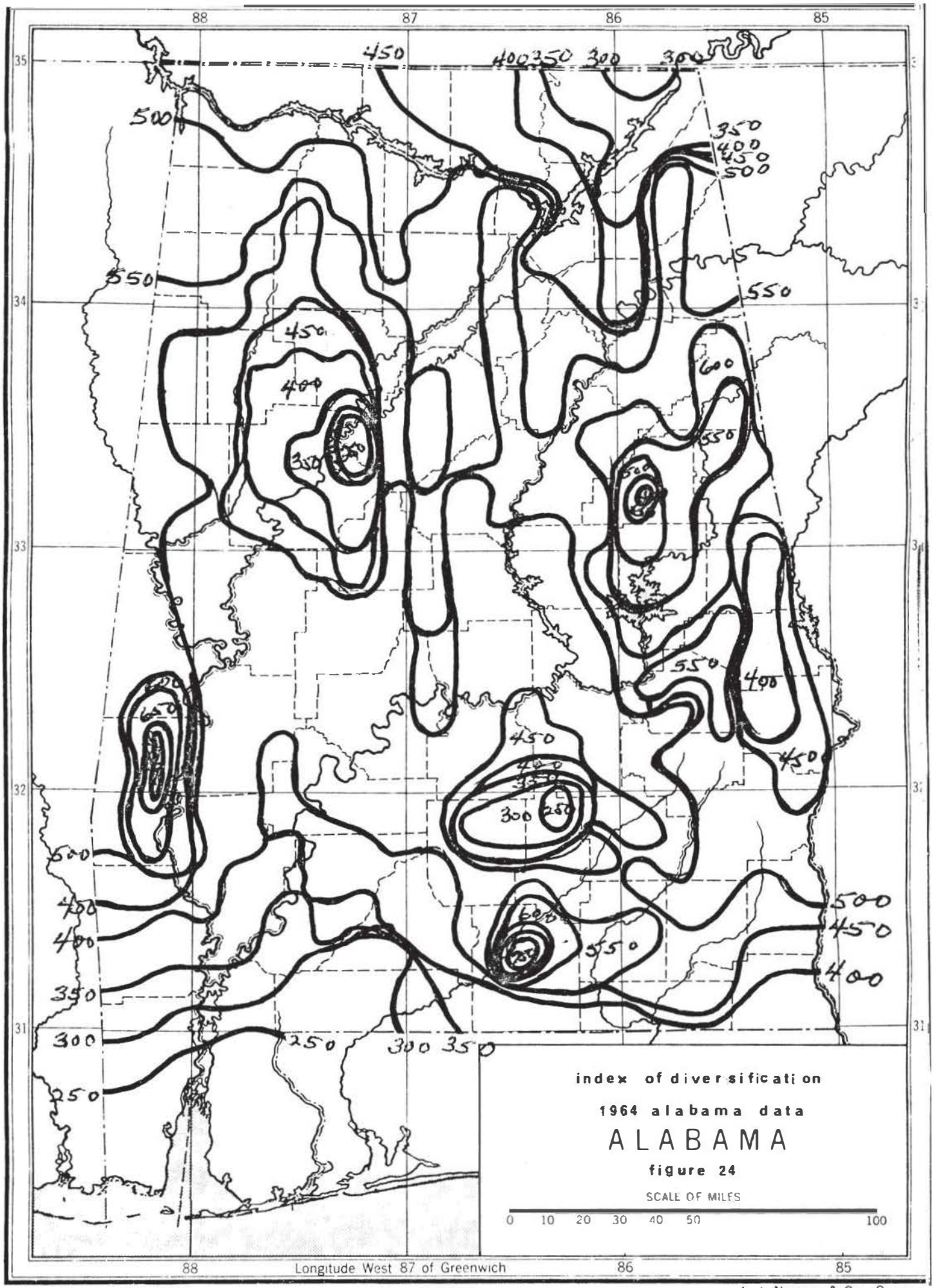
[54]George A. Strong, Statistical Reporting Service, Montgomery, Alabama, interview, June 1, 1971.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ALABAMA
figure 24
SCALE OF MILES
0 10 20 30 40 50 100
Longitude West 87 of Greenwich

Figure 25. Skip-a-Row Planted Field of Cotton in Limestone County, Alabama, 1971.

FIGURE 26

VALUE OF FARM COMMODITIES IN ALABAMA

(THOUSANDS OF DOLLARS)*
RANKED BY VALUE

COMMODITY	1910	COMMODITY	1964
Cotton	74,210.	Cotton	138,271.
Corn	28,547.	Broilers	96,508.
Dairy products	6,396.	Beef cattle	61,571.
Forest products	6,308.	Dairy products	37,931.
Vegetables	5,380.	Peanuts	24,023.
Swine	4,594.	Swine	22,401.
Sweet potatoes	3,561.	Corn	21,765.
Beef cattle	2,642.	Forest products	12,906.
Oats	2,113.	Soybeans	11,386.
Tree fruits and nuts	1,856.	Horticulture	9,066.
Peanuts	1,491.	Potatoes	8,742.
Potatoes	880.	Vegetables	5,483.
Broilers	715.	Oats	3,105.
Horticulture	427.	Wheat	2,310.
Forage crops	256.	Tree fruits and nuts	2,145.
Strawberries	160.	Sweet potatoes	1,993.
Wheat	---	Forage crops	1,883.
Soybeans	---	Strawberries	228.
Grain sorghum	---	Grain sorghum	47.

*Amount sold from USDA Census of Agriculture multiplied by the average sale price for each year.

practices in the State of Alabama. In 1958, the combined income from the livestock-broiler industries was greater than crops. Seventy-two percent of the income was from the livestock-broiler production, while only twenty-eight percent was earned from crop commodities.[55] Yeager[56] emphasized that cotton is no longer the number one cash commodity in Alabama, as broiler-feed industry integration has overcome cotton financially. Yeager stressed that since 1965, broilers have been the top income producer in Alabama.

The jump from eighth to third ranking in value of beef cattle resulted from the emphasis placed on cattle-raising in the Black Belt in which farmers could use the grasses that grow well in the area. A "peanut patch" on each farm was an outdated farming practice since peanut cultivation became a specialty agricultural practice. The value of forest products increased from 1910 to 1964 since tree farming had replaced general farming in the southern pine region of Alabama, and the Piedmont farmers now stressed forest crops instead of cotton as they did prior to the boll weevil arrival. Soybeans became more valuable when farmers began to use them in the row-crop rotation system in grain and peanut farming. The value of the soybean was also enhanced when farmers learned to double-crop as a part of their farming practices.

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[55]Strong interview, op. cit.

[56]Yeager interview, op. cit.

Corn dropped in rank according to its value by 1964, inasmuch as the trends reflected the disappearance of the small, submarginal farm and the fact that Alabama corn yields are not very competitive with imported Midwest corn as a livestock feed. Locally, corn was receiving increasing competition from a sorghum for use as silage. Corn was grown mainly in Alabama in association with livestock feeding programs, such as in the production of poultry in the Sand Mountain region and hogs or swine in the Wiregrass region.[57]

Vegetable production was nearly the same in value in 1910 and 1964, although vegetables ranked only twelfth in 1964, as the result of increased production of other specialty crops. Sweet potatoes and strawberries remained low in value and rank both in 1910 and 1964. Both Yeager and Strong indicated they would remain low in value since they are grown less because of the exodus of "stoop labor" from Alabama. Although grain sorghum remained last in rank in 1964, its value had increased because farmers in Alabama were using it as a double-cropping grain with wheat and soybeans in the Black Belt. Farmers were also planting additional acres of grain sorghum since the sorghum is more resistant to head diseases and bird destruction. Grain sorghum also provides farmers with a more constant grain supply. Sorghum also has a great potential as

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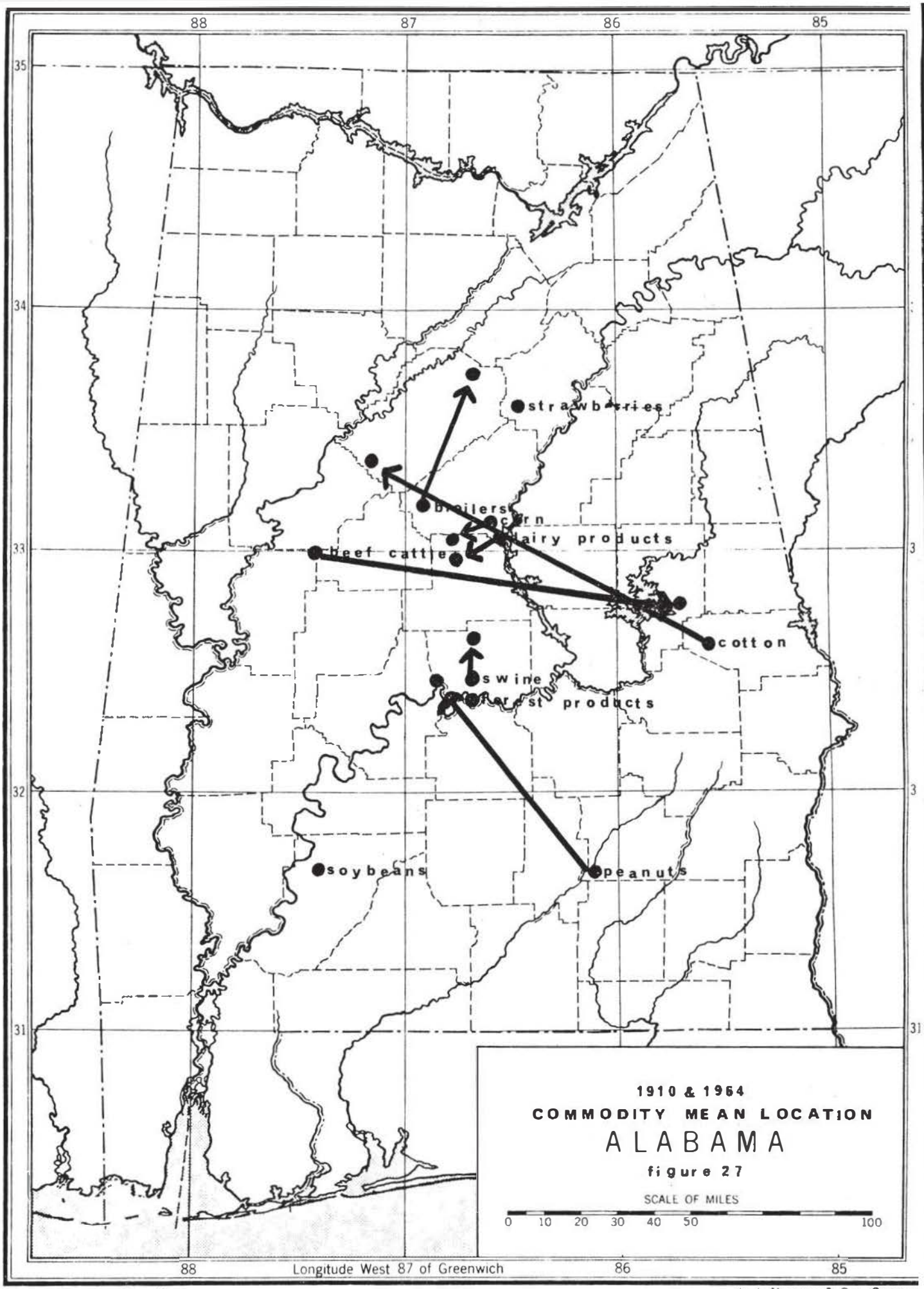
[57] Neal Lineback and Charles T. Traylor, Atlas of Alabama (Auburn, Alabama: The University of Auburn Press, 1973), pp. 67-8.

a forage crop rather than grain according to O. N. Andrews of the Alabama Extension Service.

Mean Location Map Analysis

The mean location for 1910 and 1964 (Figure 27) allows for comparison of the two periods of commodity production. The areal shift indicates extremes in production. The shift in the position of the commodity mean location reflects-reveals the association with the change in farming practices in the State of Alabama. The center of cotton production shifted northwest because the Limestone Valley County farmers increased cotton production in the Tennessee Valley by buying the government cotton allottments from the Wiregrass counties in southeastern Alabama.[58] Broiler production is centered more to the north because small poultry farms can thrive in the hilly terrain north of Birmingham, since small acreage is available and broiler houses don't require absolutely level land. The central location for peanuts in 1964 is the exception, according to production practices. The 1910 location is truer of 1964 production practices. The mean location for dairy products is in the central part of the state both years since there are huge population centers in the north and south of Alabama. Dairy products can be marketed easily. Swine are used to "hog-off" the land after initial crops have been harvested. Beef cattle production has increased in the Black

[58]Strong interview, op. cit.



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Belt since 1930.[59] As a result, the central location remains in the same area and county. The mean locations of forest products, soybeans, and strawberries appear only on the 1964 Mean Location Map, because census data were available in 1964 and not in 1910. These products have been added to the commodity production data after they were used extensively by farmers to specialize according to soil capabilities, climatic conditions, and demand for products.

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[59]Yeager interview, op. cit.

CONCLUSION

From the preceding discussion the conclusion has been reached, i.e., Alabama farmers were less dependent on cotton in 1970 than they were in 1910. Cotton is no longer the number one cash crop and has been replaced by the integrated broiler and feed industry. The cash value of broilers surpassed cotton in both 1965 and 1967.[60] Other products have also become higher than cotton in cash value importance since 1930 in Alabama. Cattle has replaced cotton in the Black Belt, while forestry and horticulture have become the predominant farming aspect in the Piedmont and south respectively. At the same time peanuts have taken priority in the Wiregrass Counties. These commodity conversions have evolved because of better land use since farmers in each region have begun to produce commodities best suited for the types of soil in that area. The better use of soil is most evident in the Wiregrass Counties, the Black Belt and the Piedmont. The availability of more and larger machinery has also become a determining factor in commercial and specialty farming in Alabama. Today the commercial use of tractors is very high. Cotton picker machines are used by over ninety percent of the cotton farmers. Fifty to sixty percent of the corn raised is harvested with

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[60] Yeager interview, op. cit.

picker-shellers.[61] A third use of modern technology is more application of chemicals. In 1971 sixty to seventy percent of the farmers in Alabama were using herbicides for weed control.[62] As a result of modern technology being used, Alabama farmers have improved the agricultural practices of the state.

Today there is more regional specialization in growing specific crops in Alabama than diversification. Specialization has evolved in cotton, dairy, beef, forestry, horticultural, broiler, and peanut aspects of the farming industry. At the same time diversified or general farming remains in the Upper Coastal region. Diversification is also found in peanut-hog operations and in the corn-grain crop areas. The computation of the Index of Diversification confirms the fact that there was still both diversification and specialization with more areas of specialization.

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[61] Ibid.

[62] Ibid.

PROSPECT

Since Alabama has a humid subtropical climate, farmers in Alabama can capitalize on the climatic advantage and grow the crops best suited for the area. Because Alabama farmers and extension personnel are stressing the important factors in agricultural practices in Alabama; the changes in crop farming practices that have occurred will continue to benefit the farmers and other agricultural-based industries in Alabama. Wood-using industries can be expected to expand rapidly and wood usage could exceed wood growth earlier than previously expected. Since the broiler industry has continued to expand during the last quarter of a century, continued expansion will be forthcoming to meet the demand for more broilers in the supermarkets. If Alabama farmers continue to use the practice of feeding animals to heavier weights, the gross beef income in Alabama could easily double in five years. Cotton farmers will keep cotton acreage about the same in future years, but income will show increased profits when prices edge up slowly. Present peanut acreage can be expected to remain about the same, but growers will be producing a better quality peanut to accompany higher yields and prices. Good prices, corn blight problems, new market outlets, and a relatively good market outlook are factors that should assure continued increase in

soybean production. Great accomplishments have been, and will continue to be, made as Alabama farmers strive to maintain a profit-making enterprise in Alabama.

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