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FARM PRODUCTION

and

MARKETING

in

ALABAMA

Farm Production and Marketing in Alabama

Committee Report on Alabama Farm
Commodities and Appraisal of
Marketing Facilities

The Alabama Polytechnic Institute
EXTENSION SERVICE

P. O. DAVIS, Director

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Foreword

To Mr. John M. Ward, Chairman,
Special Agricultural Committee on
Marketing Farm Products:

You will recall that on Wednesday, November 11, 1942, a group representing various organizations in Alabama met at the State Chamber of Commerce Office in Montgomery to consider farm marketing problems in Alabama.

You, as chairman of this group, appointed a committee to make a survey and study of commercial crops and livestock production, existing marketing facilities, and recommendations for improving market conditions.

This report is being transmitted to you in the form of a bulletin published by the Extension Service, Alabama Polytechnic Institute.

This report does not include specific recommendations as to which of the existing agricultural agencies will perform the additional work outlined. It is believed this phase can best be developed through conferences between members of your committee, representatives of agricultural agencies, and other interested groups.

The Committee has had access to studies of marketing programs in other southern states, as well as the active help and cooperation of many agencies and individuals.

We are particularly indebted to the officers and members of the:

1. Alabama State Chamber of Commerce.
2. Alabama Department of Agriculture and Industries.
3. Alabama Farm Bureau Federation.
4. Farm Products Division, Tennessee Coal, Iron and Railroad Company.
5. Agricultural Committee, Alabama Bankers' Association.
6. Experiment Station of the Alabama Polytechnic Institute.
7. Extension Service of the Alabama Polytechnic Institute.

Much assistance and information also was given by the Forestry Division of the Alabama Department of Conservation, the managers and officials of packing plants, stockyards, poultry and farm produce dealers, State Milk Control Board, and managers of various processing plants.

County agents furnished much hither-to unpublished county information and data on production and marketing. Likewise, the home demonstration agents furnished valuable information on curb market facilities and sales.

Special thanks and appreciation of this Committee are due:

F. W. Burns, dairyman; W. H. Gregory, livestock specialist; J. C. Lowery, agronomist; John C. Wither-
spoon, assistant forester; John E. Ivey, poultryman; Lyle Brown, hor-

ticulturist; J. T. Belue, cotton specialist; W. W. Cotney, assistant agronomist; J. A. Beaty, marketing specialist; L. O. Brackeen, editor, all of the Extension Service of the Alabama Polytechnic Institute; D. D. Whitcomb and C. T. Bailey, farm products marketing agents, T. C. I.; A. B. Hope, representative of Alabama Bankers' Association; Ben F. Alvord, head professor of agricultural economics, J. N. Mahan, associate agricultural economist, L. M. Ware, head horticulture and forestry department, all of the Experiment Station, Alabama Polytechnic Institute.

Respectfully submitted,

MARKETING COMMITTEE

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INTRODUCTION

ALABAMA has an area of 32,689,920 acres of land with 19,143,391 acres in farms. Of this farm land (according to 1940 Census) 7,009,164 acres are woodland; 2,173,731 acres plowable pasture; 1,736,954 acres, "other lands"; and 8,223,542 acres cropland.

According to the 1940 Census there were 2,832,961 people in Alabama of which 1,338,664 or 47 percent were rural farm people. The cropland amounts to only about 6 acres per farm person or around 34 acres per farm.

These data show clearly that Alabama farm people have little productive land from which to gain an income. The farm population is relatively more dense than in the United States, as a whole, but compares in this respect to other southeastern states. Not only do Alabama farmers have less land, but they also have relatively less machinery and equipment to use in farming this land. According to the 1940 Census, Alabama farmers had \$128 worth of machinery and equipment per farm. This contrasts with a machinery value of \$502 per farm in the entire United States.

The Alabama situation may be contrasted with that of one of the higher income farm states like Iowa. In 1940, 34,148,673 acres of farm land were reported in Iowa. This land was divided into 213,318 farms, on which lived 930,810 farm people. The average size of the Iowa farm was 160.1 acres and the average size of the Alabama farm was 82.6 acres. That is, the Iowa farmer operated twice the land operated by the Alabama farmer. At the same time, the cropland per farm in Iowa amounted to 99.3 acres and in Alabama about 34 acres. Thus, the Iowa farmer had three times the cropland in his farm that

the Alabama farmer had. Furthermore, the Iowa farmer had \$1,135 worth of machinery and equipment, or about nine times the amount the Alabama farmer had. The Iowa farmer used, according to U.S.D.A. Bulletin 1348, about 1.1 horsepower hours per man hour in his farming operations. By contrast, the Alabama farmer used about one-seventh of a horsepower hour for each man hour in his farm operations.

The fact that Alabama agriculture is composed largely of small farms may be further emphasized by the table indicating the number of AAA payees receiving checks of various sizes (Table 1).

Table 1 — Distribution of AAA Checks by Size of Check in Alabama (1940)

Range in size of check	Number payees	Per cent
\$.00	95,558	33.1
\$ 20	97,267	33.7
40	46,074	15.9
60	34,615	12.0
100	9,488	3.3
150	2,996	1.0
200	1,378	.5
300	586	.2
400	360	.1
500	460	.2
1000	109	--
2000	25	--
3000		
	288,918	100.0

However, when we take the income per acre of cropland in Alabama, we find that it compares favorably with that of other sections. The average income per acre (crops only, 1941 figures) in the United States is \$12.02, while that from Alabama is \$12.64 per acre.

Alabama has been particularly weak in her income from livestock. In recent years considerable progress

has been made in this respect. The income from livestock was estimated at nearly \$42,000,000 in 1942. This is more than 20 percent of the estimated total income for that year even including government payments (Table 2). The total value of

crops and livestock produced was estimated at \$293,537,756 and the cash income at \$195,855,000. The latter figure is more significant since a large portion of the crops was fed to livestock and entered into the income from livestock production.

Table 2—Farm Production, Average Price, Value of Crops, and Estimated Cash Income from Sales, Alabama—1942

Crop	Production ¹	Average Price ¹	Value	Estimated Cash Income
Cotton (bales)	883,056	\$.188	78,026,828	78,027,000
Cottonseed (tons)	603,001	48.37	29,167,158	21,000,000
Peanuts (pounds)	378,000,000	.52	19,656,000	19,656,000
Livestock and Live- stock Products, in- cluding Poultry			83,844,000	41,922,000
Fruits and Vegetables			16,066,000	8,382,000
Pecans (pounds)	6,670,000	.17	1,133,900	1,133,900
Forestry			7,360,000	7,360,000
Corn (bushels)	43,960,000	.92	40,443,200	4,000,000
Oats (bushels)	4,800,000	.69	3,312,000	100,000
Wheat (bushels)	169,000	1.19	201,110	70,000
Hay (tons)	829,000	11.49	9,525,210	1,300,000
Tobacco (pounds)	235,000	.26	61,100	61,100
Sorghum Sirup (gallons)	1,767,000	.75	1,325,250	350,000
Sugarcane Sirup (gallons)	2,645,000	.80	2,116,000	500,000
Legume seed (pounds), including Kudzu Crowns	11,149,558		1,300,000	950,000
Estimated Earned Government Pay- ments in 1942				11,043,000
Total			293,537,756	195,855,000

¹Estimated from F.D.A., A.A.A. and Census Reports.

According to the 1940 Census, there were 231,746 farms in Alabama. They had an average income, including Government payments, of \$488.

Due to farm families shifting to war industries and more profitable occupations, it is estimated that there were not more than 220,000 farms operating in Alabama in 1942. It is estimated that these farms had an average income, including Government payments, of \$890. This increase in income may be attributed to increase in production, as well as in price of farm products.

The number of livestock on the farms in Alabama is constantly increasing. The cash income from cotton and cottonseed is accurately determined by census data and annual estimates of sales based on the known production.

The number of livestock on Alabama farms is much greater than the census figures and annual estimates indicate. These data have not been adjusted to the rapid growth in the livestock industry. This also is true with many farm products other than cotton, cottonseed, and corn.

DAIRYING

Historical Background

ANY STUDY of dairy marketing problems would be incomplete without a brief review of the progress made and the problems that have confronted the industry. Prior to 1914 the only available markets for dairy products were around cities. It was not until the coming of the boll weevil that farmers and business men began thinking seriously of dairy products as a means of supplementing the farm income. Small creameries were established at Auburn and Decatur in 1914 to be followed rapidly by others in most sections of Alabama.

During this early development no check was made on the weight of milk nor test made of cream sold. It was not until the agricultural Code of 1923 was passed by the legislature that an accurate history of manufacturing plants was available. Records reveal that in 1924, 34 creameries and milk plants were in operation in the State.

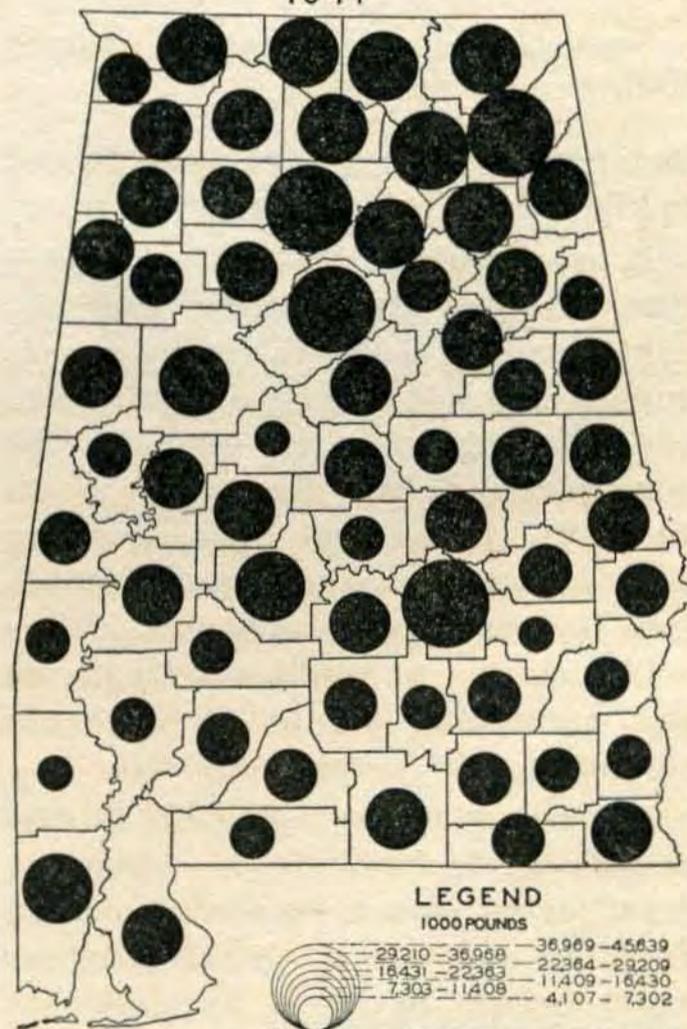
During this early period of development the Alabama Health Department began to regulate the fluid milk industry. The 1914-15 health ordinance required only a T.B. test of dairy cattle for milk to be sold. No check was made on barns or equipment by the inspectors. Pasteurization of milk in the state was started in Montgomery in 1915.

When America entered the World War, the U. S. Department of Agriculture became active in checking milk used in army camps. While this was not the first rigid milk inspection in the State, it probably was responsible for the rapid expansion of this work. Today, Alabama is recognized as one of the outstanding states in health work and certainly its milk

supply is as good as any state in the Union.

Growth of the dairy industry was rapid from 1914 to 1930 with creameries and ice cream plants paying good prices for dairy products. During 1932 and 1933 the prices of dairy products declined rapidly. This caused the value of dairy products sold to drop \$9,583,000 in 1929 to \$5,491,000 in 1932. Lower prices during the next few years was more than many farmers with low producing cows and poor feed crops could stand. As a result many cream stations and creameries were forced to close or combine their business with ice cream or pasteurizing plants. Many farmers who

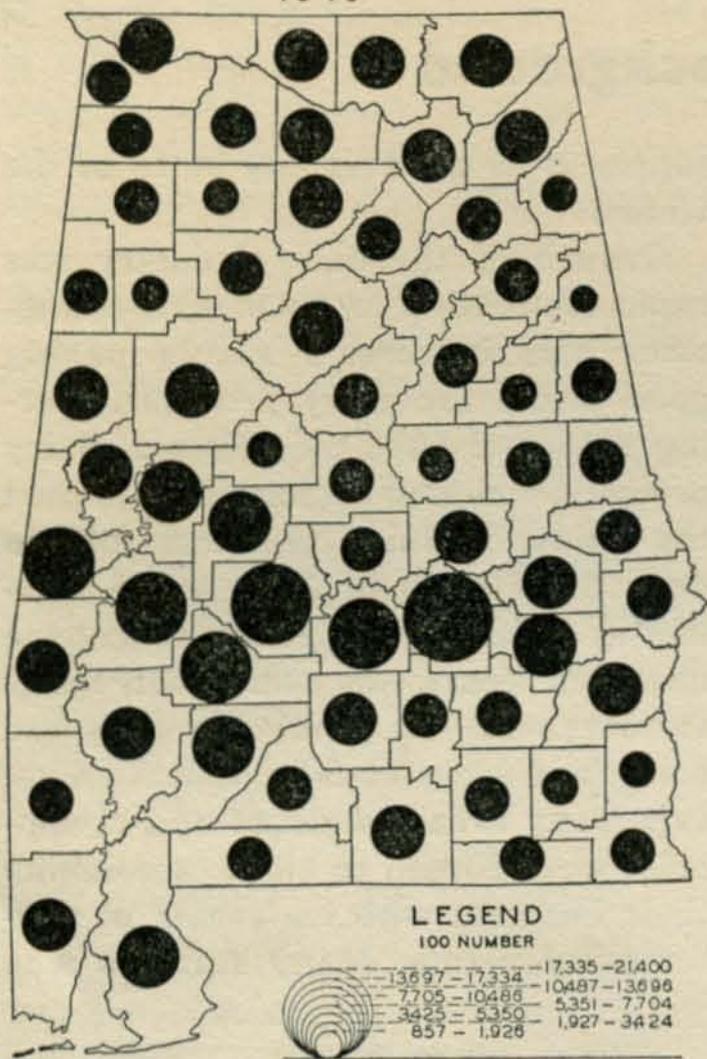
TOTAL MILK PRODUCTION
1941 *



MAP 1

*Estimates based on Census and AMA reports.

COWS AND HEIFERS MILKED
1940 *



MAP 2

*Estimates based on Census and AMA reports.

had been selling cream were forced to change to beef cattle production.

It was during this critical period that the legislature passed the milk control act in 1935 to insure a safe supply of grade A milk and to insure the dairymen of a fair share of the consumer's dollar. Through its efforts the board has done much to show that milk markets can be stabilized to return producers and dealers a fair margin of profit and to insure the consuming public an adequate supply of pure, wholesome milk.

During this trying period Alabama's agriculture began changing from an all cotton economy to more pastures and feeds. Small farmers again began to need animals that would give them a market for this feed and profitable employment for labor on their farms. Small cheese

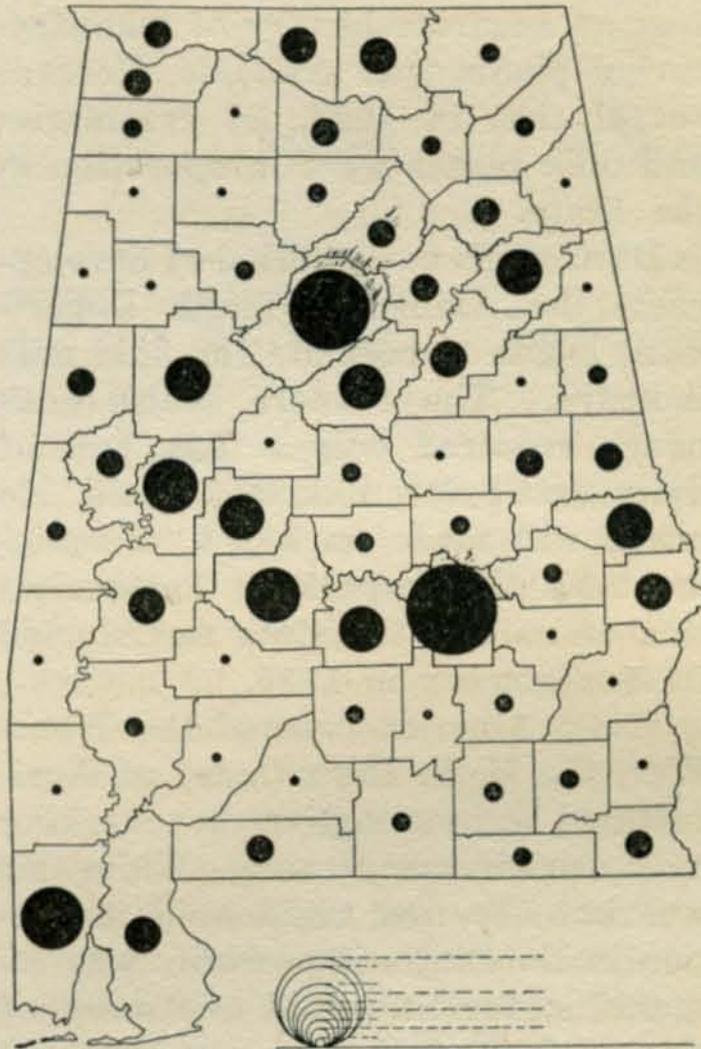
plants were established in 1940 at Athens, Decatur and Boaz. These were in addition to the ones that had survived the depression in Central Alabama. Unfortunately a shortage of material has curtailed this new market development. Several areas of the State are now ready for markets. As soon as established, farmers will supplement their income by milking a few cows.

The following maps give a graphic picture of the dairy industry in the State.

Types of Markets

Grade A Milk — Grade A milk can be sold by a limited number of dairymen around cities and towns after they meet the requirements of the local board of health. In addition, a number of farmers supply this type of milk to cooling stations at Burk-

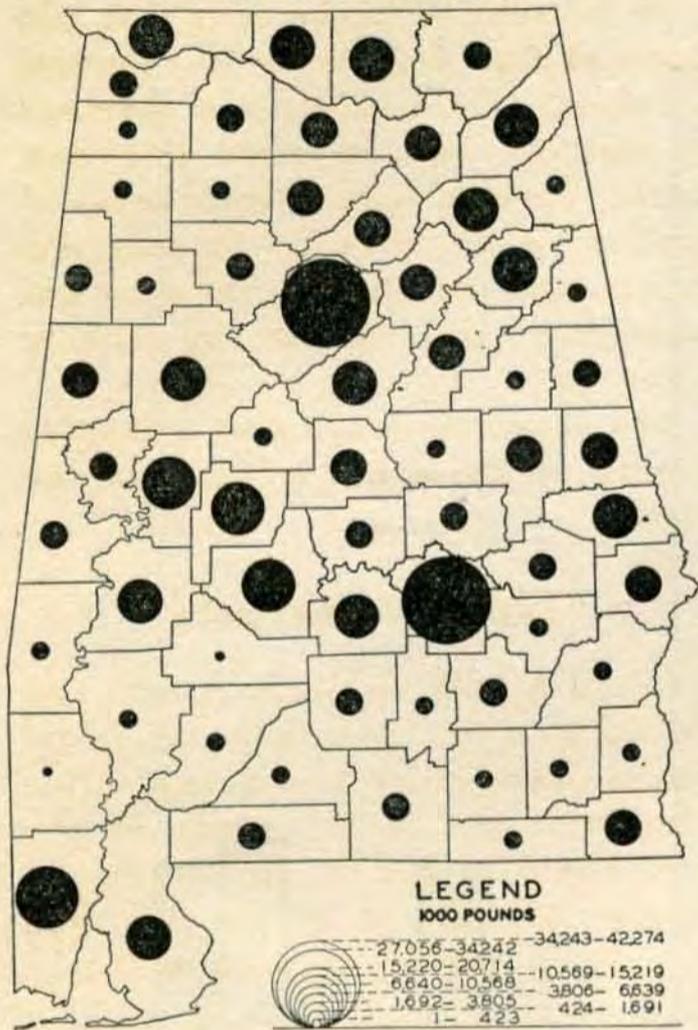
WHOLE MILK SOLD 1941 *



MAP 3

*Estimates based on Census and AMA reports.

TOTAL MILK SOLD 1941 *
(MILK EQUIVALENT)



MAP 4

*Estimates based on Census and AMA reports.

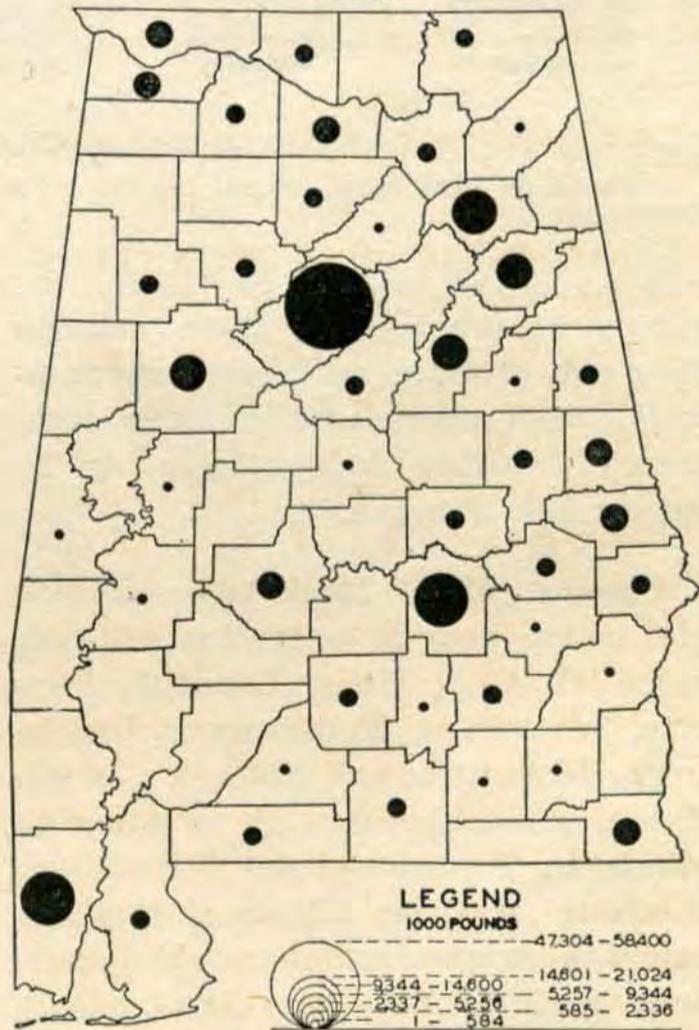
ville, Harrell and Gallion. This milk is hauled by trucks to Birmingham where it is pasteurized and distributed. A similar cooling station at Greensboro furnishes milk for the Mobile market. Much milk from Baldwin County also is trucked to Mobile and Pensacola markets. During the emergency considerable milk is being hauled to Camp Rucker, Anniston and Childersburg from Montgomery and surrounding counties. Additional milk from Tennessee is helping to supply the increased demands at the Tri-Cities, Huntsville, Gadsden and Decatur.

It is conservatively estimated that Alabama dairymen have increased the production of Grade A milk over 10,000 gallons per day during the past year. Fully this much additional milk is needed at this time to meet demands. Ungraded milk from Minne-

sota is being shipped into Alabama to help supply the present demand. O.P.A. price ceilings, increased labor and feed costs, and uncertainty of this market, have held back many dairymen from entering this field.

The Grade A phase of the industry is undergoing a change with the outcome uncertain. Out of it all should come an opportunity for more farmers to enter this market. It is probable that in the future a greater proportion of the milk needed by the industrial areas of North Alabama will come from the adjoining counties. Small cooling stations strategically located in this area will provide markets for farmers with only 10 to 15 cows. Farmers in the area have the advantage of location, higher yields of feedstuffs and a home

GRADE 'A' MILK MARKETED
1942 *



MAP 5

*Estimates of grade "A" milk marketed in cities. This milk may have been produced in counties other than one in which it was sold. Based on estimates from the State Health Department, State Milk Control Board, and Alabama Extension Service.

POUNDS OF SWEET MILK SOLD BY DISTRIBUTOR PLANTS, 1941-'42 *

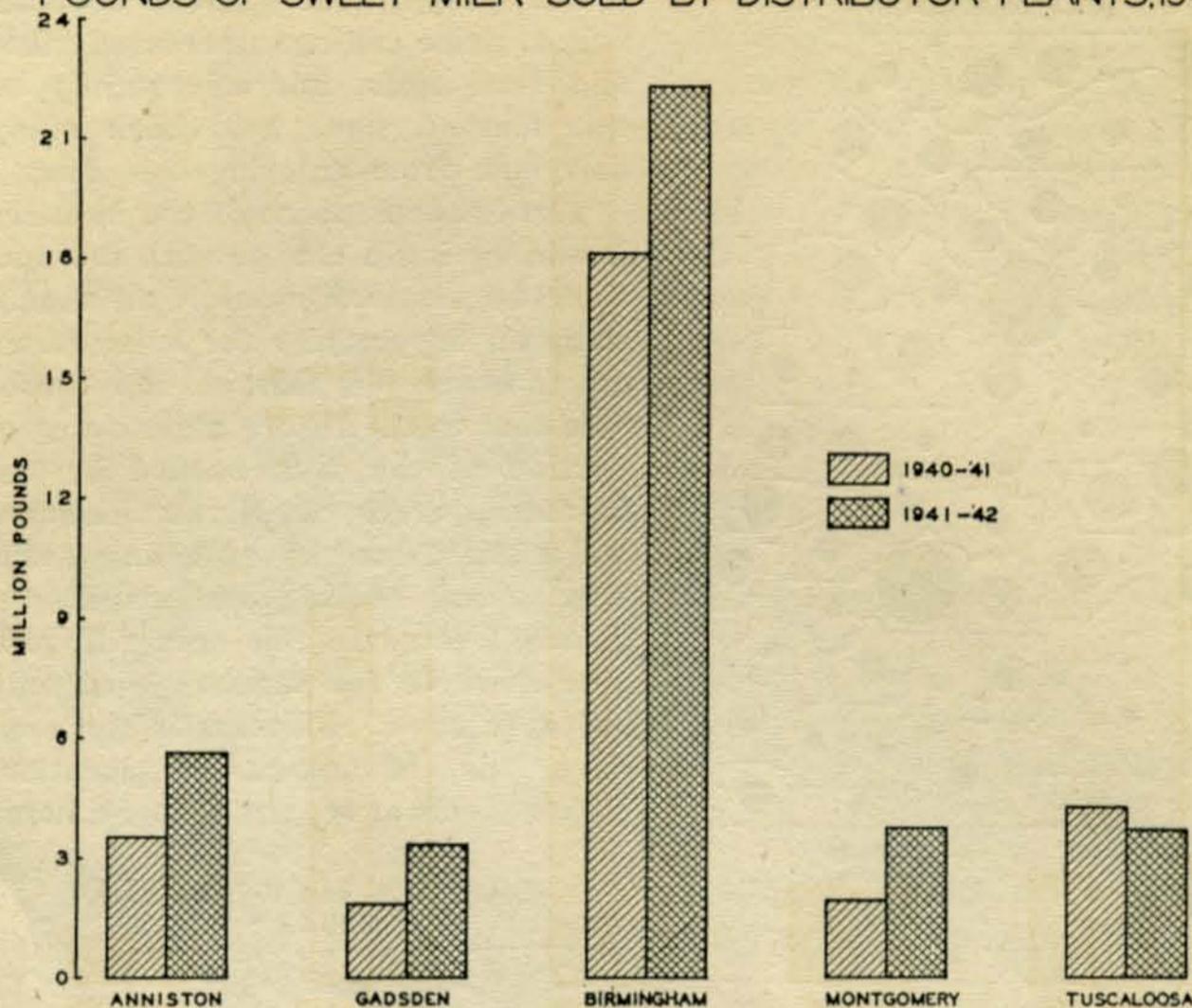


CHART 1

*Based on data from annual reports of State Milk Control Board for fiscal years ending September 30.

supply of labor. For these reasons they can produce milk more economically than many of the large commercial dairies now attempting to supply this demand.

Cheese Milk Markets — Cheese plants are now in operation at Ardmore (Tenn.), Boaz, Decatur, Fayette, Scottsboro, Montgomery, Uniontown, Demopolis and Safford. In addition, some cheese milk is going to plants in Tennessee and Mississippi. A check of these plants showed an increase in production of 25.9 percent during 1942 over 1941. Only two plants showed a decrease. This was caused by a diversion of milk from the larger producers to Grade A channels.

Whole milk is picked up daily on

regular milk routes in about 25 counties. This solves the problem of many small producers getting their milk to market. At present some of the routes are so long that they are expensive to operate but this will probably be corrected as the volume of milk is increased or as additional plants are built.

Careful guidance to this new phase of the industry should be given to avoid a repetition of early over-expansion. Unless a minimum of from 10,000 to 20,000 pounds of milk per day can be secured within a radius of 25 miles of the proposed new plant it is a risky proposition. Eventually it will be necessary to compete with older dairy sections of the country in the sale of cheese, without the benefit of the present inflated prices. A

POUNDS OF SWEET MILK SOLD BY PRODUCER-DISTRIBUTOR

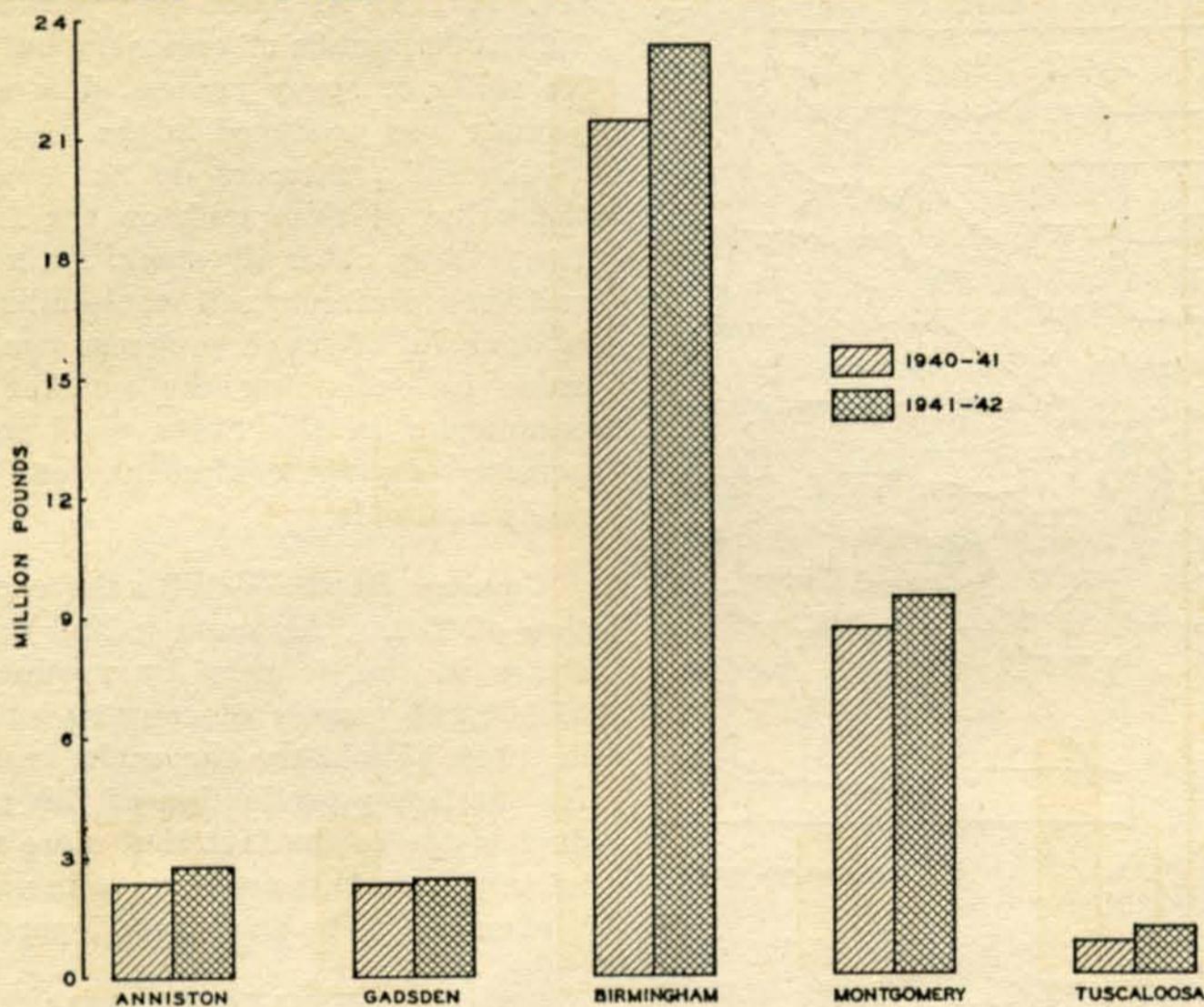


CHART 2

*Based on data from annual reports of State Milk Control Board for fiscal years ending September 30.

careful survey of the territory should be made before a cheese plant is advocated.

There are possibilities of using cheese plant facilities and daily milk trucks to handle other products, especially eggs. This would reduce the hauling cost and help to keep down overhead on small plants. During 1941 Alabama cheese plants produced 3,278,000 pounds of cheddar cheese worth about \$1,183,400.

Creameries and Cream Stations—

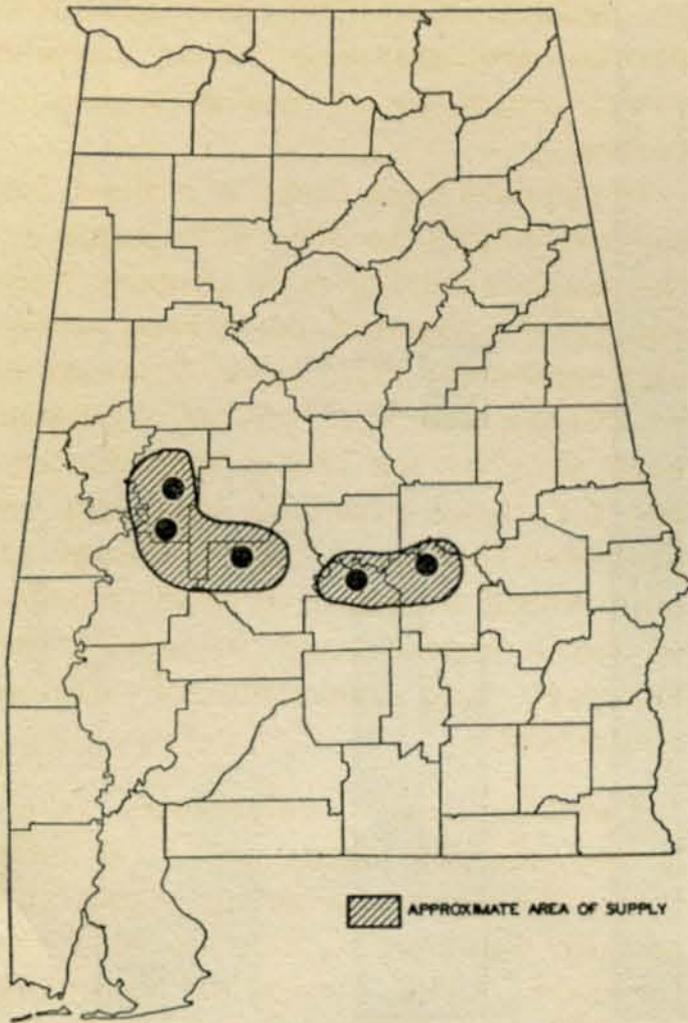
Creameries were the first type of market established in Alabama. Since it requires more milk to successfully operate a creamery than is needed for a cheese plant, creameries suffered for a lack of volume to operate economically. As a result many have closed and others are operating only

as a sideline to ice cream or pasteurized milk plants.

Cream stations were set up in an attempt to increase cream volume to creameries but as a whole they have not proven satisfactory. Generally they are operated as a sideline by someone who does not push cream production. Often these stations only open once each week and the quality of the cream received does not permit the production of quality butter. In many cases the price paid at the station is below the price farmers can get for country butter.

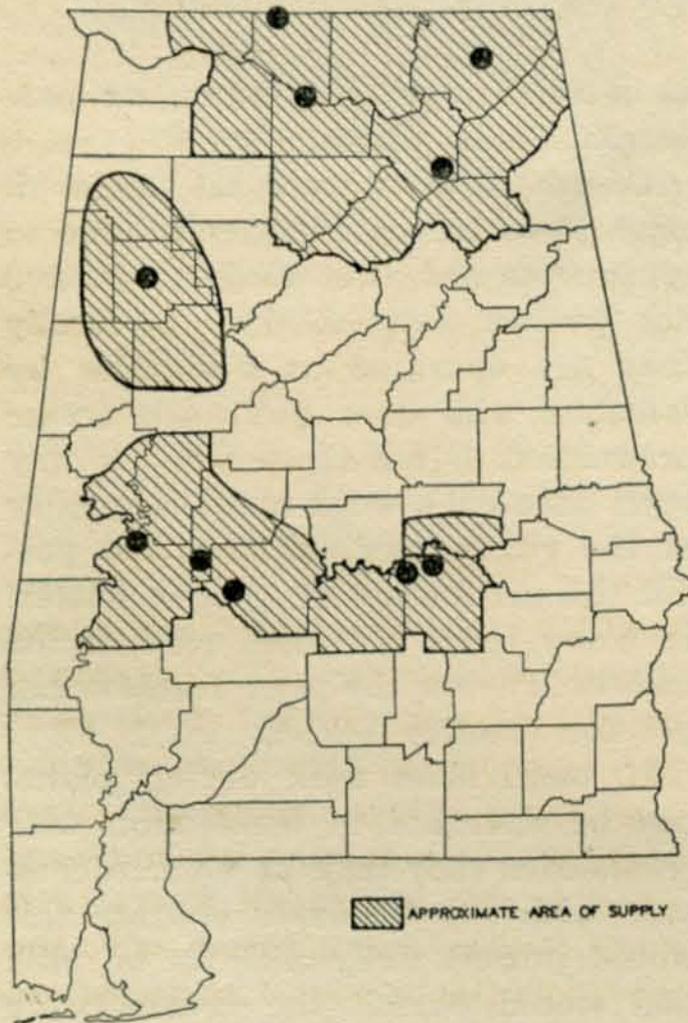
If small skim milk drying plants can be operated in connection with creameries they may be able to compete with cheese plants because this would permit daily pick-up of milk and would permit the creamery to produce skim milk powder for live-

COOLING STATIONS
1942



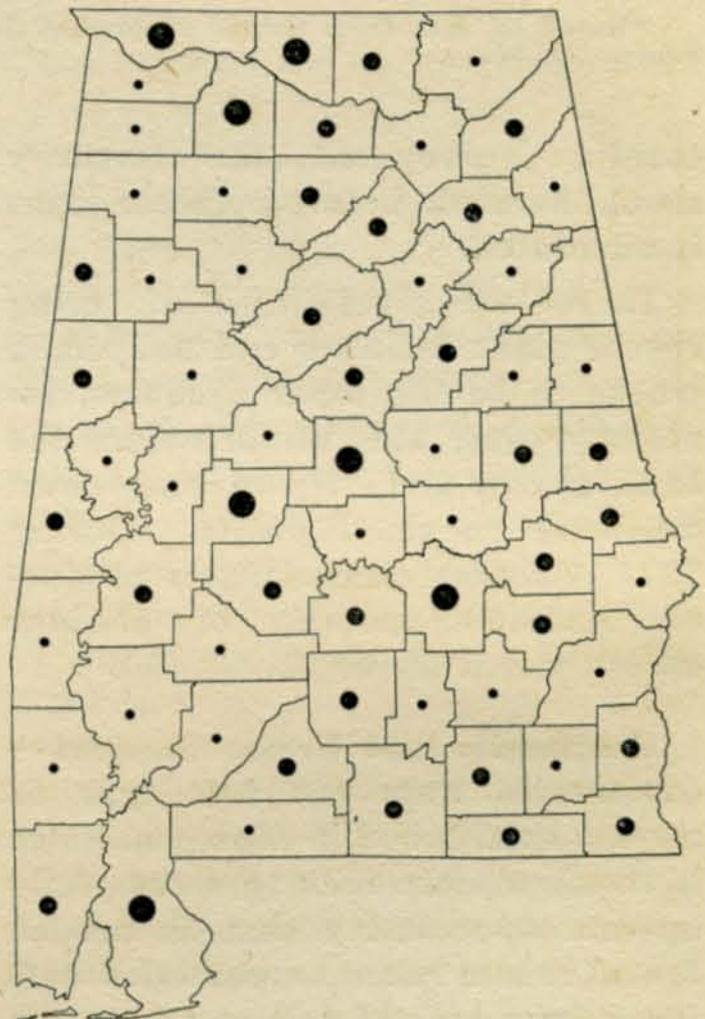
MAP 6

CHEESE PLANTS
1943



MAP 7

BUTTERFAT SOLD 1941 *
(MILK EQUIVALENT)



MAP 8

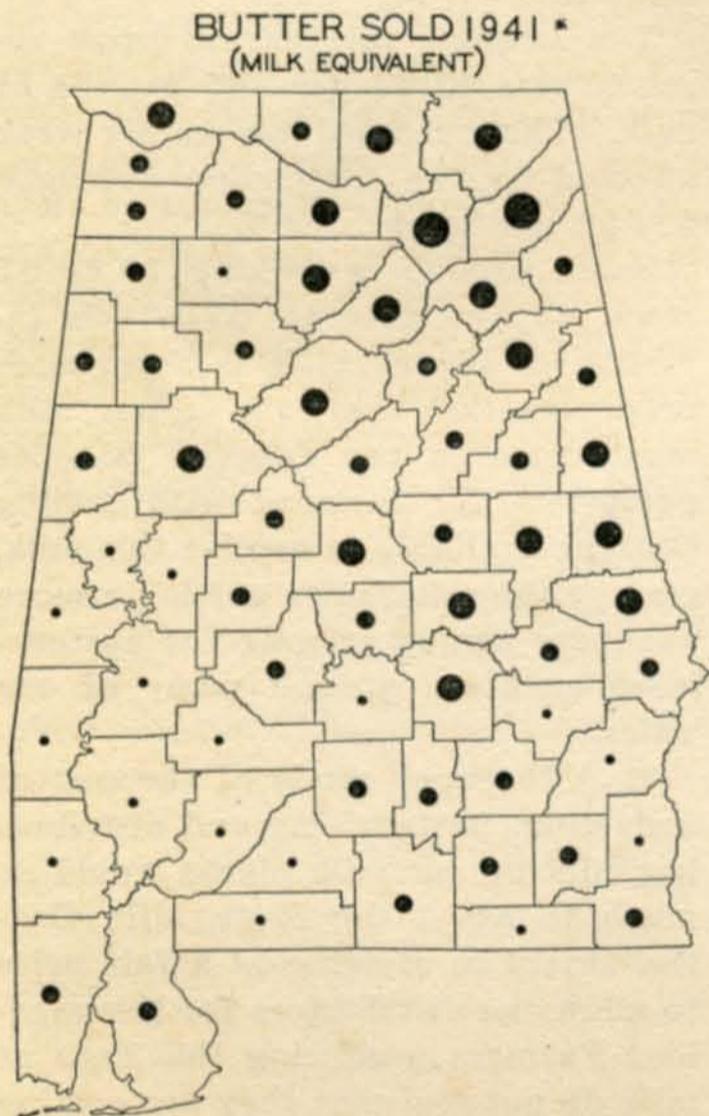
*Estimates based on Census and AMA reports.

stock feed in addition to quality butter. In 1941 Alabama only produced 1,231,000 pounds of creamery butter. No roller or spray process skim milk powder was produced in the State.

Generally, farmers do not realize the value of skim milk on the farm for feeding other livestock. As a result they prefer to sell whole milk. It is doubtful if much progress can be made in expanding the number of creameries in the State until inexpensive drying equipment can be made available.

Country Butter — With the exception of Texas, Alabama led all other states in the country by producing 32,000,000 pounds of country butter in 1940. Probably the main reason for the heavy production of this product is due to the fact that more satisfactory markets are not available. It is also due to the fact that 75 percent

of our dairy cows are in herds of from 1 to 3 cows, which permits the sale of a very limited amount of dairy products after home needs are supplied. At present some of this butter is being collected by rolling stores at low prices and hauled to renovating plants located at Birmingham and Cullman. The production of country butter for sale is decreasing in areas served by whole milk markets as the price generally received is below the price paid by manufacturing plants.



MAP 9

*Estimates based on Census and AMA reports.

Ice Cream Plants — Ice cream production far exceeds creamery butter production in Alabama. During 1941 a total of 3,633,000 gallons of ice cream was manufactured. Most of the sweet cream and milk powder used in ice cream are shipped in from other states because they are not available here. Southern Dairies in Montgom-

ery produce both sweet cream and semi-solid skim milk for ice cream production. In addition, several cheese plants are shipping their surplus sweet cream to ice cream manufacturers.

It appears that there is a need for several plants to locate in some of the manufacturing milk areas to help supply the demand for sweet cream and semi-solid skim milk. Thousands of dollars are sent out of Alabama each year by ice cream manufacturers for these products that can be produced locally. A larger volume of milk would be required than is needed for a cheese plant to justify the purchase and operation of drying equipment.

Condenseries—Condenseries usually pay slightly higher price for milk than other manufacturing plants and employ fieldmen to help develop the territory. The Carnation Company already has made a survey of the Piedmont section of Alabama and it is possible that it will locate there as soon as materials are available. This plant, with several cooling stations, could serve at least 10 counties in this area and would find a ready market for products in the cities of the Southeast. A production of from 50,000 to 100,000 pounds of milk per day is necessary to make the operation of such plants profitable. Few areas in the State produce this volume of manufacturing milk.

Marketing Problems

MARKETING problems tie in closely with production of all types of dairy products. It is difficult to induce commercial plants to locate in a territory and lose money for several years while production is being developed. It also is difficult to try to induce farmers to increase milk production without some assurance that a market will be available.

It seems that it would be advisable to make a careful study of Alabama to determine the counties with potential ability to produce dairy products. This would include ability to produce economically the necessary feed and pasture and to provide an ample supply of labor. Where natural advantages are found a long time program should be developed aimed toward obtaining an increased farm income from two or three main sources.

Following the survey all agricultural agencies, local business men and bankers should provide the necessary marketing facilities and stimulate the production of well-adapted crops and livestock products. In a few cases farmers may be in position to set up their own cooperative markets but generally this is not true. The interest of the local business men will be tied in closer to the program if they have some money invested. They also will have to help finance and plan landlord-tenant programs that will permit the inclusion of dairy cattle in the farming system.

A State-wide program encouraging business men to give preference to Alabama-produced dairy products will do much to assist in finding markets for these several products.

Summary and Recommendations

1. A careful study should be made of milk ordinances in Alabama with the view of eliminating all requirements not absolutely essential to the production of a safe, wholesome supply of milk.

At present, milk which meets the requirements of one milk shed may not be acceptable in another shed in Alabama. In a study made in 1942 at Greensboro where 17 dairymen converted their equipment to grade A production the capital outlay in making the conversion ranged from \$610

to \$4380 per farm. The average was \$1476. They spent an average of \$819 on barns, \$220 on milk houses, \$231 on water systems, \$89 on water heating equipment and \$117 on other supplies such as cans and buckets. These dairymen had an average of 39 cows and the increased cost per cow for equipment was \$38.85. Additional labor cost for producing Grade A milk was \$12 per week. Depreciation and interest on the average increased investment was \$1.71 per week.

The average increase in price received was \$1.22 per 100 pounds of milk. The increased income per week affected by the conversion averaged \$34.22 per week.

Small producers milking 10 to 15 cows may hesitate to make this investment. However, it is from such producers that the bulk of our milk must come in the future. Simpler equipment for farmers, with cooling stations available to receive this milk, may be the solution to getting a more adequate supply of milk for pasteurizing purposes around many of our cities.

2. A thorough study of the cost of collecting, pasteurizing and distributing milk by our milk plants would do much to assist the State Milk Control Board in arriving at a fair price to allow the distributors for this service. Farmers producing this type of milk do not feel that they are getting a fair share of the consumer's dollar.

3. Both the Health Department and the Department of Agriculture employ men to check dairy manufacturing plants in Alabama. It seems that this is an unnecessary duplication of work. By having full time men checking quality, running butterfat tests and examining sanitary conditions of the milk plants, doubtless farmers and plants would receive better service. At large plants it might be advisable

for state men, paid jointly by plants and producers, to do all weighing and testing.

4. To be in position to compete with out-of-state Federally graded cheese and butter it is advisable to have at least one licensed grader on the inspection staff of the Alabama Department of Agriculture. Each plant could be required to pay for this service when requested.

5. Several privately-owned cheese plants are dependent on the large distributors for markets. They may be squeezed out of business as demands for cheese decrease after the war. Such plants need advice on proper methods of manufacturing cheese that will permit them to produce a product that can be sold on the Alabama markets without reprocessing. Since this might not be a full-time job, a trained man might be jointly employed by the Experiment Station and Extension Service to devote part

time to field work and the remainder to working on new types of cheese best suited to local conditions. He also might assist in training men for new plants as they are needed.

6. Many have the erroneous opinion that all that is necessary to increase milk production is to increase feed and pasture. While feed represents approximately 50 percent of the cost of producing milk, farmers cannot pay for feed and obtain a reasonable return on the investment with low producing cows that average only 130 pounds of butterfat per year. Since 75 percent of the Alabama dairy cows are in herds of from 1 to 3 cows it is very difficult to get production-bred sires available to do the job of breeding up small herds. Artificial insemination associations, subsidized by the State, offer one of the most promising solutions to the problem. With State-owned herds at Auburn and Kilby available it appears that

**DAIRY PRODUCTS SOLD FROM FARMS
PERCENTAGE OF TOTAL VALUE OF SALES
ALABAMA, 1924-1941**

	Milk & Cream Retailed by Farmers	Milk Sold to Plants, Dealers, Etc. at Wholesale	Cream Sold to Plants, Dealers, Etc. as Butterfat	Farm Butter Sold	Combined Sales of Dairy Products
1924	46.2	24.7	8.5	20.6	100
1925	45.1	26.6	9.1	19.2	100
1926	45.3	26.9	8.1	19.7	100
1927	46.1	28.3	7.3	18.3	100
1928	46.8	29.2	6.8	17.2	100
1929	43.1	32.2	9.0	15.7	100
1930	43.6	33.4	7.2	15.8	100
1931	50.3	26.8	6.3	16.6	100
1932	53.0	24.8	6.6	15.6	100
1933	53.6	26.0	6.4	14.0	100
1934	53.0	27.0	6.1	13.9	100
1935	51.5	27.9	6.6	14.0	100
1936	46.0	33.8	7.1	13.1	100
1937	41.7	36.7	7.0	14.6	100
1938	43.1	36.8	7.4	12.7	100
1939	44.3	37.7	6.6	11.4	100
1940	44.1	40.7	5.2	10.0	100
1941	39.2	43.7	6.3	10.8	100

SOURCE: Farm Production, Disposition and Income from Milk
1924-1940, 1940-1941, AMS, USDA.

Extension Economics
August 14, 1942.

**GROSS INCOME FROM DAIRY PRODUCTS
ALABAMA, 1924-1941**

	Total Value Dairy Products Sold	Value Dairy Prod. Used In Farm Household	Gross Farm Income From Dairy Products
	(000)	(000)	(000)
1924 -----	\$5,107	\$23,195	\$28,302
1925 -----	5,677	23,607	29,284
1926 -----	6,561	24,806	31,367
1927 -----	7,232	25,447	32,679
1928 -----	7,748	26,034	33,782
1929 -----	9,583	26,243	35,826
1930 -----	8,798	24,450	33,248
1931 -----	6,744	21,311	28,055
1932 -----	5,491	16,836	22,327
1933 -----	5,543	17,017	22,560
1934 -----	6,054	18,752	24,806
1935 -----	6,890	20,381	27,271
1936 -----	7,715	21,231	28,946
1937 -----	7,574	21,704	29,278
1938 -----	7,805	20,635	28,440
1939 -----	7,689	20,779	28,468
1940 -----	7,937	18,786	26,723
1941 -----	9,101	20,615	29,716

SOURCE: Farm Production, Disposition and Income from Milk
1924-1940, 1940-1941, AMS, USDA.

Extension Economics
August 14, 1942.

an appropriation to start this work would be advisable.

7. A uniform plan for paying for manufacturing milk seems advisable. Some plants are at present paying a bonus for quantity, others for quality. Others pay a straight butterfat price, while others pay on a basis of a price for 100 pounds of 4 percent milk with a point differential. If this could be standardized it would make it possible to quote daily prices in market reports and in radio market broadcasts.

8. Due to the growing interest in dairy cattle and other livestock on Alabama farms it is becoming increasingly important that livestock statistics in the state be improved. Errors of 50 percent or more occur in many counties when census figures are compared with Bangs test reports. This situation makes it difficult to make accurate surveys needed in determining the location of new markets or plants.

9. As dairying is still a new industry in Alabama, much stress must be placed on educating people in all phases of the work. All inspectors of dairy products should assume an attitude of friendly, constructive criticism where needed and plant operators need to do as much field work as their time and money will permit. Needless to say, the educational forces working in counties where dairying is one of the major sources of income, should be well grounded in dairy fundamentals and should devote a considerable portion of their time to practical dairy demonstrations. A combination of feed production, better dairy cattle, practical dairy skill and management together with adequate markets are needed to make dairying successful in Alabama.

10. While a most friendly attitude exists at the present time between all agencies dealing with educational and regulatory work there is still

some overlapping of responsibility that might be eliminated in the interest of greater efficiency. All educational forces should use recommendations of the Experiment Station, as far as they are available, and should agree on other recommendations before taking them to the field. These forces need to know marketing problems and work toward their solu-

tion but should not attempt to engage in actual buying and selling. Regulatory and inspection work should be kept separate from educational work, except where cooperation is needed in handling educational problems. Occasional meetings of all these forces to study their common problems should prove beneficial to the group and to the industry.



MEAT ANIMALS

(Beef Cattle, Hogs and Sheep)

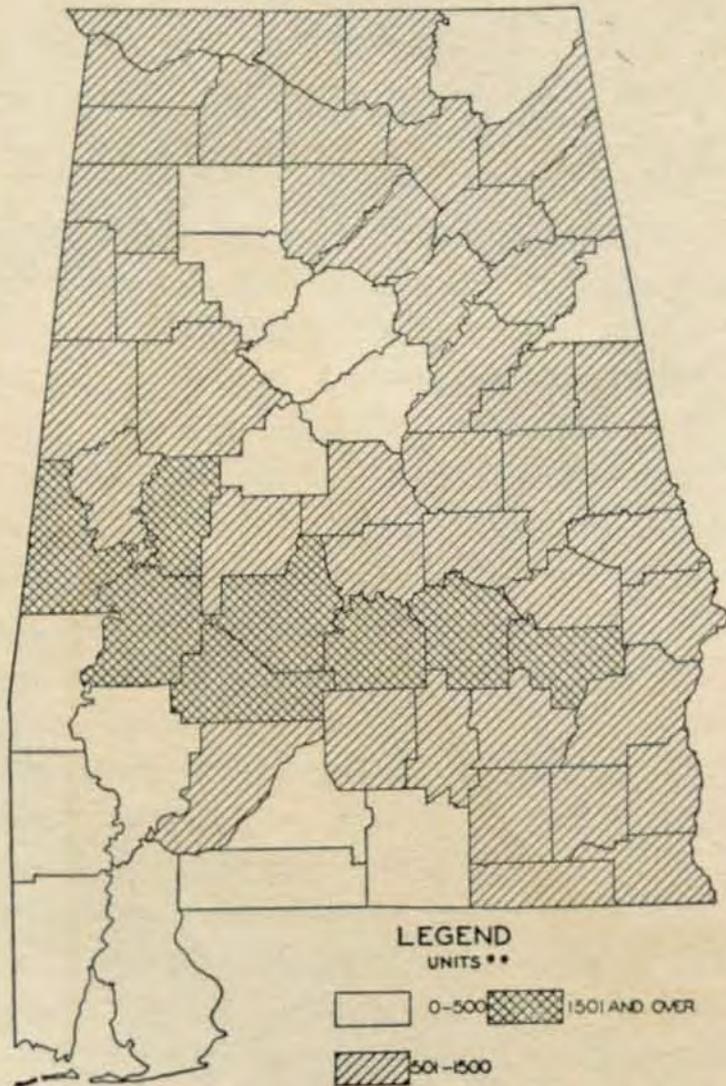
Production

IMPORTANCE of livestock production in Alabama has increased in recent years. Classes of livestock are being concentrated in definite areas largely as a result of the cropping system which influences the amounts and types of feed available for producing livestock.

Beef Cattle

BEEF CATTLE production in Alabama has developed most rapidly in areas where large acreages of pasture land and forage crops are

PASTURE FORAGE FEED UNITS PER SQ. MILE
1939*



MAP 10

*Estimates based on Census and AMA reports.

**One feed unit represents the amount of total digestible nutrients in one bushel of corn or its equivalent.

grown. The heaviest concentrations of cattle are in the grazing area including the Black Belt from Russell County across the State through Sumter County, in the Tennessee Valley and the open grazing areas of Southwest Alabama. (See Map, No. 10.) Beef cattle production has increased faster and steadier than any other livestock enterprise, which is reflected by the volume of business done by the Union Stock Yard of Montgomery. (See Charts 3 and 4.)

Estimates by the U. S. Bureau of Agricultural Economics place Alabama's cash income at \$7,660,000 from cattle and calves in 1940. This was 81 percent larger than the average income received during the period 1928-37. From information secured from the stock yards and packers in the State this figure is undoubtedly very much too low.

The quality of beef cattle has shown a marked improvement in the past few years through the use of purebred bulls and by retention of better heifers in the breeding herds. The State Veterinarian reports that 4,995 registered beef animals were shipped into Alabama for breeding purposes in the past two years. In addition a large number has been shipped in without the official State health certificate. Too, a larger number than those shipped into the State has been produced by the 186 purebred beef cattle producers. At present, practically every herd in Alabama is headed by a purebred beef bull. Farmers are doing more winter feeding and this has done much to improve quality even though there is considerable room for further improvement in this respect.

RECEIPTS OF CATTLE AND CALVES AT UNION STOCKYARDS
MONTGOMERY, ALA. JUNE 1918-1940 *

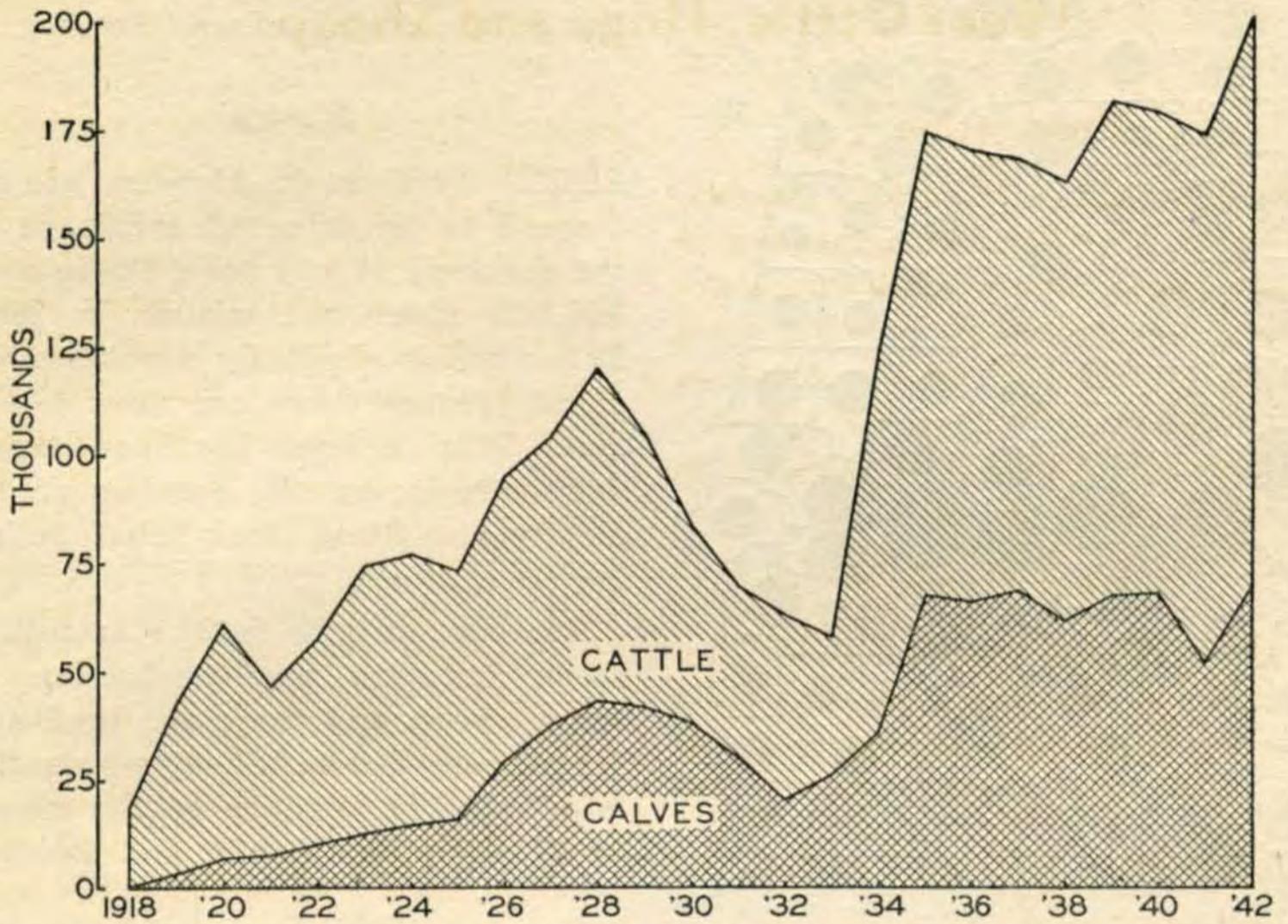


CHART 3

*Based on reports from Union Stockyards Company.

RECEIPTS AT UNION STOCK YARDS, MONTGOMERY *

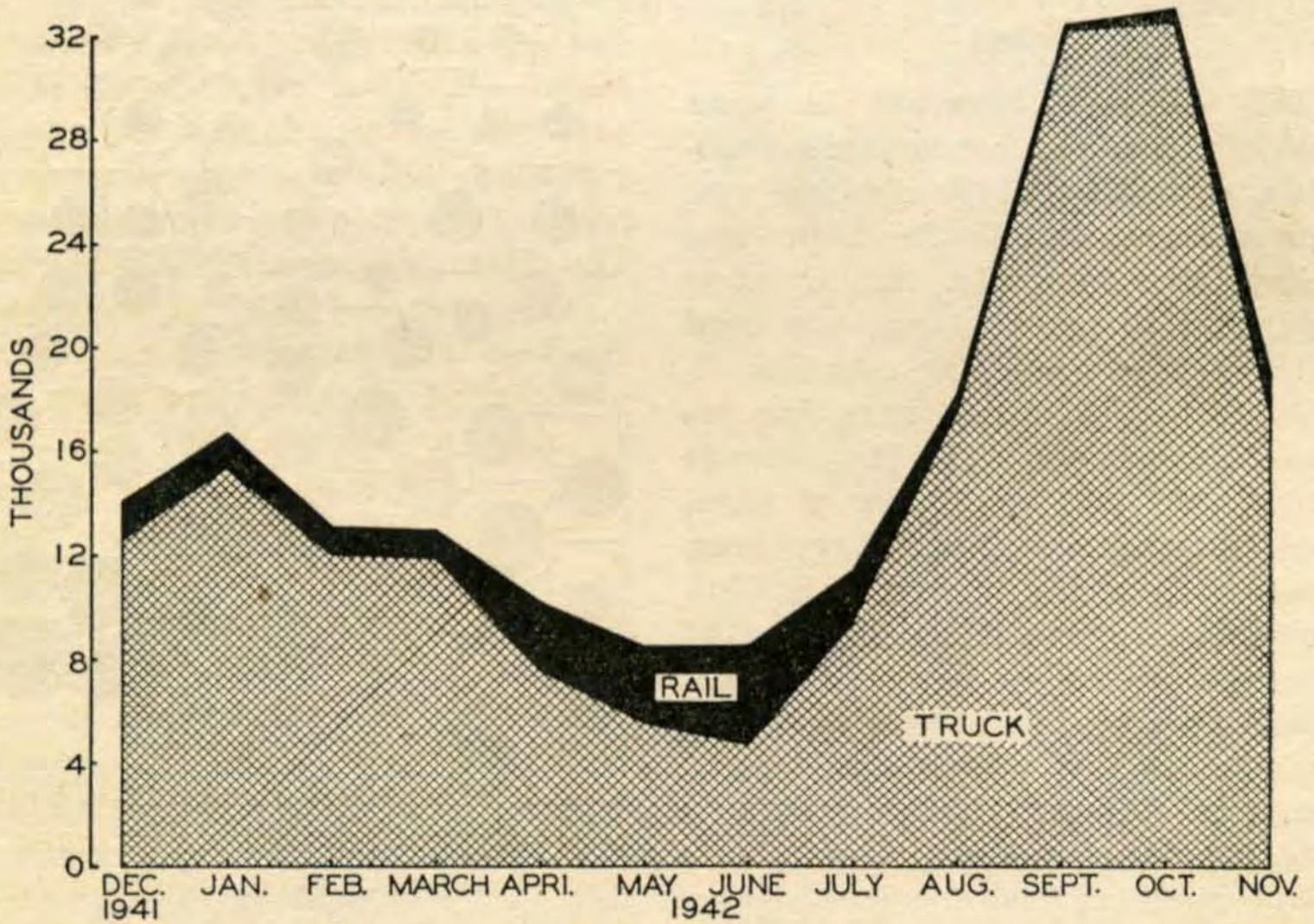
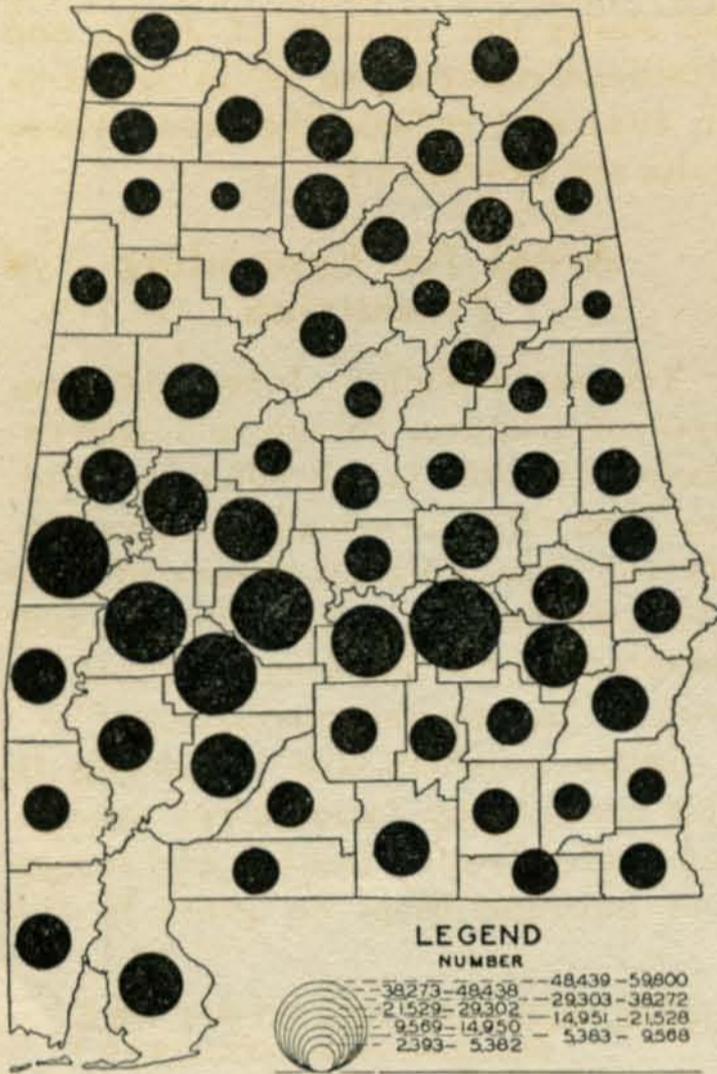


CHART 4

*Based on reports from Union Stockyards Company.

ALL CATTLE
1940 *



MAP 11

*Estimated number on farms on January 1, 1940, based on Census and AMA reports.

Hogs

MOST Alabama hogs are in areas which produce concentrate feed-stuffs, especially in the old and new peanut areas, and in the Tennessee Valley. (See Map, No. 12.) Greatest expansion in recent years has been in the peanut producing counties.

Quality of Alabama hogs has increased greatly in the last decade through the widespread use of pure-bred boars. These boars have been introduced largely through 4-H Club pig chain projects. The carcasses of many Alabama hogs, however, are affected by serious infestations of internal parasites. This makes large numbers of livers, kidneys and loins unfit for human consumption.

Hog numbers have increased irregularly in recent years in Alabama. This irregularity has been due to the

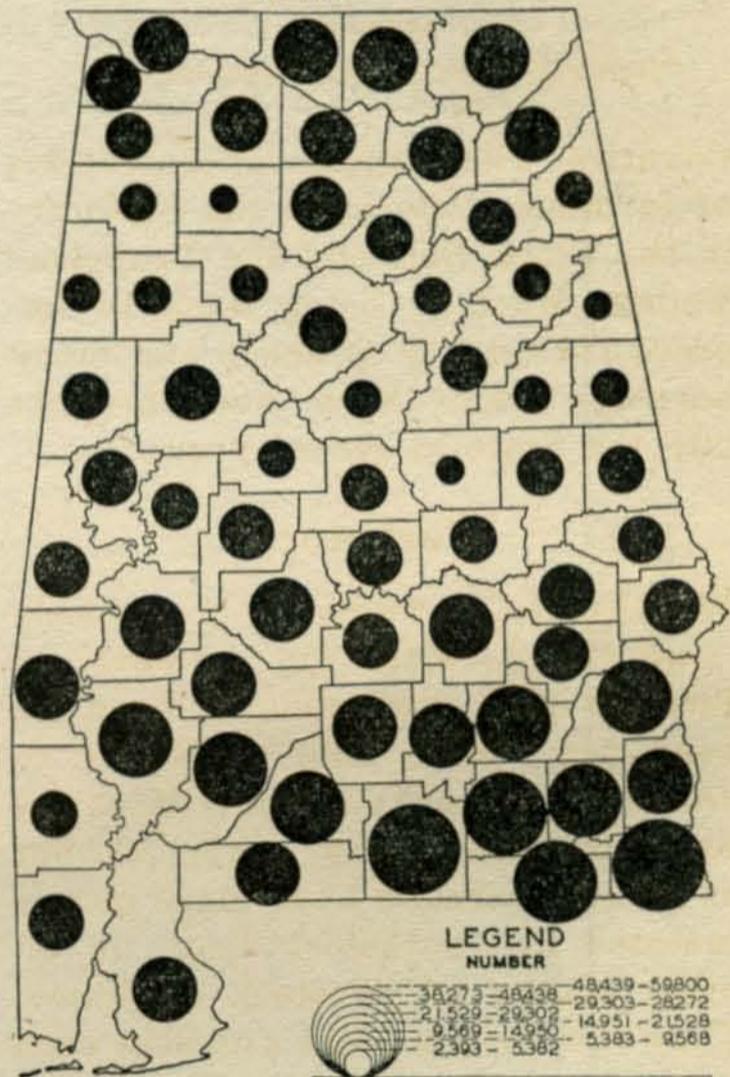
influence of periodic price changes. This has caused peaks in numbers at intervals of about 4 or 5 years and low points during other intervals.

Sheep

SHEEP numbers in Alabama are too small to be of much influence on the economy of any area. There were 365,000 sheep in Alabama in 1860. This number gradually decreased until at present there are only 48,000 head. This decrease has been caused very largely by the passing of the county and State stock laws abolishing open ranges.

Alabama is now in the transition stage between the production of range sheep and the more profitable farm sheep flocks. Sheep production is of some importance on the ranges of Washington, Mobile and Baldwin

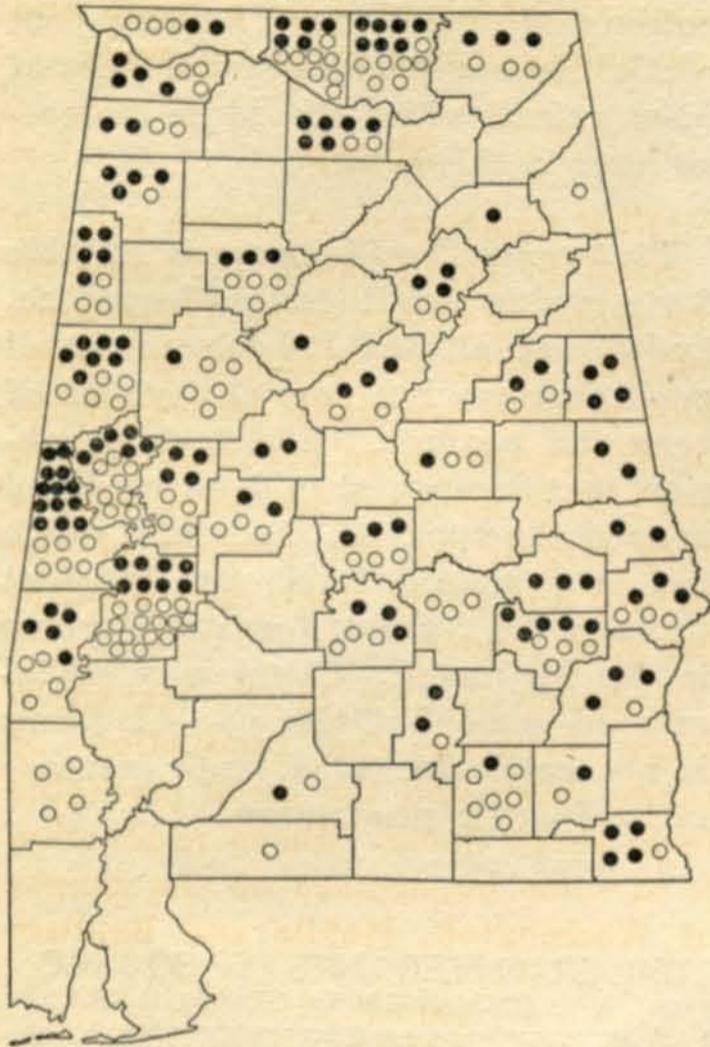
SWINE
1940 *



MAP 12

*Estimated number on farms on January 1, 1940, based on Census and AMA reports.

JACKS AND STALLIONS
1941 *



MAP 13

*Reports from county agents.

Counties. The largest concentrations of farm sheep flocks in the State are in the Black Belt and the Tennessee Valley. Much is being done to improve the quality of sheep and many purebred rams have been brought into the State in recent years.

Workstock

WORKSTOCK numbers are closely associated with the number of farmers in an area, ranging from 1.8 head per square mile in Mobile to 16.6 in Marshall County. Machines have displaced many workstock but at present farmers have more money invested in workstock than in all other classes of livestock combined. They are buying large numbers each year for replacements. Some colts are produced in the Black Belt and Tennessee Valley, but most of them are shipped in from Tennessee and

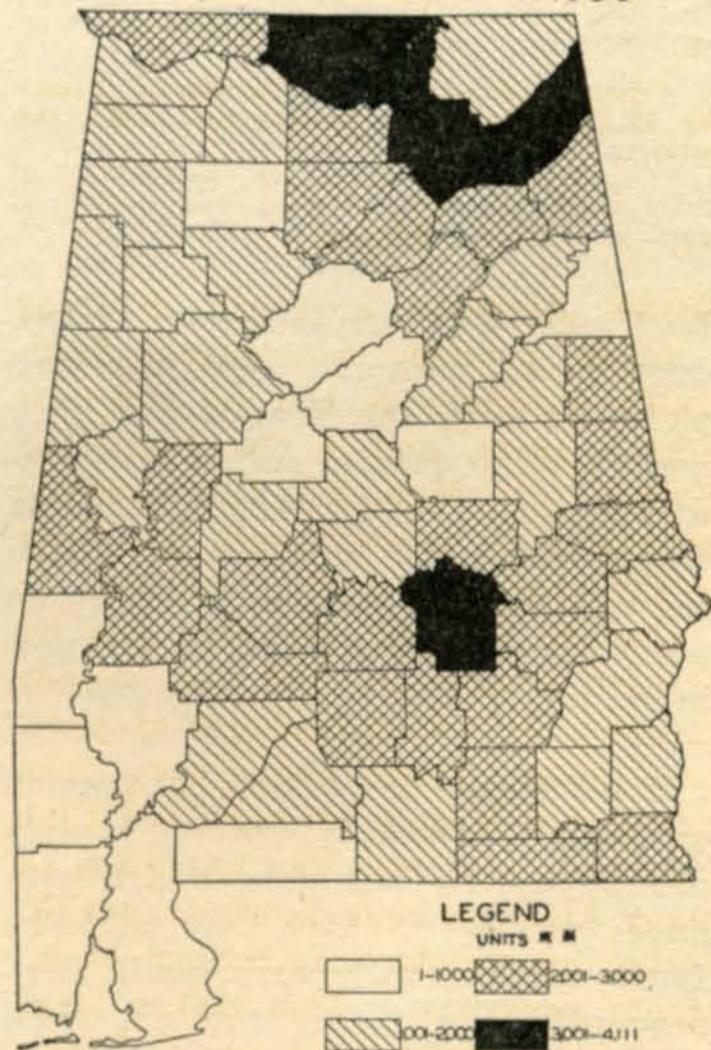
Missouri and sold to Alabama farmers by regular mule dealers. (Map 13 shows the number of Jacks and Stallions reported to be in Alabama in 1941 and reflects the areas where colts are produced.)

Areas for Expanding Production

Tennessee Valley: Increased acreages of pasture, forage and concentrate feedstuffs in the Tennessee Valley area offer an excellent opportunity for expanding all classes of livestock production. The valley is well adapted to the growing of grain as well as forage and pastures.

Cattle numbers are increasing in this area. Many farmers are producing beef calves on pasture and forage and finishing them on grain in the

TOTAL FEED UNITS PER SQUARE MILE
(INCLUDING MINOR CROPS), 1939 *



LEGEND

UNITS ■ ■

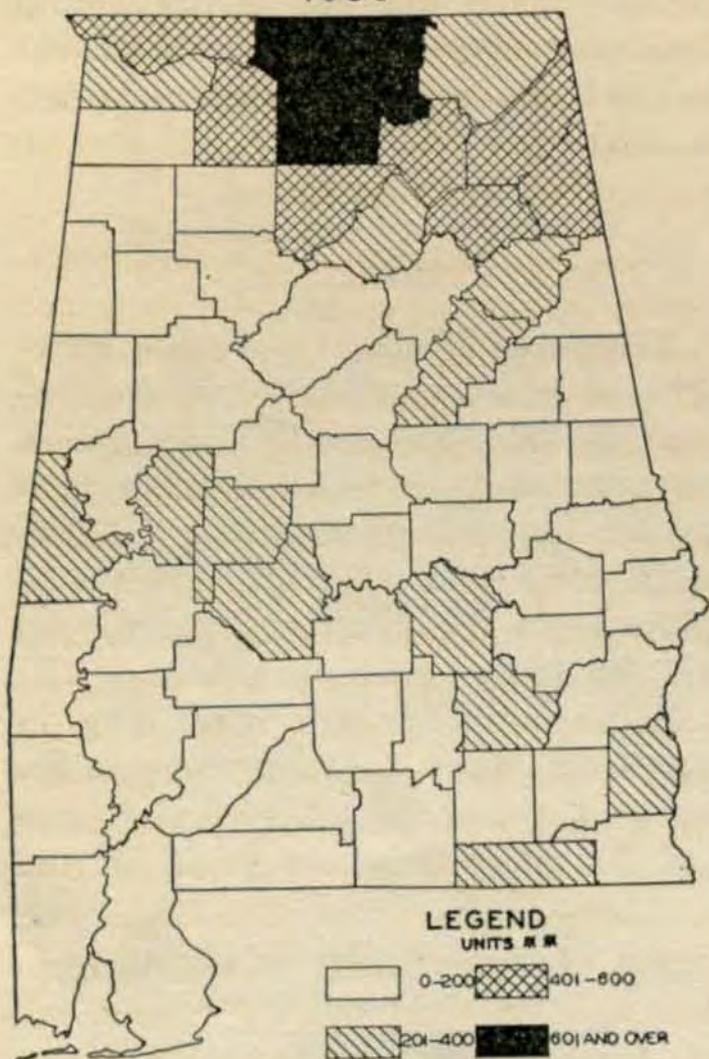


MAP 14

*Estimates based on Census and AMA reports.

**One feed unit represents the amount of total digestible nutrients in one bushel of corn or its equivalent.

HARVESTED FORAGE FEED UNITS PER SQUARE MILE
1939 *



MAP 15

*Estimates based on Census and AMA reports.

**One feed unit represents the amount of total digestible nutrients in one bushel of corn or its equivalent.

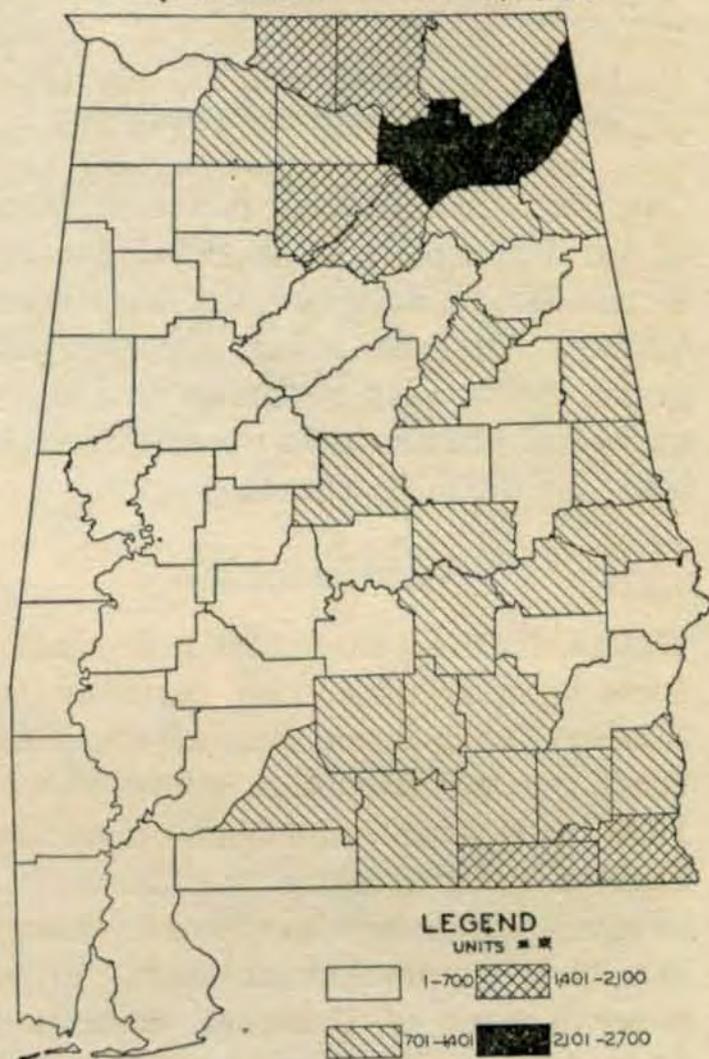
feed lot. With the successful introduction of peanuts and increased yields of corn, the Tennessee Valley may develop into a major hog producing area. Feedstuffs produced in this area are conducive to profitable use of a limited number of sheep on many farms. Sheep numbers are now increasing in the Valley.

Sand Mountain: Farm production on Sand Mountain is centered largely around cotton and corn which produce relatively high yields. The farms are generally very small. Consequently, the farms are not well adapted to extensive systems of farming like beef cattle production. There is a very definite trend toward the production of hogs which require less space and are efficient users of corn.

There is some promise of farmers utilizing surpluses of both corn and cottonseed meal for feeding out cattle. Hogs appear to be the class of meat animal which should be increased most in this area.

Piedmont: The Piedmont is suitable for growing small grains, lespedeza, kudzu, and alfalfa. It has some small good pastures but very low yields of corn and peanuts. Livestock expansion in this area should be centered around the types of feedstuffs which can be produced. Sheep are efficient users of the types of feedstuffs grown in the Piedmont. Cattle may be increased some but the size of farms is not conducive to a large increase in beef cattle production.

TOTAL GRAIN FEED UNITS PER SQ. MILE
(INCLUDING MINOR CROPS), 1939 *



MAP 16

*Estimates based on Census and AMA reports.

**One feed unit represents the amount of total digestible nutrients in one bushel of corn or its equivalent.

Upper Coastal Plain: The Upper Coastal Plain, extending from Elmore and Autauga Counties northwesterly to Franklin County and bounded on the south by the Black Belt, contains a large variety of soils and farming practices. Beef cattle production in this area is largely confined to the more fertile bottom lands. There is opportunity for more expansion of beef cattle production on more farms with good bottom land.

Many farmers who have increased their corn yields by the use of winter legumes are producing hogs for market. There is a great need for increased yields of corn marketed through hogs in this area.

Black Belt: The Black Belt is considered by many authorities as one of the best beef cattle producing areas in the Nation. It has been reported that there are more beef cattle in the Black Belt than in any area of equal size in the United States. This development has taken place over a period of years but has been accelerated during the past decade by the development of more improved pastures. Not only has there been an increase in numbers but a great improvement in the breeding and quality of the cattle.

Crops produced in this area are conducive to the production and sale of beef calves rather than to the finishing of cattle in the feed lot. In the past few years cattle producers have been feeding their cattle better during the winter and giving them more winter care but there is still room for much improvement in this part of the program.

Many cattle producers are increasing their income by the addition of a small flock of sheep to their farm operations. This area is well adapted to sheep production and producers report substantial profits. There is room for a large expansion in the sheep industry in the Black Belt.

Systems of farming practiced on the clay lands of the Black Belt offer little opportunity for expansion of hog production. However, those with sandy soils are producing hogs for market; there is room for additional expansion on these farms.

Southeast Alabama: Southeast Alabama is operating largely on a cotton-peanut-hog economy supplemented with some beef cattle. Past trends indicate that peanut-hog and beef cattle enterprises will be expanded, however, expansion of beef cattle will be limited by the extent to which it supplements peanuts and hogs. With a large amount of peanut hay produced, comparatively good yields of corn, and available supply of cottonseed meal and peanut meal, there is an opportunity for more farmers to feed cattle for the market. The Black Belt offers an opportunity to supply large numbers of good quality feeder cattle for Southeast Alabama producers.

Southwest Alabama: Its large size farms, its abundance of bottom lands with lime out-washings from the Black Belt, and its large timber tracts make Southwest Alabama well adapted to production of more meat animals. During recent years there has been an increase in number and improvement in quality of both cattle and hogs. With this trend, together with a development of near-by markets, there is a greater appreciation among farmers for the opportunities offered in this section.

Packing Plants

ALABAMA has 18 packing plants which use Alabama livestock so long as volume and quality are available for supplying their demands. In addition, the plant at Columbus, Georgia, buys about 88 percent of its cattle and 51 percent of its hogs in Alabama. Most of them import livestock during slack seasons and small vol-

ume of better quality livestock at regular intervals throughout the year.

Swift's packing plant at Montgomery imports from three to four cars of good to choice steers from the Middle-West each month because the number of steers of good to choice quality offered on State markets is not sufficient to meet its demand for high-quality meat. Other plants are forced to import livestock in slack seasons in order to obtain a volume sufficient to keep their plants in operation.

In rush seasons, Alabama livestock are placed on the market in such numbers that many of them are moved to plants in adjoining states for slaughter. Alabama cattle and hogs are killed at such places as Ocala, Tampa and Marianna, Florida; Moultrie, Albany, Tifton, Thomas-

ville, Rome and Atlanta, Georgia; and Nashville, Memphis, and Chattanooga, Tennessee. Some are shipped to points as far away as Jersey City, N. J.

Markets

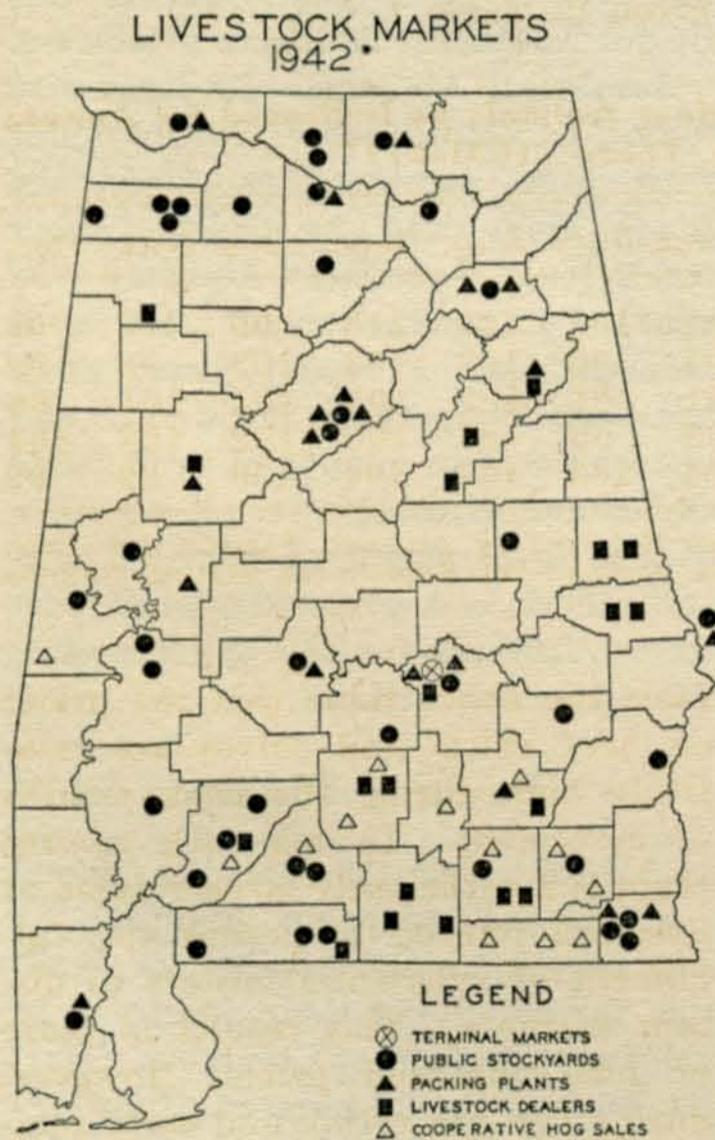
MOST AREAS of Alabama producing a volume of livestock are serviced by some type of market. Marginal areas where there is insufficient volume are served by livestock dealers. (See Map, No. 17.)

Terminal Markets: Alabama has one terminal livestock market. It is the Union Stock Yards, Montgomery, where five commission firms sell livestock for farmers. One order-buying firm operates on this yard. It is the largest firm in the United States and provides a continuous and daily widespread outlet for all classes of livestock in unlimited quantities. This yard is considered to have the largest volume of cattle sales in the Southeast.

Auction Markets: Alabama has about 40 small stockyards where cattle are sold and traded. Usually from one to two auctions are held each week at each yard. (See Map, No. 17.) In addition, there are about 17 producer cooperative hog sales in the peanut areas.

Most of the small stockyards have been built since 1938. It is estimated that these cattle were worth \$12,958,384 and the hogs worth \$11,846,542, a total of \$24,804,926 to Alabama producers. In addition to these figures, there was a considerable volume of livestock sold directly to packers within the State and to yards and packers outside the state.

Sales Points: The marginal areas are served by livestock traders and dealers who use either the packing plants, the auction markets, or the Union Stock Yards as outlets for their purchases.



MAP 17

*Based on market reports and reports of inspectors.

Marketing Practices

ALABAMA FARMERS have several methods of placing their livestock on the market. They sell through a commission firm on the terminal market, through one of the auctions, to a livestock trader, or directly to a packer. Generally the method used is influenced by both proximity to market and the volume to be marketed.

The auction market is relatively new but it is a very popular market with farmers. Farmers get satisfaction from seeing the actual sale of their cattle and from the opportunity to sell near home. The livestock at these auctions are bought by packer buyers, traders, order buyers or other farmers.

Some of the counties have from two to four auctions. These handle a comparatively small volume of livestock. It is doubtful that more than

one auction is necessary to market the cattle in any one county. In some counties markets are being established which cannot expect to draw a volume sufficient to maintain an efficient market.

Cooperative hog sales in the peanut area handle approximately 25 percent of the hogs going to market in the State. They have had a favorable influence on the quality of hogs produced.

Many of the packing plants have located in Alabama and adjoining areas since 1933. As a result, many farmers sell direct to the packer.

Prices

Seasonal Variations: There is a very definite seasonal variation in the volume and prices of livestock sold on Alabama markets. The indexes of seasonal variations of prices are given in Table I.

Table I—Seasonal Price Variations of Meat Animals as Indicated by Annual Averages of Past Ten Years (1931-41)*

Class	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Hogs	91	92	94	94	94	97	105	109	113	109	103	98
Beef Cattle	90	93	97	104	105	104	105	102	103	102	99	99
Veal Calves	92	94	98	101	102	101	101	102	105	104	101	98
Sheep	97	101	103	101	98	98	99	97	100	102	103	104
Lambs	94	96	97	101	102	104	103	102	104	100	99	99

* Mahan, J. N., and Marsh, John F., "Prices Received by Alabama Farmers for Farm Products, August 1909-August 1942", Alabama Agricultural Experiment Station Bulletin 258, Auburn, Alabama.

Based upon receipts at the Union Stock Yards, the bulk of the hogs is sold in December, January, February and March with the extreme low movement of hogs for market in May, June and July. Bulk of the cattle and calves is marketed from August through November with large quantities carrying over into December and January. The lowest movement of cattle and calves for market is in the period from April through June.

Generally speaking, it will be noted

from the above table that the prices on beef cattle and calves are relatively high during the peak months of movement. During such months there is a sufficiently large volume of livestock offered to permit the fulfillment of substantial orders to distant markets. This results in more or less stabilized prices. However, during the late spring and early summer when there are light offerings of cattle, the market is generally good. It will be noted that during

the months of peak movement, the prices of hogs are considerably lower than they are during the months of light movement.

The livestock programs of the Peanut and Black Belt areas are organized in such a manner that many farmers find it difficult to change the season in which their livestock must go to market. But farmers in the Tennessee Valley and portions of other areas can arrange their feed crops and livestock enterprises so as to take advantage of seasonal variations in prices. They should be encouraged to do so.

Price Differentials: A very controversial subject is price differentials between markets for animals of comparable grade and weight, especially as between Alabama markets and markets in the Mid-West. It is a known fact that there are differences in prices for livestock of comparable grade and weight in the two areas. The debatable subject is whether or not the existing differentials are justified.

It is commonly believed, and area differentials tend to support the belief, that livestock prices in Alabama are Mid-west market prices less transportation cost from Alabama to the Mid-West. People having this opinion contend that, so long as Alabama is a deficit producing area and livestock are being shipped from the Mid-west to supply present demands, livestock prices for comparable grades and weights in Alabama should be Mid-west market prices plus transportation costs to the area.

Livestock buyers from the Mid-west and packing companies deny the Mid-west plus contention. Instead, they justify the differentials on the basis of quality and dress-out percentages of livestock as compared with those in the Corn Belt. It is claimed that slaughter steers of comparable grade and weight produced in

Alabama yield less meat and are not of as high quality as those from the Mid-west.

Many Alabama peanut-fed hogs produce soft hams and bacon which shrink when cured. The soft bellies and fat backs do not have a wide outlet, and a high percentage of the casings and livers are unfit for human consumption because of parasite injury. Consequently, many Alabama hogs have a lower dress-out percentage, shrink badly and have a higher loss of by-products than Mid-west hogs. Various cuts of soft pork sell at prices less than hard corn fed pork. Packers also contend that hard hogs in Alabama have more parasite injury, a lower dress-out percentage and lower quality cuts than the Mid-western better-bred corn fed hogs.

Neither group has shown sufficient reliable data to completely substantiate their argument. Objective research is needed to reveal the facts so that both groups may know what adjustments are needed to make livestock enterprises in Alabama more successful.

Price margins on Alabama markets between different grades and weights of the same class of livestock have been insufficient to emphasize the importance of producing quality livestock. For example, barrows and gilts are sold on many Alabama markets by weight groups and very little attention is given to whether or not they are choice, good, medium or cull. A 180-240 pound barrow or gilt is considered a top hog on Alabama markets and little emphasis is given to the degree of excellence in relation to the entire range of excellence possible for such animals.

Consumption

EVEN THOUGH there are marketing peaks when Alabama produces a temporary surplus of some classes of meats, there is considerably more

beef, veal, pork and mutton consumed in Alabama than is produced in the State.

One packer operating a killing plant in Alabama imports annually about 50,000 hogs, 8,000 calves and 3,000 cattle to enable him to use his plant the entire year. In addition, he imports 23,000,000 pounds of beef, 4,000,000 pounds of veal, 3,000,000 pounds of lamb and 69,000,000 pounds of pork. All of this meat is consumed in Alabama and adjoining states and is a potential market for Alabama producers. This condition has proved true with the other packers operating in Alabama.

Based on figures supplied by the packing industries, Alabama consumes about 185,000,000 pounds of packing house meat annually. It is estimated that this 185,000,000 pounds would provide a market for about \$37,000,000 worth of Alabama livestock if all of it were supplied by Alabama producers. This does not include meat killed by local butchers or raised for home use.

Summary and Recommendations

1. Greatest needs in Alabama are for larger production of all classes of meat animals, pastures and feed, with improvement in the quality of animals produced.

2. Changes are needed, especially with hogs, in systems of production which will permit a greater distribution of marketing throughout the year.

3. Better hog production practices are needed to control parasites and diseases. It also is recommended that

a study be made of methods for controlling diseases and parasites of cattle.

4. Generally speaking, most areas of Alabama have sufficient near-by outlets for all animals produced. Most areas have outlets for much more production.

5. Alabama and adjoining areas have sufficient killing plants to absorb a substantial increase in production if marketing is more evenly distributed throughout the year.

6. There is a demand in Alabama and adjoining states for much more meat than is now being produced with an almost unlimited market for feeder cattle in North and Southeast Alabama and in states to the North and East. To these markets Alabama producers are many hundreds of miles nearer than Western feeder cattle producers.

7. Compared with other Southern States and quality considered, Alabama producers are apparently receiving a fair price for their livestock.

8. Research work should be done on transportation costs and price differentials between markets and grades of the same classes of livestock to determine the comparative level of prices received by Alabama farmers for their livestock.

9. Believing that increased sheep production would be profitable to Alabama farmers, it is recommended that the Alabama Experiment Station do additional sheep work at the sub-stations located in the Black Belt, the Tennessee Valley and the proposed station to be located on the Piedmont plateau.

POULTRY AND EGGS

Historical Background

CENSUS FIGURES of 1920 show that the yearly production of each Alabama hen was only 47.5 eggs, a production far too low for poultry to be an economic factor in Alabama agriculture. To help change this picture the Extension Service of the Alabama Polytechnic Institute on June 1, 1923, appointed the first full-time extension poultry specialist.

During the early twenties the State was so engrossed in a cotton economy that little thought was given to the possibilities of poultry in a sound agricultural program.

A forward step in bringing about a realization of the importance of poultry in Alabama agriculture was the establishment of the Alabama National Egg Laying Contest in 1924, the first egg laying contest in the South. The 1000 hens entered in the contest produced an average of 153.23 eggs each, the highest of any contest in the country up to that time. Soon, egg laying contests were

established in Georgia, Florida, Mississippi, Louisiana, and Texas. In these contests hens consistently produced more eggs than hens in contests in other sections of the country. Results showed that egg production can be maintained on a satisfactory level in Alabama and the South.

Since the poultry department of the Alabama Polytechnic Institute was established and combined with poultry research in 1925 the staff has been enlarged and the scope of research work broadened. This has been of great value in expanding the poultry industry.

Records reveal that from 1937 through 1941 a total of 1,077 farmers, with 178,509 hens, in 65 Alabama counties, conducted poultry demonstrations and kept an accurate record on production, expenses, and income. All these producers made a profit except 84. A summary of the results from the 1,077 farms follows:

Average number of eggs per hen per year.....	170.3
Average sale price per dozen eggs.....	24.7c
Gross income per 100 hens per year.....	\$342.51
Income above feed cost per 100 hens.....	\$153.51
Average sale price of cotton per pound (same period).....	10.1c
Pounds of cotton to equal gross income of 100 hens.....	3459.8
(Approx. 7 bales)	
Average sale price of corn per bushel (same period).....	65c
Hen market per bushel of corn after paying \$3.50 for supplement	\$2.55
Gross daily income per 100 hens.....	93.4c

Poultry Improvement Program

IN 1925 the State Department of Agriculture, Montgomery, and the Extension Service, Auburn, started a joint breed improvement and pullo-rum (B.W.D. or Bacillary White Diarrhea) testing program. During the first year approximately 10,000 birds were on the program. The num-

ber of birds increased each year until 1930-31 when 51,937 birds were involved. A gradual decline in number of birds was noted until a low of 30,277 birds was reached in 1934 when an improved program was perfected. The following comparison of 1935 and 1942 tells the story since that time:

	1935	1942
Number counties having hatcheries -----	17	57
Number official hatcheries -----	19	93
Number birds pullorum tested -----	32,509	198,361
Hatching egg capacity -----	118,574	2,855,600
Number certified flocks -----	0 (1-1936)	370
Number certified birds -----	0 (13-1936)	71,058

On September 13, 1937, the Auburn Record of Performance Project, the first of its kind in the United States, was started. This is a co-operative breeding project conducted by the Alabama Poultry Breeders, co-operating with the Alabama Extension Service, State Department of Agriculture and Industries, Alabama Experiment Station, and United States Department of Agriculture.

Objectives of the project are:

1. To encourage the use of hens of known values and livability for the purpose of obtaining desirable males for breeding purposes, which will

affect the economy of egg production by lowering flock mortality.

2. To encourage and assist poultrymen in breeding of birds capable of economical egg production over a period of years, which will affect the entire poultry industry in Alabama, including the three definite recognized groups—home flock, farm flock, and commercial flock.

3. To encourage and assist in progeny testing, to isolate and distribute males of known superior breeding ability to hatcheries producing and selling commercial chicks.

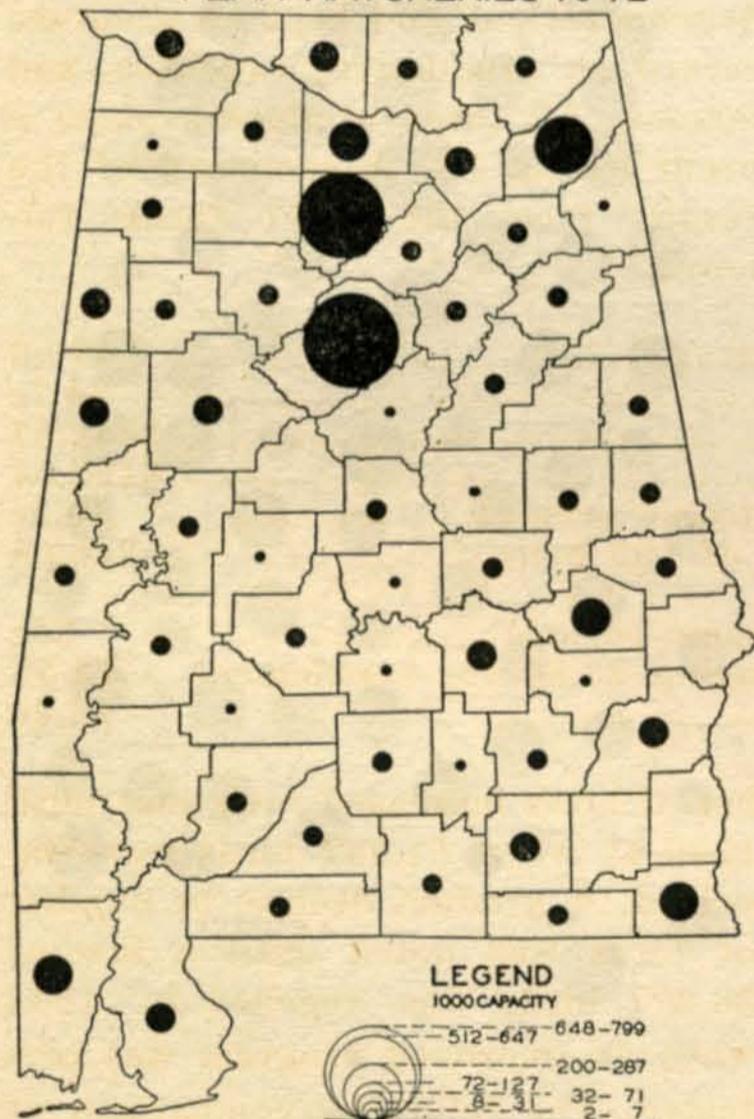
4. To secure accurate data relative to the egg production ability of fowls of different breeds and from different sources during their pullet, yearling and later years, for study and research.

As an integral part of the Alabama poultry improvement program, 13,491 individually wing banded chicks were produced and distributed from this project in 1940-41. Records also reveal that in 1936 there was only one flock of 13 hens in Alabama mated to R.O.P. males. In 1942 this number had jumped to 370 flocks with 71,158 hens mated to R.O.P. males.

The following, quoted from a letter from the Alabama State Hatchery and typical of what is happening in other sections, illustrates the far-reaching effect of the Auburn R.O.P. project:

"From the 1,855 wing-banded chicks you shipped me from my two pens of birds, I have selected 484 males. They are mated to 6,000 females from which I will secure my hatching eggs for 1943.

NATIONAL POULTRY IMPROVEMENT PLAN HATCHERIES 1942 *



MAP 18

Report of State Dept. Agr. & Ind.

“On the basis of my last year’s operation these 6,000 hens will produce 180,000 chicks that will be distributed to 1,800 farmers. From this increased egg production and lower

mortality are expected real contributions to farmers and economy of the State.”

The following figures give some evidence of the influence of Alabama’s poultry program:

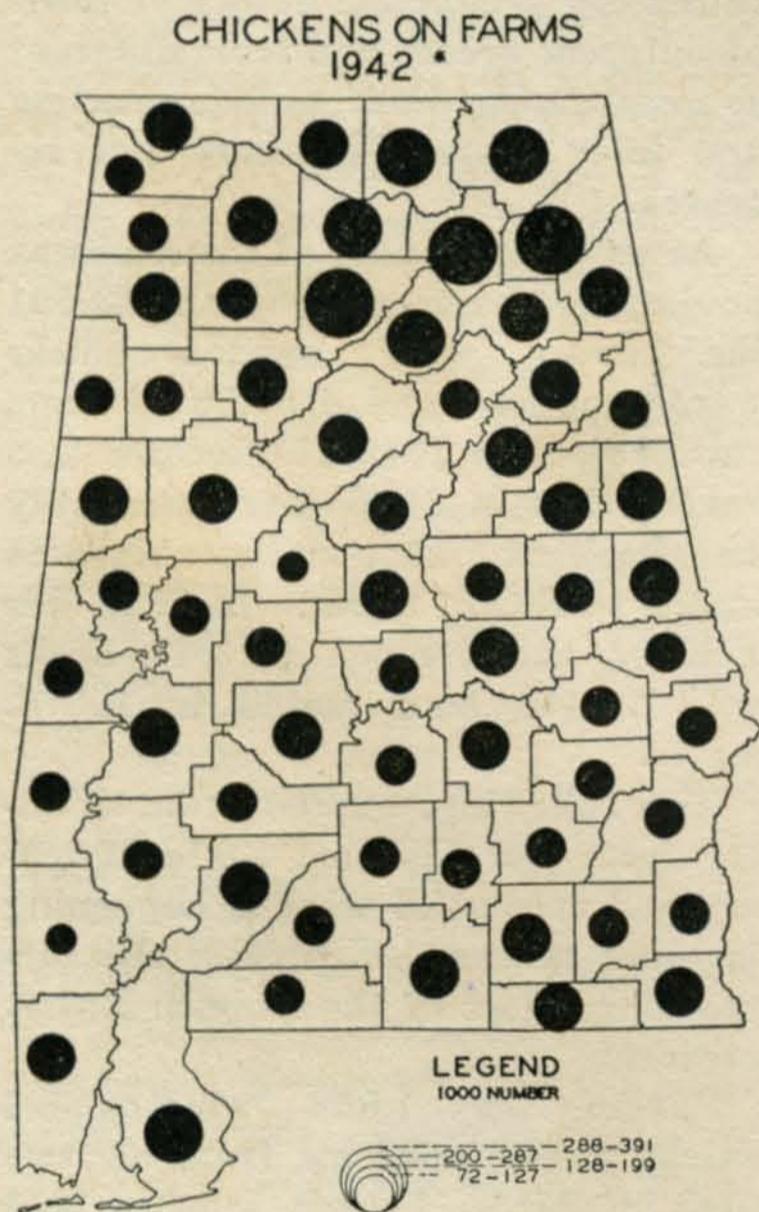
	1920	1942
Number chickens on farms -----	5,915,429	7,525,000
*Egg production per hen -----	47.5	85.9
Average egg production per hen in Auburn R.O.P. Project -----		189.3

*From Bureau Agricultural Economics.

During 1942 Alabama hens produced 30,451,218 dozen or 2,537½ carloads more eggs than they did in 1920. At 24.7c per dozen, (the five year average 1937-41 inclusive) this increase in production meant \$7,411,450.84 for the Alabama farmers.

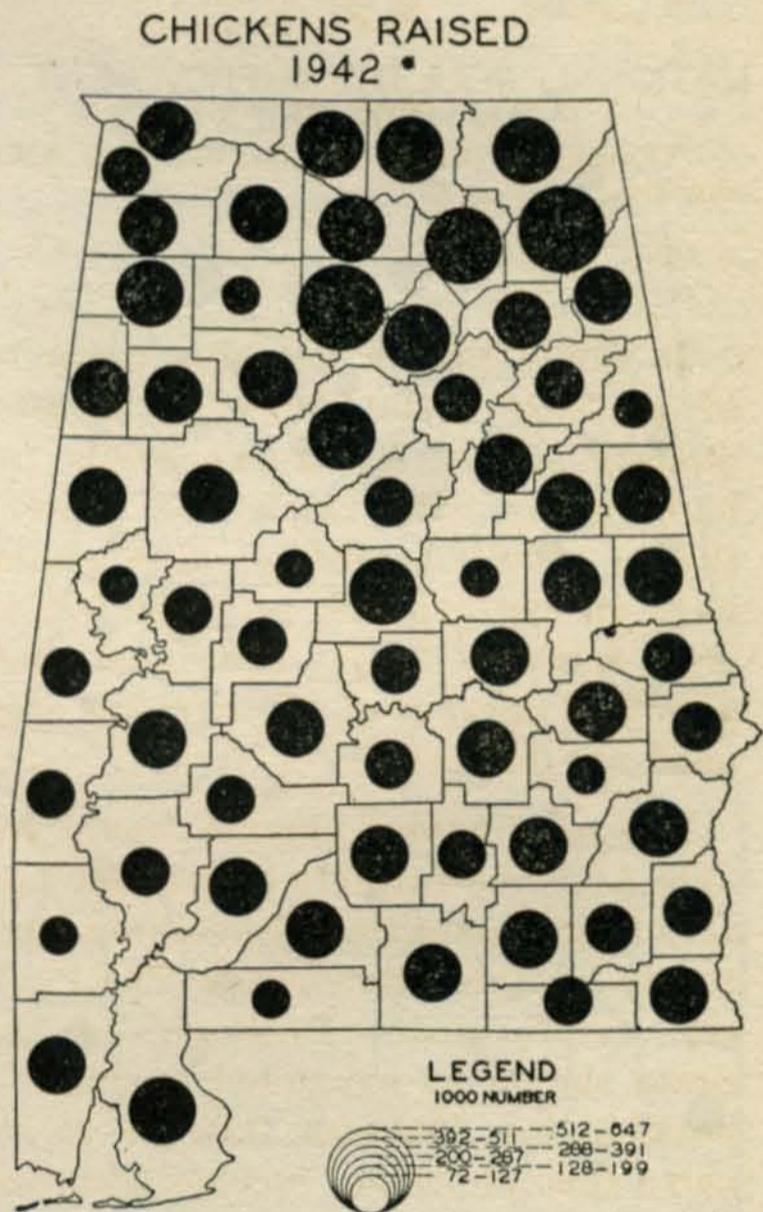
Hatching Eggs

FIGURES from the Alabama State Hatchery, Dothan, Alabama, show that 19 farmers in Henry County increased their cash income in 1942 by \$254.00 each from the sale of U. S. Alabama Approved Pullorum tested hatching eggs.



MAP 19

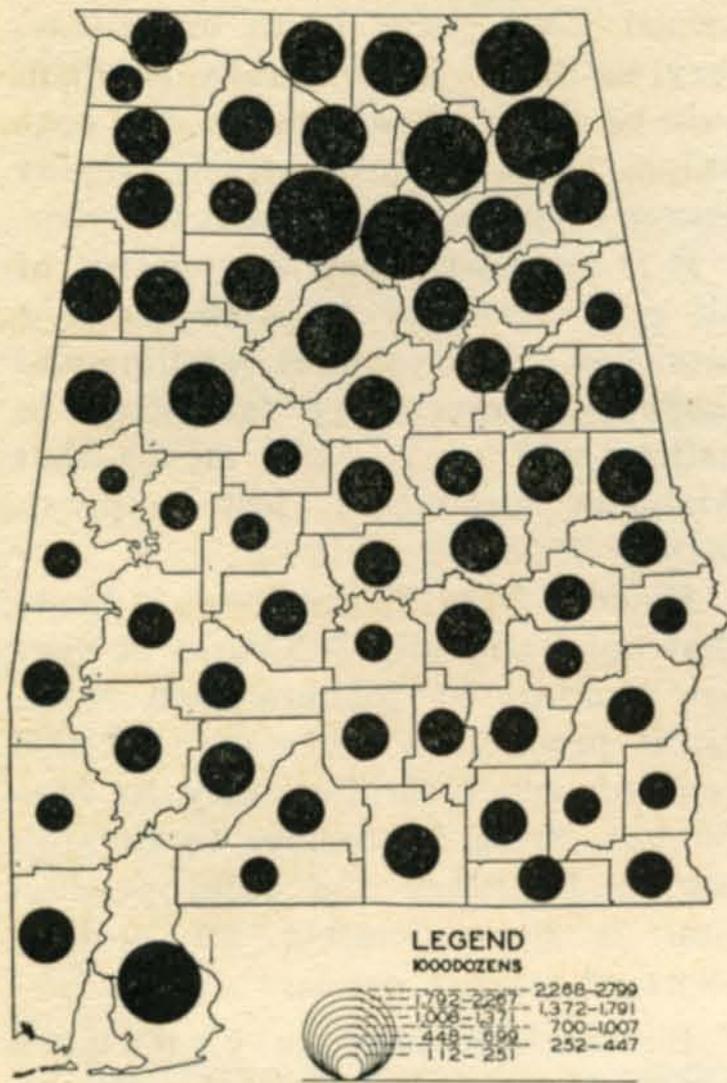
*Estimates based on Census and AMA reports.



MAP 20

*Estimates based on Census and AMA reports.

EGGS PRODUCED
1942 *



MAP 21

*Estimates based on Census and AMA reports.

It would take a hatching capacity of at least 6,700,000 eggs to adequately supply Alabama's needs for high-quality baby chicks. At present the 93 official hatcheries in Alabama have an egg capacity of 2,855,600 at one setting. It is estimated that about 25 percent of all hatching eggs used are imported.

The mild winter climate would enable Alabama farmers to produce and ship large quantities of hatching eggs to the Northern hatcheries. The Poultry Improvement Program of the State should be expanded to make it possible for Alabama farmers to receive this additional income from exported chicks. Already we have a program recognized as outstanding in the Nation but it is expanding.

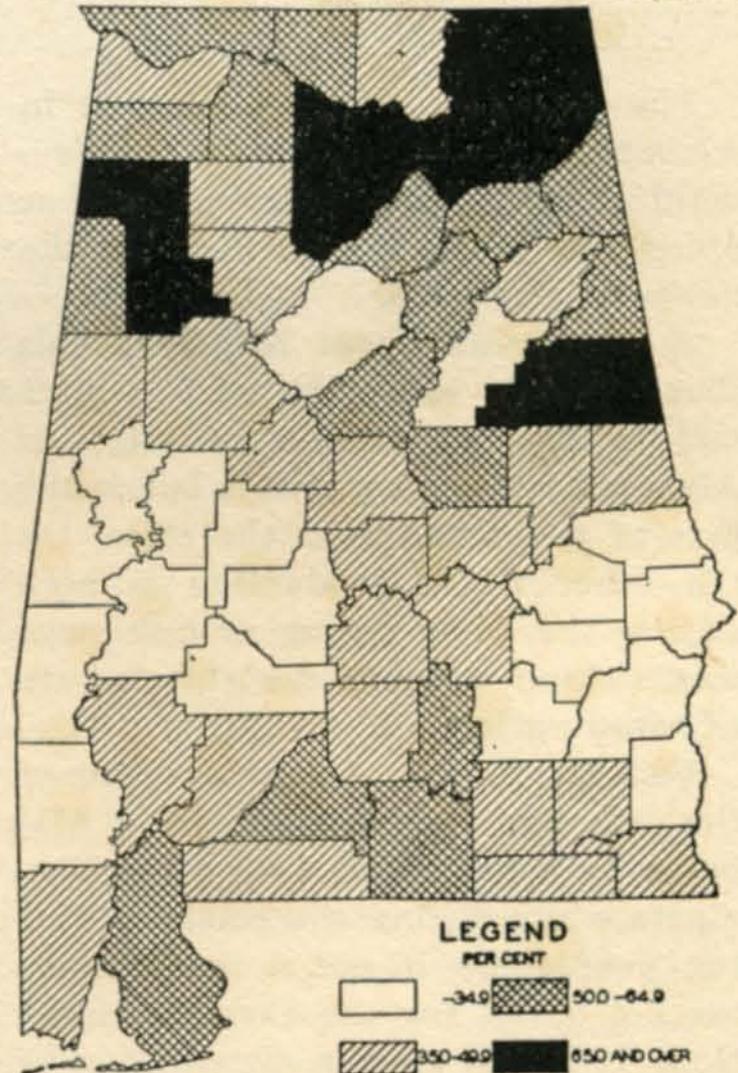
Value of Alabama Poultry Industry

ACCORDING to 1940 census the value of the poultry industry (poultry and eggs) in Alabama was \$12,134,000. With the increase in number of hens, larger egg production, and increase in prices the 1942 value is well over \$16,000,000.

Egg Production

A STUDY of the map (Map No. 21) reveals the fact that egg production is distributed throughout the 67 counties with heavy production concentrated in the area north of Jefferson County and in Baldwin County. The census shows that 46.4 percent of all farms in Alabama receive some cash income from the sale of poultry and poultry products. The distribution of this income by counties is shown in (Maps No. 22 and 23).

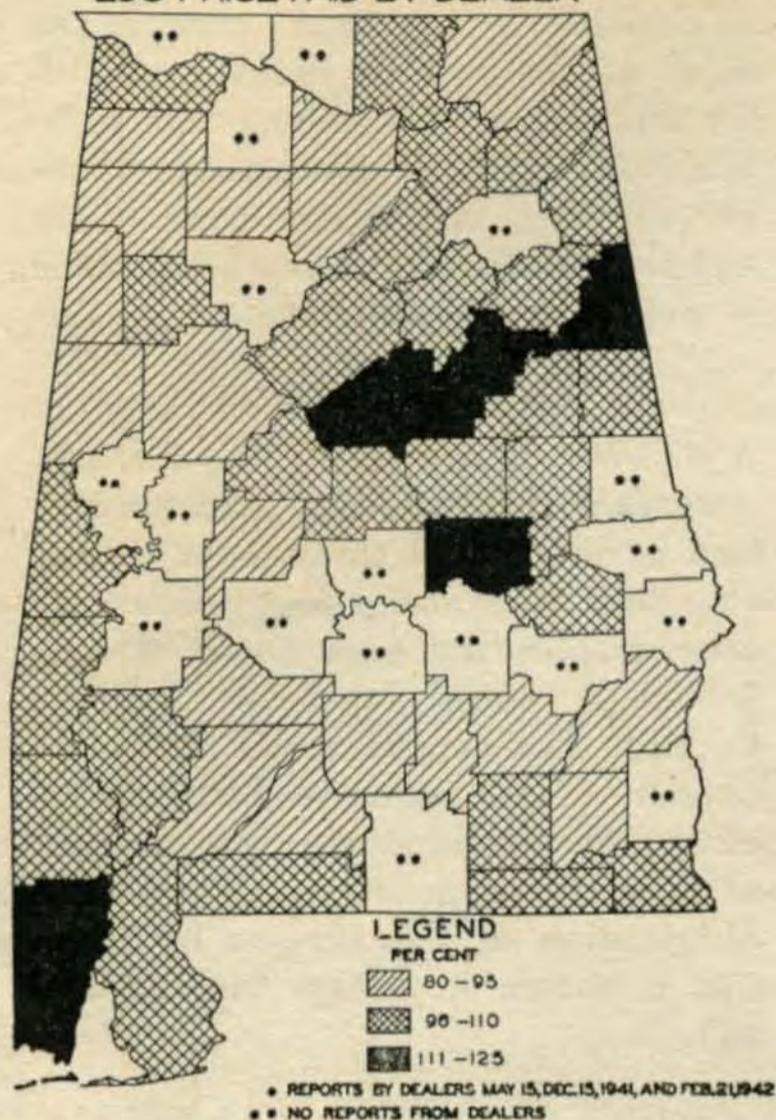
PERCENTAGE OF FARMERS SELLING POULTRY AND POULTRY PRODUCTS, 1939 *



MAP 22

*1940 Census.

PERCENTAGE OF AVERAGE ALABAMA
EGG PRICE PAID BY DEALER*



MAP 23

The problem of egg marketing in Alabama is serious. On a twelve-month basis, an insufficient number of eggs is being produced to fill the needs in the state.

A glance at Chart No. 5 reveals that during the fall and winter months the production of eggs in Alabama is very low and is below the rate of consumption in the state. On the other hand, production is high during the early spring and summer months and exceeds the state's rate of consumption.

This means that for one period of the year eggs are imported into Alabama to meet consumption requirements while during the remainder of the year there is not a satisfactory market outlet for the excess production. It is this uneven distribution of production that complicates the marketing problem.

It is almost impossible to get an increase in egg production during the period when there is an unsatisfactory market. It is equally as difficult to establish a market for eggs unless there is a relatively steady source of supply throughout the year.

It is estimated that five percent of all eggs produced in Alabama is a total loss due to careless handling and inadequate marketing facilities. In dollars and cents this means that Alabama producers lost approximately \$795,000 in 1942.

Reports from Montgomery indicate that approximately 500 cases of eggs are handled by jobbers each week. Local production takes care of this requirement from February to September. From September to the following February the local production is approximately 30 percent short of market needs.

Birmingham markets consume about \$2,000,000 worth of eggs annually.

It is estimated that between 40,000 to 50,000 thirty-dozen cases of Alabama produced eggs are sold in Birmingham annually. In addition large quantities of eggs produced in other states are shipped into Birmingham. This means that Birmingham offers a tremendous market for Alabama eggs.

In 1942, an egg drying plant with a capacity of 2,000 cases of eggs per day was established in Birmingham primarily to produce dried eggs under Government contract for Lend-Lease purposes. This plant buys eggs during the surplus season and places them in cold storage and dries them on a regular schedule throughout the year.

Through the dehydration process, (only water removed) a 30-dozen case of eggs with a net weight of 45 pounds is reduced to a 10-pound package. This dried product, which can be kept for a long time under

6-10

EGGS-SEASONAL VARIATION OF PRICES AND PERCENTAGE PRODUCED BY MONTHS*

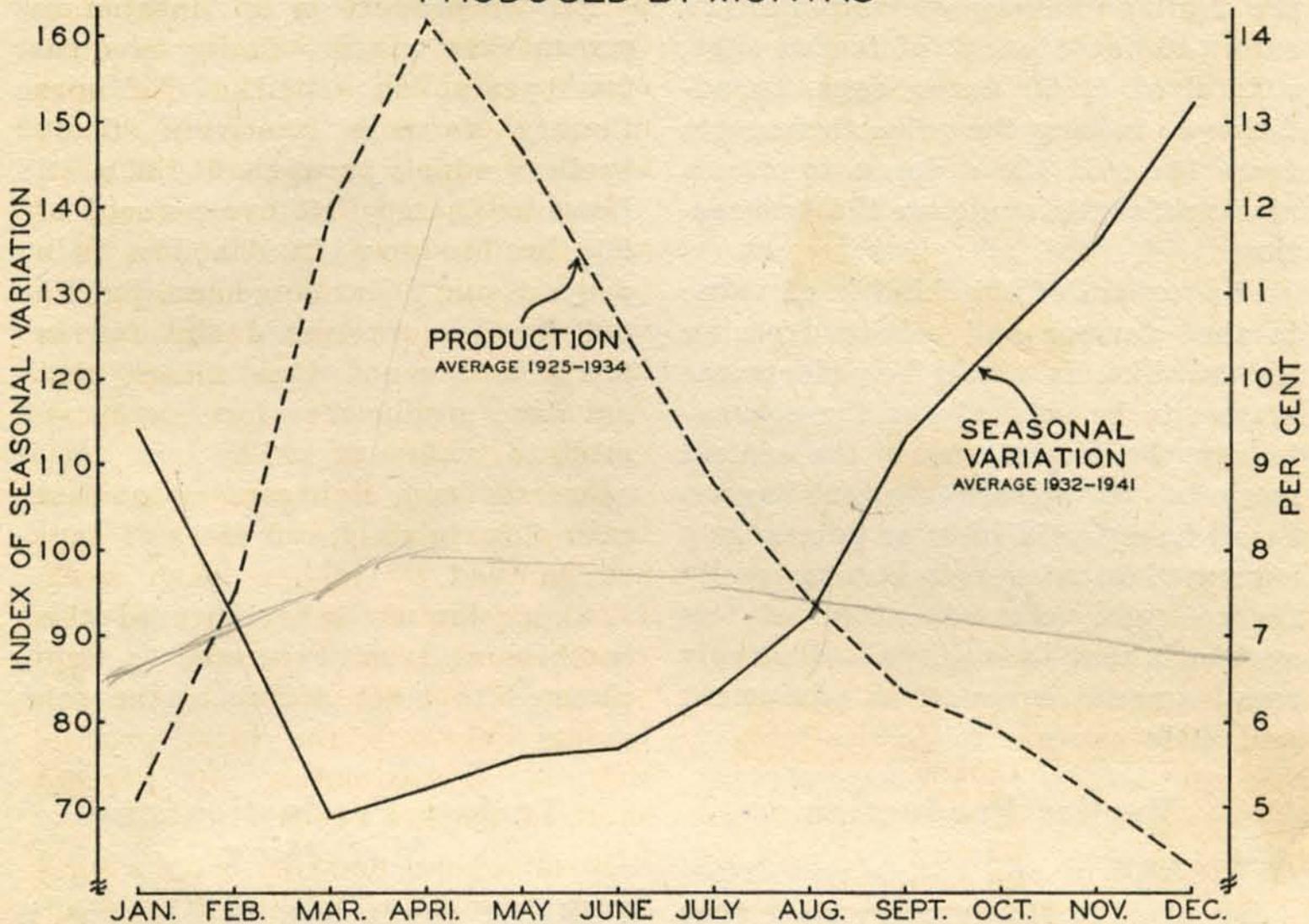


CHART 5

*Mahan, J. N. and Marsh, John F., "Prices Received by Alabama Farmers for Farm Products, August 1909-August 1942," Ala. Agr. Exp. Bul. 258 and "Crops and Markets," U. S. D. A., April 1938.

average weather conditions, is being shipped to our fighting forces and allies all over the world. Plans are being developed for using this plant after the war to take care of the surplus production during the spring and summer months. It can handle about 20 percent of Alabama's present production.

Frozen Eggs

ESTABLISHMENT of local quick freezing plants in Alabama has provided another way of relieving congested egg markets during the spring of the year. At the same time the plants provide farmers with an outlet for their eggs at a higher price than they would otherwise get. Handling the eggs also increases the income of the plants.

For several years one bakery in

Mobile has used approximately 40 tons of frozen eggs per month. The quick-freezing plants at Camden, Selma, and Grove Hill processed eggs in this form in 1942. Here is an example of how this plan works:

About the first of May, 1942, eggs were selling in Clarke County from 11c to 18c a dozen, mostly in trade at country stores. The Central Refrigeration Cooperative of Grove Hill worked out an arrangement with the Malbis Bakery in Mobile to deliver them frozen eggs. The co-operative paid the farmers 24c a dozen for standard weight eggs of "standard" grade, one cent per dozen premium for each ounce over 24 ounce, and 1c per dozen less for each ounce under 24 ounces. Immediately eggs all over the county advanced to 24c per dozen.

From May 1, to July 1, the Central Refrigeration Cooperative shipped the Malbis Bakery of Mobile 129 cans (40 dozen each) of frozen eggs, a total of 5,160 dozen eggs. In addition to raising the price to farmers from 11c and 18c a dozen to 24c, a nice profit was made on the transaction.

A program of this kind is of value to the farmer and sharp freezing plants alike. It would help for some system to be worked out for concentrating the frozen eggs in the central markets to attract larger buyers. Small bakeries in interior points have expressed an interest in buying locally frozen eggs. An advantage of this system is that it requires a relatively small amount invested in equipment and little expense to do the job.

Broiler Production

OFFICERS of one killing and dressing plant in Montgomery state that they kill approximately 10,000 pounds of broilers each week. Local production takes care of the requirements from April to July, but during August, September, October, November, December, January, February and March, they buy about 3,500 pounds each week from Georgia and Tennessee.

In Mobile there is one dressing plant that kills 12,000 pounds of broilers per week. About 90 percent of them are produced in Alabama; the other 10 percent comes from Georgia and Mississippi.

To take care of the needs for the boats leaving Mobile it requires about 12,000 pounds of frozen broilers per week. At present this requirement comes from out of the State, graded and properly packed.

A large poultry plant in Birmingham kills approximately 25,000 broilers per week, 98 percent of which comes from Georgia, and 2 percent from Alabama. Birmingham alone

uses about 50,000 chickens per week valued at \$25,000 to \$30,000.

Broiler production in Alabama has grown very rapidly during the past few years. In 1942, 21 Monroe County farmers produced 68,000 broilers which brought \$40,000. In Lowndes County, 10 farmers sold 40,000 broilers for \$22,000. The Tallapoosa County Exchange handled 91,438 broilers and paid the farmers \$51,870. An additional 25,000 broilers were produced in the county and sold to independent dealers. It is conservatively estimated that Cullman County produced 200,000 broilers in 1942.

Expansion of the broiler production in these and other areas is being planned to meet Alabama's requirements.

Turkey Production and Marketing

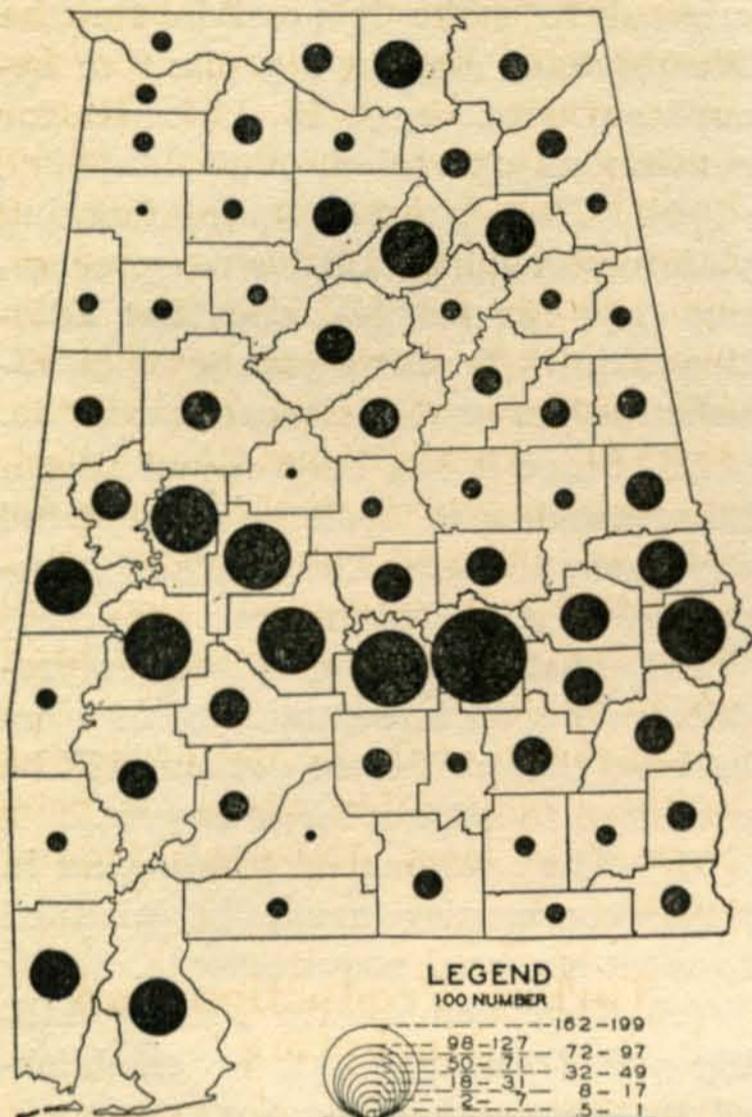
TURKEY production in Alabama is largely within the area known as the Blackbelt, with heavier concentration in Hale, Sumter, Greene, Marengo, Perry, Montgomery, Lowndes, and Russell Counties.

There are a few large producers in other parts of the State. (See Map, No. 24.)

Until a few years ago turkey was thought of as a Thanksgiving and Christmas delicacy. It is now being served in many leading hotels and cafes every day in the year. Six leading hotels in Chicago in 1941 carried turkey on the menu from three to seven days each week, thus increasing consumption of turkey meat in Chicago 4,000,000 pounds that year. The present emergency is creating demands for turkeys, which should stimulate production. At present it is the most economical meat obtainable, replacing high-quality steaks that are unavailable.

There has been a change in the system of marketing turkeys. Until

TURKEYS RAISED
1942 *



MAP 24

*Estimates based on Census and AMA reports.

recently they were all marketed alive. Leading markets are now on a "dressed basis". Due to this change and the fact that there are no turkey killing and dressing plants in the State, larger dealers have been forced to secure much of their supplies out of the state.

Offering dressed and graded turkeys would increase the number of buyers on local markets, which would result in higher prices. The present marketing system (live basis) interests only a few buyers. This means that farmers have no advantage of competitive prices.

One Russell County producer and shipper who follows good production methods sold his turkeys dressed at an average of 33c per "N. Y. dressed" (bled and feathers removed) basis, while another producer and shipper with comparable quality tur-

keys sold his "live" basis at an average of 22c per pound. The man who sold on a dressed basis said his shrinkage and additional cost was 5c per pound which was equivalent to 28c live weight, or 6c more per pound by killing and dressing. This is an additional income of \$1.20 on a 20-pound turkey. He sold 500 turkeys which brought him \$600.00 more than if he had sold them on foot. The other grower sold 2,000 turkeys at 22c per pound. Had he marketed them "N. Y. dressed" he would have received \$2,400.00 greater income.

Lack of proper facilities is a big problem in handling dressed turkeys in the concentrated production areas. It is believed that this could be solved by shipping to large storage plants in Mobile, Montgomery, and Birmingham in ice packs, dry cold packs, refrigerated trucks or cars, or by establishing cold storage holding rooms in local storage plants.

All turkeys should be sold on a grade basis. As farmers become acquainted with the value of quality they will appreciate and profit by a grading system. Official grading is necessary because Government regulations now require packers and distributors to sell on graded basis.

Recommendations for Improving Poultry Production and Marketing

IT IS DIFFICULT to separate problems involved in marketing from those in production, therefore, the two phases will be considered together.

I. Since the Poultry Improvement Program now in operation in Alabama has proven its value, it is recommended:

(a) That an official hatchery be established in every county or closely accessible to it. This has proved to be the best method of stimulating interest in getting increased produc-

tion of quality products. These hatcheries also may assist in marketing poultry and eggs.

(b) That the present breeding and disease control program be enlarged to help meet the requested increase in poultry and egg production.

II. Standardization and grading being essential in any sound system of marketing, it is recommended:

(a) That at least one or more limited licensed egg graders be made available to every county producing eggs in quantities greater than local consumption.

(b) That a full-time State-Federal egg grader be placed in each of the three central markets at Montgomery, Birmingham and Mobile. These graders would operate under the existing marketing agreement of the State Department of Agriculture, Alabama Extension Service, and United States Department of Agriculture.

(c) That a plan be formulated to expedite the movement of eggs from interior points to the central markets.

(d) That the two activities of standardizing and grading of poultry and eggs and conducting improvement work be combined and the Poultry Division of the State Department of Agriculture, co-operating with the Alabama Extension Service, and United States Department of Agriculture, be responsible for the combined program.

(e) That adequate cold storage facilities be maintained at central markets to care for the increased poultry and egg production and to provide a better distribution of surpluses created during seasons of peak production. It is desirable to encourage the system of financing whereby producers of eggs during seasons of peak production can retain their equity in them until they are sold. At the present time this system is actually in operation by some banks, cold

storage plants, and private operators.

(f) That egg production be increased to make it possible for the Birmingham egg drying plant to secure sufficient eggs in Alabama for continuous operation.

(g) That present quick-freezing plants offer opportunities for processing eggs for market, and that additional quick-freezing plants be established when materials are available.

III. Since it has been found that a large number of broilers is imported each year to meet Alabama's requirements, it is recommended:

(a) That expansion of broiler production be on a community or area basis so that sufficient volume will be produced to attract large buyers.

(b) That volume of production in these community areas be planned to meet seasonal requirements.

(c) That community poultry killing and dressing plants be established to prepare broilers for market.

(d) That broilers be properly packed and officially graded to meet U. S. Standards.

IV. Believing that turkey production has a bright future, it is recommended:

(a) That increased production of turkeys be done on an area basis.

(b) That killing and dressing plants be established to take care of area production.

(c) That the turkeys be properly packed and officially graded to meet U. S. Standards.

V. It is further recommended that appropriate legislation or regulations be passed to make "U. S. Grades" of turkeys, eggs, and broilers, the "official grades" in Alabama. This will enable Alabama turkeys, eggs, and broilers to enter all competitive markets on equal basis.

VI. It is also recommended that a State-wide poultry and egg market news service be set up for keeping producers informed daily on prices.

FIELD CROPS

Cotton

COTTON is, and for more than 100 years has been, the backbone of the economic system of Alabama. In 1942 Alabama farmers produced 883,056 bales of cotton which sold for \$78,026,828. The cotton industry has directly or indirectly furnished employment and income for a big proportion of the population. Out of a total cash farm income of \$137,254,000 in 1941, \$64,462,000 came from sale of lint cotton and \$11,356,000 from sale of cottonseed.

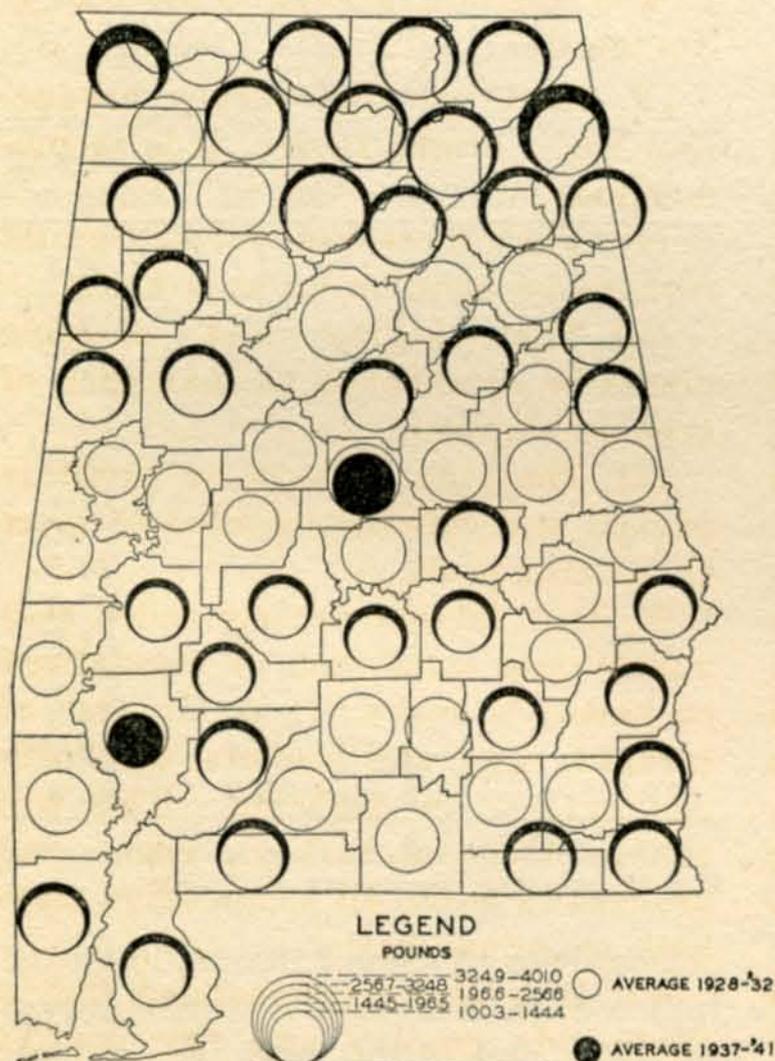
Nearly 40,000 people earning \$27,799,213 in wages were employed in 1939 by 103 textile manufacturing plants, largely engaged in cotton manufacturing of various kinds. These establishments used \$68,000,-

000 worth of material, fuel and electric energy, and manufactured products valued at \$123,979,606.

The Black Belt was the principal cotton producing area in Alabama up to the advent of the boll weevil in 1914. The heavy producing areas are now the Tennessee Valley, Sand Mountain and Wiregrass while the Black Belt has shifted largely to cattle and hay crops.

For generations much of Alabama's cotton crop went to foreign markets. Several foreign countries have become strong competitors within the last fifteen years, especially in quality and uniformity of packing. This, plus disturbed economic conditions, practically closed foreign cot-

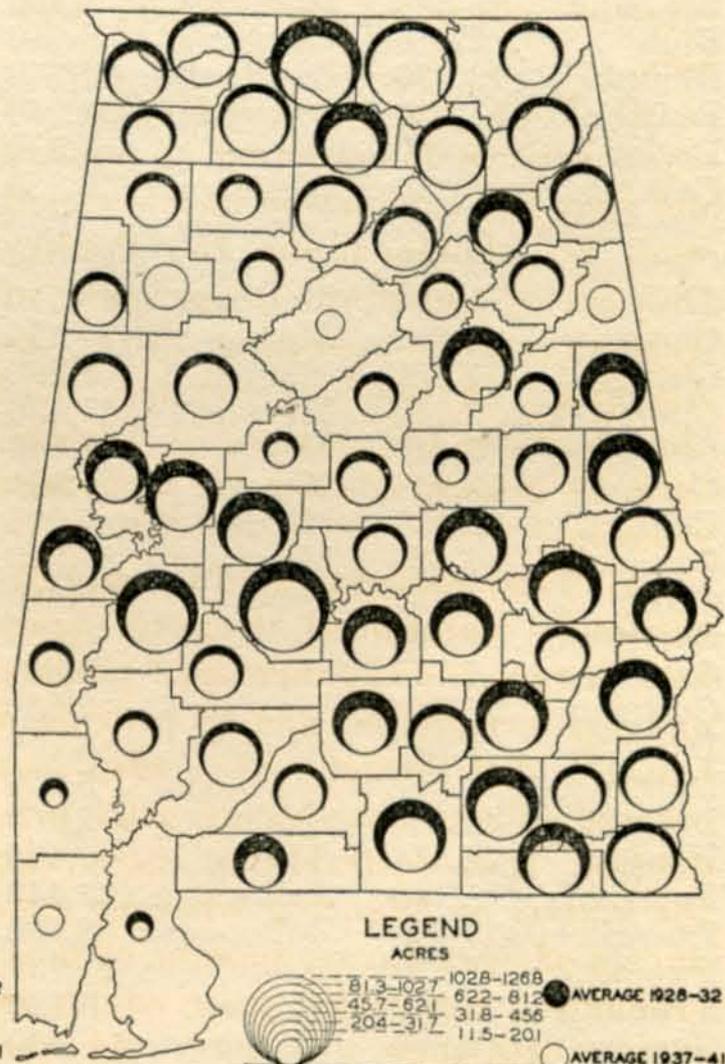
COTTON YIELDS *



MAP 25

*AMA and AAA reports.

COTTON ACREAGE *



MAP 26

*AMA and AAA reports.

ton markets to Alabama before World War No. 2.

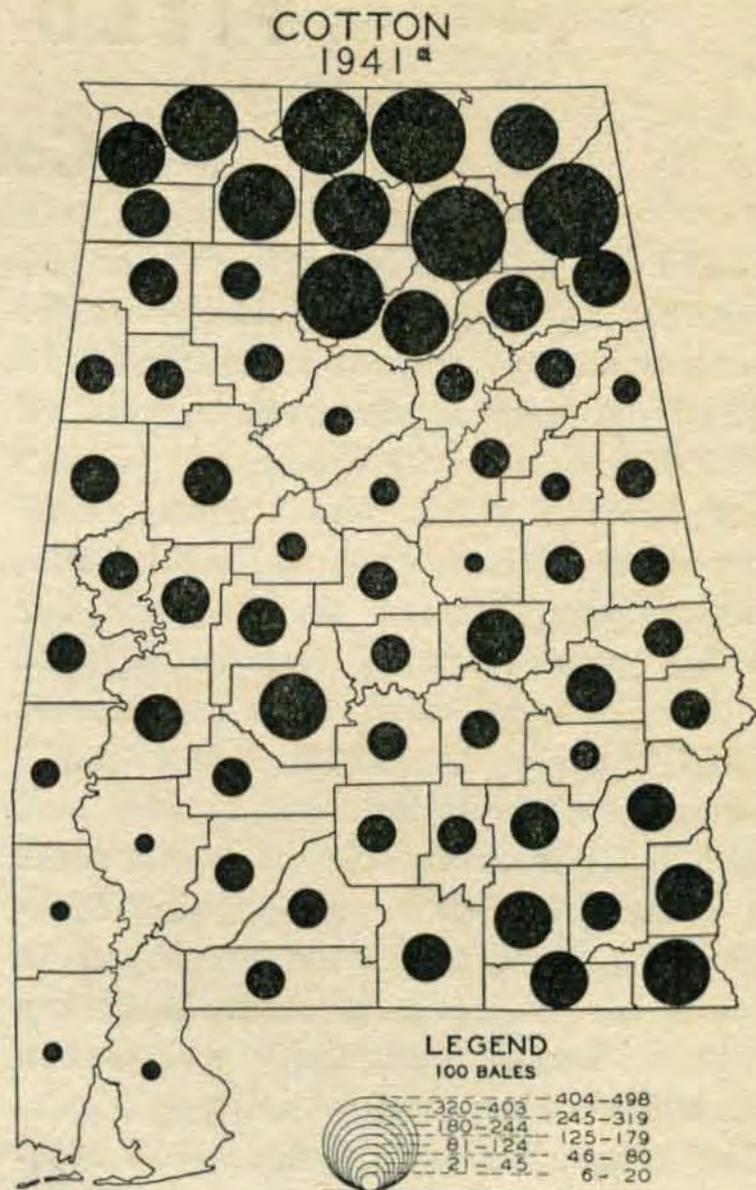
Furthermore, the cotton acreage in Alabama in 1941 dropped to 1,760,000 acres, the lowest since 1876. The average acreage 1909-1914, just before the invasion of the boll weevil, was more than 3,500,000 acres.

Military requirements are for better quality and longer staple cottons. The supply of short cotton is far in excess of needs.

Whether for military needs during the war, for meeting requirement of domestic consumption in war or peace, or for regaining foreign markets after the war, high quality, good staple cotton, properly ginned and packed must be produced economically in Alabama.

Bales of Cotton Produced in 1941 Alabama — By Counties

County	Bales	County	Bales
Autauga	6,580	Houston	22,620
Baldwin	1,040	Jackson	23,940
Barbour	8,330	Jefferson	2,530
Bibb	2,610	Lamar	8,010
Blount	19,680	Lauderdale	24,770
Bullock	4,330	Lawrence	31,740
Butler	6,710	Lee	6,580
Calhoun	5,320	Limestone	39,830
Chambers	5,950	Lowndes	6,690
Cherokee	17,390	Macon	11,040
Chilton	5,030	Madison	49,710
Choctaw	2,950	Marengo	11,120
Clarke	1,850	Marion	8,280
Clay	3,890	Marshall	43,150
Cleburne	3,410	Mobile	1,140
Coffee	13,470	Monroe	7,950
Colbert	22,530	Montgomery	7,960
Conecuh	5,720	Morgan	27,500
Coosa	1,030	Perry	8,440
Covington	10,330	Pickens	11,530
Crenshaw	7,370	Pike	9,300
Cullman	36,240	Randolph	7,780
Dale	7,670	Russell	6,290
Dallas	18,350	St. Clair	5,250
DeKalb	42,250	Shelby	2,960
Elmore	12,610	Sumter	6,470
Escambia	5,420	Talladega	6,440
Etowah	14,590	Tallapoosa	5,100
Fayette	6,620	Tuscaloosa	11,730
Franklin	11,360	Walker	5,130
Geneva	14,800	Washington	820
Greene	5,820	Wilcox	6,170
Hale	11,030	Winston	7,070
Henry	12,680		



MAP 27

*AAA records.

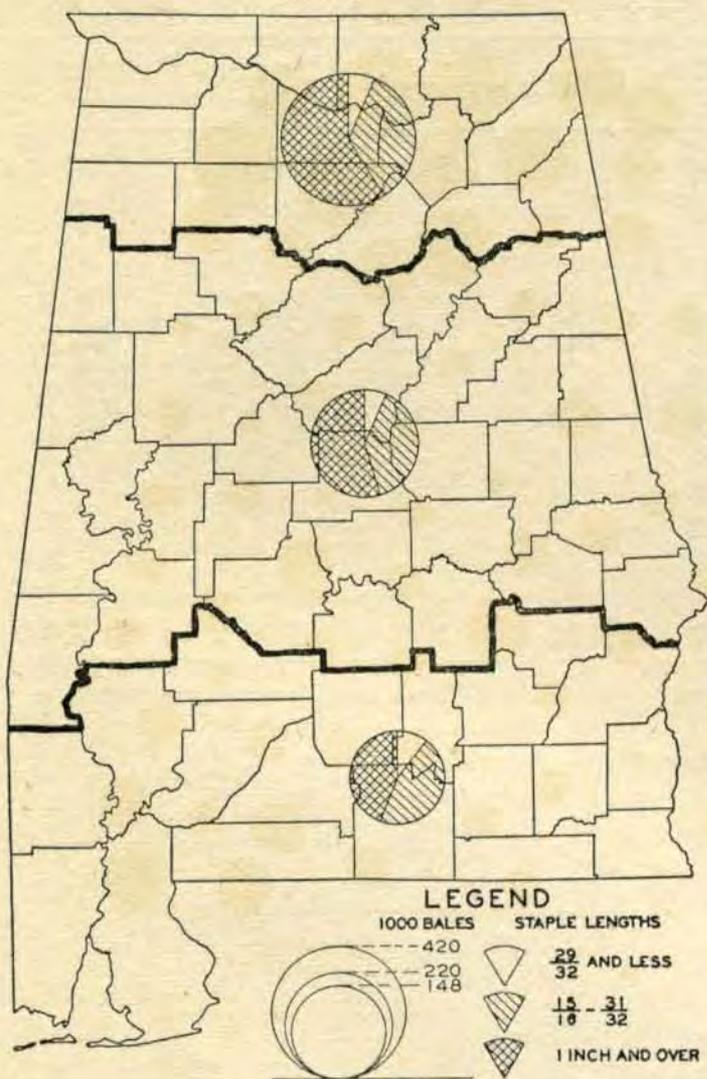
Percentage Staple Lengths Alabama

Year	7/8	7/8 and 29/32	15/16 and Longer
1928	24.1	69.5	6.4
1929	44.8	52.7	2.5
1930	38.3	55.5	6.2
1931	9.9	75.4	14.7
1932	14.7	70.4	14.9
1933	8.7	73.0	18.3
1934	21.0	61.3	17.7
1935	34.7	51.7	13.6
1936	5.2	60.3	34.5
1937	17.1	46.9	36.0
1938	4.9	33.6	61.5
1939	1.9	23.7	74.4
1940	2.9	20.8	76.3
1941	.2	7.1	92.7
1942*	1.2	13.9	84.9

*Agricultural Marketing Administration Report released December 8, 1942.

Penalties of some \$10,000,000 were inflicted on Alabama cotton growers in 1929 and 1930 because a high percent of the cotton averaged less than 7/8 inch due to the planting of

QUANTITY AND STAPLE LENGTHS OF COTTON PRODUCED
1942*



MAP 28

*AMA and AAA reports.

short staple varieties. Domestic mills and foreign markets did not want Alabama cotton because of its short staple length and inferior quality.

By practically eliminating short cotton and producing largely 15/16 and longer the reputation of Alabama cotton for better quality and longer staple has been restored and farmers no longer suffer heavy penalties.

Consumption and Production

THE CONSUMPTION of cotton in Alabama during the season 1939-40 exceeded, for the first time in history, the production of cotton in Alabama. For the season 1940-41, the excess of consumption over production was very materially increased. A total of 1,124,700 bales was consumed in the State as compared with a production of 768,500 bales.

PERCENTAGE OF COTTON BY STAPLE LENGTHS, ALABAMA, 1928-41*

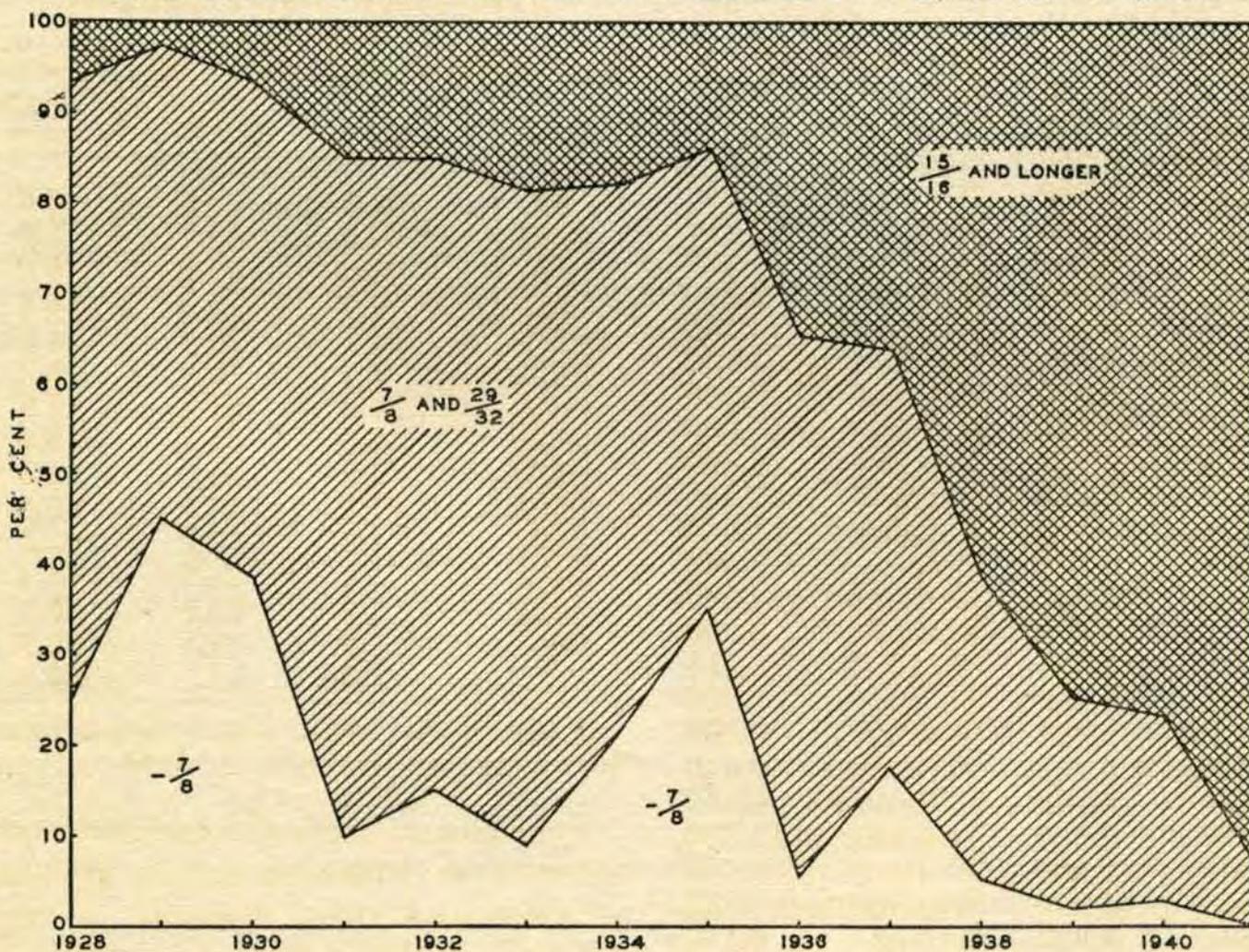


CHART 6

*AMA reports.

Growth and staple length (inches)	1939-40			1940-41		1941-42	
	Consumption ¹		Production ²	Consumption ¹		Production ²	Production ³
	1,000 bales	Per cent	1,000 bales	1,000 bales	Per cent	1,000 bales	1,000 bales
Upland:							
Minus 7/8 ⁴	7.1	1	14.7	10.1	1	25.2	1.5
7/8 & 29/32	87.4	10	182.6	147.3	13	160.3	54.6
15/16 & 31/32	362.3	42	379.6	476.3	42	318.2	289.3
1 & 1-1/32	329.0	38	183.4	398.0	35	251.1	407.8
1-1/16 & 1-3/32	74.7	9	8.2	84.9	8	13.4	16.2
1-1/8 & 1-5/32	3.8	⁵	.8	4.5	1	.3	⁶
1-3/16 & 1-7/32	1.3	⁵	.4	2.2	⁵	⁶	⁶
1-1/4 & longer	.2	⁵	⁶	1.4	⁵	⁶	⁶
Total	865.8	100	769.7	1,124.7	100	768.5	769.4

¹Estimate based on data obtained from cotton mills, adjusted for classification according to the official cotton standards.

²Based on published reports of Agricultural Marketing Service.

³Compiled from preliminary report of ginnings through November 30, 1941.

⁴Includes cotton, which, because of character defects, is classed as "no staple".

⁵Less than 0.5 percent.

⁶Less than 50 bales.

U.S.D.A. — A.M.A. — March, 1942.

Cotton, Upland: Estimated Supply, Disappearance, and Carry-Over, by Staple Length, United States, 1941-42 Season

Staple length	Carry-over Aug. 1 1941	1941 Production	Total supply	Estimated domestic disappearance of American ¹	Probable carry-over August 1, 1942	
					Total	Percent of disappearance
Inches	1,000 bales	1,000 bales	1,000 bales	1,000 bales	1,000 bales	Percent
Shorter than						
7/8	704 ²	436	1,140	330	810	245
7/8 and 29/32	2,855	1,213	4,068	1,340	2,728	204
15/16 and 31/32	3,254	2,263	5,517	2,910	2,607	90
1 and 1-1/32	2,779	3,857	6,636	3,980	2,656	67
1-1/16 and 1-3/32	1,688	1,955	3,643	2,330	1,313	56
1-1/8 and 1-5/32	598	487	1,085	865	220	25
1-3/16 and 1-7/32	84	138	222	160	62	39
1-1/4 and longer	49	79	128	85	43	51
Total 1-1/8" and longer	731	704	1,435	1,110	325	29
Total	12,011	10,428	22,439	12,000	10,439	87

¹Domestic consumption and exports (including lend-lease shipments).

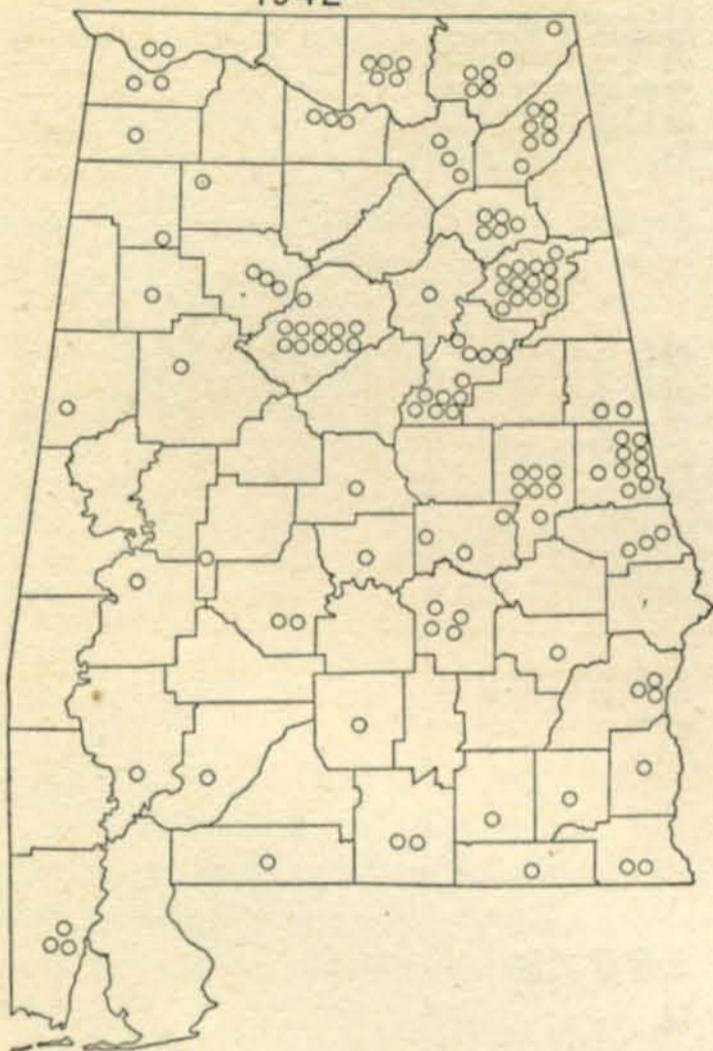
²Includes cotton reported as "no staple".

Cotton Division, A.M.S., and estimates of Cotton Goal Committee of the Department, January 12, 1942.

Southern Division, AAA.

July 6, 1942 — NEA.

COTTON MILLS 1942 *



MAP 29

*Records of Extension Agronomist.

Cotton Varieties

USUALLY the greatest return from the cotton crop is obtained by growing varieties that will produce staple 15/16 inch and longer in length. The production of cotton shorter than 15/16 inch exceeds the consumption of such cotton within the State. On the other hand, consumption now greatly exceeds production for 15/16 inch cotton and all of the longer staples. For the season 1939-40, the production of 15/16 inch and 31/32 inch cotton slightly exceeded consumption. During the following season, however, the production of cotton of these staple lengths decreased somewhat, whereas consumption was very materially increased, making it necessary for Alabama mills to go outside of the State for a considerable quantity of this kind of cotton as well as for cotton

of longer staples. This is far more important than ever now since the Military requirements demand longer staple and better quality.

Non Wilt Soils

FOR THE VALLEY section of North Alabama, the DPL variety leads; with Stoneville second and other varieties developed from Stoneville, such as White Gold and Coker 100, following.

The Sand Mountain Section of North Alabama is predominantly Stoneville with the exception of Jackson County which is DPL.

For the upper Coastal Plain and Piedmont Area, the DPL variety leads, with Stoneville second, and Cook 144 in isolated wilt spots.

Wilt Soils

IT IS ADVISABLE to plant only a wilt-resistant variety of cotton in Central and South Alabama on account of the prevalence of wilt in those areas. The planting of such varieties will tend to check the spread of the disease and will help promote the one-variety program. There are several wilt-resistant varieties that compare favorably in yield and other qualities with the best of non-wilt varieties.

Some of the leading wilt-resistant varieties are: Cook 144, S and C Big Boll, Early Wilt Cleveland, Cokers 4 in 1, and Coker 100 Wilt.

One-Variety Communities

A ONE-VARIETY community is a group of farmers in a fairly well defined natural community or larger area, who organize to increase the yield and improve the quality of their cotton crop. One-variety growers agree to follow the latest improved methods of production necessary to produce high yields, maintain the purity of planting seed, and preserve the quality of lint.

Increased Value from One-Variety Program

Year	Average State yield lint per acre lbs.	Av. inc. in lint per acre lbs. 10%	Av. market price per lb. lint	Value inc. yield per acre lint	Av. yield per acre One-Var. cotton lint	Av. premium points received for One-Var-cotton	Amt. rec'd as premium on One-Variety cotton	Total amt. rec'd for extra yields and premium per acre	Total One-Variety cotton acreage	Total increase yield and premiums rec'd.
1938	251	25	8.4	\$2.10	276	40	\$1.10	\$3.20	170,282	\$544,902.00
1939	182	18	9.4	1.69	200	40	.80	2.49	111,587	277,852.00
1940	190	19	9.2	1.75	209	30	.63	2.38	234,943	559,164.00
1941	216	22	16.0	3.52	238	30	.71	4.23	424,508	1,795,668.00
1942	261	26	18.5	4.81	286	20	.57	5.38	513,485	2,752,589.00
(5)	1100				1,209			17.68		5,930,155.00
Aver.	220				242			3.53		1,186,031.00

One Variety Progress Report in Alabama

Year	Coun- ties	No. Com- muni- ties	Acreage	Bales Classed
1931	1			
1932	2			
1935	16	21	10,000	
1936	31	74	40,000	
1937	33	66	69,127	
1938	49	110	170,282	
1939	57	132	111,587	40,000
1940	63	181	234,943	80,000
1941	53	232	420,341	171,877
1942	56	254	513,485	192,162

Smith Doxey Act

THE SMITH-DOXEY ACT which was passed by Congress in 1939 provides for free classing service for members of regularly organized one-variety cotton improvement associations.

Extra yield of lint per acre from the adopted varieties in the organized communities is estimated as 10 per cent of the state average yield. This extra yield is undoubtedly much higher than this in most places.

Estimated premiums received on the one-variety cotton are very conservative as it is realized that not more than one-half of the one-variety growers get anything like the market premiums on their one-variety cotton, and some of them get no premium.

Growers outside the one-variety communities are receiving extra yield and premiums as a result of the one-variety program.

Marketing On Basis of Staple Length and Grade

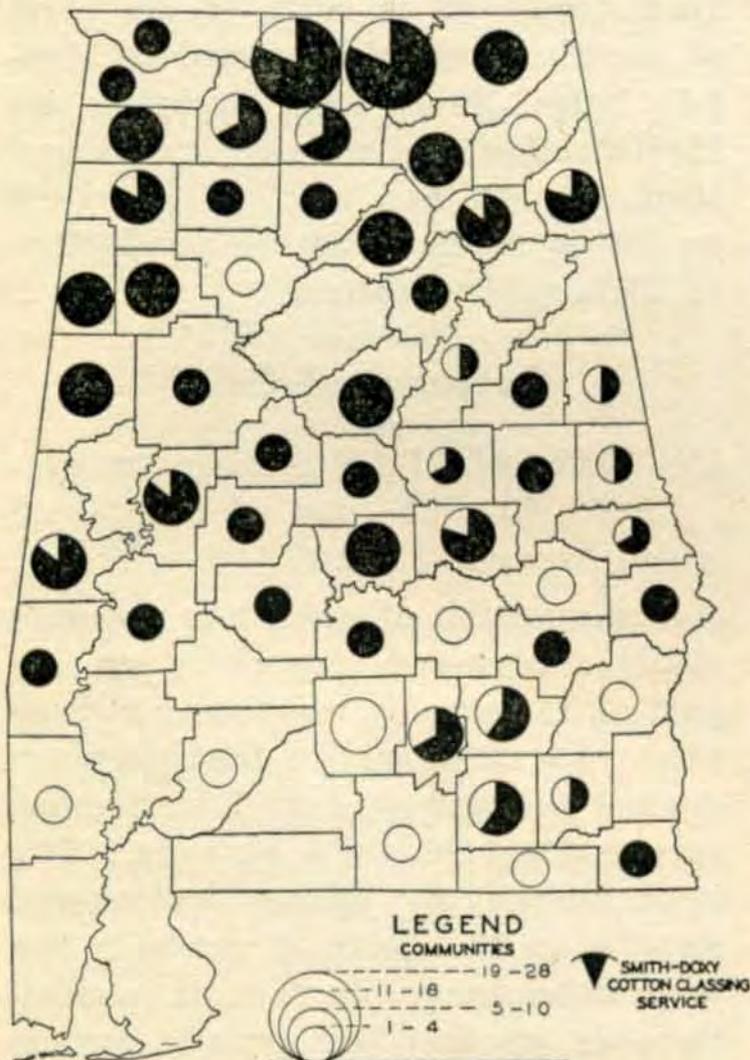
THE BIGGEST problem in improving the quality and staple length of cotton is the feeling among farmers that little or no consideration is given staple length in the price they receive for their cotton. It is difficult for markets to reflect staple values when many different varieties of varying staple lengths are grown in a trade territory.

When a community builds a reputation for commercial quantities of quality cotton, buyers are attracted, competitive bidding is stimulated, and growers are in position to bargain for premiums on their better cotton.

In order for farmers to secure additional marketing advantages, they should produce improved one-variety cotton in large even-running lots which can be made available to the trade from year to year.

Through a cooperative educational program conducted by the Extension Service of the Alabama Polytechnic Institute and other agricultural agencies, cotton buyers, Alabama Gin Association and cotton mills, remarkable progress has been made in Alabama in the last 10 years in obtaining rec-

ONE VARIETY COTTON COMMUNITIES
1942 *



MAP 30

*Records of Extension Agronomist.

ognition of staple length and grade values on local markets where quality cotton is produced in volume.

When the importance of grade and staple lengths is fully understood by both farmer and local buyers it is believed that this problem will be largely eliminated.

Summary of Lint Problems

GINNING: War demands are for longer staple and better quality cotton. The trend for years has been to better staple and higher quality for civilian needs.

Good gin preparation is essential to quality. Rough ginned cotton results in the farmer being penalized. Up to four or five years ago much of Alabama's cotton crop was "rough" in preparation. This has been improved to where Alabama ranked first in the Southeast in 1940-41 with the

lowest percent of roughly prepared cotton.

Staple Production Problems: Use of "gin run" seed, seed from irresponsible seed "peddlers" and many different varieties being planted in same community, make it impossible to produce uniform quality and staple. Some communities are known to have been growing a dozen or more different varieties or strains. The ginner cannot do a good job of ginning if he must gin mixed varieties and a uniform cotton in quality cannot be put on the market.

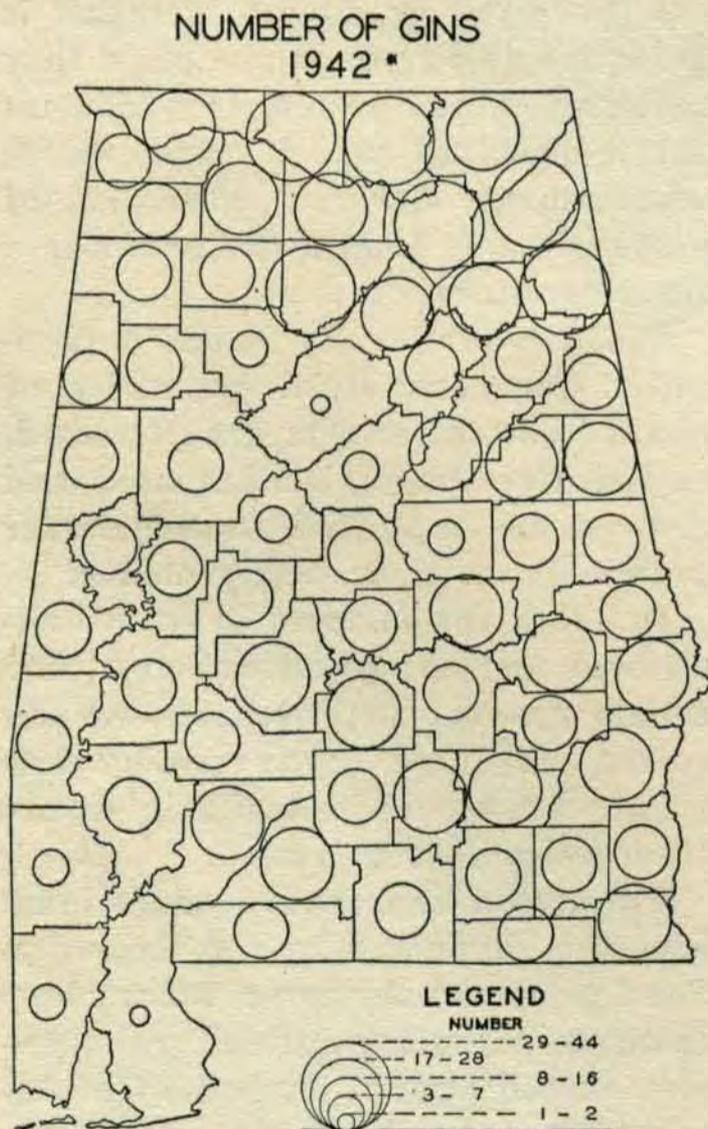
Staple Recognition Problems: Grade, staple length and gin preparation should be well recognized cotton marketing factors by farmers, cotton buyers and others. The grade and staple length of each bale should be definitely established while the cotton is still in the farmer's possession.

Quality cotton should be so identified that it can be followed easily from producer to mill. Some form of metal tag should be used to identify bales. Each bale carrying an identification tag showing grade and staple length and sold on its merit would do much to assure production of high quality cotton.

Cottonseed Sold

IN 1942 ALABAMA farmers produced 603,001 tons of cottonseed which brought \$29,167,153.

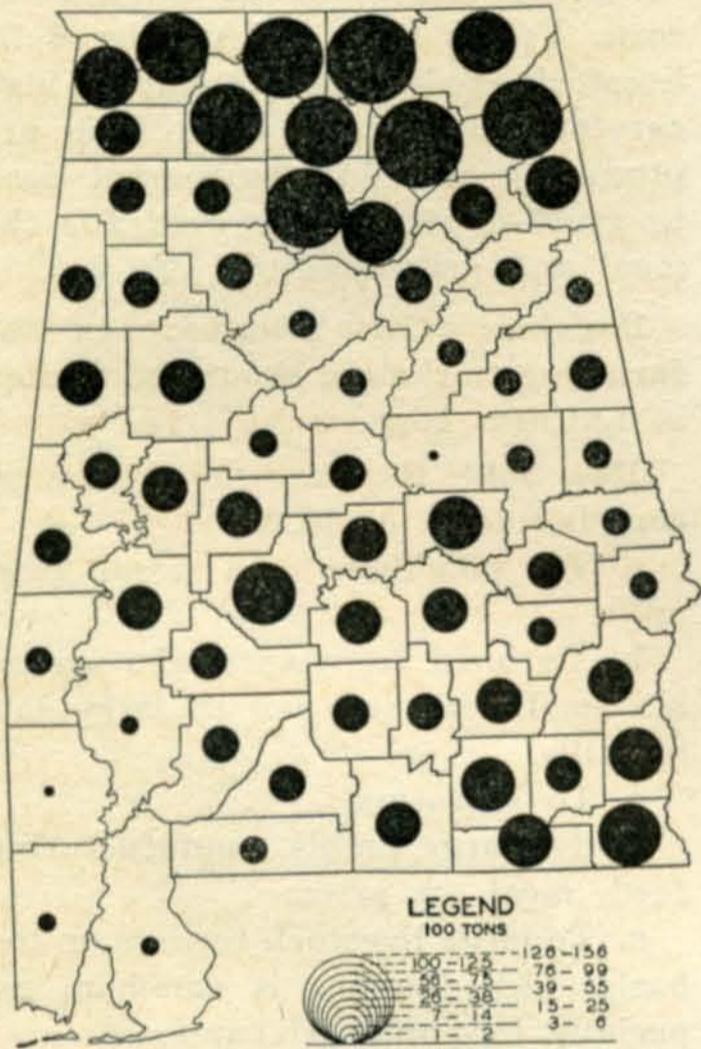
The question of quality is not generally recognized, especially on the part of farmers, in marketing cottonseed. Farmers realize that they are docked for damaged and high moisture content at some seasons. The importance of selling cottonseed strictly on the basis of grade is not well understood. In fact, it is questionable whether the present system of cottonseed grades reflect fully the economic gain of farmers.



MAP 31

*Records of Extension Agronomist.

COTTONSEED SOLD
1941*



MAP 32

*Estimates based on AAA records of cotton production and current reports of the Bureau of the Census on quantities of cottonseed crushed.

Composition of a ton of Cottonseed is as follows:

- 300 Pounds oil
- 900 Pounds cottonseed meal
- 600 Pounds hulls
- 100 Pounds linters
- 100 Pounds waste

Swapping cottonseed for meal is practiced in many localities. This practice, when done fairly, is good business for both the farmer and the purchaser. In too many cases, however, farmers do not understand the values involved and they trade at a heavy loss to themselves. A definite regulation setting forth the basis for trading should be in effect so that farmers and purchasers would make sound business transactions.

Much can be done to improve the quality of cottonseed by proper methods of picking and handling. If

cotton is dried before being packed in wagons or storage the danger of moisture damage is reduced. It is essential to have proper operation of dryers or else both the lint and seed may be damaged.

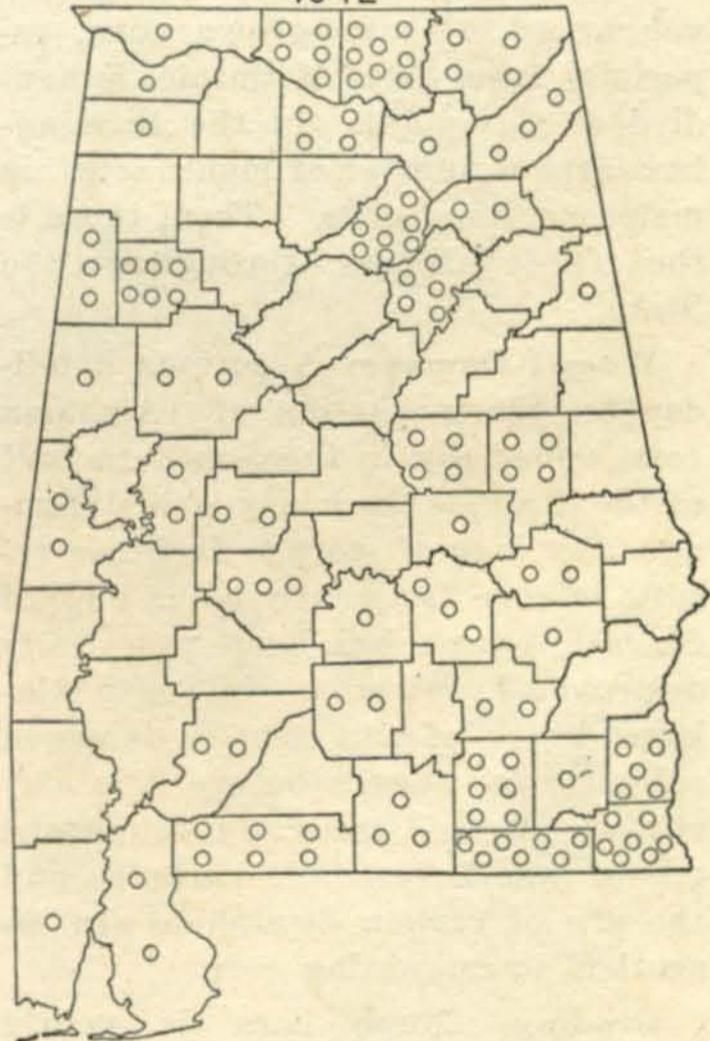
Corn

IN 1942 ALABAMA produced 43,960,000 bushels of corn valued at \$40,443,200.

Since the annual corn production in Alabama is not sufficient to meet needs, corn is not considered a cash crop for Alabama. However, there are many localities in which corn is of considerable importance as a cash crop. Total corn sales in the State amount to more than \$5,000,000 some years.

High yields being made in the Sand Mountain and Limestone Valley areas enable many farmers to sell some corn. Observations at the elevator at Guntersville show that a considerable

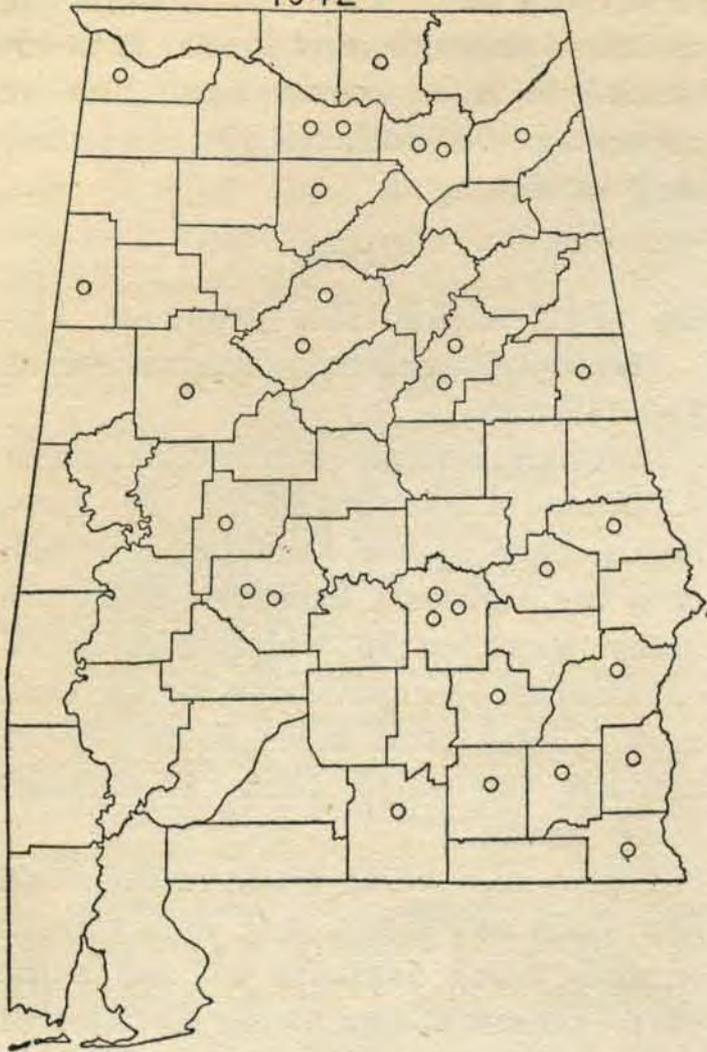
COTTON DRIERS
1942*



MAP 33

*Records of Extension Agronomist.

OIL MILLS
1942 *



MAP 34

*Records of Extension Agronomist.

volume of Alabama-grown corn, especially from Sand Mountain, is handled at this point. In the Birmingham area a number of manufacturers make meal and grits. Then, there is the feed business throughout the State.

Weevil Damage: A serious handicap to the marketing of Alabama corn, especially in the Southern half of the State, is the heavy weevil damage. The lack of storage facilities results in corn frequently being offered for sale which has been practically destroyed by weevils. In South Alabama much of the corn is damaged seriously by weevils before it is harvested. Weevil control through the use of weevil resistant varieties and the use of carbon disulphide are essentials to marketing corn.

Grading: Much corn is poorly graded; frequently it is not graded at all. A serious problem for the

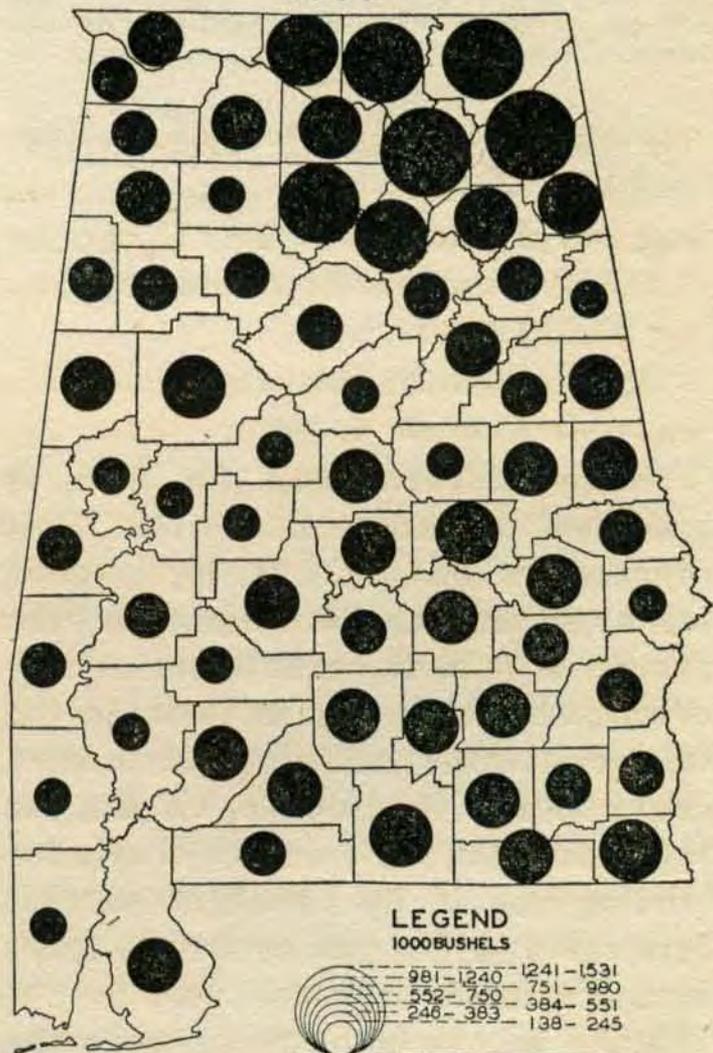
manufacturer of grits and meal is the prevalence of mixed and colored corn. Yellow corn is preferred by livestock feeders on account of high carotene content. Those who are producing corn for the market need to grow a pure white corn for the meal and grits trade.

Bagging: Corn selected on the farm for marketing should be packed in uniform bags.

How Sold: Here are the ways most corn is sold in Alabama:

- a. To neighbors and local grist mills.
- b. To local merchants who assemble small lots and sell in large lots to mills.
- c. To elevators.
- d. To large mills manufacturing feed, meal, or grits.
- e. To large livestock feeders on ton basis. This practice is common, especially in South Alabama.

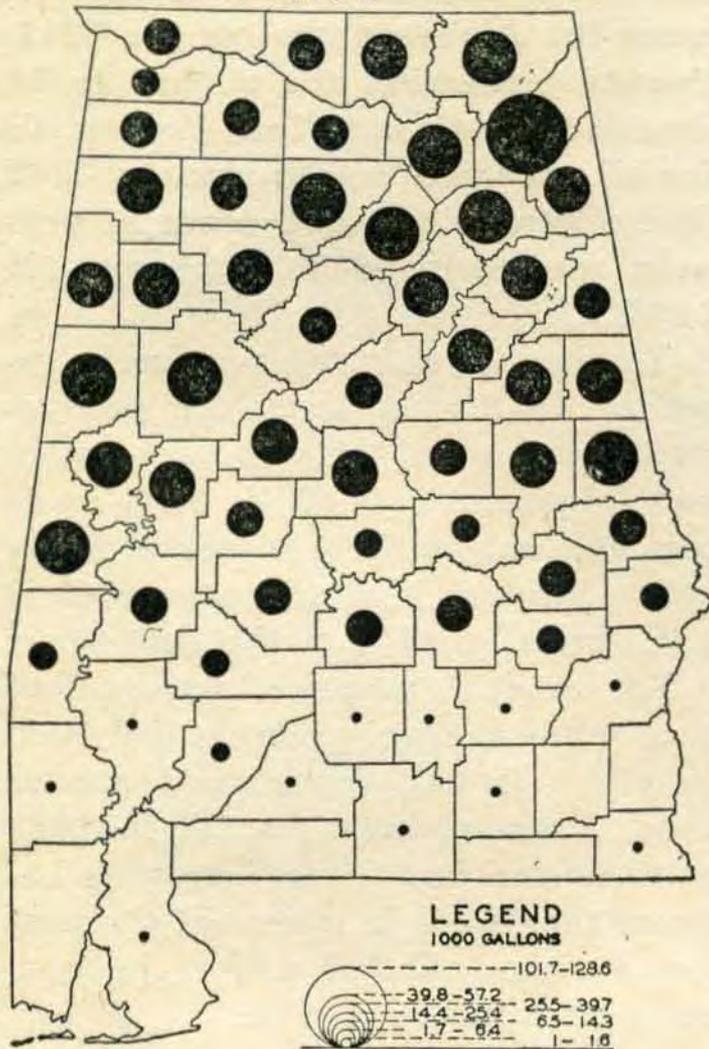
CORN
1939 *



MAP 35

*1940 Census.

SWEET SORGHUM SYRUP
1939 *



MAP 36

*1940 Census.

Syrup

IN 1942 ALABAMA farmers produced 2,645,000 gallons of sugar cane syrup valued at \$2,116,000 and 1,767,000 gallons of sorghum valued at \$1,325,250.

Production of high quality sugar cane and sorghum syrup offers considerable opportunity to Alabama farmers. Experience shows that urban consumers like to buy high quality syrup direct from farmers. Too often syrup is packed in various types of containers and may contain foreign material. For several years a group of farmers in DeKalb County has placed high-quality sorghum syrup on the market in neat uniform containers. This syrup has been very popular. Farmers in other sections are finding a ready market at syrup plants.

Sugar cane production is confined

largely to the southern half of the State. By using good varieties, proper cultural methods, and proper rotation, high yields of sugar cane are obtained.

The following will help improve market conditions:

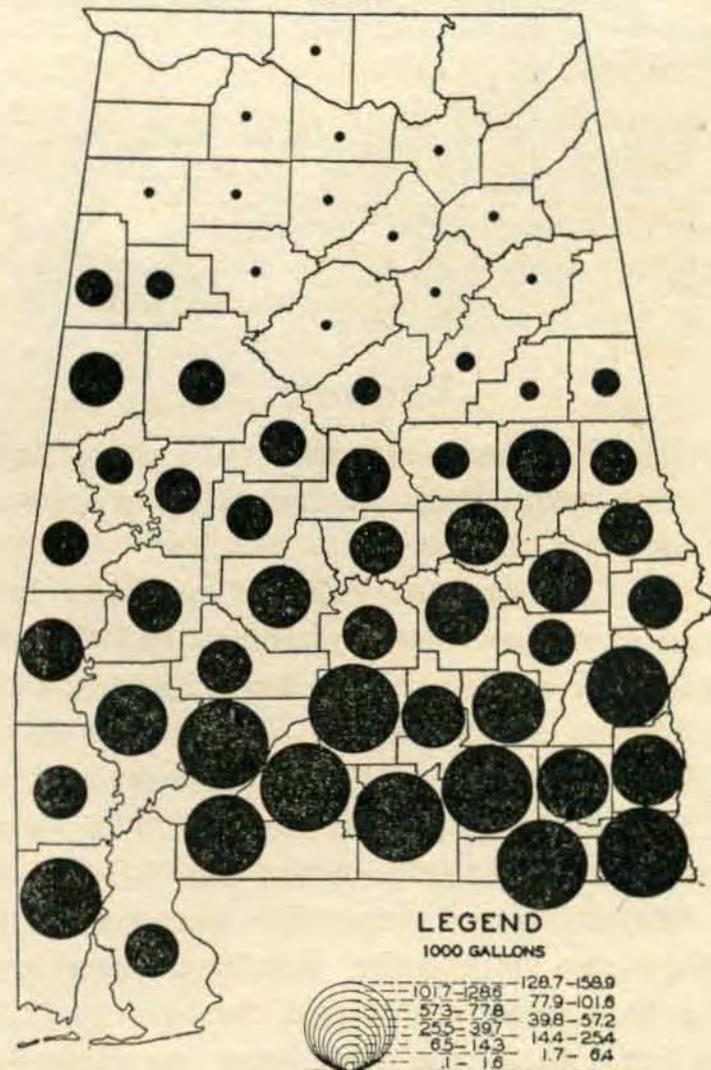
1. Growers in whole communities or areas plant and produce single varieties so that each syrup mill can make a uniform product.

2. Plant syrup crops on the proper kind of land and use the right fertilizer.

3. Use equipment that removes all foreign matter and manufacture to reduce sugaring; pack in uniform, neatly labeled glass or tin containers.

Sorghum production is confined to North and Central Alabama. The multitude of varieties makes uniform manufacturing impossible and the

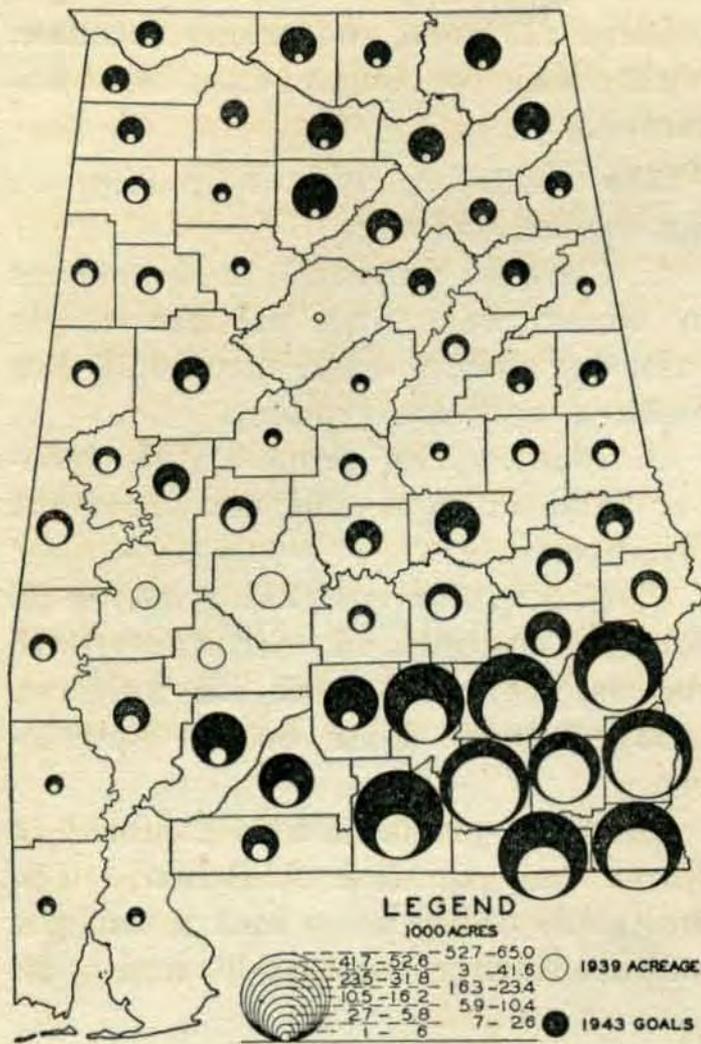
SUGAR CANE FOR SYRUP
1939 *



MAP 37

*1940 Census.

PEANUTS



MAP 38

*1939 acreage adjusted on basis of Census and AMA reports and 1943 goals from State War Board.

small areages per farm and small mills seriously limit uniform large scale commercial production. Sand Mountain sorghum is very popular on the markets.

Peanuts

PEANUTS are second to cotton in importance in Alabama as a cash crop.

The average acreage of peanuts in Alabama from 1929 through 1938 was 449,000 acres with an average of 231,000 acres picked. In 1940, total plantings were 540,000 acres with 310,000 acres picked and 195,341,000 pounds sold for \$5,860,000.

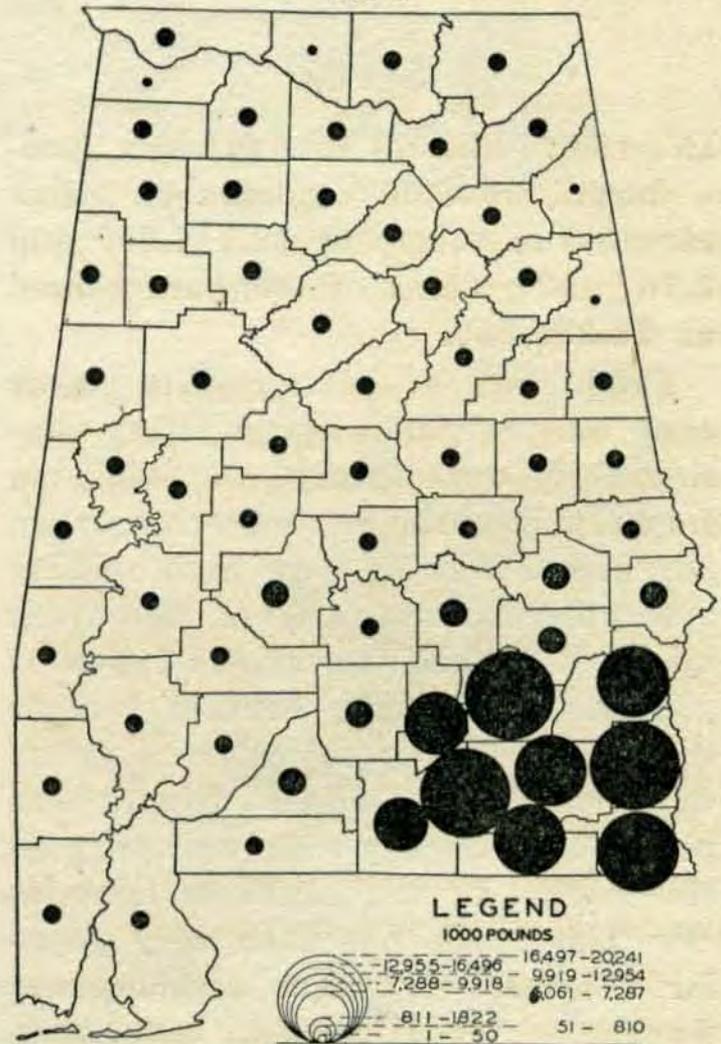
Peanut production for harvest and for hogs has been confined largely to Southeast Alabama up to 1942, when Alabama farmers produced 189,000 tons of peanuts which sold for \$19,656,000.

War needs for vegetable oils became so acute that a goal of 810,000 acres for Alabama was set for 1942. Peanut production for oil had to be expanded to all counties. War needs for oil were such by the close of 1942 that a goal of 850,000 acres of peanuts was assigned to Alabama for 1943.

The peanut industry was badly upset in 1942. To meet the production goal for oil, farmers in the commercial peanut area of the State made big increases in their acreages. Many other farmers planted peanuts on a commercial scale for the first time.

For several years a government production control program had been in effect in the commercial peanut area. Extra peanuts for oil in 1942 were known as "excess" peanuts because they were in excess of the peanut acreage allotted under the government control program.

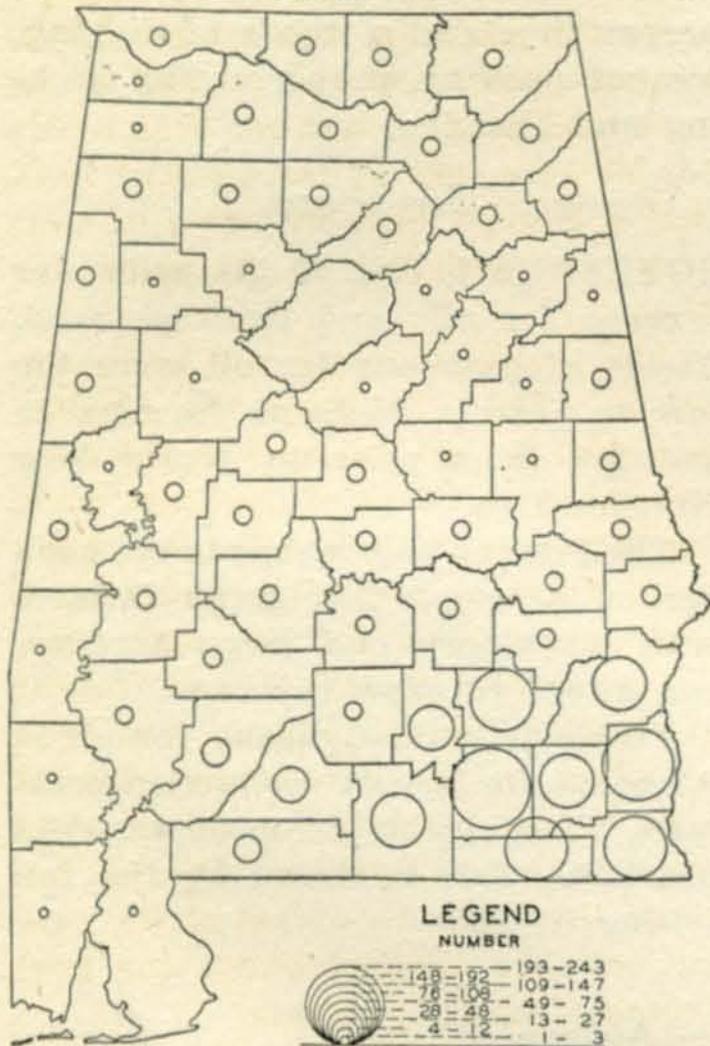
PEANUTS 1939*



MAP 39

*1940 Census.

PEANUT PICKERS
1942 *



MAP 40

*AAA records.

To effect the program for increased acreage for oil in 1942 the government projected a program of distributing seed, pickers, weeders, and providing grading, warehousing and marketing facilities.

Many difficulties naturally will arise with a big program affecting so many individual farmers. Some of the problems were:

(1) Many seed of the recommended small type white Spanish had mixtures of improved Spanish and other varieties. This was contrary to explicit information given farmers as to variety standards.

(2) Seed was delivered too late to permit shelling before planting.

(3) Labor shortages and limited supplies of weeders made rapid and cheap cultivation of peanuts necessary.

(4) Placement of pickers in counties was delayed.

(5) Operators of pickers in new producing areas failed to receive adequate training in operation of machines.

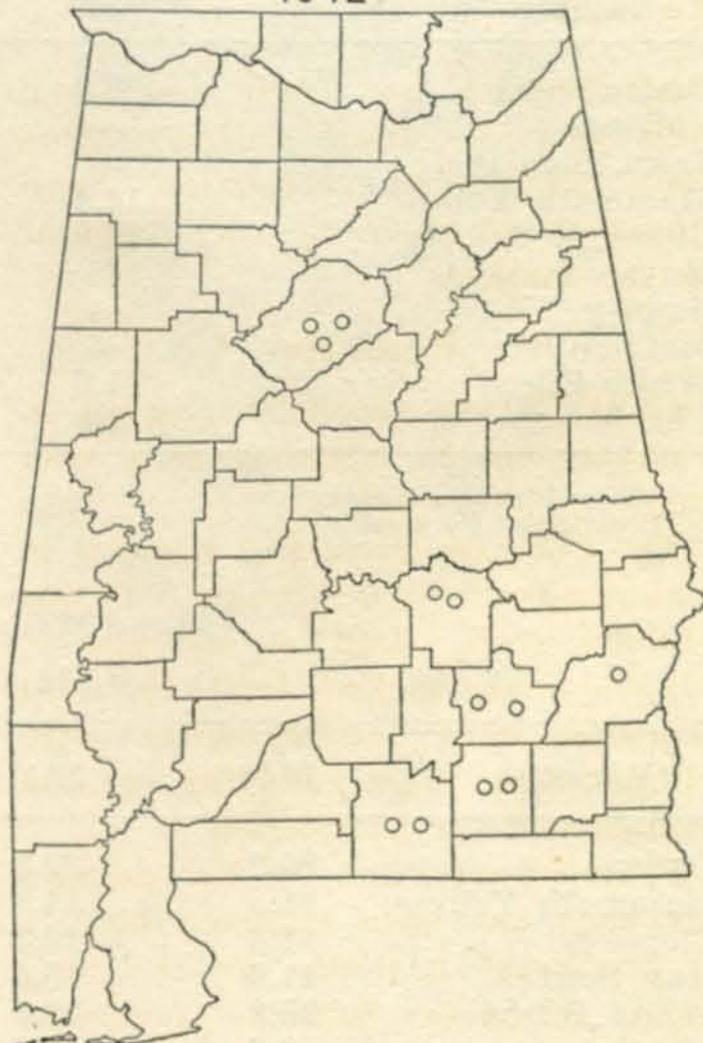
(6) Many counties had inadequate warehousing facilities.

(7) Scarcity of pickers and inefficient routing of pickers delayed the completion of picking.

(8) There was a wide difference between price of "excess" peanuts and quota peanuts. This gave rise to widespread dissatisfaction. Growers felt that peanuts for oil, if essential for the war effort, should sell for as much as peanuts for any other purpose.

No doubt most of these problems can be worked out in 1943. It is necessary that they be solved to enable farmers to produce ample peanuts to meet war needs.

PEANUT BUTTER MILLS
1942 *



MAP 41

*Records of Extension Agronomist.

Oil Content

A TON of Spanish peanuts produces approximately 600 pounds of oil and 900 pounds of meal, and runners 570 pounds of oil and 850 pounds of meal. These yields vary somewhat with seasons. The average yield of peanuts in 1940 was 725 pounds per acre.

Marketing

NORMALLY, markets are readily available to Alabama farmers producing commercial lots of peanuts sold on basis of Federal grades. Grades and values are established while the peanuts are still in possession of the producers. Most farmers are familiar with the grades and factors which determine grades.

Outstanding improvement in pea-

nut grades has been made in Alabama within the last five years on proper time and methods of digging, correct stacking, proper curing, picking and cleaning.

Soybeans

SOYBEANS is one of the main war crops for oil and livestock feed. Yields of soybeans for oil were too low to justify Alabama farmers in growing them prior to World War Number Two.

The present war has made the need for oil so great that many farmers with machinery and large acreages can afford to grow soybeans.

Problems with soybeans for oil in Alabama are largely production problems. First, yields of most varieties are low. This is shown by the following tests:

Main Station — Auburn
Yield - Bushels

Variety	1940	1941	1942	3 yr. av.
Ogden	28.8	26.8	20.3	25.3
Volstate	—	—	7.0	7.0 ¹
Tenn. Non-Pop	—	—	11.8	11.8 ¹
Mammoth Yellow	14.3	Failed ²	Failed ²	4.8
Clemson	11.2	Failed ²	Failed ²	3.7
Hayseed	14.9	8.2	12.8	12.0
Arksoy	—	—	12.8	12.8 ¹
McCoupin	—	—	8.6	8.6 ¹
White Biloxi	11.6	Failed ²	Failed ²	3.5
Charlee	11.8	Failed ²	8.5	6.8

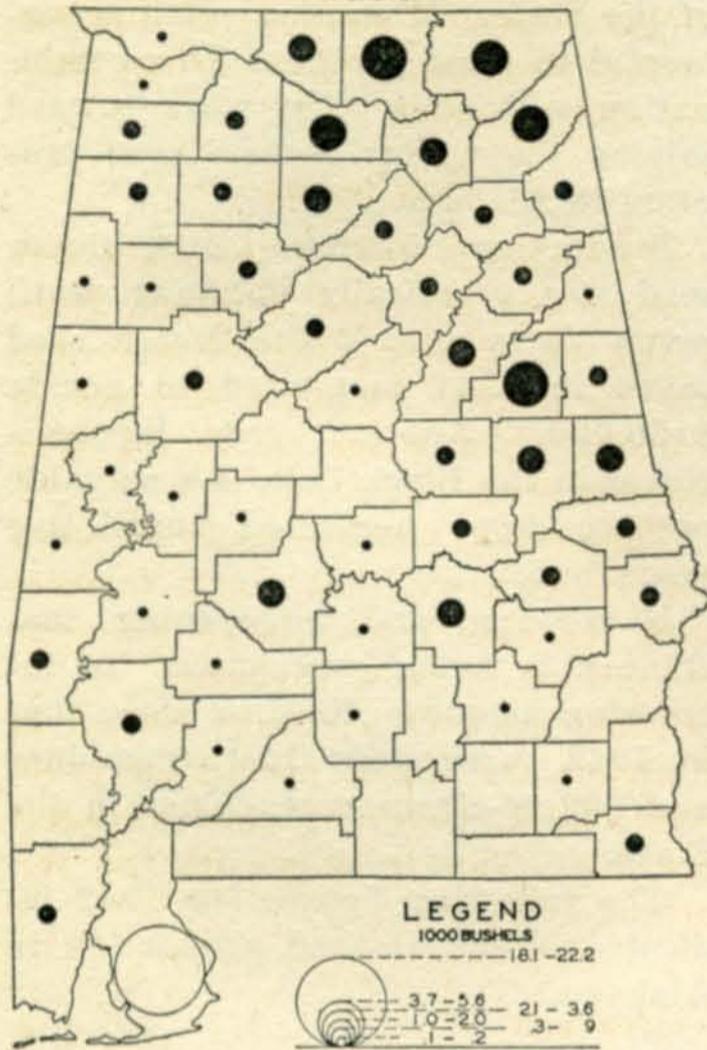
¹Only 1 year average.

²Destroyed by worms.

Sand Mountain Station
Yield - Bushels

Variety	1940	1941	1942	3 yr. av.	Shattering resistance
Ogden	20.2	22.8	21.6	21.5	Good
Mammoth Yellow	15.8	14.8	29.1	19.9	Poor
Clemson	11.8	10.3	20.1	14.1	Poor
Hay Seed	11.6	15.6	22.8	16.7	Good
White Biloxi	15.8	13.0	20.0	16.3	Fair
Charlee	9.6	8.8	20.8	13.1	Fair
Palmetto	10.4	11.1	18.7	13.4	Poor

SOYBEANS HARVESTED
1939 *



MAP 42

*1940 Census.

Second, shattering, with many varieties, results in heavy losses. Most farmers do not have sufficient equipment to harvest soybeans when they must be harvested. A few promising shatter-resistant varieties have been developed.

Third, volume of production, except in two or three counties, has been too low to establish a market.

Seeds

ALABAMA is rapidly changing from a seed-buying to a seed-producing State. Approximately \$1,250,000 worth of legume and pasture crop seed was saved in Alabama in 1942. Seed production is rapidly becoming a considerable source of supplemental cash income in a number of counties in the State.

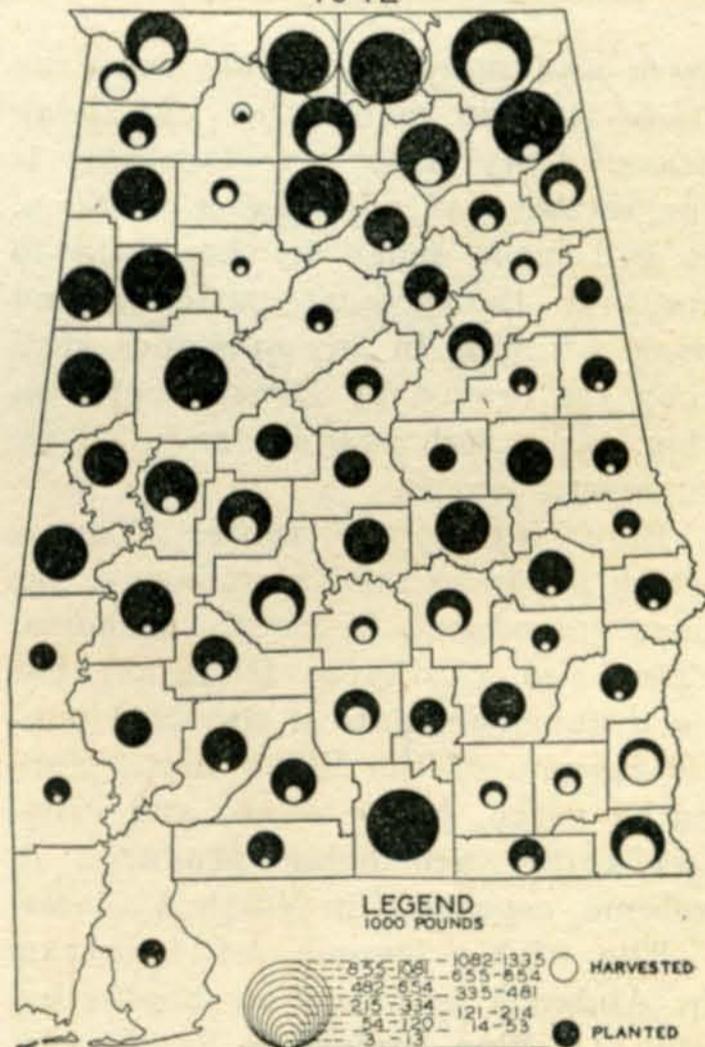
Fifteen years ago Alabama bought all of the O-too-tan soybean seed

from other states. As a result of a seed producing project in Baldwin County and in the Piedmont area, Alabama not only produces enough O-too-tan for its own needs but the bulk of the O-too-tan seed for the Nation. In Baldwin County O-too-tan seed is produced after spring truck crops. In the Piedmont area the seed is interplanted in corn. Frequently the cash income from these seed amounts to as much as farmers in these areas get from the sale of other crops.

Through the one-variety cotton improvement community program normally ample cottonseed of good varieties are available to farmers at fair prices.

Ample peanut seed is available. Men experienced in commercial peanut business point out that the small type runner and the small type Spanish grown in Alabama are more uni-

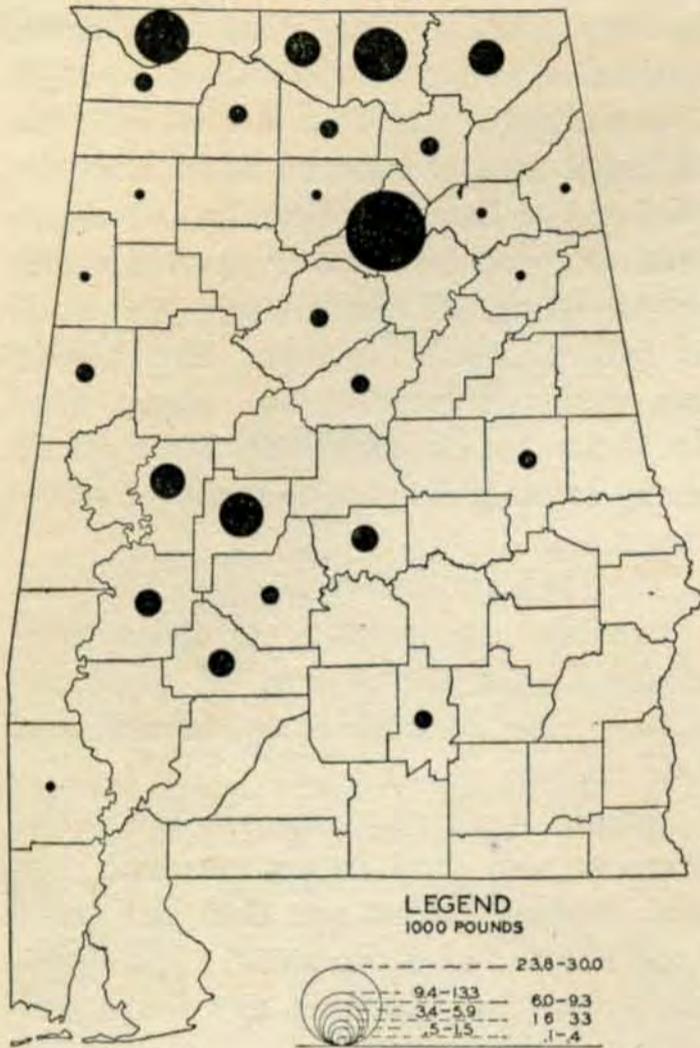
WINTER LEGUMES
1942 *



MAP 43

*Records of Extension Agronomist.

WHITE DUTCH CLOVER
HARVESTED 1942 *



MAP 44

*Records of Extension Agronomist.

form and more desirable for the trade than in most other producing areas. Only in a few localities is the mixture of varieties a problem. It will mean much to the State to continue the present varieties and avoid bringing in any new ones until they are proved by Experiment Station tests and peanut trade to be superior.

Blue lupine, a winter legume which produces seed abundantly, has been introduced in South Alabama. Caley pea (*Lathyrus Hirsutus*) has been developed into a standard winter legume of the Black Belt. Monantha vetch, hairy vetch, and crimson clover are being produced in volume, especially in North Alabama.

The winter legume seed program in Alabama is based on production of: (1) Blue lupine in South Alabama, (2) Caley pea in the Black Belt, (3) Monantha vetch, hairy

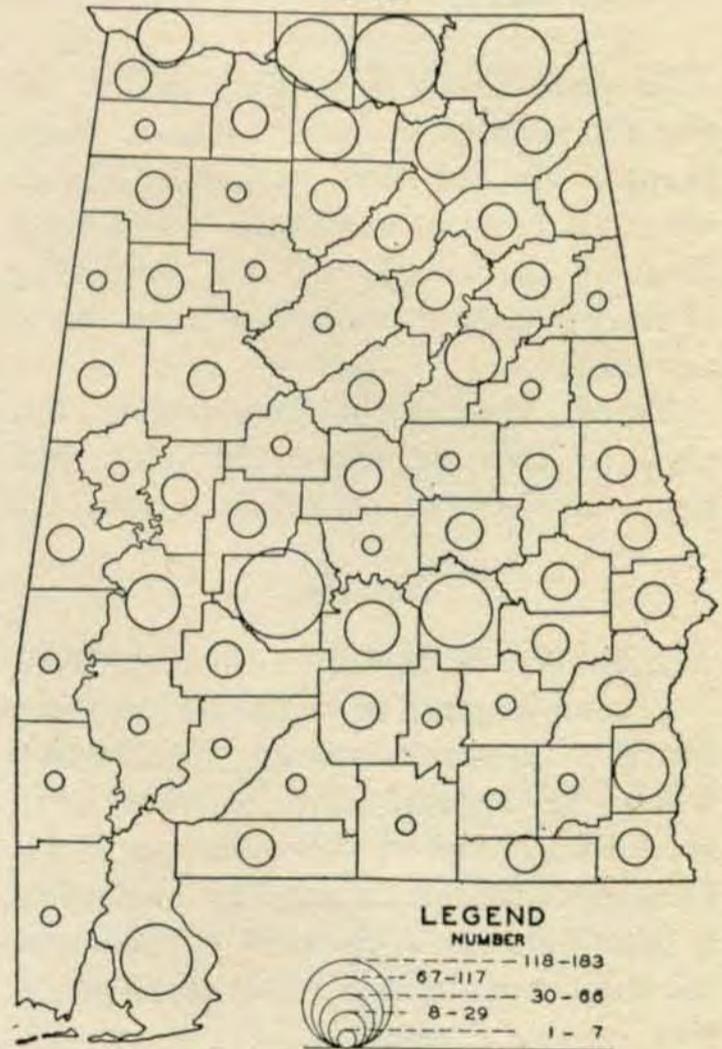
vetch, and Williamette vetch and crimson clover in the northern half of the State. Monantha vetch is successful in most sections. This combination will go a long ways toward solving the winter legume seed program in Alabama.

Production of white Dutch clover seed was practically unknown until seven years ago. White Dutch seed saved in 1941 amounted to nearly \$150,000. Another crop, lappacea clover in the Black Belt, is a valuable pasture crop neglected until five years ago.

Harvesting and re-cleaning machinery is being purchased in increasing amounts. Records show that in 1942 there were 1,515 combines and 202 re-cleaning machines in the State.

The following figures for 1942 indicate volume of seed production in Alabama:

COMBINES
1942 *



MAP 45

*Records of Extension Agronomist.

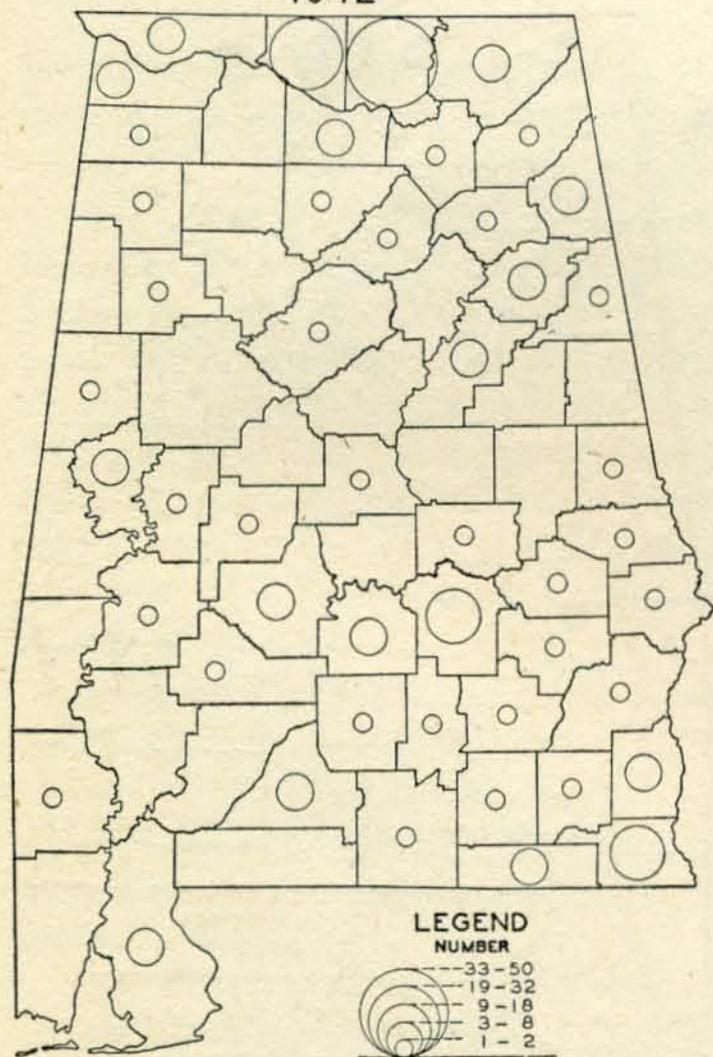
Winter Legumes

	Pounds Harvested	Value
Hairy vetch	1,814,573	\$199,603
Monantha vetch	231,164	21,961
Willamette vetch	298,438	23,875
Austrian Winter peas	36,240	2,174
Crimson clover	1,352,133	141,974
Blue lupine	599,295	59,929
Caley peas	338,200	33,820
TOTAL	4,670,043	\$483,336

Other Legumes

	Pounds Harvested	Value
White Dutch clover	92,596	\$ 55,557
Lappacea clover	15,400	7,700
Kudzu	8,914,000 crowns	75,769
Sericea	696,500	104,475
Annual lespedeza	2,749,659	412,448
Crotalaria	1,011,360	151,704
TOTAL	13,479,515	\$807,653

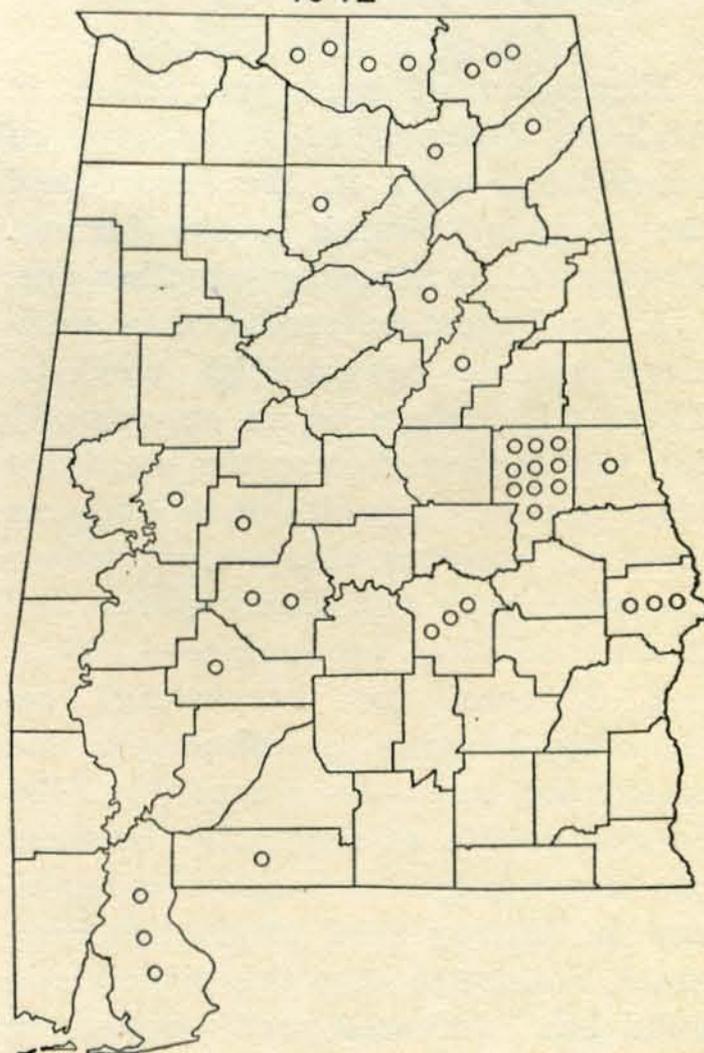
SEED RECLEANERS
1942 *



MAP 46

*Records of Extension Agronomist.

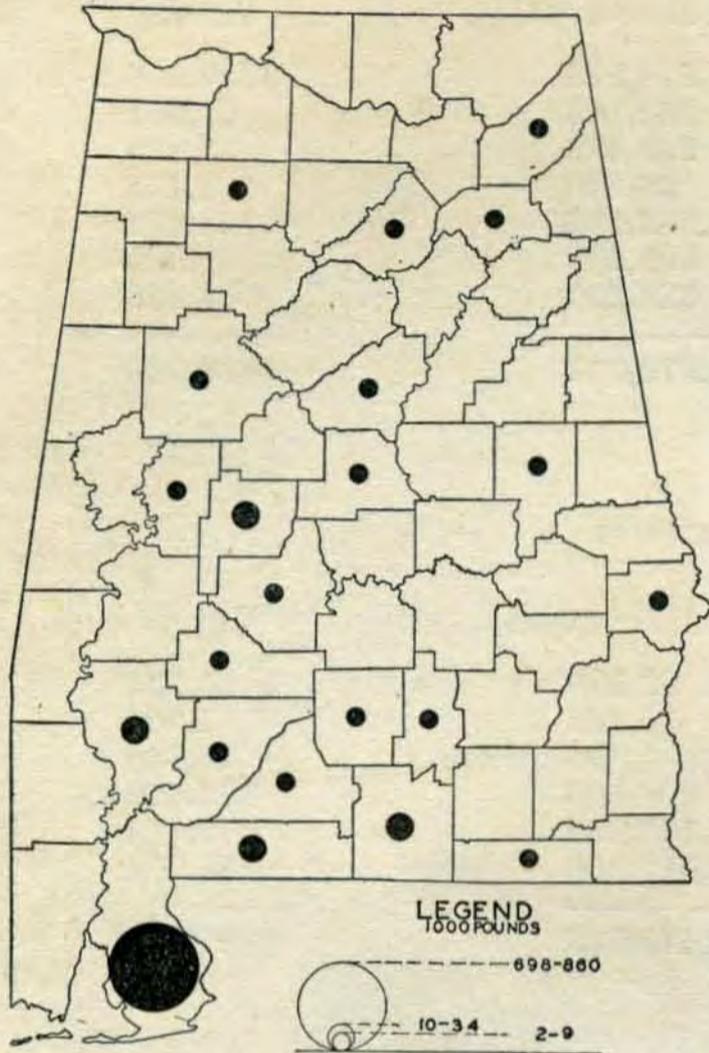
SEED SCARIFIERS
1942 *



MAP 47

*Records of Extension Agronomist.

CROTALARIA HARVESTED
1942*



MAP 48

*Records of Extension Agronomist.

Expansion of seed production in Alabama depends upon the type of educational work in the future and the financial returns to the farmer. Fundamentals in seed production are:

1. Seed must be produced in sufficient volume to establish markets. There will always be an opportunity for the farmer to produce seed for his own needs. Conditions in Alabama are such, however, that certain groups in some areas will likely never find it economical to produce seed.

2. Charges for harvesting, re-cleaning, bagging, warehousing, and marketing must be reasonable. Excessive profits at any point between producers and other consumers handicap or destroy seed production program. Failure to keep this principle in mind has defeated seed producing programs as a source of cash.

3. Many farmers are inexperienced

with planting and harvesting equipment.

4. There is an insufficient number of harvesting and re-cleaning machines.

5. There is need for better grading.

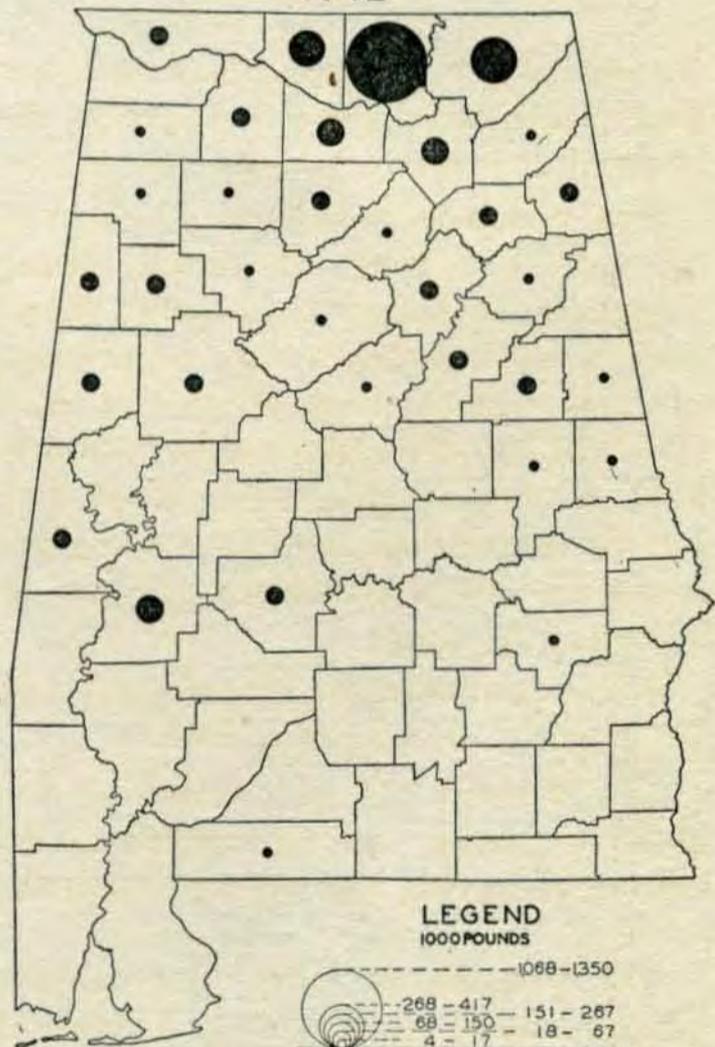
6. Bagging is a big problem.

Hay

THE BIG hay problem in Alabama is to increase hay production to meet present needs of the farm and to provide for expansion of the livestock industry. In 1942, Alabama farmers produced 829,000 tons of hay valued at \$9,525,210. In general, hay produced in Alabama should be marketed through livestock.

Alabama is on a deficit hay basis. This is partly due to weather conditions and partly to a lack of perennial hay crops. Less than 23 percent of the total hay acreage in 1934 was

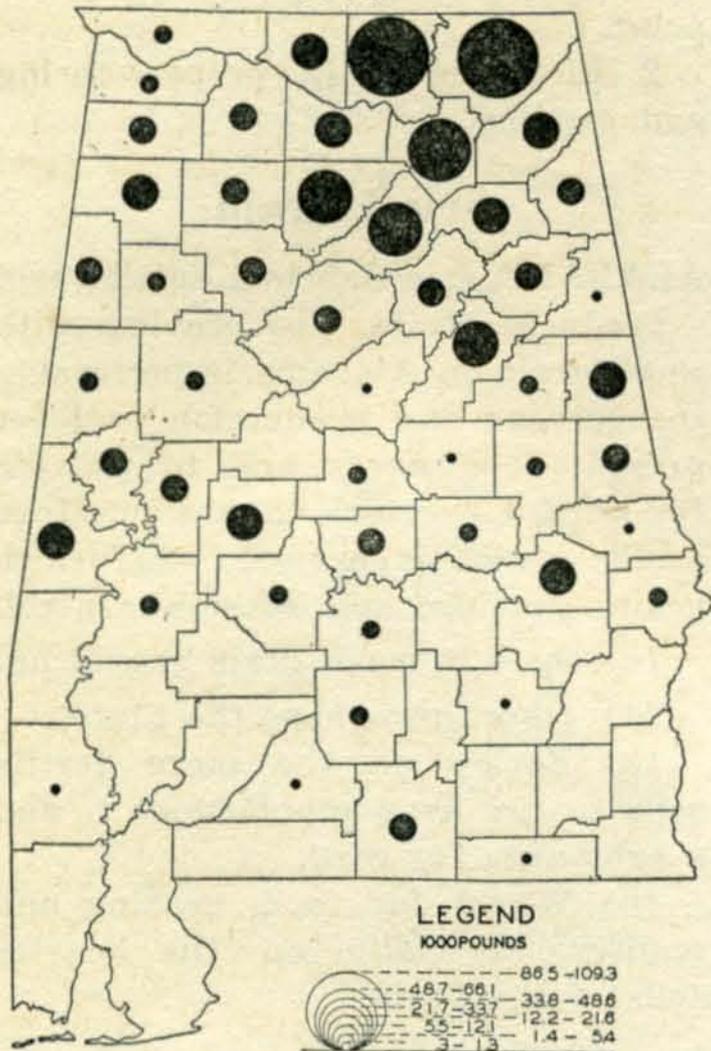
ANNUAL LESPEDEZA SEED HARVESTED
1942 *



MAP 49

*Records of Extension Agronomist.

SERICEA SEED HARVESTED
1942 *



MAP 50

*Records of Extension Agronomist.

accounted for by perennial crops, but perennials have been materially increased in recent years.

Hay needs in industrial areas have dropped to a very low figure. Many livestock farmers, especially dairymen, are producing a high percentage of hay requirements compared with 20 years ago. The Black Belt formerly sold a considerable volume of hay but the trend has been to more grazing with less dependence on hay as a source of cash.

Some problems in commercial hay production in Alabama are:

(1) Volume of production is too small to justify use of machinery essential to saving hay on a commercial scale.

(2) Volume at marketing centers is too small to establish a market that will attract buyers.

(3) Warehousing facilities are in-

adequate to take care of large quantities of hay.

(4) Weather conditions make it difficult to cure high quality hay.

Tobacco

IN 1942 ALABAMA farmers produced 235,000 pounds of tobacco valued at \$61,100. For the year tobacco allotments for Alabama were:

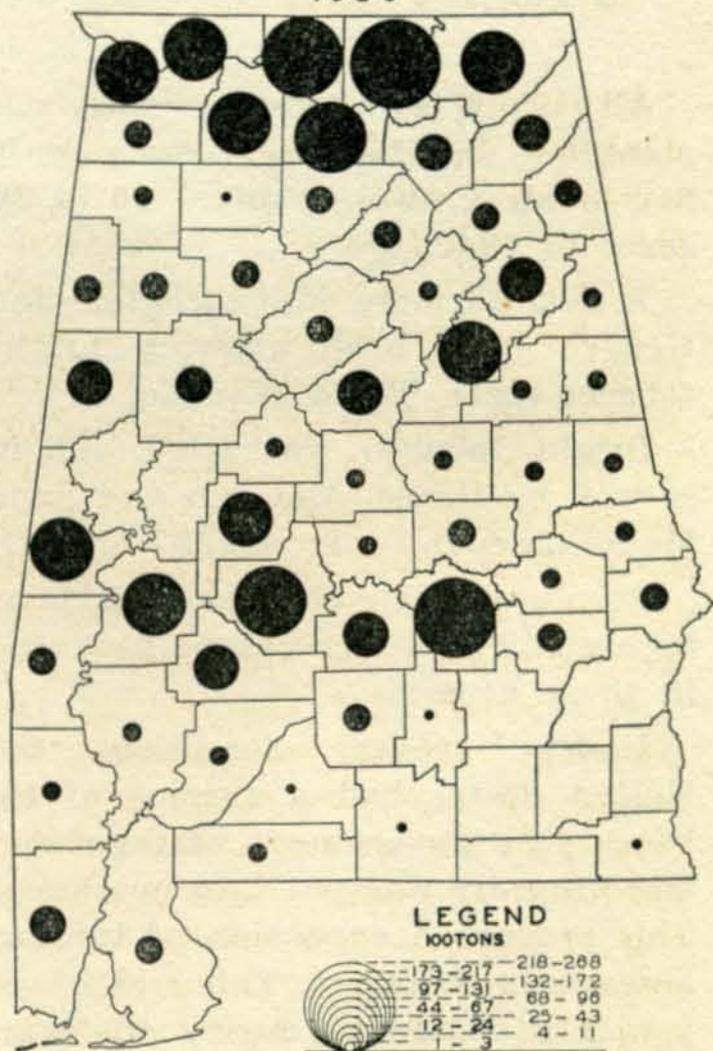
Bright Tobacco

Autauga	1.0 Acre
Butler	24.4 Acres
Conecuh	30.7 Acres
Dale	14.5 Acres
Geneva	14.7 Acres
Henry	2.0 Acres
Houston	53.5 Acres
Covington	131.3 Acres
Total	272.1

Burley Tobacco

Lauderdale	1.7 Acres
Limestone	6.4 Acres
Madison	69.4 Acres
Marshall	1.4 Acres
Winston	.6 Acre
Total	79.5

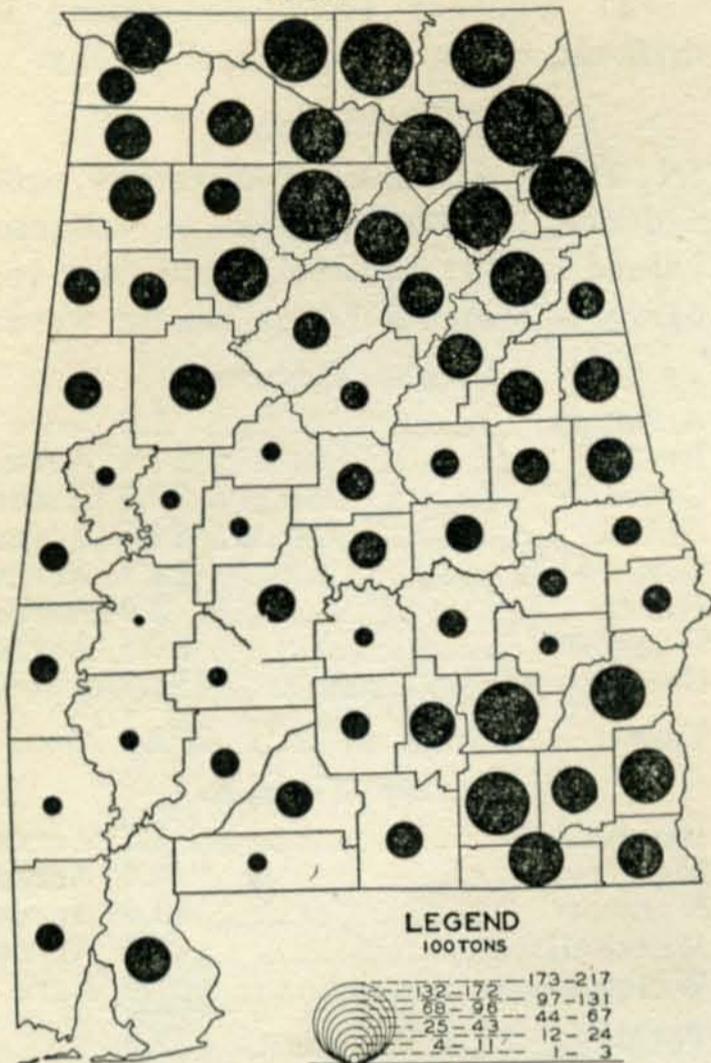
ALL HAY OTHER THAN ANNUAL LEGUMES
1939 *



MAP 51

*1940 Census.

ANNUAL LEGUME HAY
1939 *



MAP 52

*1940 Census.

All of this allotment was not planted. In Houston County only five or six growers planted 15 to 20 acres in 1942.

A few farmers in Covington and Geneva have been growing bright tobacco since World War No. 1.

Bright tobacco was tried out in several southeast Alabama and Sand Mountain counties from 1937 to 1941.

Results indicate that good yields of high quality tobacco can be produced in these areas.

Under pre-war conditions the United States had a surplus of tobacco so a government acreage control program was put into operation. This prevented expansion of tobacco acreage in Alabama. Labor shortage prevents expansion during the war. After the war the crop should be fully considered.

Tobacco marketing problems are:

1. Lack of volume at any given point.
2. Inexperience in proper curing and grading.

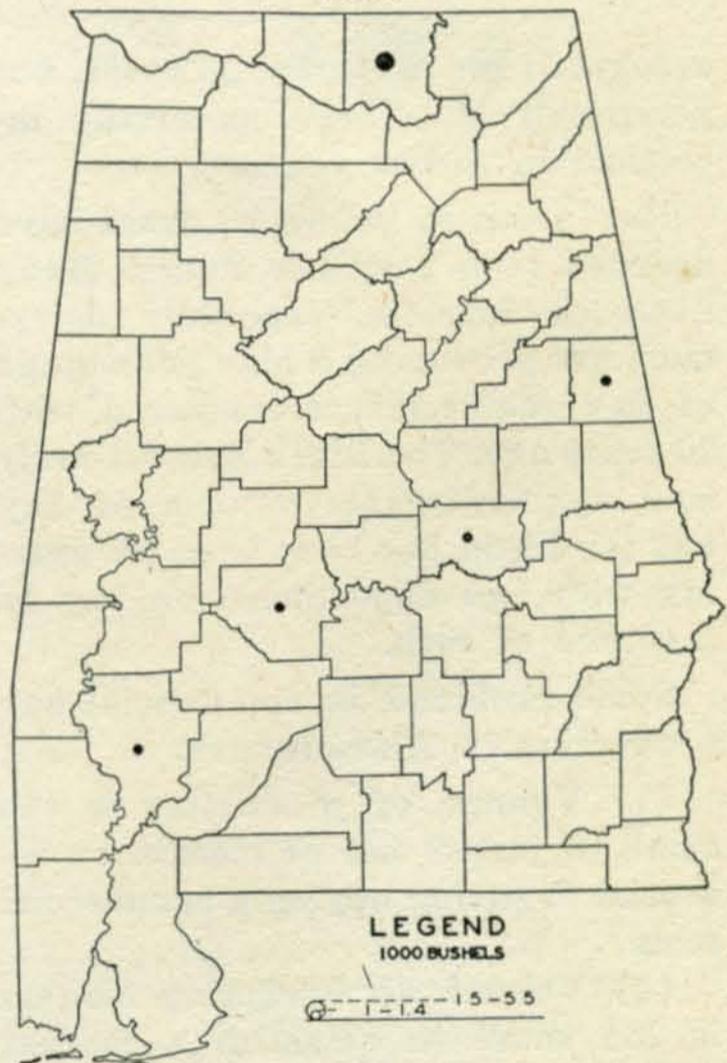
Small Grain

ALABAMA is a deficient small grain producing state. The problem with small grain in Alabama is increasing the acreage and production to meet present feed needs and to provide for needed livestock expansion. More small grain is needed to furnish grain, grazing, and erosion control.

Increases in small grain should be:

- (1) Oats throughout the State.
- (2) Barley on the more fertile soils to use as a supplement to and a substitute for corn.
- (3) Wheat for food, grazing and poultry, especially on the heavier soils of the State.

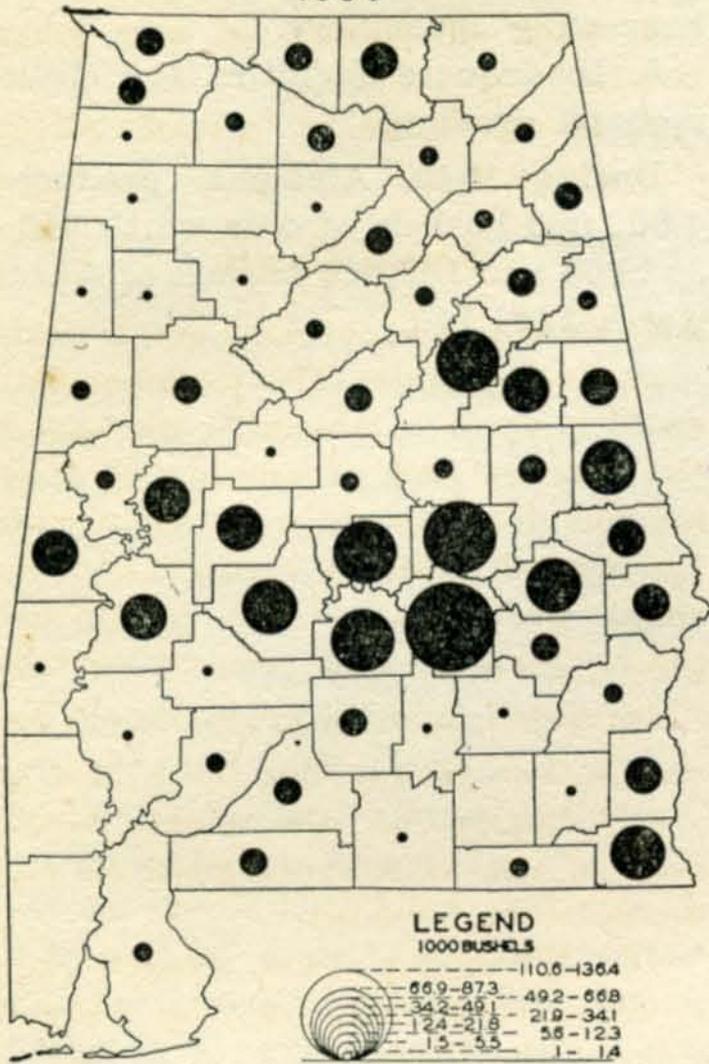
BARLEY THRESHED
1939 *



MAP 53

*1940 Census.

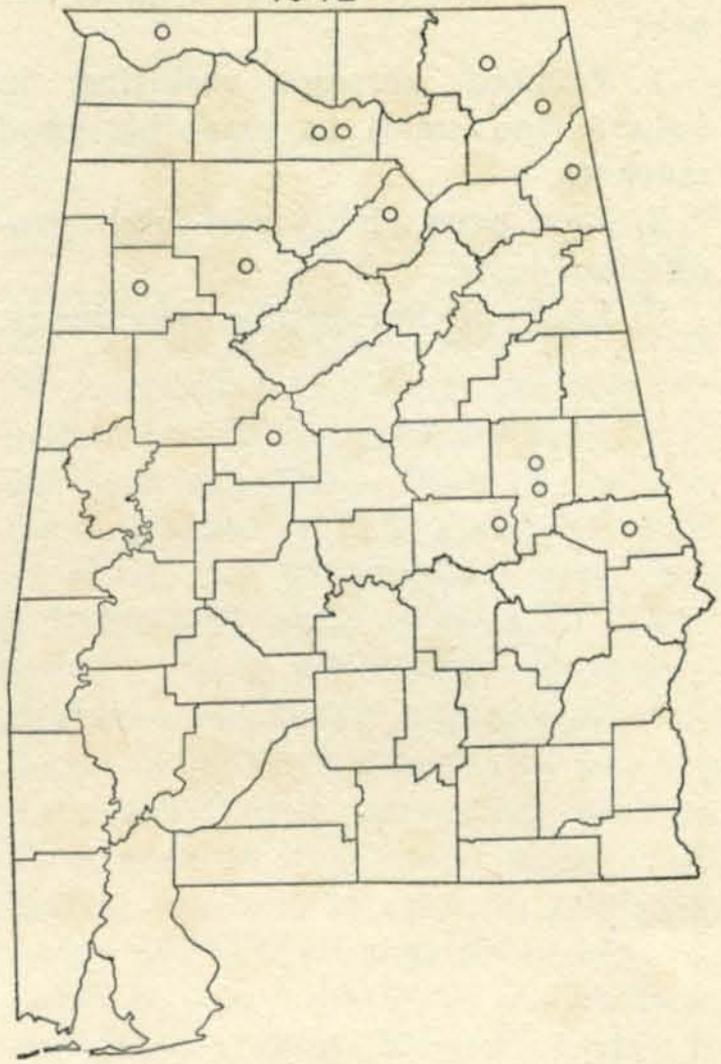
OATS THRESHED
1939 *



MAP 54

*1940 Census.

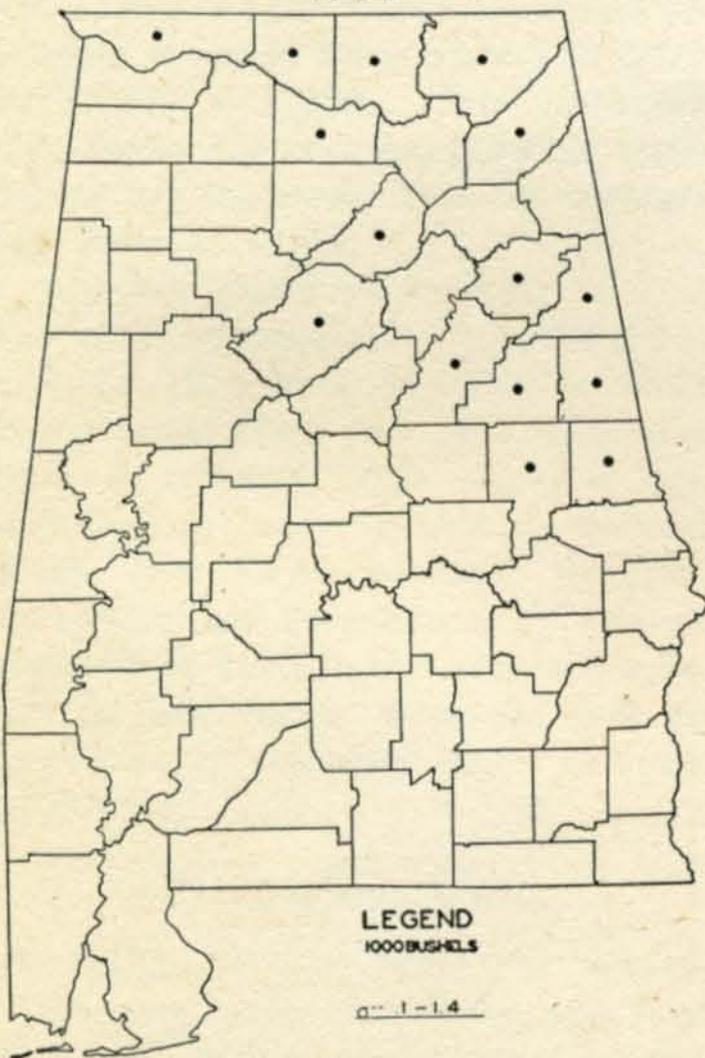
FLOUR MILLS
1942 *



MAP 56

*Records of Extension Agronomist.

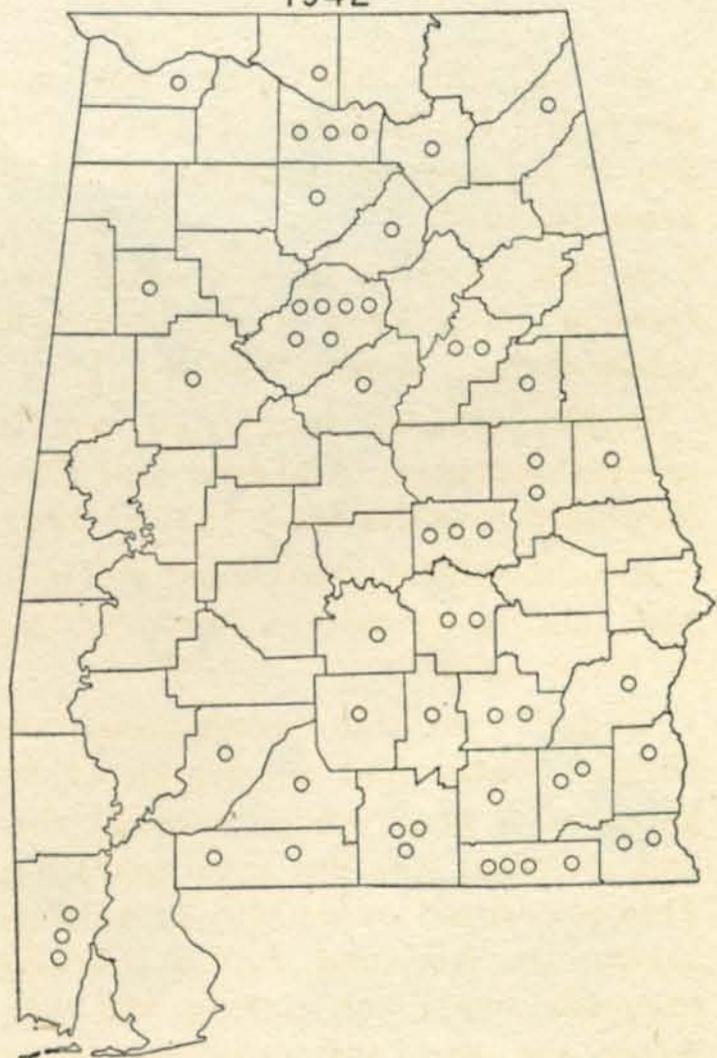
WHEAT THRESHED
1939 *



MAP 55

*1940 Census.

COMMERCIAL FEED MIXING PLANTS
1942 *



MAP 57

*Records of Extension Agronomist.

Problems with small grain for sale are:

1. Limited acreage resulting in volume too small to establish good markets.

2. Low acre yields and high production costs.

3. Lack of harvesting machinery.

4. Inexperience with planting and harvesting machinery.

5. Inadequate facilities for cleaning and grazing.

During 1942, Alabama produced 4,800,000 bushels of oats worth \$13,312,000 and 169,000 bushels of wheat worth \$201,110.



FRUITS AND VEGETABLES

Introduction

COMMERCIAL fruit and vegetable industry in Alabama returns to growers approximately \$10,000,000 annually. Of this amount, general truck crops bring in about \$1,500,000, fruits and nuts about \$4,000,000, Irish potatoes about \$3,000,000 and sweet potatoes about \$1,500,000. These are from all sales by farmers, including everything from small lots on local markets to car and truck lots shipped out. All statistics used in this report, unless otherwise designated, are based on the 1940 census.

In making a study of the commercial fruit and vegetable industry in Alabama a number of trends are of special interest. The 1939 commercial vegetable acreage of 38,000 acres was about 2500 acres over the 1929 total. At the same time farms reporting dropped from 18,587 in 1929 to 11,634 in 1939. This indicates that fewer farmers are growing vegetables but that these few are increasing their acreages.

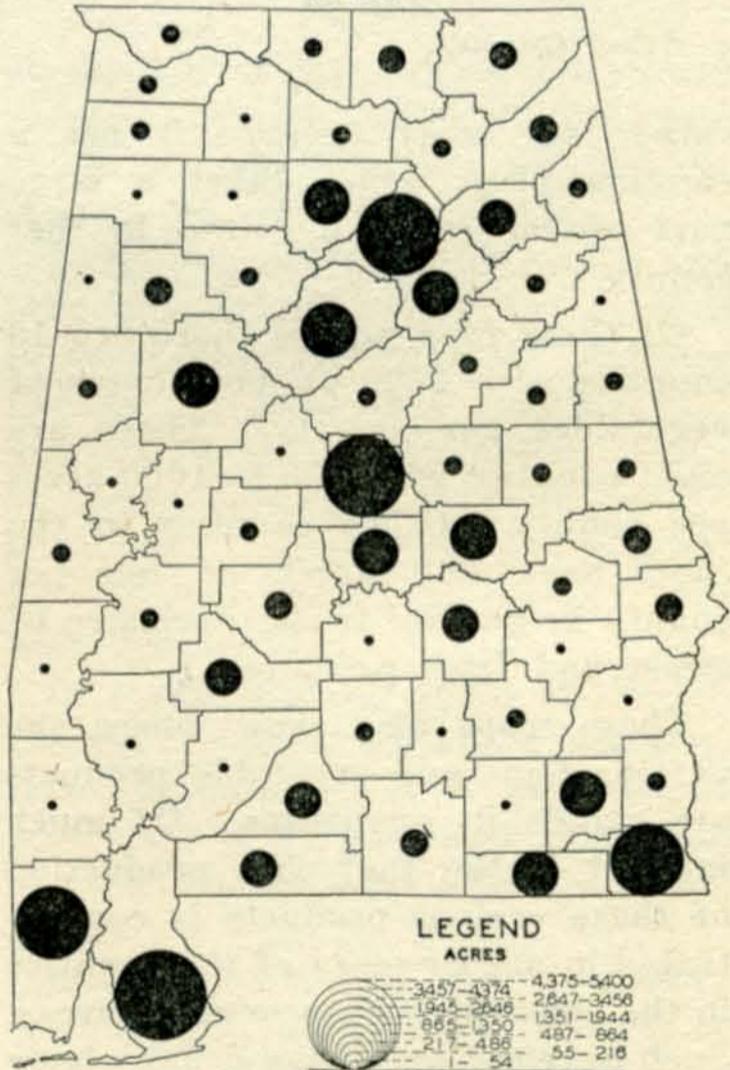
Another point of interest is that the value of vegetables harvested for sale in 1929 was \$2,540,000 while the returns from the 1939 crop was only \$1,335,000. This shows a tremendous decrease in returns from a 7 per cent larger acreage. Returns, of course, are determined by a large number of factors but efficient marketing can mean a great deal to growers in making their business profitable.

Producing Areas

IT WILL be seen from the accompanying maps that there are four areas of major importance in the commercial production of vegetables

in Alabama. The group around Birmingham takes in the lower end of the Sand Mountain territory with Birmingham and Tuscaloosa counties added. In the Montgomery area there are four counties. Some of the products grown in this area are marketed in the Birmingham area, but a large part of it is used in Montgomery and elsewhere. Southeast Alabama has three counties growing large amounts of vegetables but has no nearby large consuming centers. This area is dependent upon more distant markets to take its products. Large amounts of vegetables are produced in four counties in the Baldwin and Mobile area. Wilcox County is

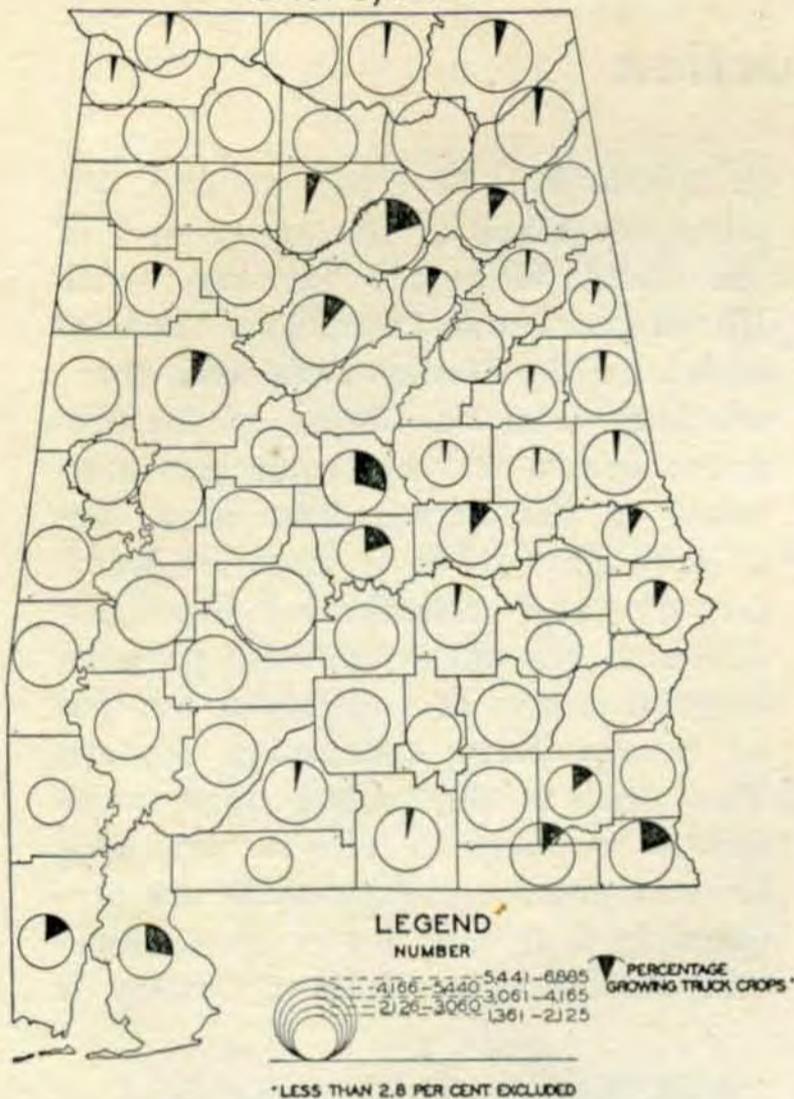
VEGETABLES HARVESTED FOR SALE
1939 *



MAP 58

*1940 Census.

NUMBER OF FARMS AND PERCENTAGE GROWING TRUCK CROPS, 1939 *



MAP 59

*1940 Census.

rather set apart because it has a canning plant which takes a large part of the produce grown in that county.

Of these four groups there are 10 counties with 1000 or more acres of vegetables per county. There are eight counties with 500 to 1000 acres per county. Other counties in the State have 500 acres or less per county in general truck, exclusive of sweet and Irish potatoes.

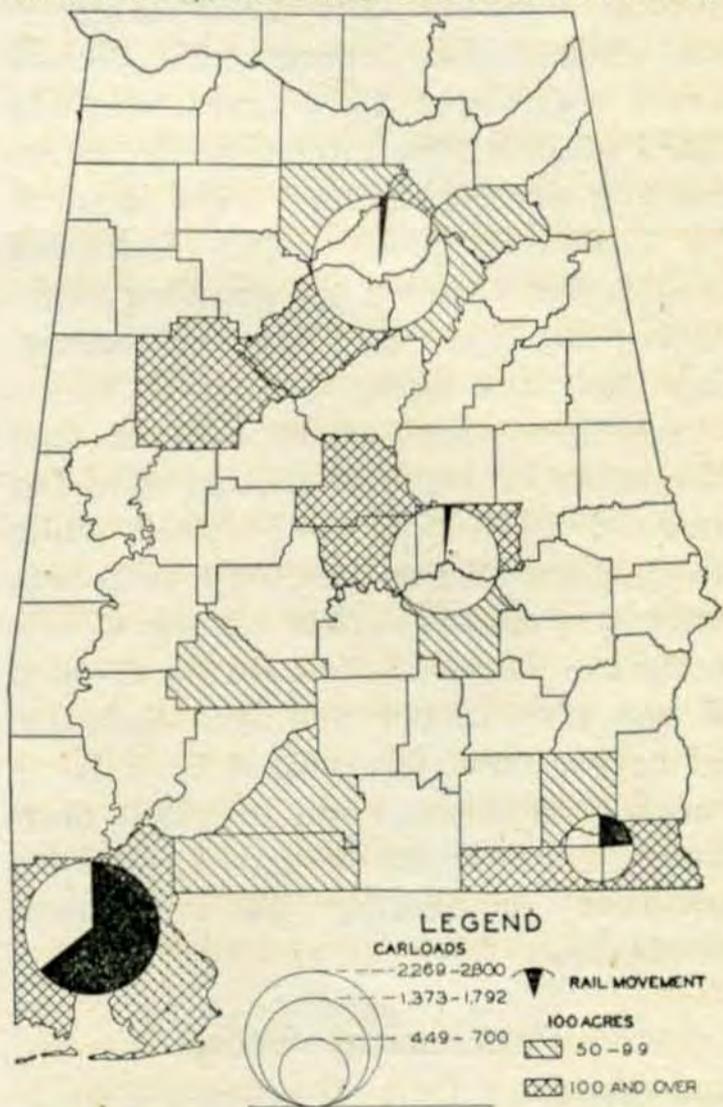
These maps also show where the various fruit and vegetable products are grown in quantities. Of much interest is the fact that production of these various products is concentrated in one or more of the counties in the general heavy producing areas. Such developments have usually been brought about by the problems involved in marketing these perishable

products. Farmers, unless they are large independent operators, have been forced to concentrate their production operations.

The accompanying map, No. 61, shows the locations of the various concentration markets or outlets for the products which are now being grown in Alabama. These markets range all the way from the small farmer cooperatives to the large markets which are operated by independent individuals. As might be expected, these are located almost entirely within the areas where the important commercial production is found.

A clearer understanding may be had of the entire problem of production and marketing of perishables in Alabama when it is observed that

FRUITS AND VEGETABLES 1939 *
MAJOR AREAS, VOLUME PRODUCED AND RAIL MOVEMENT



MAP 60

*Unpublished data from files of the Department of Agricultural Economics which were based on 1940 Census, AMA reports and data from county agents.

the heavy producing areas are located in sections with suitable soils, climate, people, and markets. Each area has some advantage.

In the Birmingham area, Birmingham is the market place for a large part of the produce from the six counties surrounding it. Jefferson County, with less advantage in the way of soils, grows rather large quantities because it has professional truck gardeners who understand the science of vegetable growing. It also has the advantage of being near to the markets.

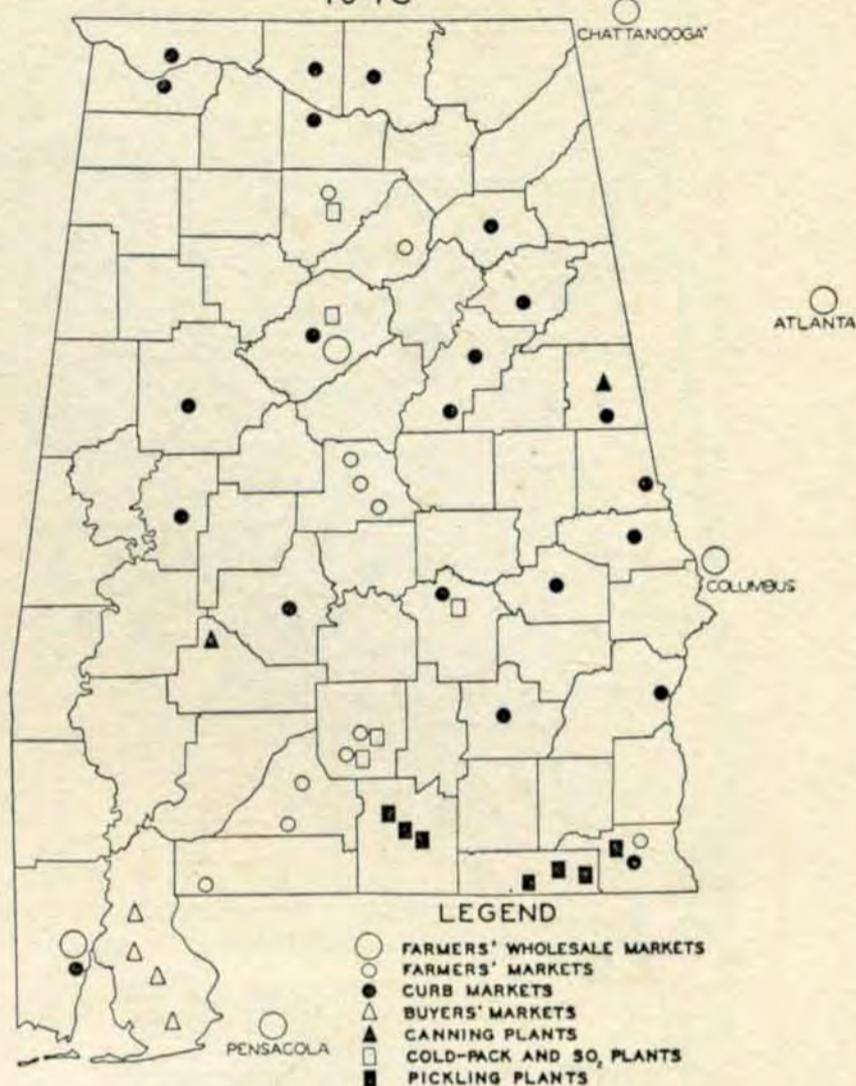
Counties such as Cullman, Blount, Etowah, and St. Clair have the advantage of excellent soils, some advantage in weather conditions, and close proximity to a ready market in the Birmingham area.

Some counties still further back have the same advantages as Cullman, Blount, and Etowah, except that they are far enough away from the markets that the farmers to the south of them are in a more advantageous position with reference to market. Tuscaloosa County is in the heavy-producing column. It has a rather satisfactory outlet in Tuscaloosa and Birmingham.

In the Montgomery area the counties of Chilton, Autauga, Elmore, and Montgomery have special advantages in soils. Chilton has a large population skilled in the production of perishable crops. Montgomery furnishes a ready market for a large portion of the goods produced in this territory but many of them are trucked to Birmingham and other points. Good highway systems and railroad facilities make transportation of minor importance compared with sections.

In counties like Houston, Geneva, and southern Dale, the exceptionally fine soils account for the commercial development. Large sections of these counties are admirably suited to the

FRUIT AND VEGETABLE MARKETS 1943 *



MAP 61

*Records of Extension Horticulturist.

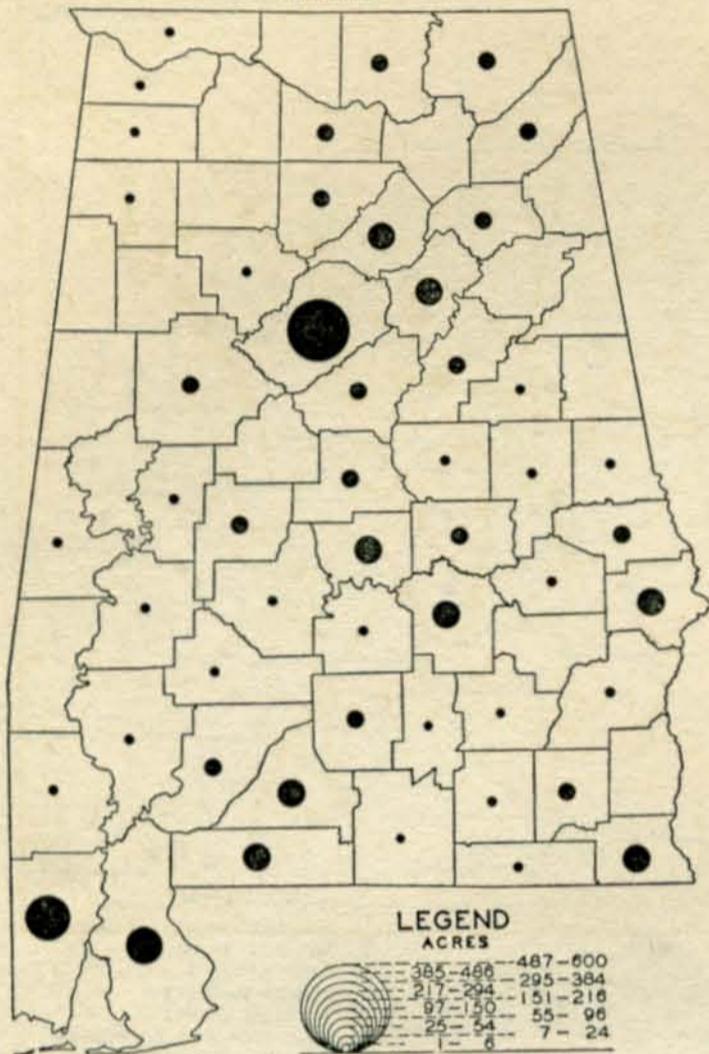
production of vegetables. They have considerable advantage in earliness as early spring weather permits the starting of crops quite early.

Earliness, naturally fine soils, and predominance of people experienced in vegetable growing, make Baldwin County an ideal spot for the production of early vegetables. Good highways and railroad facilities are adequate for moving the crops. Also, an efficient marketing system has been developed.

In Mobile County is found the advantages in earliness, mild temperatures, fairly good soils, experienced growers, and a ready market in Mobile for a large part of the produce grown.

Developments in Wilcox County may be attributed to the location of a canning plant which packs largely okra. This crop is especially well

TURNIPS AND TURNIP GREENS
1939 *



MAP 62

*1940 Census.

suiting to Wilcox and Black Belt farmers and soils.

Peaches are grown in commercial quantities in Chilton, Elmore, Autauga and DeKalb counties. Facilities for handling the present volume seem to be adequate.

Truck Crop Markets

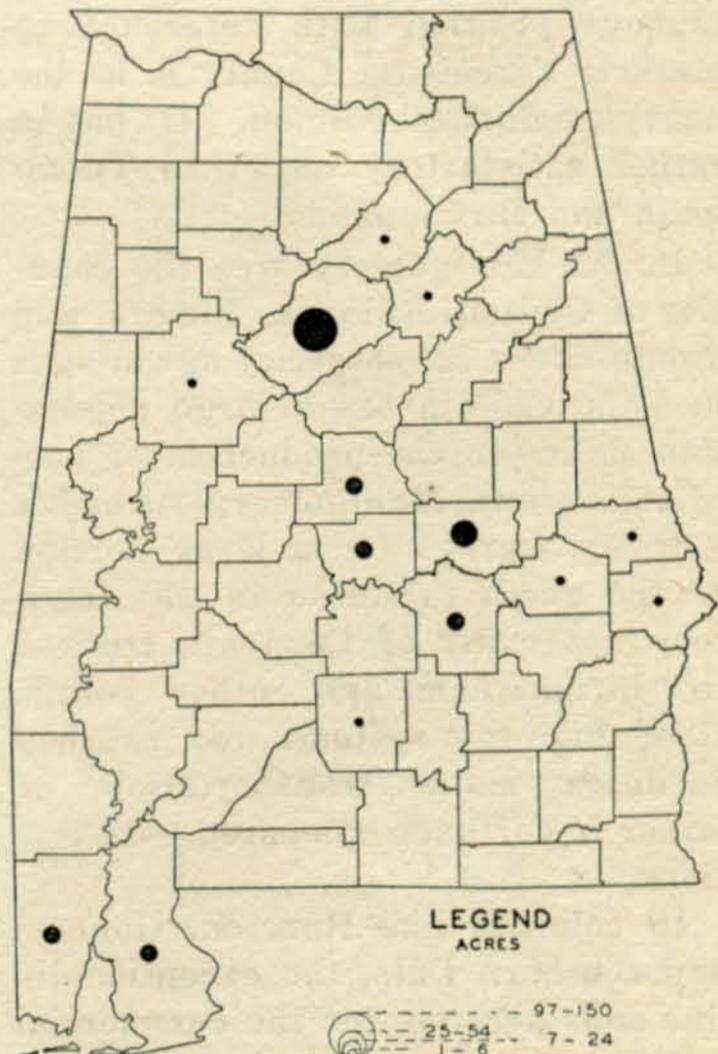
WITH REFERENCE to outlets or consuming centers, the bulk of surplus produce moving out of Alabama goes naturally into the densely populated section south of the Great Lakes. Railroad and highway Charts No. 7 and 8 show that this is a natural movement. These heavy consuming centers are located nearby compared to eastern markets and are well served by transportation facilities.

Lines drawn from Birmingham, Alabama, through Chicago and Pitts-

burgh will form a 30° triangle in which about 85 to 90 per cent of Alabama's export products are marketed. See Charts 7 and 8. Convenient diversion points in cities like Cincinnati, which is the beginning of the real consuming area, makes it possible for those who move produce into that area to direct it into the cities where there is greatest demand. This is true of truck movements as well as of car lots. Of course, it is necessary for those marketing fruits and vegetables to keep up with the current demands in consuming centers.

Another reason for the movement of this produce into the Great Lakes section is the fact that the large producing states on the Eastern Seaboard supply the East, the largest consuming center in the country. Those states have the advantage of nearness to Eastern consumers. An-

COLLARDS
1939 *



MAP 63

*1940 Census.

RAILWAYS OVER WHICH ALABAMA PRODUCTS MOVE TO MARKET

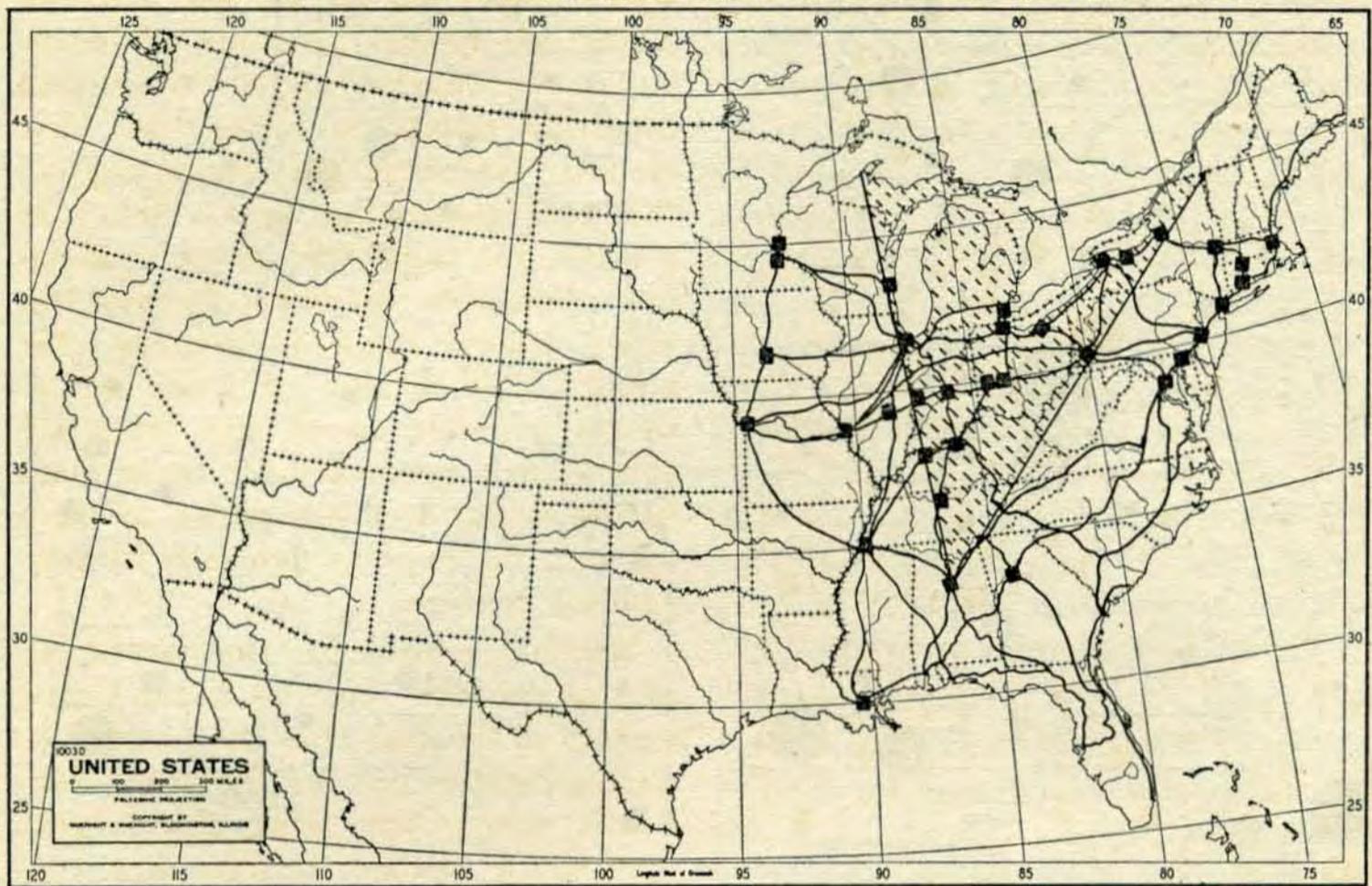


CHART 7

HIGHWAYS OVER WHICH ALABAMA PRODUCTS MOVE TO MARKET

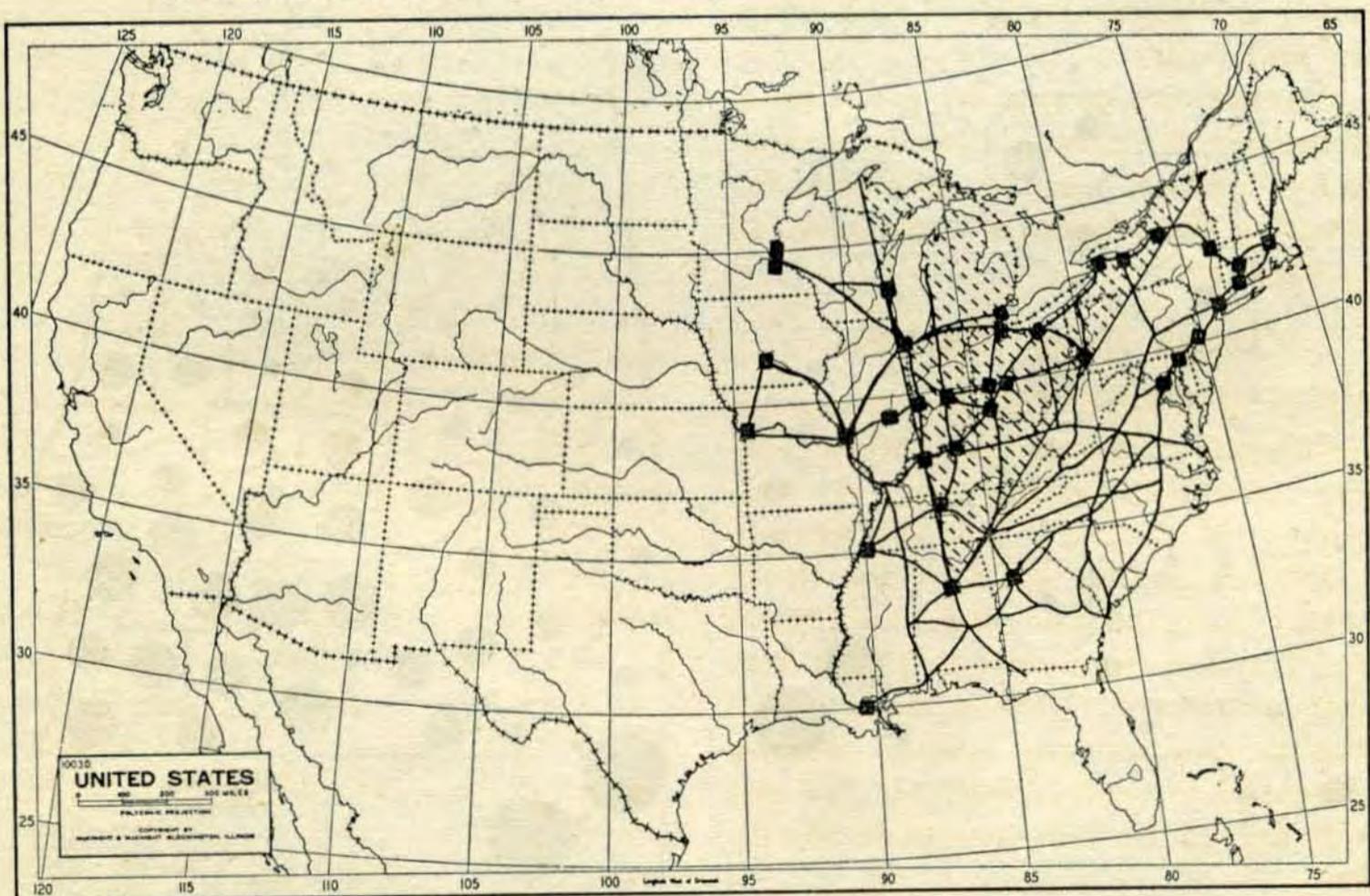
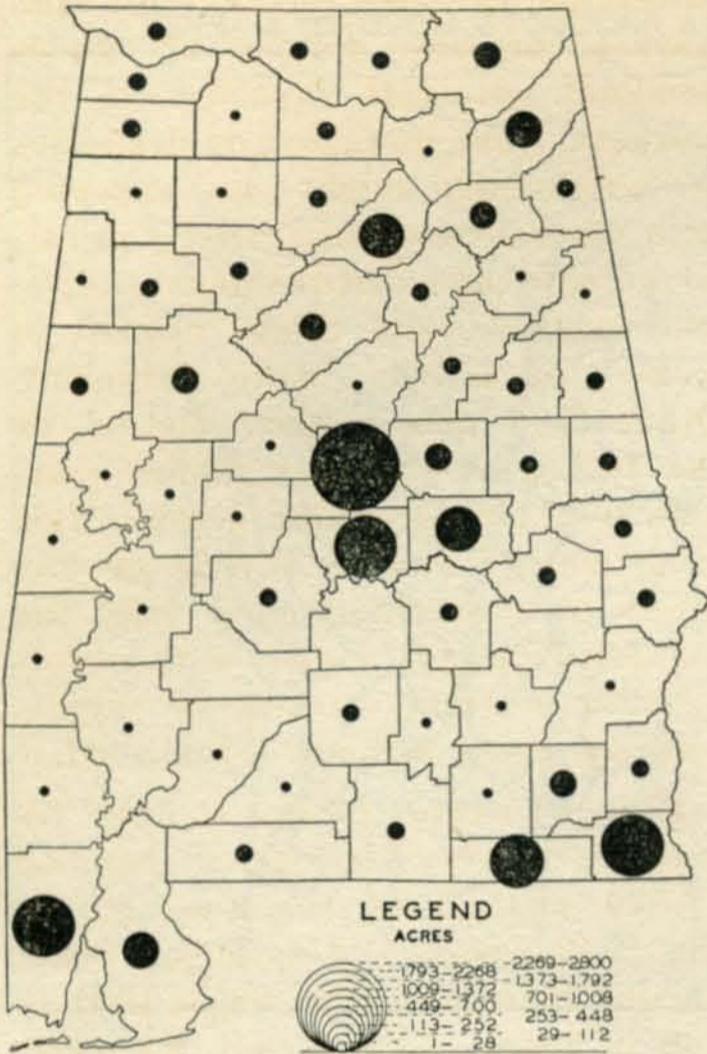


CHART 8

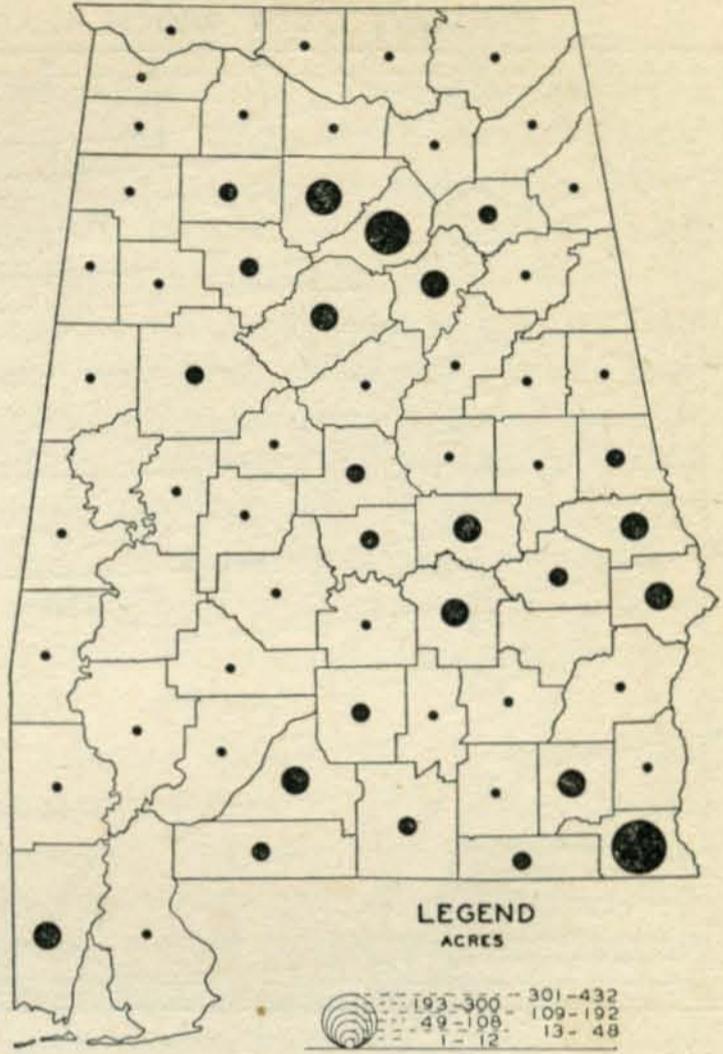
WATERMELONS
1939 *



MAP 64

*1940 Census.

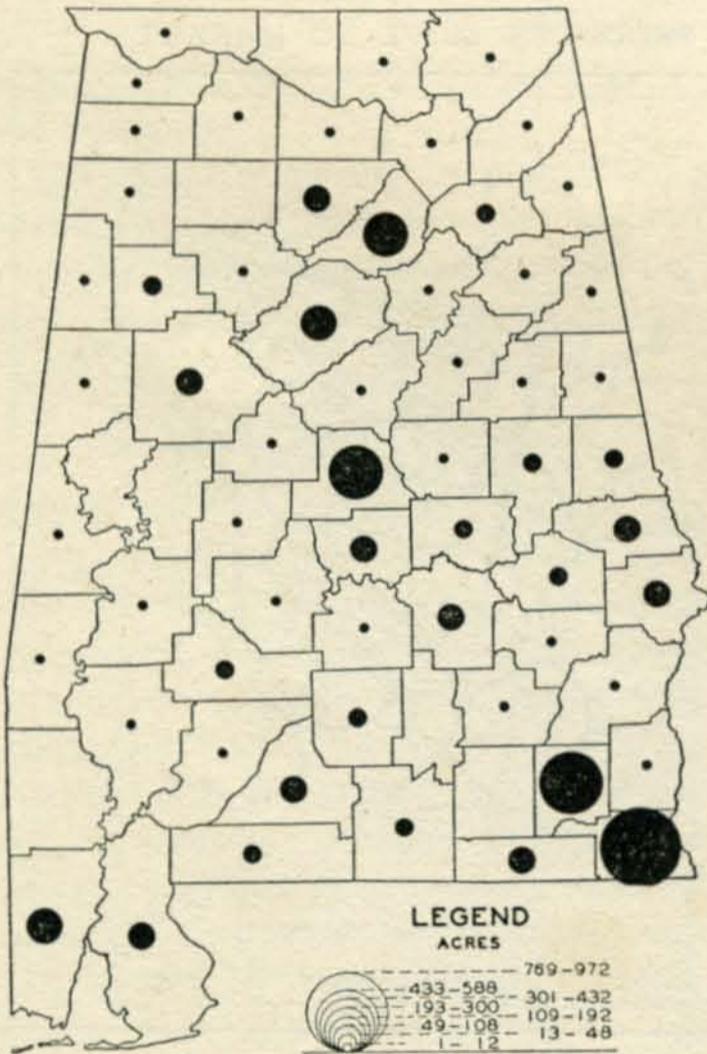
BEANS (LIMA)
1939 *



MAP 66

*1940 Census.

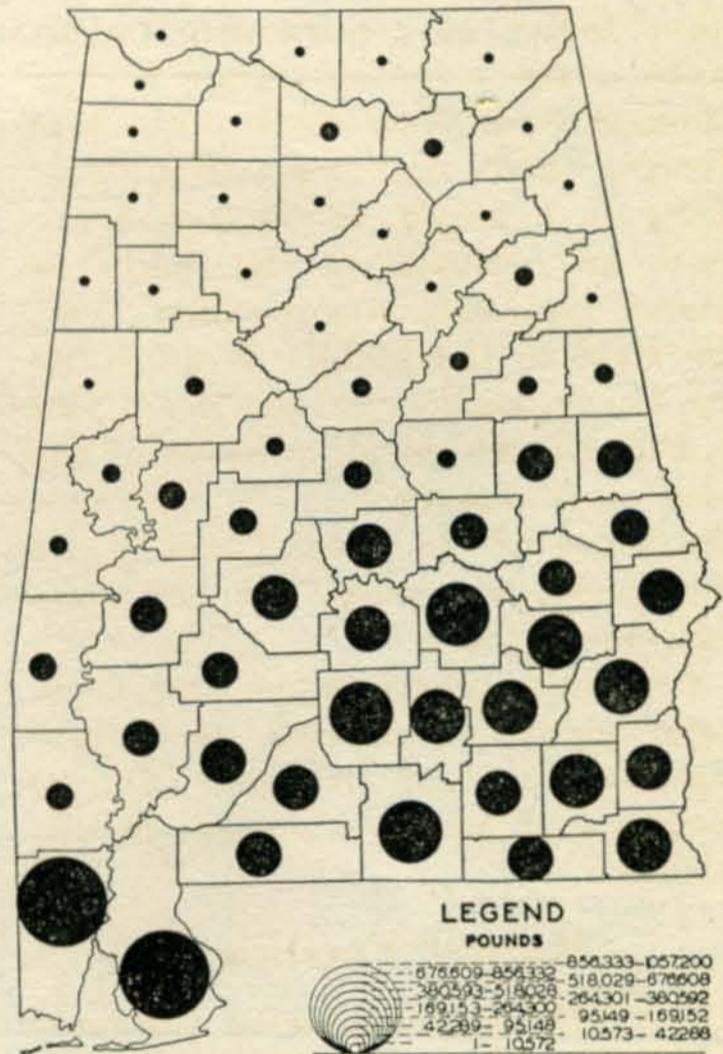
PEAS (GREEN)
1939 *



MAP 65

*1940 Census.

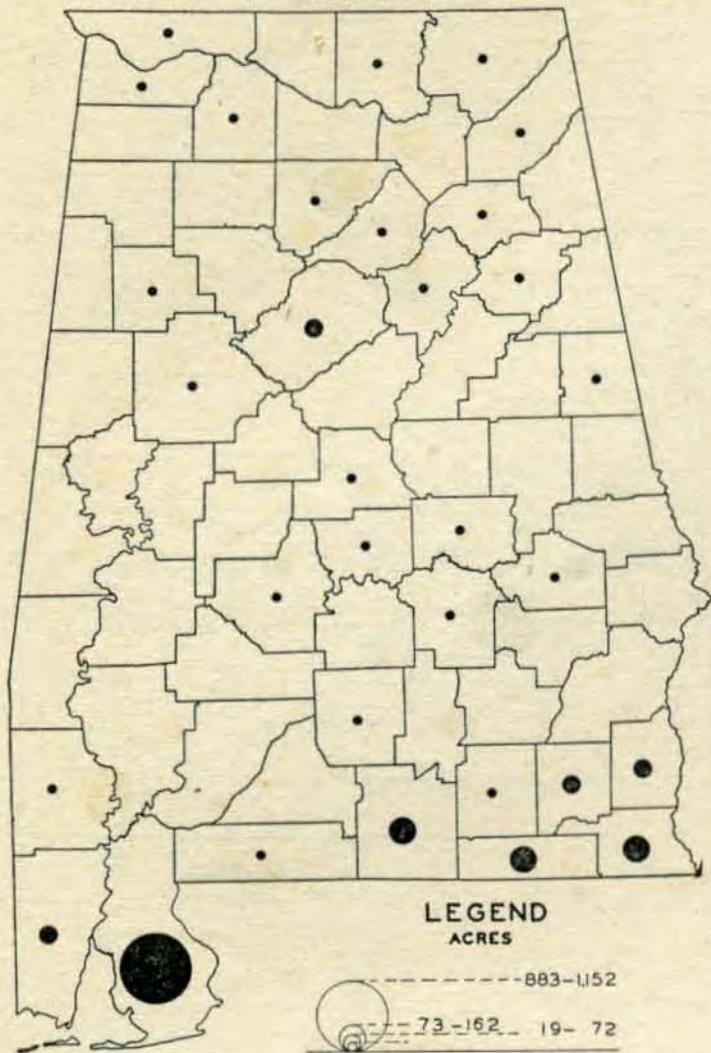
PECANS
1939 *



MAP 67

*1940 Census.

CUCUMBERS
1939 *



MAP 68

*1940 Census.

other factor of considerable importance is the mountain range barrier running from New York State into Georgia and Alabama. Mountains rising to a height of 5000 feet are quite an obstacle in the paths of trucks and railroads hauling from the East to the Middle West. Hauling heavy loads over the mountains is difficult. At certain seasons of the year it is dangerous. So the area just south of the Great Lakes is not only most convenient but less competition is found.

Competing states to the west move large quantities of their goods into the cities west of Chicago. This is natural and most economical in distribution.

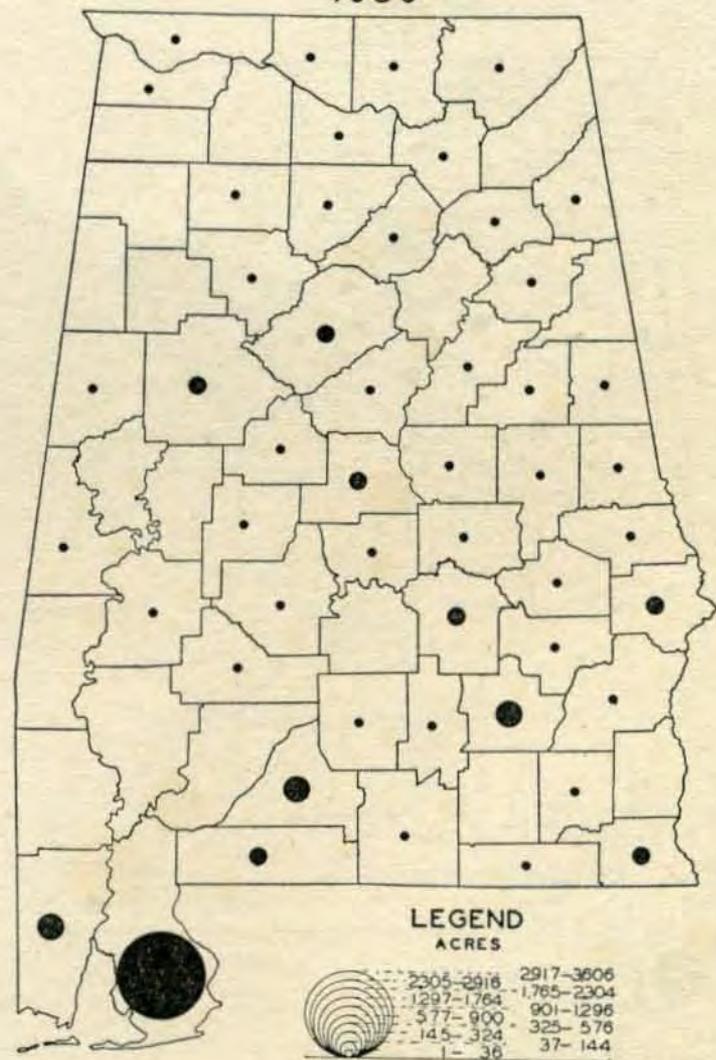
Market Facilities

DETAILED information of the market set-up in Alabama has been compiled and is given here. This in-

formation includes location of each market, present volume of goods handled, potential capacity of the markets, what increases or decreases in production might be expected with assurance of satisfactory prices, advantages and disadvantages, physical facilities, and things needed to make operations more efficient. Other facts give a clear picture of the future of these or similar markets in their particular areas. This study should enable anyone or any group to understand more fully the recommendations made with reference to locating markets or supplementing those already established.

Blount County: Blount County Tomato Growers Association handled 17,500 bushels of tomatoes during the 1942 season. Association membership increased from 68 in 1941 to 186 in 1942. L. J. Vogel, manager, reports that its present capacity is

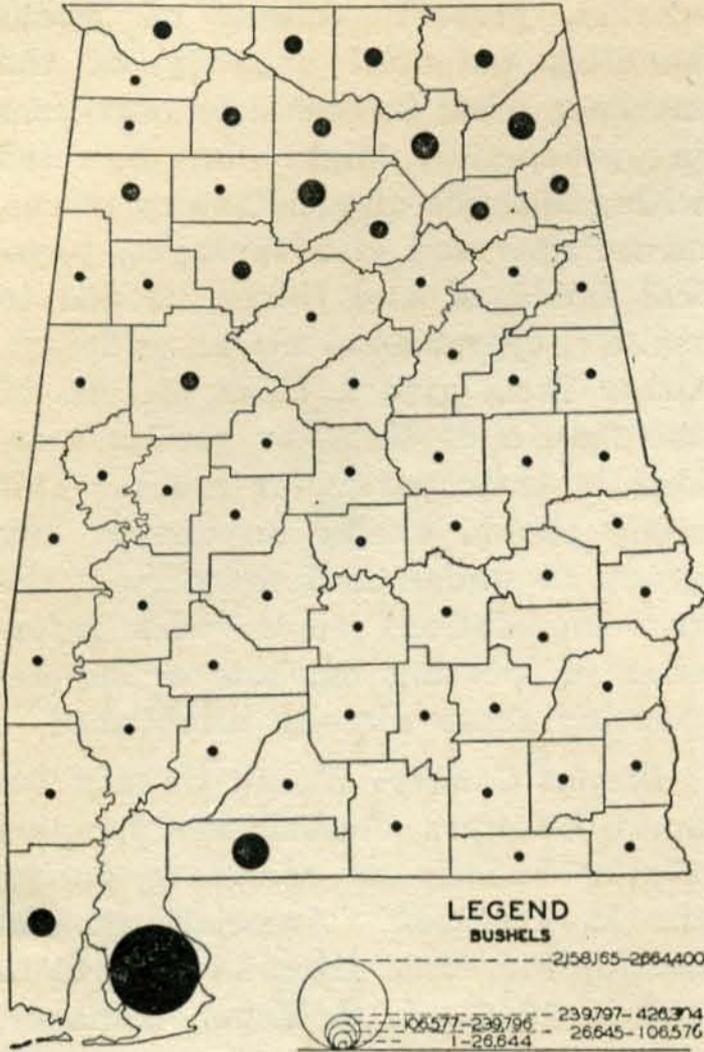
CORN (ROASTING)
1939 *



MAP 69

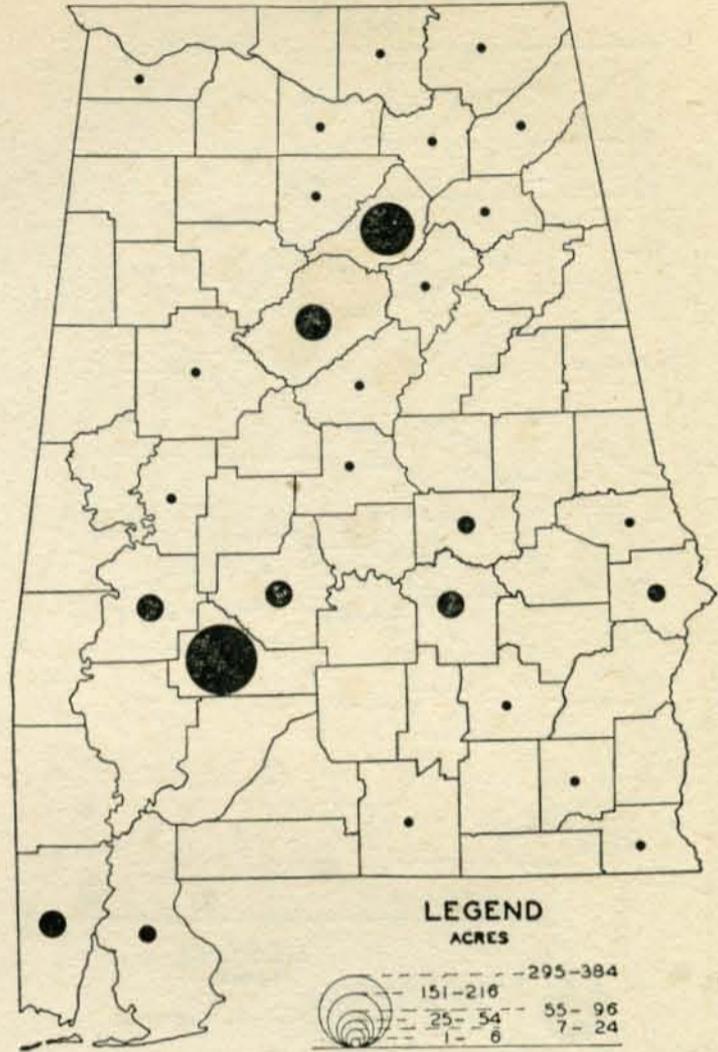
*1940 Census.

POTATOES
1939*



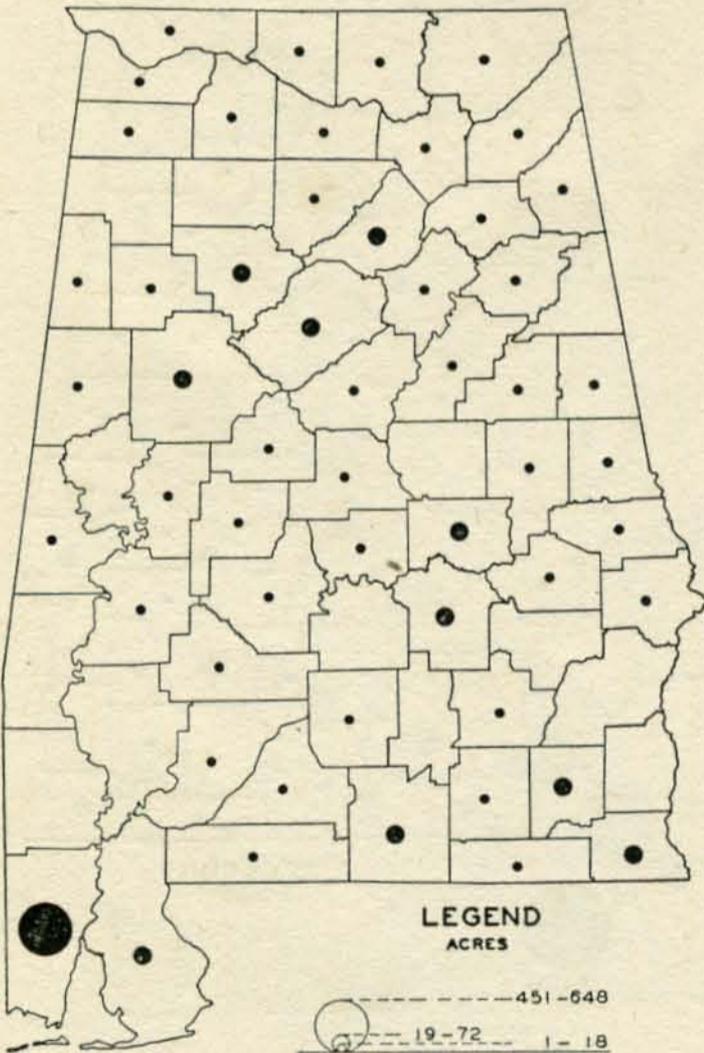
MAP 70
*1940 Census.

OKRA
1939*



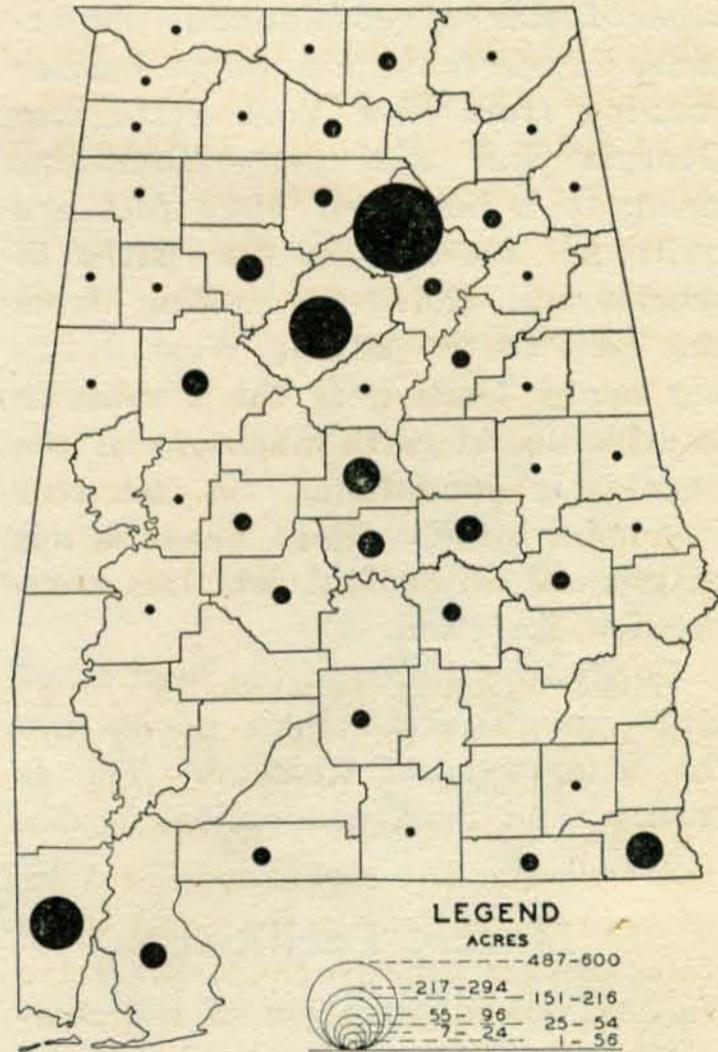
MAP 72
*1940 Census.

CABBAGE
1939*



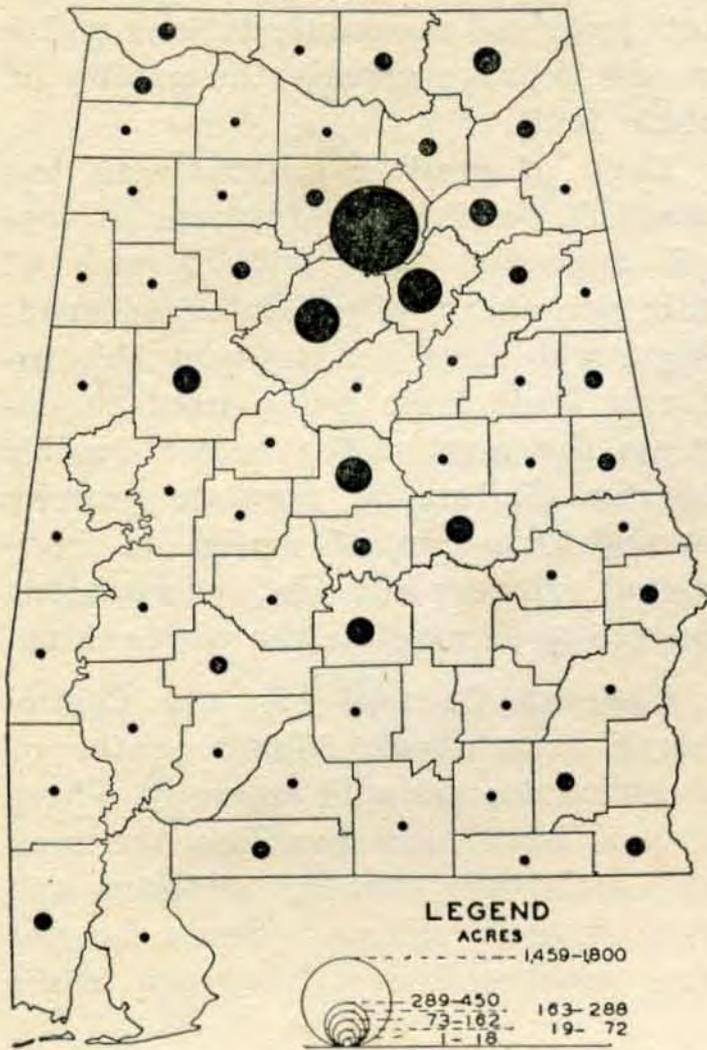
MAP 71
*1940 Census.

CANTALOUPS
1939*



MAP 73
*1940 Census.

TOMATOES
1939 *



MAP 74

*1940 Census.

about 30,000 bushels with the sizing machine now in use. It has ample shed space and facilities to take care of any expected increase.

With normal prices assured an increase of 10 percent might be expected in acreage.

The association is fairly close to market outlets with much of the crop moving to Atlanta, Jacksonville, Tampa, and other Southeastern points. Most of the crop is moved by truck.

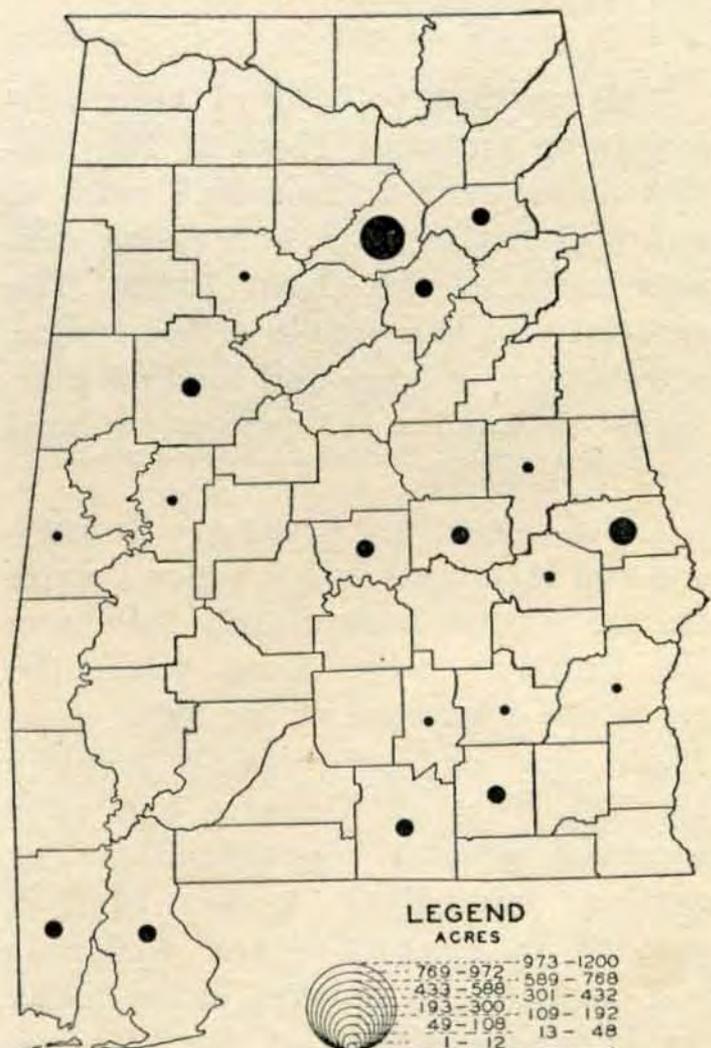
The area has advantages in climate and soil which enables it to produce good yields of superior quality tomatoes. This quality, together with the fact that the higher altitudes and plateau formations in the Sand Mountain section usually cause the tomatoes to frost out later than in surrounding regions, probably means that this project will endure and con-

tinue to grow. The volume obtained for the short season of operation makes it possible for the association to employ good sales help and to operate efficiently and profitably.

An obstacle lies in the fact that some growers prefer, for various reasons, to adhere to the old method of selling field-run fruit to local dealers. Possibly some of this is due to financial arrangements which reduce the freedom of action of individual growers.

Cullman County: United Strawberry Growers of Cullman has handled up to 65,000 crates of berries per season. In 1942 it handled 35,000 crates. Capacity of the association's facilities is about 150,000 crates. Even if satisfactory prices are assured, the serious labor shortage is expected to cause a slight reduction in strawberry acreage this year.

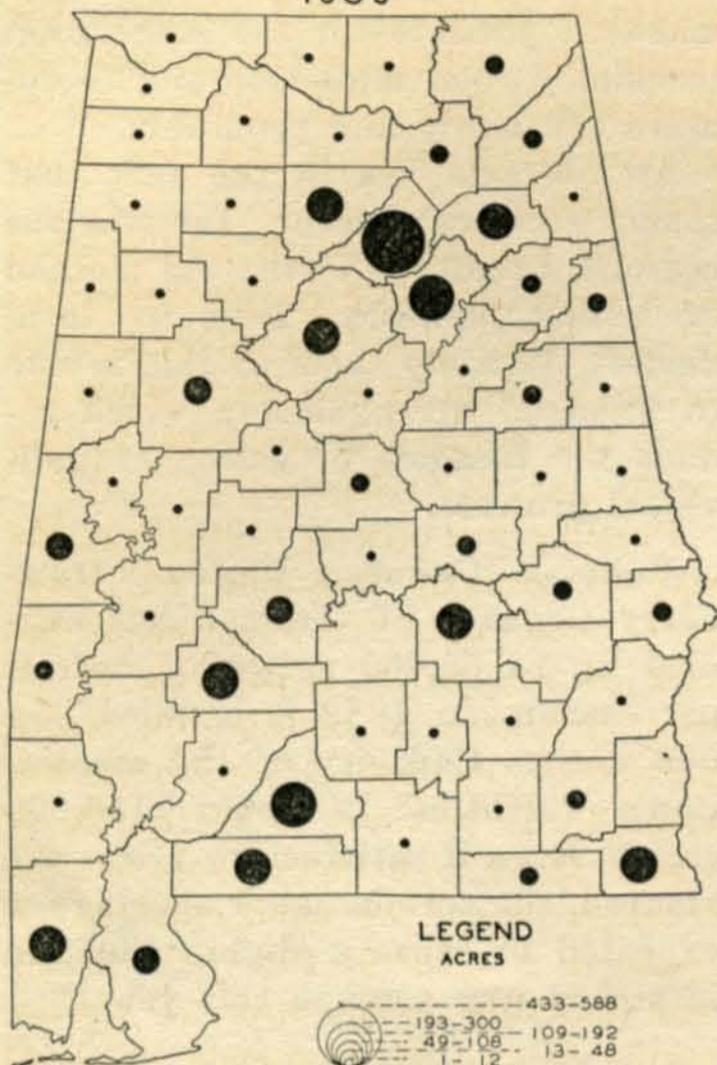
COWPEAS (GREEN)
1939 *



MAP 75

*1940 Census.

BEANS (SNAP)
1939 *



MAP 76

*1940 Census.

This market is located very favorably to outlets. Most of the berries move over a truck-line railroad and highway to large consuming centers south of the Great Lakes. The association has ample shed space, warehouses, sidings and loading platforms to handle the present volume very efficiently.

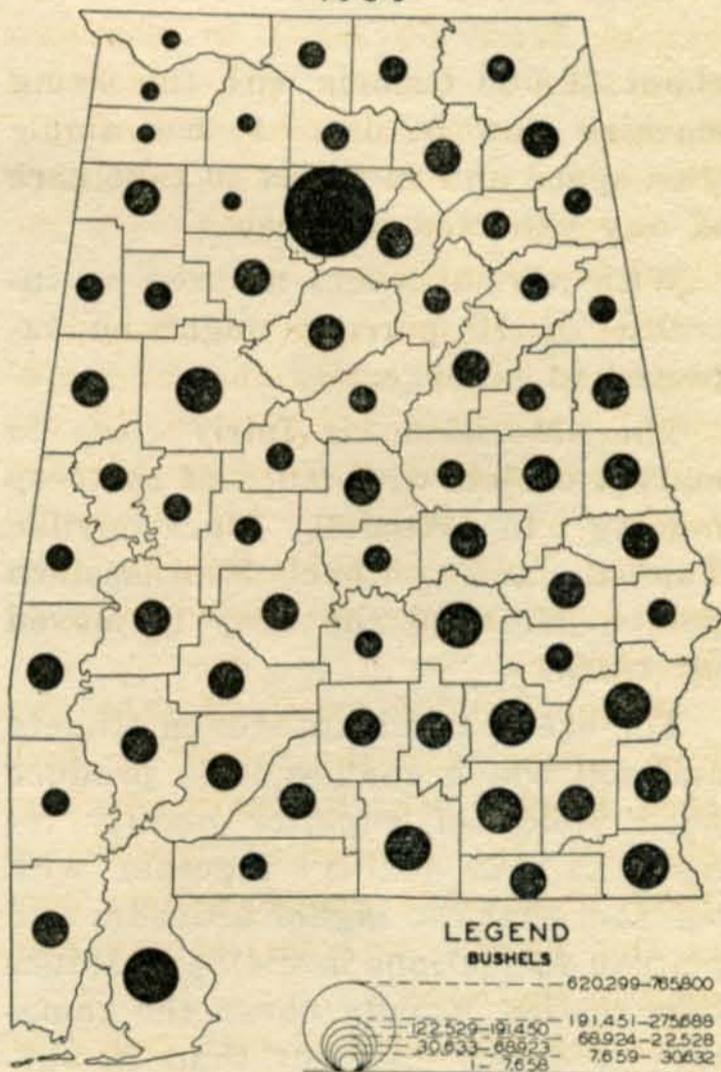
Chief competing areas are Tennessee and Arkansas which place berries on the market immediately following the Cullman crop. Some years the crops are marketed at the same time. Their combined acreages are possibly 10 times that of Alabama and offer truckers greater opportunities for getting immediate loads. Stricter grading in Tennessee and Arkansas and nearness to market cause many truckers to move out of the Alabama territory as soon as the other berries come on the market. A serious pro-

duction problem is the failure of growers in the Cullman area to follow practical recommendations which would improve greatly the quality of their fruit.

Lack of grading enforcement has made it possible for farmers to top-off ungraded fruit with berries of fair size and quality. Enforced grading regulations will prevent this inferior fruit from being used to depress the market for better quality berries. Failure to regulate permits enough freedom of action of individual growers and the unscrupulous buyers to demoralize the whole thing.

Conecuh County: In the Castleberry area about 26,000 crates of strawberries are sold annually. Three groups have been handling the crop at Castleberry through auctions and consignment selling. Some berries are marketed at Evergreen while

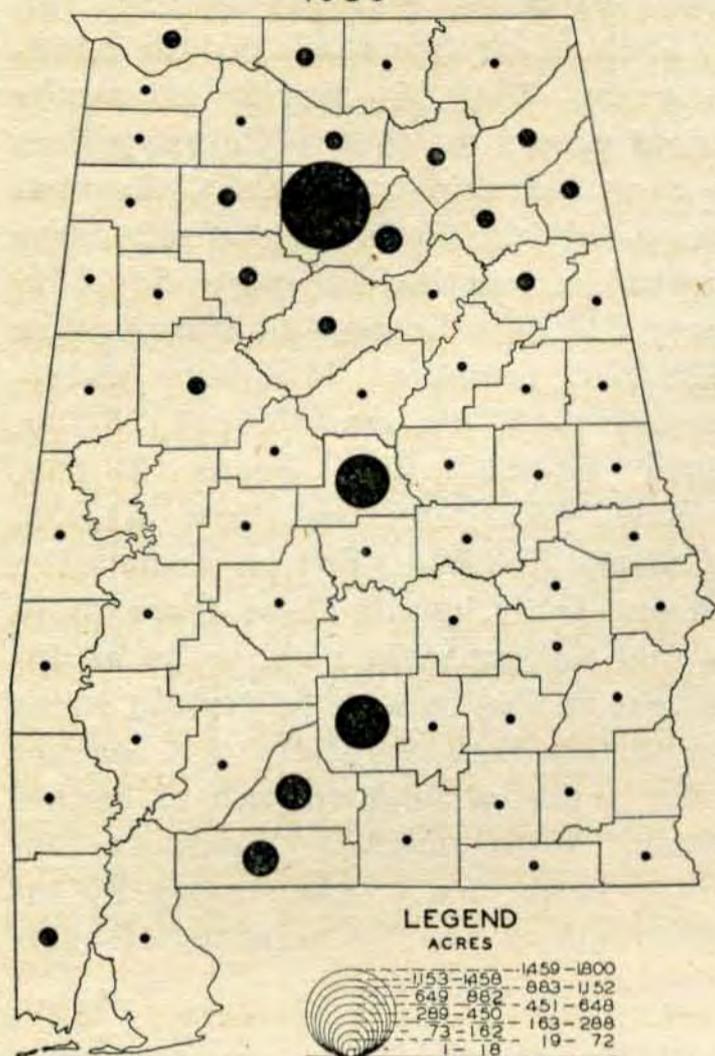
SWEETPOTATOES
1939 *



MAP 77

*1940 Census.

STRAWBERRIES
1939*



MAP 78

*1940 Census.

berries from 60 acres in northern Conecuh County are marketed through the associations at Garland. There is a serious need for assistance in organization and selling on the Castleberry market.

With satisfactory price assurance, improved labor conditions, and efficiently operated markets, a 75 per cent increase of strawberry acreage might be expected for Conecuh County. This also holds true for general truck grown in the vicinity of Evergreen.

About \$60,000 worth of snap and lima beans, squash, tomatoes, field peas, English peas, and corn was handled on the Evergreen market in 1942. Physical facilities are very poor at this point. Strawberries are handled in the open.

During the present emergency an attempt is being made in Conecuh to maintain the strawberry acreage

which may be expected to remain about as it was in 1942. Because of a shortage of labor and supplies the trend in vegetable crops will be downward. The 1943 production of general truck crops is expected to be very small.

These markets are all well located with reference to transportation facilities. They have the advantage of earliness. Most of the crops move before the competing sections to the north start their harvest.

Possibly the biggest obstacle in the way of orderly handling of these crops, especially strawberries, is the lack of volume. It is difficult to attract truckers to handle the major portion of the crop. After berries are available in sections to the north, or where there is a larger volume, the truckers desert the small markets because it is difficult for them to obtain suitable loads without considerable delay. If producers in all of these small producing sections could increase their volume by 300 or 400 percent they would be in much better position to attract and hold buyers and pay the expense of any needed marketing organization. Better assembling and grading of the product would be a help to the industry.

Combining the efforts of the various agencies and individuals now handling these berries would be beneficial. There is ample shed space and other facilities to take care of a 100 percent increase in volume of berries.

Chilton County: Jemison Strawberry Association handles annually 3,000 to 3,500 crates of berries. They could handle 100 percent more with present facilities.

The Thorsby Strawberry Association handles annually 3,000 to 3,500 crates of berries and could increase this 100 percent with present facilities.

The Clanton Strawberry Association handles 20,000 to 25,000 crates annually and could handle double that amount with present facilities.

These markets are ideally located with reference to railroad and highway outlets and the consuming centers to the north. This section normally has a ten days to two weeks period when berries move without competition from sections further to the north. When other sections start moving berries there is usually a sale for the remaining berries to processing plants in Birmingham and Montgomery.

Strawberry production could well be increased 300 percent in Chilton County. Facilities for handling such a crop are now available or could readily be supplied by these associations. However, with assurance of satisfactory prices and necessary labor a 50 percent increase may be expected. Larger volume of berries would have the effect of attracting buyers as well as reducing the per-unit cost of marketing the crop.

The Clanton Peach Association handled 4,000 bushels of peaches in 1942. It has equipment and facilities to handle 150,000 bushels. The county crop sold for \$750,000 with various individual methods of marketing used. Principal competing areas are Georgia and South Carolina, where large acreages are found. Chilton County produces peaches of quality as good as any other section. With the proper market set-up and fair prices, producers can operate very profitably.

Present production and marketing problems are: Lack of trained labor, scarcity of fertilizer and insecticides, need for better marketing facilities for the minor crops, reduced expense of marketing for individual growers, educational work on grading and packing, and a workable state law on compulsory federal-state inspection

on selected crops entering or leaving the State.

Lack of proper facilities for handling the \$340,000 worth of minor crops grown in Chilton County offers a considerable problem. Records show that in 1942 each of 12 crops brought: roasting-ear corn \$38,780, peas \$13,560, beans \$25,480, turnips \$29,020, tomatoes \$158,600, watermelons \$31,360, cantaloupes \$3,980, okra \$8,280, lima beans \$3,880, squash \$12,500, cabbage \$1,252, potatoes \$13,580. For an association to profitably handle these crops there would undoubtedly have to be an increase in the volume of certain items to justify the operation of a market over a period long enough to handle them. With normal transportation these crops are trucked away by individuals to nearby markets of their choice.

Butler County: Last year two associations at Garland and one at Georgiana in Butler County handled 51,750 crates of strawberries—15,000 as fresh berries and 36,750 as processed fruit. The estimated capacity for these associations is 150,000 crates. They have satisfactory shed space, warehouses, and loading facilities.

If labor becomes available and satisfactory prices are assured, an acreage increase of 50 percent may be expected. Growers are trying to maintain their present acreage.

These markets are well located with reference to transportation and outlets. They have the advantage of relatively early crops and usually experience good demands and prices. Their soils are suitable and people experienced. Louisiana is their chief competitor.

Chief obstacle to production of perishables in this area is lack of faith that crops can be disposed of at a profit. The farming system can be

changed if this assurance is given. The big problem at present, as with other small areas, is failure to follow recommended practices in producing quality products, lack of standardization and grading, lack of sufficient volume to attract buyers, and inability to pay for the operation of an efficient selling organization.

Escambia County: About 25 cars of general truck (except Irish potatoes) are handled from Atmore, Brewton, Canoe, and Pollard. Apparently the facilities are unlimited for handling all that can be produced in the county. Undoubtedly facilities used in handling the Irish potato crop can be employed in the preparation and handling of other crops. One association is operating at Atmore where general truck is produced and assembled.

With assurance of satisfactory prices, an increase of 10 percent may be expected in acreage. With plentiful labor it might reach 25 percent.

While this section enjoys some advantages in soils and climate, competition of the Carolinas and other states nearer to market may be a handicap. Transportation is quite ample with two railroads and a good highway serving the area, but markets are at a distance.

Jefferson County: The Jefferson County Truck Growers Association owns the facilities of the 23-year-old Birmingham Farmer's Market which handled \$2,000,000 worth of products last year. Present lot and buildings serve farmers from all points in Alabama. The association has additional space which is ample to take care of expansion as it may be needed. Farmers from anywhere can sell on this market by paying a nominal fee assessed all itinerants.

This market is located in the center of the shopping district of Birmingham, Ensley and Bessemer and is

surrounded by the wholesale districts of Birmingham. Good highway and railroad facilities are available. It serves, as do most markets of this nature, as a place where truckers meet from various sections of the country to exchange goods or to buy and sell. It naturally serves the local demands, and is used as an outlet for much of the produce from the counties surrounding it.

In addition to other services performed, the association makes available supplies such as fertilizer and containers to those who use the market.

Baldwin County: Practically all markets in Baldwin County are operated by individuals and are commonly known as buyer's markets. These are operated independently of any help from the State or any other public agency.

Mobile County: The Mobile Farmer's Market, started at Mobile in 1939, serves principally Baldwin and Mobile counties. Last year it handled \$2,000,000 worth of products. Present facilities are adequate for handling as much as 50 percent more. It has the advantage of being located between the Florida and Texas trade areas. With assurance of normal prices it appears that an increase of 25 percent may be expected in production for this market. One of the principal problems encountered is in the grading and preparing goods handled through it.

Houston County: Markets in Ashford, center of the vegetable growing section of Houston County, handle 15,000 to 20,000 tons of vegetables per year. This is exclusive of the watermelons and tomatoes handled through the local markets. The addition of these two products would double the initial figures. The facilities there consist of one shed, 25 by 50 feet, operated by the farmers, and

three or four private temporary sheds or warehouses operated by local buyers or brokers. These facilities are entirely inadequate for the volume handled during the height of the season.

Local farmers believe that the acreage might be increased 100 percent if an adequate market were established to get the farmers full value for their goods. Lack of information on the current value of perishables and established efficient methods of handling leaves most farmers with distant markets or local buyers as their only outlets. Distance to market is a serious handicap for this section.

Greatest needs in this area are increased handling capacity of the farmers' market, assistance in grading and packing, latest market news for all, competent sales assistance to help in locating best outlets.

Processing Plants

AT SEVERAL points in Alabama there are facilities for processing vegetables or fruits grown for processing plants. These plants are located as follows:

Birmingham: During the 1942 season processors in Birmingham packed 700,000 pounds of strawberries principally from the Cullman and Chilton areas. They also handled 100,000 pounds of blackberries. They state that they could pack triple the amount packed last year if the fruit were available.

Cullman: About 17,000 crates of berries were put up in barrels with sulphur dioxide for lend-lease use. This outlet could have handled 35,000 to 50,000 crates. Formerly many of these berries have been shipped to Birmingham for cold packing.

Montgomery: One concern cold-packed about 12,000 crates of straw-

berries during the 1942 season and stored these in Montgomery.

Georgiana: There were about 18,000 crates of strawberries put up at Georgiana by the sulphur dioxide method in 1942. These were put up in barrels for lend-lease use.

A new quick-freezing plant with a capacity of 7,500,000 pounds of various products is being installed at Georgiana. This plant will offer the needed marketing facilities in this area.

Garland: For a number of years one operator has been packing strawberries by the cold pack method at Garland. During 1942 he packed approximately 10,000 crates. The capacity of his plant would permit the packing of double that amount.

Randolph County: A canning plant at Roanoke packed about 18,000 cases of miscellaneous goods in 1942. This came principally from Randolph, Tallapoosa, and Chambers counties, with a small amount from nearby sections in Georgia.

Different items packed were about as follows: pimientos 3,800 cases, snap beans 3,400 cases, okra 5,000 cases, blueberries 2,800 cases, blackberries 600 cases, field peas 1,700 cases, turnip greens 2,000 cases. All of these crops are grown in the counties mentioned with the exception of a portion of the pack of blueberries which comes from extreme South Alabama and North Florida.

Present capacity of this plant, with possible additions, will undoubtedly permit a reasonable expansion of acreage. Such needs will be cared for by the owner as demands increase.

Difficulties of such plants are increased by obstacles thrown up by the large canning concerns which dominate the industry in the North and West. Small southern packers have an uphill fight against these

large interests, and certain natural disadvantages found in this section.

Wilcox County: A company operating a canning plant at Catherine had a pack last year of 90,000 cases, all okra, except 2,500 cases of blackberries.

This plant has a capacity of 150,000 to 200,000 cases, and is very well equipped. The government's refusal to permit the packing of okra in tin will apparently close down this plant for the duration of the war. The company's set-up in land and labor is not suited to the production of other products which might be canned.

A dehydration plant is now being installed in Alabama by the King Pharr Company, Camden, to dehydrate sweet potatoes. It will have a capacity of about 1,000,000 pounds of dehydrated potatoes per season if operated at full capacity. This will require about 100,000 bushels of raw potatoes.

Any program involving processing plants should not overlook the possible future development of the sweet potato for dehydration as a stock feed, human consumption and starch manufacture. This crop, typically southern, produces more food per acre than any other now grown in this section, has a food value 50 percent greater than the Irish potato and contains as much Vitamin A as carrots. The dehydrated sweet potato has proved to be as good as shelled corn as a feed for most classes of livestock, and will give, with equal treatment, three times the feed per acre as corn. An excellent human food product is derived by dehydrating it. Dehydration reduces the transportation problem and enhances the sweet potatoes' keeping qualities.

Pickling plants are operating in the vicinity of Red Level, River Falls, Hartford, Samson, Slocomb and Dothan.

Expanding Production

MAP 60, Pg. 60 shows the present heavy fruit and vegetable producing areas with their relative importance. These sections are located with reference to certain advantages of soil, climate, people, and markets. In view of the fact that these areas are not operating at capacity it goes without saying that wise expansion might first take place in these areas where people are already accustomed to the production of these crops and have the necessary equipment. Since scientific facts must be followed in growing, handling, and marketing of perishables it is extremely dangerous for new hands to attempt such work without close supervision. Producers in most areas have indicated that if they are assured normal price levels reasonable increases in production may be expected. Increases would materially lessen vegetable marketing problems. On the other hand, increased acreages in new areas might create problems similar to those in other small-producing areas. Lack of facilities and unfamiliarity with perishables might create problems very difficult to handle.

Commercial vegetable production in the United States has increased about 200 percent since 1919. With large developments in the West, improved transportation facilities and refrigeration, competition has become very keen between the various sections. With the return of normal times those producing perishable crops will have to do so in competition with well-equipped and highly trained producers in other sections. Unless producers in new sections can show that they have advantages and will employ recommended practices in producing and handling they might do well to leave this job to those who are experienced and have set-ups for handling such crops.

Old and New Markets

IN LOCATING markets two things are absolutely essential: (1) volume to pay expenses, and (2) good management to see that the products are handled most advantageously for the farmer. To begin with, some free assistance in the form of personnel and equipment will be necessary through early stages of development. Programs worthy of the attention of public agencies should in time become self-sustaining. Exceptions to these rules may be justified provided wholesale markets are established to use these out-lying smaller markets as feeders in supplying them with fruits and vegetables. If the large wholesale markets are able to support the small ones it might not be considered a direct subsidy.

It is evident that markets will have expenses which must be paid by someone sooner or later. These expenses include pay for a manager or a manager-salesman, shed and platform help, inspectors, machinery for grading, news service, telephone and telegraph, correspondence, and depreciation on equipment. To take care of these expenses it is necessary that volume be handled on the market. If these precedents of self-sustainment are not set then the question will logically arise as to who is to be given the available service and why. It will create a problem for any market service which will be a constant source of trouble.

Management of Markets

EFFICIENT and honest service to farmers and buyers, not good fellowship or painted buildings, makes a market. One authority with wide experience in handling markets in the Southeast states that 75 percent of the success of a market is due to good management.

Some qualifications of a satisfactory manager are: (1) a general fundamental knowledge of local farming conditions and people, (2) know grades and values of products, (3) be able to contact buying agencies and keep up to the minute on market conditions and furnish a daily market news service to shipping points, (4) be a salesman, (5) be honest and always firm with sellers and buyers, (6) be able to direct a field force, (7) know more about the business than the average buyer and be able to tell them the market value rather than be told, (8) be known in the business and by the trade. Handling an effective market service job is no fly-by-night business. Those who have been most successful have been in it for long periods of years and their standing in the profession has been established through long contacts.

A state representative of an effective market organization has a full-time job. It carries a large responsibility and demands good pay. He should be responsible to or directed by a designated board which helps decide policies and leave the successful operation of details to the manager.

Most of the perishable business in Alabama and the country is operated on a seasonal basis. Within two months the Irish potato crop in Baldwin County is moved. Activity moves on to other sections or to other crops. Sheds are busy as bee-hives during the potato season and absolutely deserted at other periods. Equipment and crews are again recruited to handle other crops such as sweet corn, cucumbers, and sweet potatoes which usually come and go in periods of 30 to 60 days. Outside of these seasons, sheds are entirely closed down.

Tomatoes in Blount County are handled by the association for only

two months in the year. Cabbage in Mobile County is handled over a period of about 4 to 6 weeks. Strawberry marketing at various points may not last over 30 days. A peach crop may be disposed of within 2 or 3 weeks. Watermelons in Alabama are handled mostly in June and July. Pecans begin to move in the fall and are sold by the first of the ensuing year.

Exceptions are found in the large wholesale markets which receive varieties and volumes of products throughout the year to enable them to stay open for twelve months.

A problem in helping market Alabama products is found in small areas with more goods than the local market will consume but not enough to attract outside buyers or to justify the expense of assembling and sending them away to large consuming centers. This always has been and always will be a disturbing situation.

To meet these situations, an effective market set-up must begin with increased volume to justify a marketing program. To get increased production it will be necessary for those interested in better markets to get producers together and agree to grow the same varieties and to increase their volume of production to justify a marketing system.

In view of the apparent important position occupied by the manager or supervisor of a system of state markets, first consideration should be the selection of a good man. It is important that he be adequately paid so that he will be interested in continuing with the markets. The manager, with suitable assistants, should see that help is directed to seasonal markets when needed. Generally the continuous employment of a manager in any one small market would not be justified. This means that the local managers would move from one place to another as marketing needs arose.

Inspectors of the Alabama Department of Agriculture would work in conjunction with these local managers. In some cases one man might be a combination manager and inspector.

Activities of these local managers would be closely supervised and directed by the manager of the entire system, who would keep in daily contact with them and supply them with needed information.

Physical facilities and equipment necessary for the operation of most small markets need not be very expensive. About all that is required is shed space, platforms on which to handle the products, parking lots and stalls where the truckers may be served, and suitable office space. If the commodity needs to be graded at the local market it will be necessary that suitable grading machines be provided. Of the 64 auction markets operating along the East Coast over 70 percent of them have physical facilities costing less than \$500.

In supplying services it might be necessary or advisable that the State provide movable grading machines to be carried from one spot to another to serve small markets unable to buy their equipment. There are spots in Alabama where seasonal help and adequate machinery might lead to the building of self-sustaining markets.

Curb Markets

DURING 1942 total sales on 20 Alabama curb markets were \$578,591.90. The Gadsden and Montgomery markets do an annual business of near \$200,000 per year each while the annual business on the Tuscaloosa market totals about \$100,000. Pertinent facts about the markets are reported by county home demonstration agents:

1. Most of these markets seem to have ample facilities for the present business and considerable expansion.

2. The biggest need is for more sellers to support the market. This would mean a greater volume of products sold with more efficient operations.

3. Greater varieties of goods are needed.

4. Better preparation needed of products sold.

Market masters indicate that financial assistance could be used in improving the facilities of some of the curb markets. Boards of directors of some markets find it difficult to employ market masters and to keep them operating efficiently on low salaries they can pay. This problem parallels the case with small markets which find it difficult to pay for services they need. Some markets need refrigeration equipment for handling meats and other perishables.

Throughout the history of the curb market movement in Alabama many small markets have failed because of lack of support from those for whom they were organized. The following comments on the individual markets have been gathered from agricultural workers in the various counties.

Gadsden: The Gadsden curb market is one of the oldest. It was established in 1923 and has operated continuously since that time. The market building, 30 by 120 feet, is very inadequate and is in poor condition. It accommodates nearly 300 farm families throughout the year. The cash business during 1942 was \$167,000.

This market needs assistance in building a new market place. This would have to be subsidized until increased business made it self-sustaining. Assistance is needed in grading and standardizing products offered for sale.

It is believed that this area needs a wholesale market which would serve as an outlet for large quantities of farm produce.

Tuscaloosa: The present curb market in Tuscaloosa is operated on property belonging to the county and is adjacent to the county courthouse. The 1942 business amounted to about \$80,000. It has about the capacity needed to take care of its present business. There is no room for further expansion on the present site. It has the advantage of a rather large population to serve and could use an increase of about 50 percent in products marketed. It is felt that a new addition could be profitably erected in another part of the city to serve people not now conveniently located to the present market. Assistance is needed in the construction of this addition. The market has found it difficult to pay the market master an adequate salary.

Selma: The Selma market has a space of 1,875 square feet which seems to be adequate for the present business. In 1942 cash sales amounted to \$9,932. The market serves an area with a population of about 20,000 people. An increase in physical facilities might be accompanied possibly by an increase in business. There is a need for a greater variety of products and more sellers.

Athens: This is a new market organized in the fall of 1942. Present capacity seems to be entirely adequate for immediate future needs. This market needs financial aid in buying and installing refrigeration facilities.

Auburn: The Auburn market is operating in a new building put up by the Kiwanis Club about 1940. It has a capacity of 20 stalls. During 1942 sales were \$8,555.

The need here is for more sellers and more products. A need is also expressed for refrigeration, better quality products, and more fruit, especially in the fall.

Dothan: Physical facilities for this market seem to be good and to be ample for all expected expansion in the immediate future. Last year \$9,393 worth of produce was sold on this market. The present market could well use a 50 percent increase in volume of goods sold. One of the biggest needs here seems to be in the improvement of the grade and quality of the products for sale.

The Valley Roadside Market: This market opened in Lanett in 1940 and did a business last year of \$37,577. It has a building 42 by 120 feet which could accommodate 60 sellers. It serves about 20,000 people and needs a 50 percent increase in products offered. There is need for an improvement in the facilities to make the market more comfortable. It also needs help in paying a market master and in advertising the market.

Mobile: The Mobile market has 100 stalls, in which \$31,403 worth of produce was sold last year. The capacity of the market seems to be ample for present conditions. It serves an area with a population of 150,000 to 200,000 people, but has the disadvantage of being rather poorly located. The inaccessibility of the market to a large part of the consumers in the area, as well as serious competition from several large groceries in the immediate vicinity, has seriously handicapped it. There seems to be a need for help in rearranging it and providing adequate space for its operation. The city has been requested to improve the streets and provide better approaches to the market.

Clayton: This market, space 20 by 40 feet, does not seem to be equipped with facilities to make sellers comfortable while they operate the market during certain seasons of the year. In 1942 their total sales were only \$3,239. It seems to be handicapped by poor buildings and by the

operation of peddlers, who go on the street and peddle their produce from house to house rather than bring it to the market where they could receive better prices for it. Help is needed for improving the physical facilities of this market. Financial assistance is needed in paying a market master.

Tuskegee: A nice building of 20 by 40 feet houses the Tuskegee market which did a cash business of \$7,000 in 1942. At present there is a much larger demand on the curb market in this neighborhood than can be supplied.

Wedowee: Physical facilities of the Wedowee market seem to be adequate at present. Only about \$250 worth of farm products are sold here per month. There is a need for a 50 percent increase in produce offered.

Talladega and Sylacauga: The market at Talladega has a building 8 by 30 feet which seems to be adequate for present sellers. In Sylacauga the building is 16 by 30 feet, which is sufficient for the present volume of business. Last year 26 permits were issued in the two towns and a business of \$3,350 was done. There is a population of 25,000 at present in the two cities. A 50 percent increase in sellers and products would be to the advantage of the market and community. Assistance is needed in providing more comfortable and convenient quarters and in paying the salary of the market master.

Montgomery: The Montgomery market has 215 tables over which a business of \$167,876 was transacted in 1942. In addition, an undetermined amount of farm products was delivered out in town from orders taken on the market. It is operating at capacity. Needed expansion is impossible on the present site. The area served has a population of 129,000 people.

Commercial Production of Truck Crops by Counties, 1940*

Montgomery Area¹

		Autauga	Elmore	Montgomery	Chilton	Grand total
Lima beans	bu.	1,129.3	6,360.0	3,082.7	2,300.0	12,872.0
Snap beans	bu.	448.0	1,664.0	6,042.0	1,299.0	9,453.0
Beets	bu.	—	226.1	763.6	67.0	1,056.7
Cabbage	T	24.8	138.2	125.7	12.3	301.0
Cantaloups, etc.	crate	384.0	2,710.7	780.0	1,205.3	5,080.0
Carrots	bu.	—	216.4	1,229.1	—	1,445.5
Collards	½ crate	827.2	2,389.7	1,029.4	477.9	4,724.2
Roasting corn	T	25.5	45.0	109.7	92.4	272.6
Cowpeas	bu.	230.0	238.0	—	—	468.0
Cucumbers	bu.	286.4	645.5	554.5	1,090.9	2,577.3
Okra	bu.	—	917.2	2,765.5	44.8	3,727.5
Onions	cwt.	34.6	94.2	566.9	38.1	733.2
Peas, green	bu.	1,066.7	1,069.3	1,376.3	7,027.2	10,539.5
Peppers	bu.	133.8	293.8	311.2	—	738.8
Radishes	bu.	—	—	—	—	—
Spinach	bu.	327.3	1,143.6	4,545.5	58.2	6,074.6
Squash	bu.	—	—	135.7	472.9	608.6
Tomatoes	bu.	1,348.6	14,417.1	12,175.7	22,291.4	50,232.8
Turnips	bu.	744.9	1,271.4	574.8	202.7	2,793.8
Turnip greens	bu.	—	—	—	—	—
Watermelons	melon	192,577.8	193,433.3	10,911.1	481,577.8	878,500.0
Apples	bu.	1,293	6,011.0	1,617.0	6,954.0	15,875.0
Grapes	T	5.7	4.2	2.8	18.0	30.7
Pears	bu.	3,357	3,354.0	5,334.0	1,754.0	13,799.0
Strawberries	crate	294.3	309.5	52.4	42,461.6	43,117.8
Peaches	bu.	27,367	22,060.0	12,531.0	65,458.0	127,416.0
Potatoes ²	bu.	7,673	7,607.0	4,209.0	20,336.0	39,825.0
Sweetpotatoes ²	bu.	53,794	86,772.0	128,926.0	88,132.0	357,624.0

*Unpublished data from files of the Department of Agricultural Economics, which were based on 1940 Census A.M.A. reports and data from county agents.

¹Includes counties of Autauga, Elmore, Montgomery, and Chilton.

²Includes that used on farms (total production).

Needs are for financial assistance in repairing present buildings and building a larger place. State help has been available but has been discontinued for scale testing and egg candling. This service is badly needed and would be most useful.

Summary and Recommendations

FRUITS, vegetables, nuts, and sweet and Irish potatoes bring about \$10,000,000 annually to Alabama producers.

Returns are dependent on price and efficiency of markets serving the grower.

In Alabama there are four areas

embracing 18 counties where the commercial production of fruits and vegetables is of major importance. These areas are found to have advantages in soil, climate, people and markets.

Eighty-five to 90 percent of Alabama products moving out of the State are marketed in the area covered by a triangle from Birmingham, Alabama, to Chicago and Pittsburgh. Reasons for this are: closer proximity to these markets than the heavy consuming centers of the East, good transportation, similar advantages for the eastern producing areas marketing in the eastern cities, and the natural barrier formed by the mountain

Commercial Production of Truck Crops by Counties, 1940*

Dothan Area¹

		Dale	Geneva	Houston	Grand total
Lima beans	bu.	5,862.7	1,268.0	9,590.7	16,721.4
Snap beans	bu.	754.0	805.0	2,001.0	3,560.0
Beets	bu.	22.7	114.8	—	137.5
Cabbage	T	73.9	16.6	50.7	141.2
Cantaloups, etc.	crate	22.7	317.3	1,932.0	2,272.0
Carrots	bu.	36.4	—	81.8	118.2
Collards	½ crate	—	—	—	—
Corn, roasting	T	69.4	5.9	71.0	146.3
Cowpeas	bu.	—	—	—	—
Cucumbers	bu.	6,745.5	16,818.2	14,713.6	38,277.3
Okra	bu.	62.1	—	88.3	150.4
Onions	cwt.	—	253.8	18.8	272.6
Peas, green	bu.	17,756.1	1,269.3	10,808.8	29,834.2
Peppers	bu.	—	—	—	—
Radishes	bu.	—	—	—	—
Spinach	bu.	—	—	63.6	63.6
Squash	bu.	—	—	104.7	104.7
Tomatoes	bu.	2,372.9	484.3	6,681.4	9,538.6
Turnips	bu.	221.1	31.3	974.1	1,226.5
Turnip greens	bu.	—	—	—	—
Watermelons	melon	41,800.0	78,500.0	153,522.2	273,822.2
Apples	bu.	816.0	180.0	99.0	1,095.0
Grapes	T	3.2	3.5	4.1	10.8
Pears	bu.	3,899.0	3,058.0	3,069.0	10,026.0
Strawberries	crate	62.6	78.3	215.4	356.3
Peaches	bu.	9,433.0	10,602.0	9,684.0	29,719.0
Potatoes ²	bu.	4,251.0	10,089.0	18,143.0	32,483.0
Sweetpotatoes ²	bu.	74,340.0	78,439.0	128,111.0	280,890.0

*Unpublished data from files of the Department of Agricultural Economics, which were based on 1940 Census A.M.A. reports and data from county agents.

¹Includes counties of Dale, Geneva, Houston.

²Includes that used on farms (total production).

range which offers an obstacle to both sections attempting to cross it.

There are 25 established seasonal outlets for fruit and vegetable products grown in commercial quantities in Alabama. Some of these markets handle more than one product. In addition there are nearby markets in other states such as the state market at Pensacola, Florida, the wholesale municipal market at Columbus, Georgia, the wholesale market in Atlanta, Georgia, and the markets at Rome, Georgia, and Chattanooga, Tennessee, which offer good outlets for many Alabama products. Added to these are the 20 curb markets scattered throughout the State.

Physical facilities at most points are adequate for present volume and considerable expansion. Some points which seem to need special help in this respect are Ashford in Houston County, and Evergreen in Escambia County. There is possibly a need for the establishment of a seasonal market at spots like the Chandler Mountain section in St. Clair County, where a rather large volume of produce is grown with no local set-up to help handle it. The conversion of melon acreage to needed crops in areas like Clanton will demand some aid in handling these crops which cannot be disposed of in markets now used. This may apply to other sec-

Commercial Production of Truck Crops by Counties, 1940*

Mobile-Baldwin County Area¹

		Mobile	Baldwin	Escambia	Conecuh	Grand total
Lima beans	bu.	5,420.0	344.0	829.3	3,556.0	10,149.3
Snap beans	bu.	6,375.0	2,427.0	7,248.0	5,501.0	21,546.0
Beets	bu.	922.7	65.9	151.1	—	1,139.7
Cabbage	T	3,096.4	220.4	19.5	17.5	3,353.8
Cantaloups, etc.	crate	8,720.0	1,578.7	—	—	10,298.7
Carrots	bu.	13,120.0	380.0	—	—	13,500.0
Collards	½ crate	724.3	878.7	—	—	1,603.0
Roasting corn	T	424.4	4,703.6	134.8	145.8	5,408.6
Cowpeas	bu.	184.0	178.0	—	—	362.0
Cucumbers	bu.	10,768.2	244,200.0	390.9	—	255,359.1
Okra	bu.	1,628.3	737.2	58.6	—	2,424.1
Onions	cwt.	74.2	101.9	57.7	—	233.8
Peas, green	bu.	3,119.3	1,537.7	643.0	3,214.9	8,514.9
Peppers	bu.	338.8	85.0	—	—	423.8
Radishes	bu.	—	—	527.7	—	527.7
Spinach	bu.	367.3	336.4	67.3	—	771.0
Squash	bu.	378.3	62.0	—	385.3	825.6
Tomatoes	bu.	13,494.3	1,262.9	968.6	390.0	16,115.8
Turnips	bu.	2,598.0	2,491.2	1,059.2	2,643.5	8,791.9
Turnip greens	bu.	2,172.0	—	—	—	2,172.0
Watermelons	melon	399,611.1	281,811.1	8,777.8	2,177.8	692,377.8
Apples	bu.	44.0	71.0	705.0	4,691.0	5,511.0
Grapes	T	10.9	33.3	5.7	6.0	55.9
Pears	bu.	3,440.0	5,335.0	2,543.0	5,154.0	16,472.0
Strawberries	crate	555.6	65.6	15,025.7	11,703.1	27,350.0
Peaches	bu.	1,129.0	2,577.0	7,835.0	20,937.0	32,478.0
Potatoes ²	bu.	119,688.0	2,664,213	399,486	6,709.0	3,190,096.0
Sweet potatoes ²	bu.	70,756.0	221,992.0	59,508.0	97,812.0	450,068.0

*Unpublished data from files of the Department of Agricultural Economics, which were based on 1940 Census A.M.A. reports and data from county agents.

¹Includes counties of Mobile, Baldwin, Escambia, and Conecuh.

²Includes that used on farms (total production).

tions of the State for the duration.

The greatest need at established markets seems to be increased volume to enable these markets to operate more efficiently. Along with this is needed educational help in grading, inspection to certify grade, market news service and sales help.

Curb markets at Gadsden and Montgomery need aid in enlarging physical facilities. Nearly all others are adequately equipped for present and expected volume. Sellers and volume are needed for the markets to operate most efficiently.

Processing plants are taking products available in attractive quantities and have capacities for any ex-

pected increases. Most important of these are canning plants at Camden and Roanoke, cold packing plants at Birmingham, Montgomery, and Garland, and pickling stations in Covington, Geneva and Houston counties.

Any expansion of production should be considered first in the areas where there are advantages in soil, climate, people and markets, and especially where established markets need increased volumes for greater efficiency in handling their products.

Production and marketing programs should be very closely related and considered jointly.

Small producing areas with volumes above the local demand and less than

Commercial Production of Truck Crops by Counties, 1940*

Birmingham Area¹

		Blount	Cullman	Etowah	Jefferson	St. Clair	Tuscaloosa	Grand total
Lima beans	bu.	16,532.0	14,213.3	746.7	7,274.7	2,282.7	2,421.3	43,470.7
Snap beans	bu.	30,126.0	10,200.0	4,070.0	7,372.0	12,607.0	3,272.0	67,647.0
Beets	bu.	—	—	63.6	1,884.1	33.0	1,062.5	3,043.2
Cabbage	T	54.5	21.6	20.1	146.8	9.2	153.3	405.5
Cantaloups, etc.	crate	19,754.7	382.7	1,773.3	7,006.7	172.0	1,281.3	30,370.7
Carrots	bu.	—	—	50.9	1,558.2	—	514.5	2,123.6
Collards	½ crate	62.5	—	—	3,325.7	172.8	197.1	3,758.1
Roasting corn	T	60.5	9.6	84.5	161.5	9.1	170.3	495.5
Cowpeas	bu.	1,779.0	—	380.0	—	194.0	303.0	2,656.0
Cucumbers	bu.	1,940.9	522.7	418.2	7,109.1	536.4	1,027.3	11,554.6
Okra	bu.	4,043.4	44.1	115.2	1,505.5	24.1	374.5	6,106.8
Onions	cwt.	63.5	13.8	912.3	645.0	44.6	426.2	2,105.4
Peas, green	bu.	5,422.8	1,544.7	614.0	4,882.5	377.2	2,611.4	15,452.6
Peppers	bu.	753.8	—	285.0	2,352.5	—	228.8	3,620.1
Radishes	bu.	—	—	—	—	—	—	—
Spinach	bu.	—	—	930.9	8,549.1	—	294.5	9,774.5
Squash	bu.	982.9	54.3	929.5	820.2	262.8	—	3,049.7
Tomatoes	bu.	96,970.0	5,304.3	7,352.9	24,320.0	17,352.9	13,455.7	164,755.8
Turnips	bu.	837.4	321.1	412.9	10,817.7	1,153.1	884.4	14,426.6
Turnip greens	bu.	284.9	—	—	584.9	—	—	869.8
Watermelons	melon	138,311.1	26,088.9	63,844.4	39,311.1	7,688.9	59,866.7	335,111.1
Apples	bu.	33,549.0	38,802.0	18,553.0	21,745.0	17,013.0	12,985.0	142,647.0
Grapes	T	39.9	121.8	21.9	26.0	24.4	10.8	244.8
Pears	bu.	4,928.0	7,862.0	3,947.0	5,211.0	5,571.0	4,789.0	32,308.0
Strawberries	crate	4,550.2	139,789.8	2,033.8	730.4	135.0	621.3	147,860.5
Peaches	bu.	36,867.0	49,972.0	19,822.0	22,829.0	20,279.0	32,676.0	182,445.0
Potatoes ²	bu.	52,996.0	206,549.0	40,342.0	24,813.0	22,677.0	32,370.0	379,747.0
Sweetpotatoes ²	bu.	86,267.0	765,762.0	62,472.0	98,125.0	45,625.0	150,569.0	1,208,820.0

*Unpublished data from files of the Department of Agricultural Economics, which were based on 1940 Census A.M.A reports and data from county agents.

¹Includes counties of Blount, Cullman, Etowah, Jefferson, St. Clair, and Tuscaloosa.

²Includes that used on farms (total production).

enough to justify a set-up to help dispose of it are big problems in marketing. Such developments in perishables should be discouraged.

Efficient management by a trained leader is absolutely essential to the successful continued operation of any market system.

Volume of goods to give financial support to any market is most essential to successful operation.

Physical facilities need not be expensive to insure a successful market. Money spent on good supervision and service is much more desirable after such actual needs are met.



FORESTRY

Introduction

ALTHOUGH ranking third in the nation in 1941 and leading the South in the production of lumber, Alabama forest lands (58 percent of the total land area) are producing (according to the Southern Forest Survey) only 109 board feet per acre per year. Under good management and fire protection they could produce 300 board feet per acre per year.

The 1941 lumber cut in the State was 2,000,000,000 board feet (Table 1) which had a rough green lumber f.o.b. mill value of \$25 per thousand feet or a total of \$50,000,000. It is estimated that the cost per thousand of cutting the timber and delivering to the mill in the form of logs was approximately \$7 or 28 percent of \$25. Approximately \$14 or 56 percent of the \$25 went into the cost of operating the sawmill. This \$14 is further broken down as \$12 for cost of sawing and operating mill, management, risk, insurance, labor, etc., and \$2 profit per thousand feet.

This leaves ($\$25 - \$7 - \$14$) \$4 per thousand for the portion paid for the standing timber. Applying the percentages to the \$50,000,000, it is estimated that \$28,000,000 went into the operation of the sawmill, \$14,000,000 to get standing timber cut and delivered as logs to the mill, and \$8,000,000 to the timber owners.

Thus, after waiting 40 to 60 years for the timber to grow, producers received only 16 percent of the value of rough green lumber f.o.b. mill. During the 40 to 60 years they paid taxes on the land, ran the risk of fire, disease, wind damage, timber theft, and failed to receive interest on their investment.

As rough green lumber is further processed, the value increases rapidly and the timber grower's proportionate return decreases.

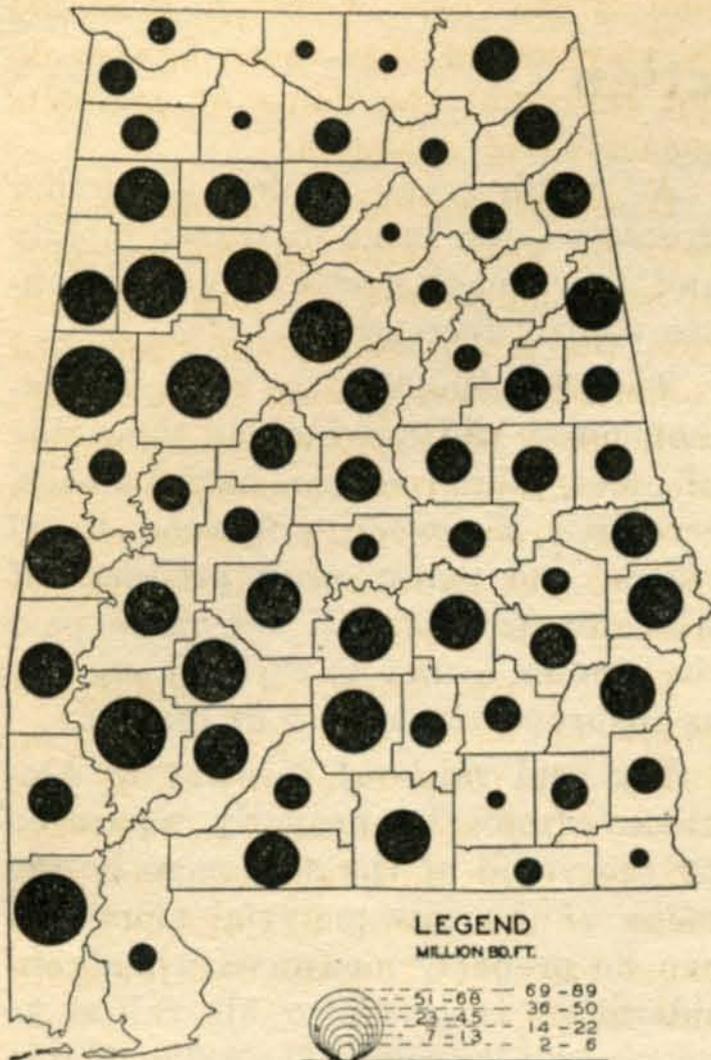
The \$50,000,000, it must be remembered, did not include the value of poles, piling, veneer, barrel stocks, cross ties, fuelwood, pulpwood, naval stores, and many other products of Alabama forests, but the price paid the timber owner is at least equally as disproportionate as in lumber.

The real value of forestry to Alabama cannot be properly measured by the value of the stumpage or the value of the raw material alone. It can be properly measured when consideration is given to all values to people and industry. The value of forestry in the over-all economy of the State includes the value of the labor and investments involved in cutting, bucking, hauling, and processing, whether the process be sawing into lumber, converting into pulp or paper, or into boxes or crates. It includes the business given to railroads, industries created, returns on investments, etc. When consideration is given to all of these values, forestry constitutes one of the major industries of Alabama. Data are given to indicate these values.

In 1939, 75,000 people were given full-time employment by Alabama forest industries; in 1929, 21.7 percent of all wage earners were employed by forest industries; in 1937, 130,730,000 man-hours of labor were provided by the forest industries of the State.

In 1937, 35.71 percent of the net tonnage of commodities moving out of the State by rail and water consisted of forest products. In 1928, the

LUMBER CUT
1941 *



MAP 79

*Unpublished data from Southern Forest Experiment Station, New Orleans, La.

value of the net out-of-State movement of forest products was \$81,438,000.

The importance of forestry to Alabama's trade with other states and the outside world is shown in a study made by the Alabama Industrial Development Board on the movement of different classes of commodities into and out of the State. The final values are expressed as the value of the net movement of each commodity either into or out of the State. In a sense the values represent the State's balance of trade with other states and the outside world.

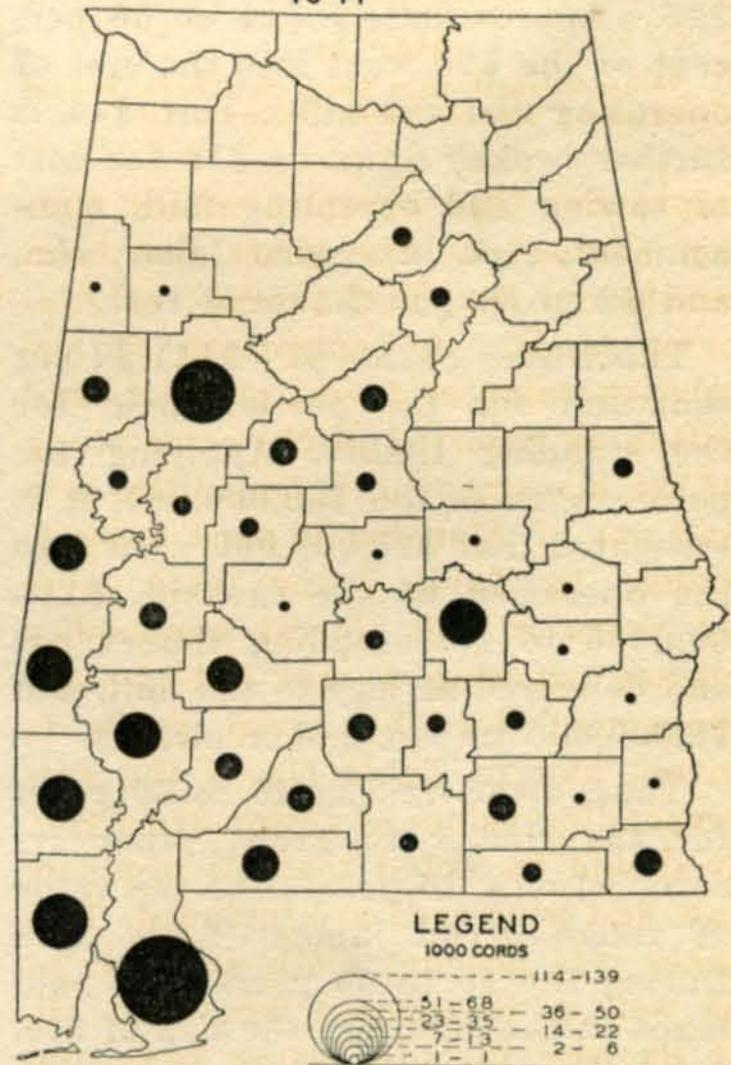
In Table 2 is given the value of the net out-of-State movement of forest products as compared to the value of the net out-of-State movement of all commodities. The value of forest products constituted, over the seven years covered in the study,

57.46 percent of the value of the net out-of-State movement of all commodities. For no year was it less than 38 percent, and in 1928 it represented 98 percent of the total value of the net out-of-State movement of all commodities.

If no consideration is given to the value of those commodity groups which had a net into-the-State movement (excess movement into the State over movement out of the State) and comparisons are made only between the value of forest products and the value of other commodity groups which had a net out-of-the-State movement, it will be seen that the net value of the forest products for the seven years of the study was 29.92 percent of the net value of all commodity groups which had a net out-of-State movement.

Comparative values are often more

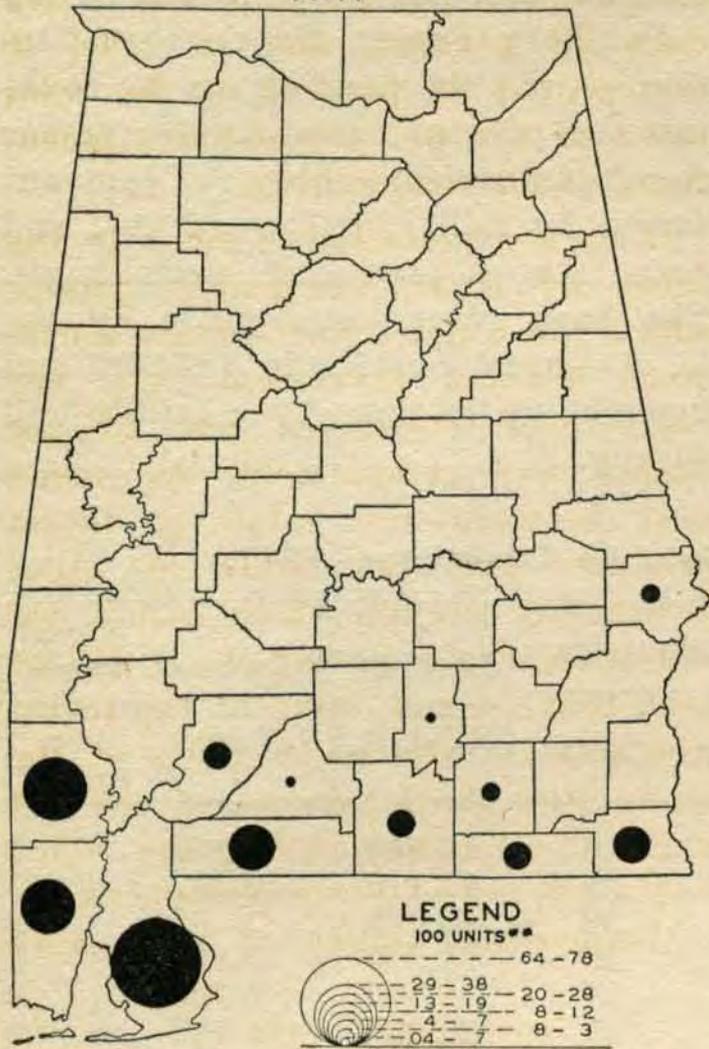
PULPWOOD CUT
1941 *



MAP 80

*Unpublished data from Southern Forest Experiment Station, New Orleans, La.

NAVAL STORES PRODUCTION
1941 *



MAP 81

*Unpublished data from Southern Forest Experiment Station, New Orleans, La.

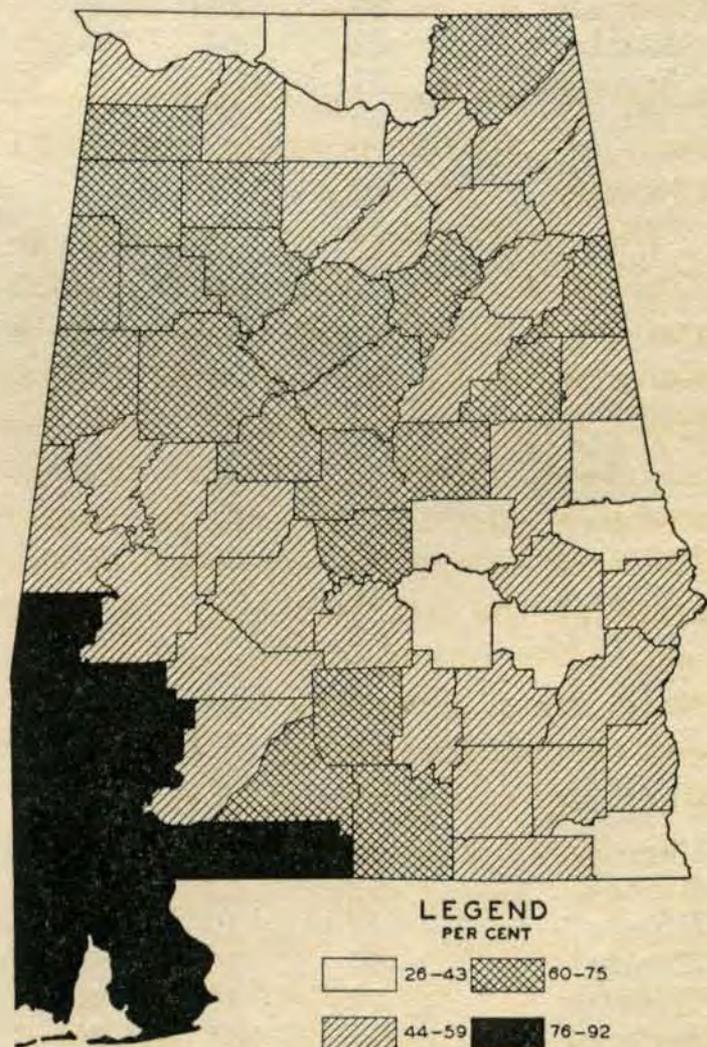
impressive than absolute values. Cotton throughout the years has been considered the chief product of Alabama lands. A comparison of the relative value of forest products and cotton as reported in the same study of the movement of commodities into and out of Alabama is most enlightening. In Table 3 the total value by years of all forest commodity classes showing a net out-of-State movement for the seven years is given, and in Table No. 4 the corresponding values of cotton are given. It should be noted that all products raw and processed are included. This takes into account cloth and fabrics as well as cottonseed meal and oil. It likewise includes paper bags and wrapping paper, turpentine, etc. The value of all forest products having a net out-of-State movement for the

seven years reported was 85.92 percent of the value of cotton. It should be emphasized that these figures do not represent the value of products consumed in Alabama.

It is interesting to compare the year by year value of the net out-of-State movement of cloth and fabrics, the most important processed commodity class coming from cotton, with paper bags and wrapping paper, the most important commodity class coming from forestry. Paper manufacture was an infant industry at the time of this study.

The State imported \$5,872,336 worth of paper and paper bags in 1928. By 1932 its export value was \$15,133,344, as compared to \$18,565,768 for cloth and fabrics. In 1937, these values were \$25,620,687 for paper bags and \$34,408,634 for cloth and fabric.

PERCENTAGE OF LAND AREA IN FOREST
1940 *



MAP 82

*Unpublished data from Southern Forest Experiment Station, New Orleans, La.

A similar comparison may be made of the value of net out-of-State movement of cotton in bales and lumber, shingles and laths, each representing a single commodity class in the study. Cotton in bales in 1932 had a value of \$20,050,485. Lumber, shingles and laths had a value of \$11,829,187. In 1937, these values were \$34,408,634 for cotton and \$42,229,415 for lumber, shingles, and laths.

The Forestry Situation

TABLE No. 1 (data furnished by Southern Forest Experiment Station — unpublished) shows by counties the percent forest land, number forest industries, lumber cut (amount sawed by mills), pulpwood cut, and naval stores produced from lands. The base survey was made by the U. S. Forest Service in 1935-36 and brought up to date by a mill-to-mill survey.

Table 1 — Forest Products Data by Counties — 1941.

County	Percent forest land	Number Forest Industries				Lumber cut (M bd. ft.)	Pulpwood cut (Cords)	Naval stores production units*
		Saw-mills	Pulp-mills	Other	Total			
Autauga	61	13	0	0	13	12,440	1,450	0
Baldwin	83	23	0	5	28	12,170	139,397	7,760
Barbour	51	31	0	1	32	45,940	82	0
Bibb	75	19	0	0	19	35,270	10,100	0
Blount	52	28	0	3	31	6,300	5,750	0
Bullock	30	27	0	0	27	23,660	135	0
Butler	63	22	0	1	23	59,790	11,040	0
Calhoun	55	38	0	1	39	15,370	0	0
Chambers	33	24	0	1	25	20,030	1,685	0
Cherokee	51	37	0	0	37	24,950	0	0
Chilton	65	50	0	0	50	34,070	4,900	0
Choctaw	79	32	0	1	33	41,980	26,967	0
Clarke	82	17	0	12	29	78,600	27,651	0
Clay	63	87	0	1	88	31,840	0	0
Cleburne	74	66	0	1	67	37,450	0	0
Coffee	47	21	0	0	21	5,170	8,113	50
Colbert	56	42	0	2	44	14,690	0	0
Conecuh	66	24	0	1	25	20,130	12,078	5
Coosa	68	33	0	0	33	32,200	0	0
Covington	63	28	0	4	32	48,340	5,912	526
Crenshaw	55	20	0	0	20	17,290	1,700	19
Cullman	46	53	0	11	64	40,780	0	0
Dale	48	32	0	1	33	22,180	652	0
Dallas	47	20	0	2	22	41,030	894	0
DeKalb	50	124	0	6	130	25,730	0	0
Elmore	43	27	0	0	27	19,570	1,050	0
Escambia	78	19	0	4	23	45,290	22,174	1,896
Etowah	49	61	0	1	62	17,650	0	0
Fayette	65	59	0	2	61	53,110	850	0
Franklin	61	78	0	5	83	19,220	0	0
Geneva	44	22	0	3	25	10,960	1,521	356
Greene	53	33	0	1	34	15,990	1,600	0
Hale	47	19	0	1	20	21,960	6,000	0
Henry	45	10	0	0	10	15,540	1,370	0
Houston	32	16	0	0	16	3,650	11,841	948
Jackson	69	108	0	2	110	28,690	0	0
Jefferson	73	69	0	6	75	58,490	0	0
Lamar	61	79	0	2	81	38,090	250	0

*One Naval Stores Production Unit = 1 barrel turpentine + 3½ barrels rosin.

Table 1 — Forest Products Data by Counties — 1941.
(Continued)

County	Percent forest land	Number Forest Industries			Lumber cut (M bd. ft.)	Pulpwood cut (Cords)	Naval stores production units*	
		Saw-mills	Pulp-mills	Other				Total
Lauderdale	35	39	0	0	39	6,850	0	0
Lawrence	46	38	0	1	39	5,210	0	0
Lee	42	38	0	0	38	24,470	0	0
Limestone	26	23	0	2	25	3,830	0	0
Lowndes	48	30	0	0	30	47,510	2,127	0
Macon	50	26	0	0	26	12,970	900	0
Madison	30	42	0	4	46	4,930	0	0
Marengo	44	13	0	1	14	46,120	11,696	0
Marion	62	78	0	3	81	41,960	0	0
Marshall	45	51	0	3	54	9,790	0	0
Mobile	78	30	4	8	42	88,210	38,039	1,990
Monroe	70	13	0	2	15	45,620	6,538	639
Montgomery	42	20	0	5	25	48,370	31,090	0
Morgan	33	43	0	2	45	15,800	0	0
Perry	51	17	0	1	18	14,750	3,000	0
Pickens	60	44	0	0	44	73,210	10,800	0
Pike	44	20	0	2	22	20,280	6,308	0
Randolph	49	60	0	1	61	17,280	0	0
Russell	45	24	0	1	25	41,010	0	140
St. Clair	61	38	0	3	41	12,510	6,250	0
Shelby	70	37	0	1	38	34,960	12,500	0
Sumter	46	18	0	1	19	55,830	13,942	0
Talladega	50	31	0	0	31	10,810	0	0
Tallapoosa	50	51	0	1	52	31,120	0	0
Tuscaloosa	72	44	1	6	51	56,970	58,200	0
Walker	70	98	0	0	98	45,720	0	0
Washington	89	22	0	1	23	26,060	25,161	3,368
Wilcox	50	14	0	1	15	57,330	15,646	0
Winston	74	67	0	2	69	28,050	0	0
Total	58	2,580	5	133	2,718	2,023,140	547,359	17,697

*One Naval Stores Production Unit = 1 barrel turpentine + 3½ barrels rosin.
Data taken from Forest Survey — U. S. Forest Service.

It will be noted that Maps No. 79, 80, 81, and 82 show graphically the data presented in Table No. 1. It may be readily seen where lumber, pulpwood, and naval stores are produced in the State, and the percentage of forest land for each county.

Map No. 83 gives a picture of the sawmill industry for the State. It should be noted that where much of the land is in forest the large mills will be found. This was taken from "The Forest Situation in Alabama", U. S. Forest Service and State Commission of Forestry of Alabama, December 1938.

Since much of the information included in this report came from the results of the Southern Forest Survey, it was necessary to follow their system of survey unit areas. In some instances, these data were listed by counties. In making the survey the State was divided into six survey units. The date for units 1, 2, 3, and 4 was 1935; for units 5 and 6, 1936. Survey units 1 and 2 are sometimes listed in this report as Southwest Alabama. Unit 3 is Southeast Alabama, unit 4 West Central Alabama, unit 5 North Central Alabama, and unit 6 the Tennessee Valley of

Table 2 — Value of the Net Commodity Movement Out of Alabama of Forest Products as Compared to the Value of the Net Out-of-State Movement of All Products and to the Value of the Net Out-of-State Movement of Only Those Commodity Groups Having a Net Out-of-State Movement*

Year	Value of all commodity groups having a net Out-of-State movement	Value of all commodity groups having a net Into-the-State movement	Value of the net Out-of-State movement of all commodity groups	Value of net Out-of-State movement of forest products	Percent value of net Out-of-State movement of forest products to value of all commodity groups having a net Out-of-State movement	Percent net value of forest products to the net value of all commodities
1932	70,190,000	47,982,000	22,208,000	16,157,000	23.02	72.75
1933	77,693,000	37,754,000	39,939,000	21,144,000	27.21	52.94
1934	75,814,000	43,518,000	32,325,000	19,453,000	25.66	60.17
1935	85,820,000	31,323,000	54,497,000	21,988,000	25.62	40.34
1936	150,272,000	44,062,000	106,210,000	39,919,000	26.56	37.58
1937	134,480,000	47,353,000	87,127,000	44,262,000	32.91	50.80
1928	223,675,000	140,133,000	83,542,000	81,784,000	36.56	97.89
Total	817,944,000	392,125,000	425,848,000	244,707,000	29.92	57.46

*Report of Alabama Industrial Development Board, January 1939 — "Net Commodity Movements Into and Out of Alabama".

Table 3 — Value of All Forest Product Classes, Raw and Processed, Showing a Net Out-of-State Movement. Rail and Water Traffic — Alabama — 1928 and 1932-1937, Inclusive*

Forest	1937	1936	1935	1934	1933	1932	1928
Lumber, shingles and laths	42,229,415	34,041,860	18,735,975	15,723,713	16,297,267	11,829,187	71,562,488
Paper bags, wrapping paper	25,620,687	24,596,073	18,358,235	17,468,906	18,868,503	15,133,344	Minus
Products of forests	2,436,591	2,118,710	—	—	—	—	1,689,712
Box crate cooperage	2,242,557	1,987,553	1,899,414	2,083,565	1,664,118	991,087	1,963,384
Rosin	1,827,013	1,241,386	1,205,288	799,668	687,331	663,446	1,412,276
Veneer and built-up wood	764,242	2,512,846	591,655	261,229	417,364	255,130	—
Turpentine	737,392	984,608	748,533	844,530	639,478	588,956	1,065,419
Posts, poles, piling	512,491	363,250	283,868	290,343	160,779	209,365	191,157
Millwork	480,387	16,863	70,720	—	—	—	—
Ties, railroad	301,734	318,302	68,608	171,621	99,488	222,820	34,416
Pulpwood	197,537	—	—	110,817	189,316	33,305	Minus
Paper board	138,275	163,984	295,916	243,817	—	—	—
Logs	134,331	188,456	196,089	250,004	260,851	90,517	—
Wood fuel	28,494	24,978	30,596	28,695	37,203	28,283	1,939,727
Total forest products	77,651,146	68,558,869	42,484,897	38,276,908	39,321,698	30,045,440	79,858,579

*Report of Alabama Industrial Development Board, January 1939 — "Net Commodity Movements Into and Out of Alabama".

Table 4 — Value of All Commodity Classes of Cotton Products Showing a Net Out-of-State Movement*

Cotton	1937	1936	1935	1934	1933	1932	1928
Cloth and fabric	34,408,634	39,983,133	26,598,377	23,994,906	24,864,910	18,565,768	25,094,501
Cotton in bales	21,068,847	25,807,200	26,733,112	22,280,184	19,065,160	20,050,485	56,481,120
Cottonseed oil	7,550,896	6,161,992	8,182,304	4,183,920	2,625,030	2,791,361	5,237,860
Cotton — linters, oils and resins	1,922,872	1,585,550	1,610,745	1,153,298	659,873	780,889	3,360,842
Cottonseed meal and cake	901,333	840,962	1,044,274	699,571	279,718	519,333	Minus
Cottonseed	113,331	337,705	282,867	—	—	—	Minus
Total	65,965,913	74,716,542	64,451,679	52,311,879	47,494,691	42,707,836	90,174,323

*Report of Alabama Industrial Development Board, January 1939 — "Net Commodity Movements Into and Out of Alabama".

North Alabama. Map No. 84 shows these units.

Unless stated to the contrary all data presented by survey units in this report originated in the following publications:

"Forest Resources of Southwest Alabama" (Survey units 1 and 2), Forest Survey Release No. 35.

"Forest Resources of Southeast Alabama" (Survey unit No. 3), Forest Survey Release No. 47.

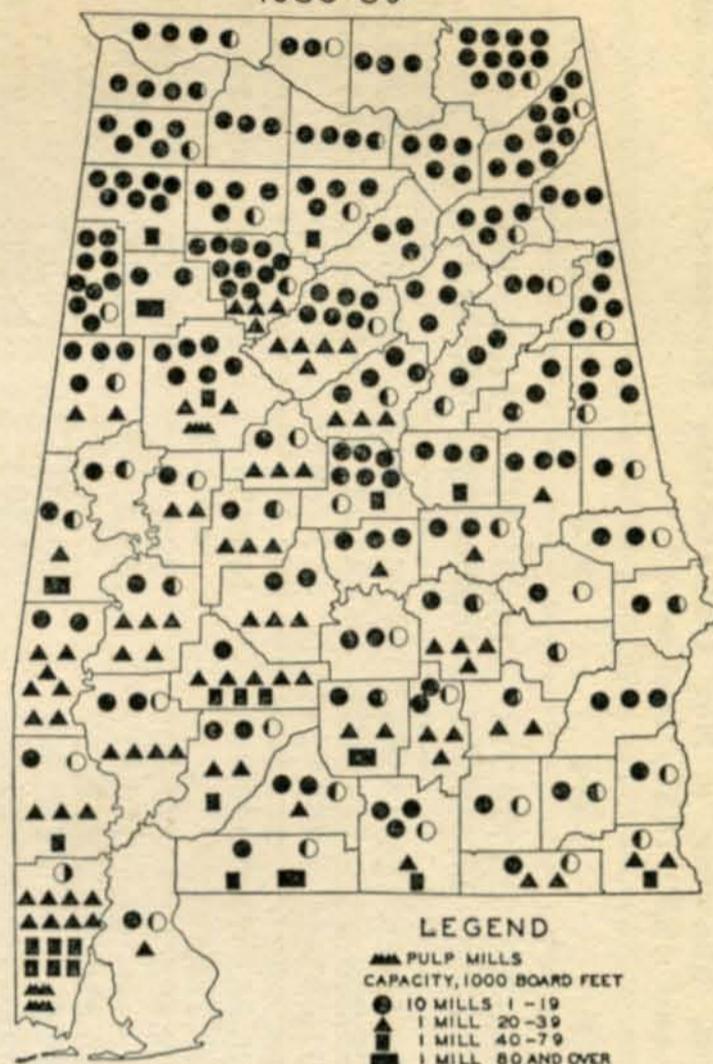
"Forest Resources of West Central Alabama" (Survey unit No. 4), Forest Survey Release No. 48.

"Forest Resources of North Central Alabama" (Survey unit No. 5), Forest Survey Release No. 50.

"Forest Resources of the Tennessee Valley of North Alabama" (Survey unit No. 6), Forest Survey Release No. 49.

All published by the U. S. Forest Service, Southern Forest Experiment Station, New Orleans, La.

SAWMILLS AND PULP MILLS 1935-36 *



MAP 83

*"The Forest Situation in Alabama," U. S. Forest Service and Commission of Forestry of Alabama, December, 1938.

Table 5 — Classification of Rural Land Ownership by Business Groups, 1935*

Business Group	Percent Area Owned by Survey Units				
	South-West	South-East	West-Central	North-Central	Tennessee Valley
Farmer Owner-operator	41	66	56	58.5	68.0
Merchants	3	4	4	3.4	2.3
Professional Men	2	3	3	2.4	2.0
Administrators and Executors	4	3	6	2.0	1.4
Banks and Mortgage Companies	3	6	3	2.7	2.8
Real Estate Agencies	3	—	2	3.9	0.6
Wood Using Industries	27	3	5	3.0	1.4
Farming Companies	1	1	—	—	—
Power, Railroad, and Farming Companies	—	—	—	1.1	—
Mining Companies	—	—	—	9.2	—
Mining, Power, and Railroad Companies	1	1	7	—	—
Mining, Power, Railroad and Farming Companies	—	—	—	—	0.9
All Other Businesses	3	5	—	5.2	9.2
All Other Businesses, including Farming Companies	—	—	8	—	—
Unknown	10	7	5	4.8	8.8
Governmental Agencies (publicly owned land)	2	1	1	3.8	2.6
Total	100	100	100	100.0	100.0

*See footnote, page 91

Classification by Size*

Acres	Survey Unit											
	Southwest				Southeast		West Central		North Central		Tennessee Valley	
	Unit 1		Unit 2		% No.	% Area	% No.	% Area	% No.	% Area	% No.	% Area
	% No.	% Area	% No.	% Area								
Less than 100	69	14	60	13	52	13	54	13	68.6	22.9	65.6	23.8
100 - 259	20	15	24	17	31	25	32	25	23.5	27.3	25.1	30.1
260 - 499	5	9	8	14	10	17	9	17	5.0	13.1	6.0	16.0
500 - 999	3	10	5	15	5	15	3	13	1.9	9.8	2.3	12.0
1000 and over	3	52	3	41	2	30	2	32	1.0	26.9	1.0	18.1
Total	100	100	100	100	100	100	100	100	100.0	100.0	100.0	100.0
Counties Covered in Study	4 of the 5 counties		5 of the 7 counties		All but Russell		All		All		All	

*Original study conducted by BAE and WPA in 1935 — Reported in U. S. Forest Service Survey Releases 35, 47, 48, 49, 50, Southern Forest Experiment Station, New Orleans, La. Values shown here exactly as classified in Survey Releases.

Table 6 — Drain (Use) by Type of Forest Product, 1935-1936

Product	Southwest		Southeast		West Central		**North Central		**Tennessee Valley		State Total	
	Cords	%	Cords	%	Cords	%	Cords	%	Cords	%	Cords	%
Lumber	1,275,400	58.8	995,600	53.8	634,300	57.2	897,800	59.2	233,300	36.3	4,036,400	55.4
Cross Ties	60,000	2.8	51,600	2.8	64,300	5.8	64,600	4.3	20,400	3.2	261,300	3.6
Poles and Piling	40,000	1.8	5,600	0.3	28,100	2.5	17,400	1.1	3,300	0.5	94,400	1.3
Veneer	56,300	2.6	29,800 ¹	1.6	20,300	1.8	1,400	0.1	12,600	2.0	120,400	1.7
Cooperage	20,100	0.9	0	0.0	8,800	0.8	72,100	4.8	17,200	2.7	118,200	1.6
Miscellaneous Manufacture	14,400	0.7	4,900	0.3	88,300 ²	8.0	94,100	6.2	7,200	1.1	208,900	2.9
Pulpwood	166,000	7.7	95,400	5.2	0	0.0	18,300	1.2	2,700	0.4	282,400	3.9
Fuelwood	464,900	21.5	523,400	28.3	201,100	18.2	281,200	18.6	203,700	31.7	1,674,300	23.0
Fence Posts	11,300	0.5	24,900	1.3	5,100	0.5	8,000	0.5	12,300	1.9	61,600	0.8
Miscellaneous Farm Use and Land Clearing	58,100	2.7	119,300	6.4	58,100	5.2	60,100	4.0	129,700	20.2	425,300	5.8
Total	2,166,900	100.0	1,850,500	100.0	1,108,400	100.0	1,515,000	100.0	642,400	100.0	7,283,200	100.0

¹Includes Veneer and Cooperage.

²Includes Pulpwood.

See explanation for Figure 3-A. **For North Central and Tennessee Valley, a converting factor for cords and cubic feet was obtained from total cords and total cubic feet.

Table 6 shows simply the drain by survey units by commodities in standard cords. The standard cord is used in this table because it is the only unit available that is consistent for all survey units in the State by types of commodities. This table not only shows the number of cords that go into a given product such as lumber, crossties, etc., but also shows within the survey unit what percent of the total drain goes into each given product. For example, the percent of the timber used

in the Tennessee Valley of North Alabama for cooperage (barrel stocks) is 2.7 percent of the total drain for that unit, or, 17,200 cords.

The following table shows the number of board feet in standing pine and hardwood saw-timber as of January 1, 1937 by Survey units. Because of the magnitude of this survey it was impossible to show the results on the existing stands of timber for as small a unit area as a county. For this reason this material is presented by survey units.

Table 7 — Standing Saw Timber (Growing Stock), January 1, 1937

Survey Unit	Pine Thousand Board Feet*	Hardwood and Cypress Thousand Board Feet*	Total Thousand Board Feet*
1	3,347,300	1,211,600	4,568,900
2	4,748,200	2,825,100	7,573,300
3	5,913,900	3,984,500	9,898,400
4	3,055,700	1,962,500	5,018,200
5	6,526,700	1,684,300	8,211,000
6	1,533,600	1,760,700	3,294,300
State Total	25,125,400	13,438,700	38,564,100

*International ¼-inch rule (calculated to allow for ¼-inch saw thickness).

Data taken from "The Forest Situation in Alabama" — U. S. Forest Service and State Commission of Forestry of Alabama. December 1938.

Table No. 8 shows the comparison of growth (or increment) and cut (or drain) for the year 1936. Table No. 7 was taken from this table to emphasize the amount of timber that was calculated to be standing at the end of the year 1936.

The term "growing stock" simply means the standing timber. The term "mortality" here refers to the amount of timber that died during 1936. "Mortality" is subtracted from "growth" to give the figure for "net increment" (growth). From this is subtracted the amount of timber cut for all uses (or "commodity drain") to give the "net change in growing stock". The "net change in growing stock" is either added to or sub-

tracted from the growing stock calculated at the beginning of the year to give the growing stock at the end of the year. In other words, in this balance sheet growing stock and growth are credits; mortality and commodity drain are debits. Net change is negative if the balance sheet is in the red.

It will be noted that for all survey units the net change in the growing stock of pine is a negative change. And for all units (except units 2 and 6) the net change for hardwoods is positive.

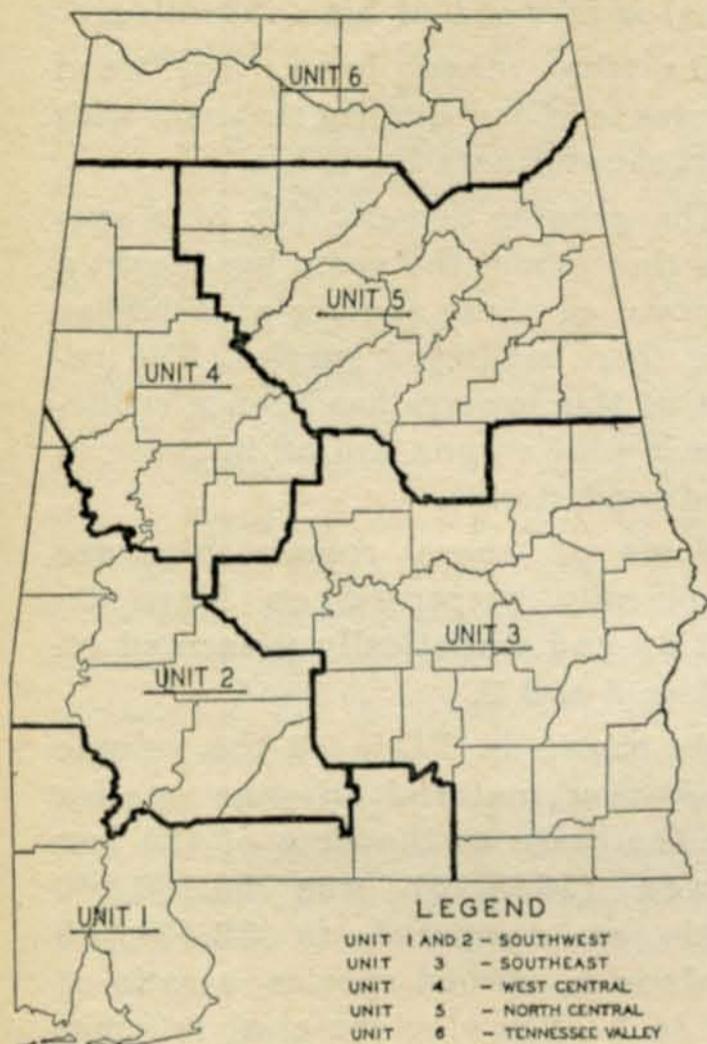
This means that pine is being cut faster than it is growing, and hardwood is growing faster than it is being cut.

Table 8 — Comparison of Increment with Commodity Drain, 1936

Species	Survey unit						State
	1	2	3	4	5	6	
	Thousand bd. ft. (International ¼-inch rule)						
Pine							
Growing stock, Jan. 1, 1936	3,356,600	4,818,800	5,937,600	3,117,100	6,657,000	1,545,700	25,432,800
Growth	236,800	326,500	418,400	243,500	391,600	112,500	1,729,300
Mortality	51,400	25,500	58,200	28,000	90,900	19,800	273,800
Net increment	185,400	301,000	360,200	215,500	300,700	92,700	1,455,500
Commodity drain	194,700	371,600	383,900	276,900	431,000	104,800	1,762,900
Net change in growing stock	-9,300	-70,600	-23,700	-61,400	-130,300	-12,100	-307,400
Growing stock, Jan. 1, 1937	3,347,300	4,748,200	5,913,900	3,055,700	6,526,700	1,533,600	25,125,400
Hardwood and Cypress							
Growing stock, Jan. 1, 1936	1,213,500	2,830,200	3,903,500	1,941,300	1,662,800	1,762,900	13,314,200
Growth	63,600	136,800	230,400	109,600	91,800	92,000	724,200
Mortality	12,600	17,900	34,000	14,000	16,900	28,200	123,600
Net increment	51,000	118,900	196,400	95,600	74,900	63,800	600,600
Commodity drain	42,900	124,000	115,400	74,400	53,400	66,000	476,100
Net change in growing stock	+8,100	-5,100	+81,000	+21,200	+21,500	-2,200	+124,500
Growing stock, Jan. 1, 1937	1,221,600	2,825,100	3,984,500	1,962,500	1,684,300	1,760,700	13,438,700
Total							
Growing stock, Jan. 1, 1936	4,570,100	7,649,000	9,841,100	5,058,400	8,319,800	3,308,600	38,747,000
Growth	300,400	463,300	648,800	353,100	483,400	204,500	2,453,500
Mortality	64,000	43,400	92,200	42,000	107,800	48,000	397,400
Net increment	236,400	419,900	556,600	311,100	375,600	156,500	2,056,100
Commodity drain	237,600	495,600	499,300	351,300	484,400	170,800	2,239,000
Net change in growing stock	-1,200	-75,700	+57,300	-40,200	-108,800	-14,300	-182,900
Growing stock, Jan. 1, 1937	4,568,900	7,573,300	9,898,400	5,018,200	8,211,000	3,294,300	38,564,100

Data for 1936 taken from "The Forest Situation in Alabama" — U. S. Forest Service and the State Commission of Forestry of Alabama — December 1938. Data presented came from the U. S. Forest Service.

SOUTHERN FOREST SURVEY UNIT BOUNDARIES * must be pointed out that this was not



MAP 84

*Based on Southern Forest Survey, 1935-36, Southern Forest Experiment Station, New Orleans, La.

However, data for 1936 are presented here because it is the only complete balance sheet available. It

must be pointed out that this was not a typical year for drain. For example, lumber cut alone for 1936 was only 56 percent of the cut for 1941, and the average yearly lumber cut for the period 1907-1930 inclusive was 35 percent above the cut for 1936. If this is considered, the State was in the red for growth and cut for pine alone by 609,000,000 board feet, or cut for *pine lumber* alone was 42 percent greater than the growth. The credit of hardwood would similarly shrink from 124,500,000 board feet to 23,500,000 board feet in a normal year.

Comparison of Pine and Hardwood Lumber Cut in 1936

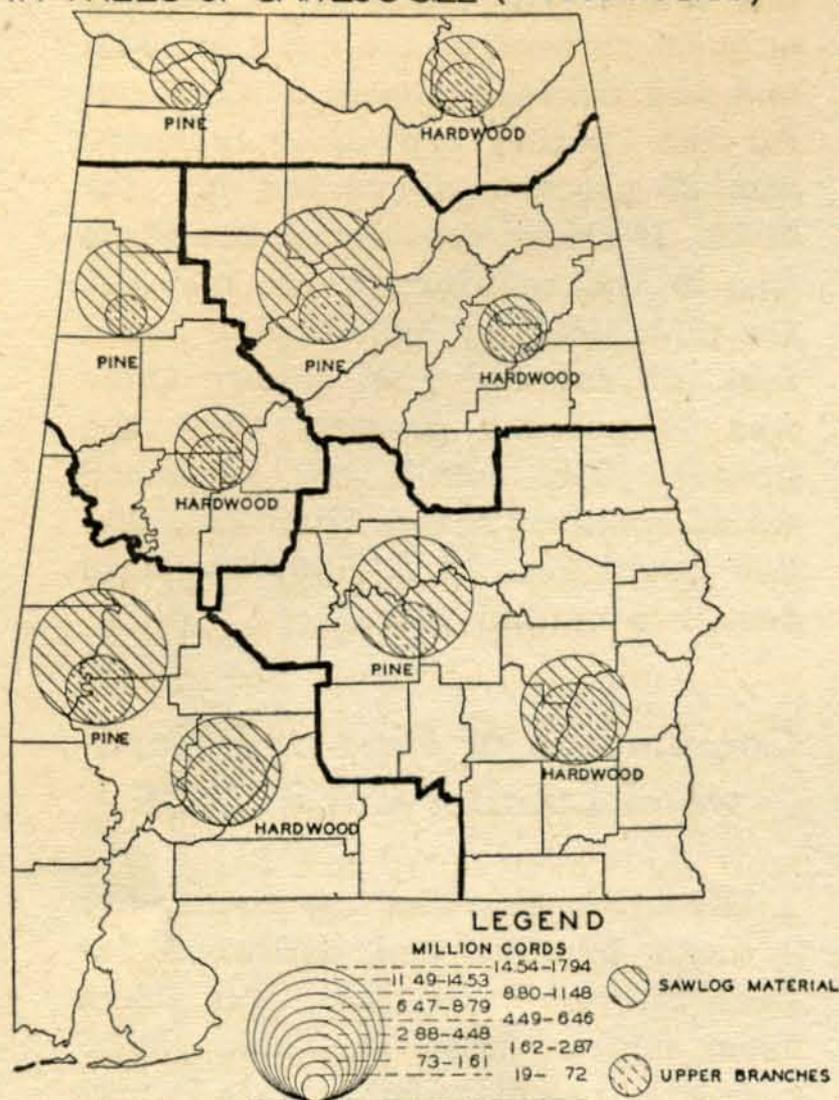
TABLE No. 9 shows the commodity drain by pine and hardwood for each Survey Unit. This was taken from figures listed in Table No. 8 opposite that classification. It is presented here to show what percent of the total cut is made for pine and for hardwood. These percentages show again that by far the greatest demand is for pine.

Table 9

Survey Unit	Cut in Thousand Board Ft.			Cut Expressed as Percent		
	Pine	Hardwood	Total	Pine	Hardwood	Total
1	194,700	42,900	237,600	82	18	100
2	371,600	124,000	495,600	75	25	100
3	383,900	115,400	499,300	77	23	100
4	276,900	74,400	351,300	79	21	100
5	431,000	53,400	484,400	89	11	100
6	104,800	66,000	170,800	61	39	100
State total	1,762,900	476,100	2,239,000	79	21	100

Data taken from "The Forest Situation in Alabama" — U. S. Forest Service and the State Commission of Forestry of Alabama. December, 1938.

SAWLOG MATERIAL AND UPPER BRANCHES
IN TREES OF SAWLOG SIZE (INCLUDING BARK) *



MAP 85

*Based on Southern Forest Survey, 1935-36, Southern Forest Experiment Station, New Orleans, La.

Trends In Timber Stands

KINDS and quality of materials in Alabama forests and trends with respect to quality are points of major importance in evaluating present forest conditions and in determining the future value of the State's forest areas.

In the past pines have furnished the larger part of the income derived from Alabama forests. Pines have furnished about 80 percent of the lumber cut of the State. This is most significant when it is realized that about two-thirds of the value of forest products has been lumber. Markets also exist for practically all sizes and classes of pines not suitable for lumber. Furthermore, a large

part of the total volume of pine material is in wood of high valuation.

On the other hand, hardwood species is of low quality material with markets and uses for it limited.

The greater demand for pine species throughout the years has meant a removal of these species at a higher rate than hardwood species. The result of this process has been a reduction in pine stands and an increase in hardwood stands.

Some of these relationships are graphically presented on Maps 85 and 86 and statistically presented on Tables 8 and 9.

As shown in Table 10 the volume of sawlog material in pine species for the State at the time of the last survey (1935-36) was 56,166,000 cords as compared to 32,404,500 cords in hardwood species, a ratio of 1.7 to 1 of sawlog material in pines to that in hardwoods. The volume of material, however, in the upper branches of pine species was only 9,847,600 cords as compared to 17,986,300 cords for hardwood species, a ratio of 1.83 to 1 of hardwoods to pine. The ratio is thus reversed. There is a very limited value to material in the branches, yet 35.7 percent of the sound material in hardwood trees of sawlog size was in branches, while only 14.92 percent of the material in pine species was in branches.

The quality picture is further developed by comparing the amount of sound material in cull trees of pines and hardwood species. This material has a limited use and is of low value. The volume of sound material in cull trees of pine species at the time of the last survey was only 4,252,900 cords; for hardwood this volume was 34,509,400 cords or almost eight times the amount in hardwoods as in pines. The volume of material in hardwood species, therefore, repre-

sents material of low value and of limited use.

These data convey an idea of the character and relative value of material found in pine species and hardwood species. Any trend, therefore, toward hardwoods holds much in determining the future value of forestry to the State. Some idea of this trend is given in Map 87 and in Table 12. It may be seen that (1) the volume of sound material in sound trees of sawlog size in pine species was 66,013,600 cords and in hardwood species 50,390,800 cords, a ratio of pine material to hardwood material of 1.3 to 1, and (2) the volume of sound material in sound trees of under sawlog size was only 25,435,400 cords for softwoods as compared to 43,098,000 cords for hardwoods, a ratio of 1.7 to 1 of hardwood material to pine material. This indicates that the proportion of hardwood in future stands will be larger than in present stands.

These facts on quality and usefulness of pine and hardwood species and the evident trend toward hard-

wood stands, together with the fact that pines are very slow in naturally restocking areas already established to hardwood, present one of the real important forest problems. In brief, the problem is this: Hardwoods are on the increase; a large part of the material in hardwood species is of low quality; there is only a limited economic use for this low quality material; consequently, it is not marketed. Hardwood, therefore, will continue to occupy the land. As long as hardwoods occupy the land, pines will not reestablish themselves satisfactorily. For pines to reestablish themselves on vast areas of the State, hardwoods must be removed; for hardwoods to be removed there must be a profitable use developed for the material which today has little economic value. The problem then is one of developing profitable uses for hardwood material so that pines and hardwoods will be removed from the forests of the State in about the same proportion.

Tables 10, 11, and 12 were taken from the Southern Forest Survey.

A. QUALITY AND CLASS OF MATERIAL AS RELATED TO PINE AND HARDWOOD SPECIES.

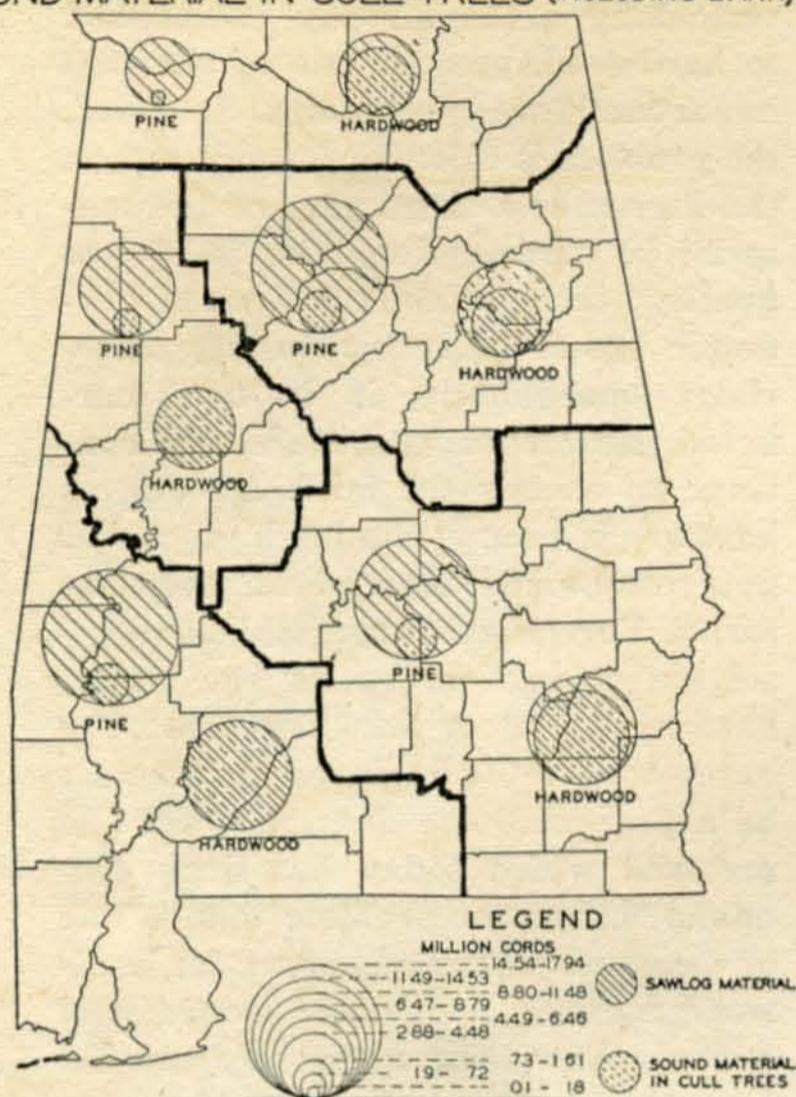
1. Character of present stand.

Table 10.—Volume of Sawlog Material and Upper Branches in Trees of Sawlog Size.

(Cords including bark — standing trees)

Forest Unit	Sound material in sound trees of sawlog size					
	Pine Species			Hardwood Species		
	Sawlog material	Material in upper branches	Percent material in upper branches	Sawlog material	Material in upper branches	Percent material in upper branches
Tenn. Valley	3,492,400	398,300	10.24	4,597,000	2,610,700	36.22
North Central	14,628,500	2,326,200	13.72	4,405,000	2,475,000	35.97
West Central	7,034,600	1,195,400	14.52	4,714,500	2,579,600	35.61
Southeast	13,068,800	2,574,800	16.46	9,281,000	5,099,600	35.46
Southwest	17,941,700	3,352,900	15.75	9,407,000	5,221,400	35.69
Total	56,166,000	9,847,600	14.92	32,404,500	17,986,300	35.69

SAWLOG MATERIAL IN TREES OF SAWLOG SIZE AND
SOUND MATERIAL IN CULL TREES (INCLUDING BARK) *



MAP 86

*Based on Southern Forest Survey, 1935-36, Southern Forest Experiment Station, New Orleans, La.

2. Character of present stand.

Table 11.—Volume of Sound Material in Cull Trees.
(Cords including bark)

Forest Unit	Cords sound material	
	Pine	Hardwood
Tenn. Valley	83,100	4,031,800
North Central	1,119,600	7,291,600
West Central	692,600	6,301,000
Southeast	1,199,900	7,500,600
Southwest	1,157,700	9,384,400
Total	4,252,900	34,509,400

3. Indicated trend in character of future stands.

Table 12.—Volume of Sound Material in Sound Trees of Sawlog and Under Sawlog Size.

(Cords including bark)

Forest Unit	Sound material in sound trees					
	Sawlog size			Under sawlog size		
	Pine	Hardwoods	Ratio hdwd. to pine	Pine	Hardwoods	Ratio hdwd. to pine
Tenn. Valley	3,890,700	7,207,700	1.85	2,666,600	7,875,700	2.95
North Central	16,954,700	6,880,000	.41	6,773,100	8,474,800	1.25
West Central	8,230,000	7,294,100	.89	3,883,500	6,203,500	1.60
Southeast	15,643,600	14,380,600	.92	4,930,200	10,518,300	2.13
Southwest	21,294,600	14,628,400	.69	7,182,000	10,025,700	1.40
Total	66,013,600	50,390,800	.76	25,435,400	43,098,000	1.69

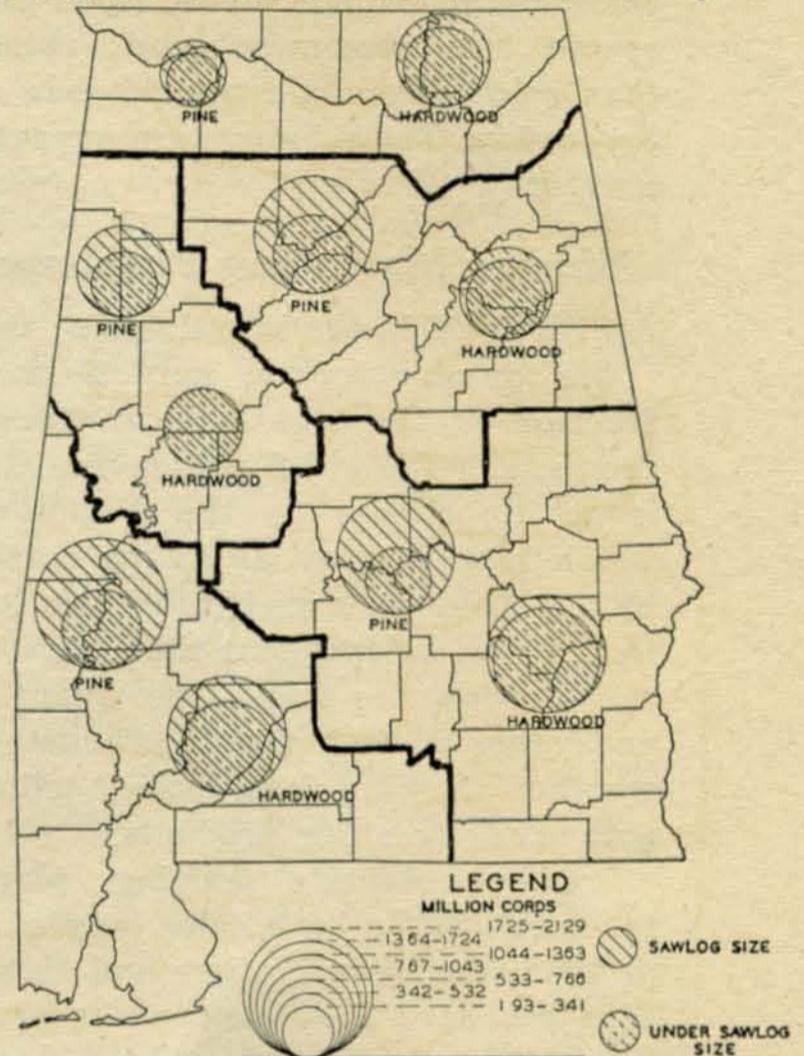
Processing Increases Value

THROUGHOUT its history the South has supplied other sections with a vast quantity of goods, most of which has left in the form of raw material. This means that it has had a relatively low value when it left this section. After receiving the raw material other sections have processed it and realized most of the profits and other values when shipped back as costly finished products. Transportation two ways also has been added to the cost. Any state receives the greatest value of its raw materials by converting them into finished products within that state.

The manufacture of paper and paper bags as compared to lumber offers a good illustration. In 1928 the net cost to Alabama of paper and paper bags was \$5,872,336. In 1937 the net value to the State of these manufactured goods was \$25,620,687. The estimated probable value in 1941 and 1942 will be about \$45,000,000 to \$50,000,000. Lumber will have little more value than this although the drain from Alabama forests for lumber represents 55 percent of the total commodity drain, whereas the drain for paper, pulpwood, etc., will represent not over 8 or 10 percent of the total drain from Alabama forests in 1941-42.

Calculations made in 1939, based on prices and the costs of materials and services at that time, show the

SOUND MATERIAL IN SOUND TREES OF SAWLOG AND UNDER SAWLOG SIZE (INCLUDING BARK) *



MAP 87

*Based on Southern Forest Survey, 1935-36, Southern Forest Experiment Station, New Orleans, La.

average values developing from the use of equivalent quantities of wood when sold as lumber and as pulp and paper. Lumber is a product requiring only intermediate processing. Bags and paper pulp represent more highly processed products. The relative value for the two are shown in Table 13.

Table 13—A comparison of an av-

Table 13

	100 small mills	1 pulp and paper mill
Wood used (2 cords per 1 M bd. ft.)	50,000 M bd. ft.	100,000 cords
Men employed	1,000	1,000
Man days employed	160,000	275,000
Wages paid	\$350,000	\$1,000,000
Taxes paid	2,000	100,000
Land owned and managed for forest production	0	100,000
Capital invested	\$300,000	\$6,000,000
Sales value of finished product f.o.b. mill	850,000	\$3,500,000

erage pulp and paper mill with small sawmills to show the benefits to a community through having wood processed into consumer goods rather than sold with a minimum degree of processing. These figures are approximate only.

Timber Marketing Problems

AS SHOWN in the introduction, timber owners receive only a small fraction of the true value of forest products. The chief reason for this is selling timber by the boundary, which is as illogical as selling cotton by the field or hogs by the hog lot. Only by an independent timber cruise can the owners know the quantity and value of their forest products—whether they be logs, poles, piling, pulpwood, or other products.

Without definite cutting plans, farmers usually have sales only once or twice during a lifetime and therefore are at a disadvantage as most buyers have learned the timber trade through years of experience. Sellers may succeed in substantially increasing original offers by promoting competitive bidding, but lacking independent estimates, they nearly always fail to receive the true value of their timber.

Sometimes a sale is concluded by mill-tally, which means a value agreed upon for each 1000 board feet as the boards leave the saw. This is the most accurate and equitable method of sale, but is not desirable unless provisions are made for the conservation of the owner's timber resources—either by specifying a diameter limit or by the owner marking with paint or axe the trees the buyer is to cut. Such provisions should be included in the timber sales contract which should be used in every sale.

The marked-tree method is by far the best way to sell timber. Only the maturer, defective, or crowded-out trees are cut. This provides growing

space for the younger, faster-growing trees that are left. Frequently young pines double their volume in 4 to 6 years. This method not only provides for future crops, but furnishes the owner with a timber inventory which he takes by recording the size of each tree as it is marked. Having a record of these sizes by diameter and number of 16-foot logs in each tree, the number of board feet can be very closely approximated.

Occasionally timber is sold by log-scale. Under this method the owner or agent uses one of the three log scales in scaling each log as it is hauled from his property.

In Alabama the most widely used rule is the Doyle rule. This rule is very inaccurate for small logs, particularly those that measure less than 20 inches in diameter. For logs 10 or 12 inches in diameter the log scale reading may be only 40 to 50 percent of the number of board feet that can be sawed from such a log.

The International rule is frequently used in some sections of the country but is not considered suitable for southern timber where much of the timber is sawed by small portable mills. Extreme care must be exercised in using this rule, and it is more applicable to mills having a high operating efficiency.

The Scribner rule is probably the fairest for buyer and seller of southern timber, where most of the timber cut yields logs smaller than 20 inches in diameter.

If proper adjustments are made in price it is not so important which rule is used. The discrepancies can be offset by educating timber owners in making these adjustments.

Many owners are unaware of markets for such special products as poles, piling, veneer, and barrel stock. Prices of all forest products are subject to fluctuation. This makes it important for the grower to study the

marketing situation in his locality and the trees suitable for various uses. By such a study he is able to profitably supply the markets.

As previously stated, quality of timber presents a marketing problem. It is affected by limbs, fire scars, decay, red-heart (pine), and the site on which some species has grown. When the market is active for timber of poor quality, timber growers should supply the market to clean out their stands to make room for better species.

It has been shown that the trend of Alabama timber is toward hardwoods, much of which is of inferior species. Increased attention should be directed toward developing markets for these hardwoods to make it profitable to improve stands by removing weed species and wolf trees that suppress good timber.

Woods fires affect the quality of timber in addition to killing seedlings and impoverishing the soil. Fire scars ruin the best lumber in the butt log. It is to the advantage of operators of all wood utilizing industries as well as timber owners to prevent this waste. Many are doing good work in preventing fires. Teaching timber producers the value of timber and how to trade on the timber market will cause them to help prevent and control fires. If they feel that timber is worth protecting they will voluntarily adopt fire prevention and protection measures. This, however, does not minimize the necessity of state-controlled organized fire protection. It merely means that a realization of timber values by the public will result in public cooperation without which no system of fire control can succeed.

Pulpwood

PULPWOOD should be marked with a paint spot or axe-blade before cutting just as saw timber should be

marked. This method provides for future crops, and, since smaller trees are used, it results in a profitable thinning.

It is usually sold as stumpage or by the standard cord or unit and checked as the material leaves the woods. A standard cord is a rick 4 feet by 4 feet by 8 feet. A unit is a rick 4 feet by 5 feet by 8 feet and is sometimes known as a long cord (5-foot sticks). Either is satisfactory. The price should be 25 percent higher for a unit than for a standard cord.

Pulpwood is considered such a low-value product that a timber cruise is not necessary. When it is marked it is not necessary to record the sizes, as a count of the cords or units as they leave the woods is sufficient.

The pulpwood industry has been criticized severely for wasteful cutting. Although this sometimes has been justified, it should be remembered that the finished products are manufactured in Alabama and the industry should be encouraged. The need is for much more effort to be directed toward conservation by the timber industry and timber owners. Most of the cutting is done by contractors and sub-contractors who will cut everything usable as long as the sale is concluded on that basis.

Many timber stands in Alabama need thinning. Cutting the pulpwood can be a profitable method of improving these stands. When young timber has, for some reason, stopped growing it should be removed. This should be sold for as fair a price as any other timber to stabilize stumpage prices for all timber products.

In the naval stores belt, the revenue from turpentine leases (usually 4 years) may be greater than from clear cutting for pulpwood. Under proper supervision such a lease results in no trees under 9 inches in diameter (4½ feet from the ground)

being faced, better protection from fire, and the title to the trees remaining in the hands of the original owner. At the end of a lease it may be renewed or the worked-out trees can be sold for pulpwood or saw timber. The timber owner must learn which market to supply to obtain the greatest returns over a period of time.

Naval Stores

PRODUCTION of naval stores is a specialized field controlled by large operators, factorage houses, and brokers. Prices are based on daily quotations from the Savannah market, and the marketing is done on a world-wide scale.

The federal government buys naval stores products to hold in stock pile. There is such a market in Mobile for finished turpentine and rosin, but producers must pay distilling charges. The nearest stock pile for crude gum is located at Valdosta, Georgia, which is too far from Alabama operators to be attractive. Prices paid Alabama producers would be higher if the federal government would arrange to buy crude gum at Mobile or some other convenient point in Alabama.

There is a federal inspector for rosin but not for turpentine. One is needed for turpentine to certify volume in gallons in each tank car as of a given temperature at point of origin of shipment. This would mean protection for producers.

Summary and Recommendations

In 1941 the f.o.b. mill value of the rough green lumber produced in Alabama was \$50,000,000, of which only \$8,000,000 or 16 percent was received by timber owners. This does not include poles, piling, cross ties, fuelwood, and many other forest products. Approximately 2,500,000 cords of fuelwood were cut in 1941 which was valued at \$4 per cord at the

house. This item alone, therefore, was worth \$10,000,000. But for all products the grower fails to receive a fair share of the returns of the timber business. In the case of fuelwood the value represents the amount saved by using home-grown firewood instead of coal or other fuel.

More indicative of the proportionate wealth of the State derived from forest products is the average from 1928 to 1937 of 57.46 percent of the total value of net exports of all commodities.

There is some variation in land ownership classification, but the fundamental principles of good forest management practices apply to all tracts regardless of size or ownership. Within a local area timber grows on much the same soil, grows under the same climatic conditions, and is made up of the same species. There is no reason to distinguish between types of ownerships in managing the timber crop.

Since the 1935-36 survey was made during a time when the timber cut was far below that for average years, it revealed a better balance sheet for growth and cut than is actually the case. In short, timber is being cut faster than it can be replaced under the existing system of cutting. More attention must be given to a balanced sheet of cut and growth. Many operators are giving this attention. Some large sawmill operators in Alabama are practicing selective cutting. By marking the trees that are to be cut these operators leave enough young growth to replace their cut. Thus they operate on a sustained yield which means a large permanent industry. These cases may be multiplied by as many times as operators and landowners together become convinced of the necessity for sound forest management practices.

By availing themselves of specialized markets, timber owners can im-

prove their business. They should become familiar with their markets and with the trees in their stands which can be utilized to supply the needs. The comparison must be made between the value of trees for lumber and their value for poles, piling, veneer, barrel staves and heading, etc. With the trend of stands toward hardwood this will become even more important.

There is a notable lack of uniformity in buying and selling. No timber should be sold by lump sum when no estimate has been made of the volume and quality present.

Naval stores marketing is a very specialized field, controlled by large operators, factorage houses, and brokers. Prices quoted on the Savannah market control all prices of these products. Alabama operators are too far from federal stock piles of crude gum to avail themselves of that market.

Pulp and paper manufacture is destined to become a major industry in Alabama, but sound conservation must accompany this development to insure sustained production without damage to other wood utilization industries. Producing finished products means much to the State. Elimination of wasteful cutting practices is equally important.

To solve Alabama's timber marketing problem No. 1 — proper estimating and evaluating standing timber coupled with sound plans on each tract for selective cutting for continuous crops — personal assistance, expanded by education by demonstration, must be given timber owners. This must be planned so that each specialist hired can teach the greatest number of owners. The timber marketing specialist must assist owners in selective cutting and timber evaluation in such a way that each owner's neighbors will see the

necessity for handling timber in this way.

In January, 1943, the Alabama Extension Service began such a service in cooperation with the U. S. Forest Service. Five forestry specialists in timber marketing will work with county agents in the five areas of the State. The State Division of Forestry has a specialist who is on call to all parts of the State.

This is a small start in the only sensible direction that can be recommended for the solution of this problem. The service must be gradually expanded to adequately meet the needs of the State.

This will take time, but it can be effected. The results will be the voluntary adoption of sound cutting practices based on the realization that timber is a crop and a renewable resource.

It is recommended that the naval stores industry be furnished with an inspector for turpentine to certify volume at point of origin of shipment.

The question of arranging for the location of a federal stock pile for crude gum in South Alabama (probably Mobile) should be further studied. This should be brought to the attention of and handled through the Commodity Credit Corporation, Washington, D. C.

The U. S. Forest Service at the Forest Products Laboratory, Madison, Wisconsin, has shown that it is technically possible to utilize certain low-grade unmarketable hardwoods that grow in Alabama. Some research agency in Alabama should further study these experiments to determine the applicability to local conditions. This should be followed up by local mills to determine the practicability of these uses on a commercial scale. It might be advisable to lend some assistance to such a mill to effect this development. Such research should continue to move forward to investi-

gate entirely new uses for these low-grade hardwoods.

The use of sound material in cull trees for construction of short panels might be mentioned as the type of manufacture which could use low-grade material which today has little value on the Alabama market.

Raw material leaving the state for further processing elsewhere means

relatively low values to the State. When this material returns in the form of finished products the cost is high and most of the profits and accompanying values of employment and salaries go to other sections. Therefore, inducement should be offered to wood utilization and processing plants to produce finished products within the State.



MARKET NEWS SERVICE

TO BE OF SERVICE to the individual farmer, market news must cover both supply and price. The supply information is needed to aid in intelligent marketing but the farmer's final interest is in price.

Many farmers are unable to interpret supply information intelligently, particularly when it must be balanced with demand information. Supply and demand are usually built up over such a wide area that farmers cannot judge their significance in local situations. There is no doubt that farmers need more supply and price information applicable to their own localities on the farm products grown in Alabama.

Much supply information is made available at stated periods through the United States Department of Agriculture on a state, section, and national basis as rapidly as the Crop Reporting Service can secure reasonably accurate estimates of acreages and crop conditions. These data are available through major newspapers, through radio broadcasts, and through Federal reports. They are ordinarily in the hands of buyers, but seldom in the hands of farmers.

Demand information is made available through the Department of Agriculture and is released regularly about the end of each crop season as a basis for planning work of the following season. Supplemental current reports, such as the Feed Situation, Cotton Situation, Livestock Situation, Fruit and Vegetable Situation, etc., are issued in season. These reports cover, as a rule, both supply and demand information, but only large and skilled farm operators are able to use them effectively.

Price information is usable by the farmer only if it applies to the quality of product he produces at a point where he may sell it. Furthermore,

price information must be available to him in order that he may use it. Apparently, buyers in many small towns have information about values of products which the farmer does not have. This means that much price information is available locally but not to most farmers.

It is the purpose of the next few paragraphs to indicate as nearly as possible the extent to which information known to be available applies to the farmer's local situation. The extent to which such information is available and applicable to the individual farmer varies a great deal with farm products.

Cotton

Perhaps the most accurate information available on price applies to cotton. Quotations are made daily on cotton prices by class in Montgomery, Birmingham, and other important cotton markets of the State. In addition, buyers frequently make their own quotations available. Difficulty confronting farmers in selling their cotton is lack of knowledge of the class of their cotton. Frequently, when the class is known, buyer competition and customs are such that buyers will not pay full price for quality cotton.

Farmers producing cotton in one-variety communities have classing and market news services which enable them to determine the class and value of their cotton.

Cottonseed

Cottonseed is ordinarily purchased from farmers by ginners and other local buyers. Occasionally the farmers swap seed for meal and hulls at the oil plant. Regularly reported prices on cottonseed are uncommon even in the city newspapers of Ala-

bama. Farmers must depend on information they get from neighbors and friends in determining the value of cottonseed. Little cottonseed is disposed of on the basis of quality. It seems that comparative prices for several points in the State would be helpful to farmers in determining what they should receive for cottonseed.

Corn

Alabama produces less corn than needed in the State. However, many farmers in practically all communities buy or sell corn during the year. Federal reports quote corn prices at Atlanta and occasionally at Birmingham, Montgomery, and Mobile. However, official quotations are seldom available for the small local markets. It is not uncommon for corn to sell for 90 cents per bushel in one section of the State and for \$1.35 in another at the same time.

Most corn sold from Alabama farms is marketed in early winter. The price spread between this period and the following May or June ordinarily far exceeds the cost of carrying corn under good conditions for these few months. It seems that some regular reporting service giving prices by quality would help to level out prices throughout the State and throughout the year.

Small Grain

Ordinarily farmers wishing to buy small grains can get quotations from feed dealers. During some seasons farmers with these products for sale have little difficulty in disposing of them at a margin under the quoted sales price. However, they have little chance to compare the price they receive with prices in other parts of the State. The nearest prices by grade may be quoted from Chicago or St. Louis.

Miscellaneous Seeds

Legume seeds, sorghum seeds and similar miscellaneous seeds are seldom quoted by official or semi-official observers in Alabama. Farmers wishing to sell to or buy from their neighbors have a very poor basis for determining a fair value for their seed. This type of product is frequently advertised in the semi-monthly market bulletin of the State Department of Agriculture. It seems, however, that this source of information is still weak because it frequently fails to give any indication of prices in many parts of the state.

Purchased Feeds

Prices of purchased feeds are quoted in a number of the central markets by city newspapers and in Federal news releases. Alert farmers can figure about what prices feeds should be by comparing local prices with central market prices, but many farmers must depend entirely on their dealers' statements to guide them in their purchases.

Fruits and Vegetables

Perhaps more fruits and vegetables are wasted because of inadequate market news than are any other farm products.

Strawberry producers who handle their berries through cooperatives may get adequate information on prices through the managers of the organizations. Independent farmers must depend more on hearsay, unless their operations are big enough to enable them to buy similar information.

The bulk of potatoes moving out of the State are handled by dealers who keep in very close touch with all central markets. Probably they pay prices corresponding to central market prices under pressure of competi-

tion, but farmers have little means of proving or disproving this point.

Sweet potatoes are sold to a much greater extent in bushel lots than are Irish potatoes. Apparently, the price reporting service on sweet potatoes is less satisfactory in local communities than on the South Alabama crop of Irish potatoes.

Most vegetable prices are quoted in season through the federal news service at Atlanta. Quotations may be made also for Birmingham and other large Alabama cities. These quotations are broadcast over the radio, particularly from Atlanta; however, such quotations are of little value to farmers with surpluses many miles from these markets. Farmers are often at the mercy of itinerant truckers who buy vegetables at as low prices as possible.

Livestock

Price quotations by kind and grade of livestock are fairly complete for the Montgomery market. They are fairly complete, also, for the southeastern markets as reported from Thomasville, Georgia. Information is ordinarily available in local areas from auction sales. Thus, price quotations on livestock are more complete than for most other products. Experienced livestock producers utilize the Montgomery, Thomasville, Memphis, Nashville, and Chicago market quotations to advantage. At present, however, many farmers do not know the quality and grade of the livestock they have for sale. This makes it difficult for them to use effectively the price information they receive.

Poultry

Poultry prices are extremely variable over Alabama. Frequently, individual buyers quote prices but farmers are unable to compare prices offered with those prevailing in neigh-

boring towns. This makes it impossible for them to accurately judge the fairness of offers made for their poultry. Cooperative organizations ordinarily are in position to follow market prices more closely than individuals.

Eggs

Egg prices promise to be supported in 1943 through F.D.A. action. Only eggs of acceptable quality meet the requirements. Support of prices in a community also depends upon the cooperation of one or more dealers with the F.D.A. program in that community. If the cooperation is adequate, farmers will be assured of avoiding extremely low prices for their eggs. This "floor" will be helpful to farmers only when local prices tend to fall below the "floor". Farmers have little effective means of estimating a fair value for their eggs when prices are substantially above the F.D.A. "floor."

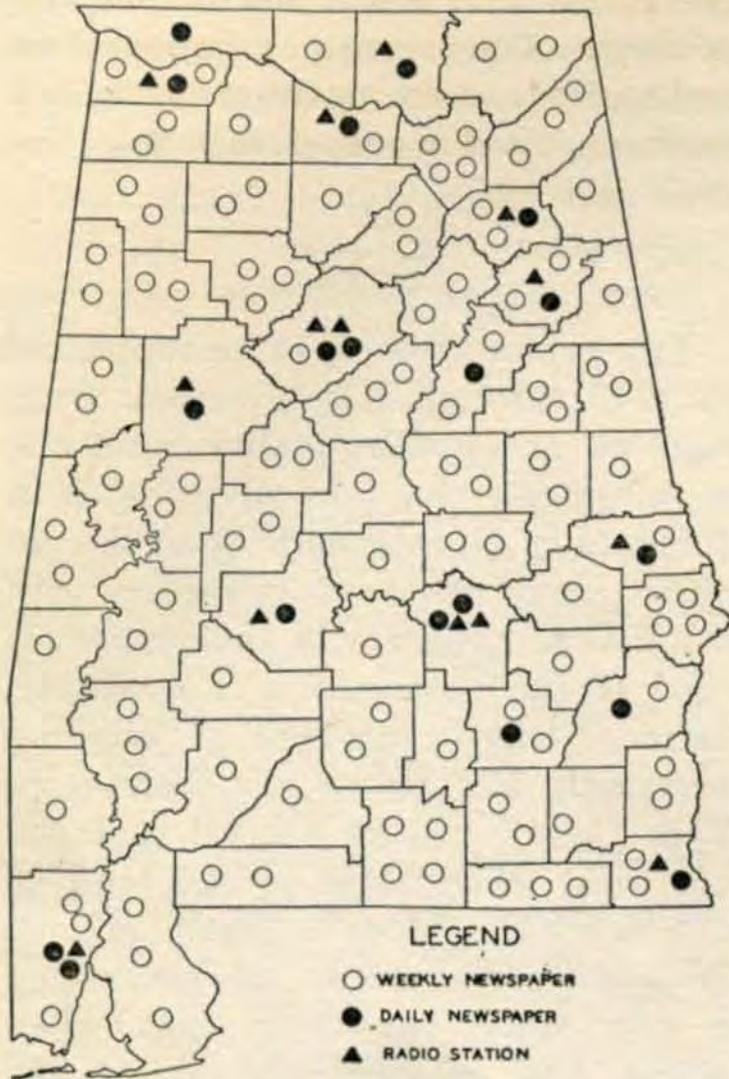
Dairy Products

Prices paid for graded milk on local markets are ordinarily known by interested farmers. Milk prices at Mobile and Birmingham are regularly quoted in Federal reports. The State Milk Control Board has its list of prices on the markets under its jurisdiction. However, no comprehensive report showing prices of graded milk throughout the State is regularly published.

Price information on ungraded milk is even less easily obtained. The basis for price determination also are less uniform. Some degree of uniformity in the bases for price determination would be highly desirable and probably helpful to both buyers and sellers.

The Alabama Department of Agriculture and Industries reports cream prices. In addition local buyers fre-

POINTS FROM WHICH MARKET NEWS IS OR MAY BE DISSEMINATED, 1943



MAP 88

quently post prices they offer for cream on a butterfat basis.

The southeastern states sell more farm butter than any other section of the United States. Yet, little, if any, uniformity exists in prices paid. Apparently there is little, if any, attempt made to grade country butter. The result is that most country butter, unless delivered to regular customers, sells at minimum prices.

Forest Products

Probably farmers know as little about the value of their forest products as about any product on their farms. They are handicapped in being, as a rule, unable to judge accurately either the quality or the quantity of the product for sale. Furthermore, they are dealing in a product of considerable weight in relation to its value. Thus, its distance from the consuming point af-

fects the price they may expect. Finally, quotations on forest products are few and far between.

A program is now under way that should give many farmers a great deal of help in the disposal of their products, as well as the handling of their forest land. It calls for individual aid to farmers by trained foresters. Nevertheless, representative authentic quotations would be very helpful to farmers and foresters.

Naval stores prices are quoted from Mobile. Only south Alabama is vitally interested in these forest products. Quotations on pulpwood, saw logs, rough lumber and poles should be quite helpful to the farmers with forest products for sale.

Summary and Recommendations

The foregoing market news statements on quantity, quality, and price of Alabama farm products indicate the following weaknesses:

While fairly complete price information is available for cotton lint and most livestock, farmers are still handicapped by not knowing their grades. Prices of most other Alabama farm products are quoted from official sources haphazardly, if at all, and give farmers, living considerable distance from the point of quotation, very little idea of the value of their products at their own markets.

The large number of products, the variability in time at which they are put on the market, the diversity of factors affecting the supply available for the market, and the demand are such that any comprehensive attempt to give the farmers adequate market news service would seem to call for the full-time services of a capable and experienced marketing man. Such a man would have to interpret the news in such a way that the farmer would understand their mean-

ing. This task in itself is heavy. Perhaps existing organizations could be of very marked assistance to the right man in both gathering and disseminating marketing information, but apparently the greatest need is for an organizer and interpreter of

farm market news, which could be disseminated through daily and weekly papers, over radio and by mail to county and home agents, cooperative associations, cooperative officials, key farmers, bankers and others. See Map No. 88.



CONCLUSIONS

THE TEXT of this report contains, along with the descriptive matter of each commodity group, a paragraph entitled Summary and Recommendations. Throughout these paragraphs are several points which are common to all.

These points should form the foundation for first designing and then building a sound marketing system in the State of Alabama.

1. Production and marketing problems:—

Production and marketing problems are interrelated and must be considered simultaneously because:

a. It is necessary to assemble a marketable volume of a given product if producers are to receive a reasonable price for the commodity.

b. The marketable volume must be assembled from farms within a reasonable distance to minimize transportation costs and aid producers in obtaining a larger share of the consumer's dollar.

2. Quality of product:—

Purchasers desire a uniformly high quality product. This can be obtained through:

a. Educational demonstrations on how to produce high quality products.

b. Concentration of production in suitable areas to assure a marketable volume of uniform products.

c. Expansion of inspection and grading services to provide all producers an opportunity to know the quality of products bought and sold.

d. Establishment of grades and standards that correspond with the official United States Grades and Standards in order to facilitate the free movement of products into all market centers.

"Grades" provide a common language of quality for buyers and sellers. Grades not only make for more

efficient marketing but are essential in buying and selling, especially in price control operations such as farmers are dealing with at the present time.

3. Market news:—

Current market information is a necessary public service and must include data on general supply, demand, market movements, distribution, prices, production trends, transportation, storage, processing, packaging, regulations, inspection, priorities, rationing, needed adjustments in regulations and distribution, lend-lease and other governmental purchases of food products, adjustments in production and marketing goals.

The basic information for this service can be collected by interviews, telegraphic reports, warehousemen, market masters and managers of markets, inspectors, and by numerous contacts with other groups, including the Market News Service Division of the regional office of Foods Distribution Administration, Atlanta, Georgia.

This information may be disseminated through daily releases by radio, State and county press, and by mail to county and home agents, cooperative association, cooperative officials, key farmers, bankers, and others.

The objective of a marketing system is to increase grower's profits by improved methods of **production, harvesting, storing, assembling, grading, packing, and selling.**

It should be remembered that perishable crops are handled on a seasonal basis and certain markets do not operate longer than a few weeks each year. Therefore, physical facilities and equipment necessary for the operation of most markets need not be expensive. About all that is required is shed space, platforms on

which to handle the products, parking lots, stalls from which truckers may transact business, and suitable office space.

In formulating a marketing program certain definite principles of marketing must be recognized. The most important of which is **education**.

The success of a market is not in the steel and concrete of the market place but in the organization and minds of those who support the market. A market cannot be built over night. There is the long and difficult process of educating producers to the necessity of proper methods of production, grading, packag-

ing, and merchandising. **Education** is probably the greatest single marketing problem in Alabama today.

Another great principle of marketing is cooperation and organization. Farmers cannot progress on an individualistic basis. Farmers can increase their income through planning production and marketing activities together. Through cooperation and organization lie the opportunities of having a voice in the markets, of finding new outlets, and of increasing farm income.

More effective marketing can be a reality through **education, organization, and cooperation**.





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