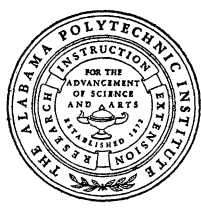


Duplicate

BULLETIN 314

MARCH 1959

*Marketing*  
**TRUCK CROPS**  
*in Alabama*



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

E. V. Smith, *Director*

Auburn, Alabama

## CONTENTS

	<i>Page</i>
MARKET DEVELOPMENT.....	3
Procedure for Development.....	5
PRODUCTION CHARACTERISTICS.....	6
Fresh vs Processed.....	6
Time of Marketing.....	6
Acreage, Yield, and Production.....	7
PRICES AND VALUE.....	10
Purchasing Power.....	15
MARKET AREAS.....	16
OPPORTUNITIES FOR DEVELOPMENT.....	17
SUMMARY AND CONCLUSIONS.....	20
APPENDIX.....	23

# MARKETING TRUCK CROPS

## *in Alabama\**

EDWARD E. KERN, Jr., *Associate Agricultural Economist\*\**

**M**ARKETING TRUCK CROPS involves the movement of commodities that are affected by many economic and biological forces. It follows that dependable and competitive markets are fundamental in the development or expansion of truck crop enterprises.

Information regarding changing conditions is basic to planning that is necessary to meet the needs of the Alabama industry. The study reported here was made to provide data that will be useful in future development of the truck crop industry in the State. Objectives of the study were: (1) to relate important experiences in public market development in the State to their current status and problems in produce marketing; (2) to analyze economic changes in production and marketing of truck crops in Alabama and competing states, and to appraise these changes in terms of future market needs and possibilities; and (3) to provide a basis for future research and development in produce marketing.

### MARKET DEVELOPMENT

Efforts to increase farm income in the State by providing farmers with commodity markets were made during the 1940's. Over a half million dollars of public funds were provided for the construction and equipping of these markets, 10 of which were prod-

---

\* This study was supported by funds provided by the Agricultural Research and Marketing Act of 1946 and by State research funds. It is a contributing project to the Southern Regional Research Project SM-8, "Evaluation of Alternative Vegetable Marketing Organizations and Handling Methods."

\*\* Acknowledgment is given the following for criticisms and suggestions: Members of the Technical Committee of SM-8, and Extension Service horticulturist and members of the departments of horticulture and agricultural economics, Agricultural Experiment Station, the Alabama Polytechnic Institute.

TABLE 1. SELECTED DATA RELATIVE TO ALABAMA STATE PRODUCE MARKETS ESTABLISHED DURING THE 1940's

Market <sup>1</sup>	Ready for operation	Operated by	Authorized capital stock	Total expenditures <sup>2</sup>	Balance <sup>3</sup>
Ashford	Feb. 1, 1946	Houston County Producers Assoc.	\$10,000	\$ 63,186	\$ 60,953
Albertville Fruit and Vegetable Citronelle <sup>4</sup>	Oct. 1, 1948	Marshall County Producers Assoc.	\$25,000	\$ 30,823	\$ 30,573
	July, 1948	South Alabama Sweetpotato Assoc.	-----	\$ 18,785	\$ 18,785
Cullman	Jan. 1, 1945	Cullman County Producers Assoc.	\$25,000	\$ 49,716	\$ 45,554
Decatur	Feb. 2, 1948	Decatur Curb Board	-----	\$ 8,161	\$ 8,063
Evergreen	May 1, 1947	Conecuh Producers Cooperative Assoc.	\$10,000	\$ 17,106	\$ 16,806
Greenville	Mar. 1, 1946	Butler County Sweetpotato Growers Assoc.	\$ 2,500	\$ 49,366	\$ 48,632
Oneonta	Nov. 1, 1944	Blount County Truck Growers Assoc.	-----	\$ 25,093	\$ 16,843
Montgomery Curb	June 1, 1947	Montgomery Curb Market Assoc.	\$ 500	\$ 32,711	\$ 25,431
Gadsden	June 1, 1947	Gadsden Curb Market Assoc.	None \$13,778 operating capital contributed	\$ 24,567	\$ 23,075
<b>TOTAL</b>				\$319,514	\$294,715

<sup>1</sup> Operated on lease purchase-agreement basis with local associations composed of county producers. Rate of repayment usually 5 per cent per year on principal without interest.

<sup>2</sup> Expenditures for buildings, equipment, and insurance (where applicable).

<sup>3</sup> Balance as of September 30, 1951 or at the end of operations of the State Markets Board.

<sup>4</sup> Never operated.

Source: "State of Alabama, Department of Agriculture and Industries, Montgomery, Alabama," Annual Report, 1950-51, Section II, Alabama State Markets Board Final Report.

uce markets, Table 1. The Alabama State Markets Board, established in 1943, was responsible for promoting the expansion of truck crop acreage in the State. Following several years of planning and administering market development, functions of the Board were transferred to the State Board of Agriculture and Industries in 1951. The latter agency's responsibilities were . . . "to cooperate with local groups in an effort to reopen markets which were closed and . . . to make every effort to collect all amounts due the State for moneys advanced for constructing and equipping these markets . . . to take whatever action or make whatever disposition of the property necessary for the interest of the farmers served by these markets and the State as a creditor . . ."<sup>1</sup> Varied operative experiences were characteristic of the markets established. At least one was never opened while others failed to attain the prominence expected. Consequently the original investments could not be amortized in the manner agreed. By 1958 the wholesale markets had ceased functioning, except for the Greenville market which was operating on a limited basis. Two small retail markets, Montgomery and Gadsden, continue to operate.

### Procedure for Development

Past experiences in public market development in Alabama have relevance only as they provide guides for directing future courses of action.

In the beginning, many ideas were advanced by different individuals and groups concerning the State's needs regarding types, locations, purposes, and methods of operating public markets. The decentralized type of market, based on local ownership of facilities, was finally decided upon. Requests for financial aid were received by the Board from local groups, composed of businessmen, agricultural leaders, and farmers. After receiving estimates of local production and marketing opportunities, the Board voted to approve an expenditure of funds for either plant or equipment or to request additional information from visiting delegations, the Director of Markets, or from other sources. Groups reported on availability of market sites and attitudes of local farmers. Cooperative ownership was to be achieved through a lease-purchase agreement arrangement, whereby the State funds

<sup>1</sup> Resolution adopted by the State Board of Agriculture and Industries, December 16, 1954.

expended would be repaid out of market earnings at an amortization rate of 5 per cent per annum on the principal borrowed, interest free.

The success of these markets was in part dependent upon anticipated production, which did not materialize. As farm adjustments occurred, resources were diverted to uses other than for vegetable production. This resulted in volumes of business insufficient to amortize market indebtedness at reasonable rates. Other causes of failure subsequently reported from the several production areas included (1) lack of capable management, (2) the State assumed too large a part of the financing of the facility, and (3) the inability of markets to make full cash settlements to producers for their produce at time of delivery. Another weakness was that producers failed to understand the cooperative basis, or were not willing to operate under such conditions.

## PRODUCTION CHARACTERISTICS

### Fresh vs Processed

Market development in Alabama has been principally for fresh produce. Over 95 per cent of the commercial vegetable production in the State, excluding Irish potatoes and sweetpotatoes, moves through fresh market channels, Appendix Table 1. This is considerably above the percentage for the United States, but is somewhat in line with that of other states in the Southeast. Processing facilities generally are not available to growers in this area. This results in the inability to divert lower grade produce from the fresh market or to provide relief to often over-supplied fresh outlets. Therefore, widely fluctuating prices might be expected.

Snap beans, cucumbers, and tomatoes are among the most important truck crops processed in Alabama, although pimiento peppers, okra, field peas, and sweetpotatoes are processed on a limited basis. Further development of processing facilities in Alabama will depend upon growers being able to produce truck crops cheap enough to compete with other major processing areas. Demand trends favoring processed vegetables warrant the further exploration of processing opportunities in Alabama. In addition, processing would add stability to the fresh market.

### Time of Marketing

Time of marketing is a critical factor in fresh market operations. Marketing a few days early or late often means the dif-

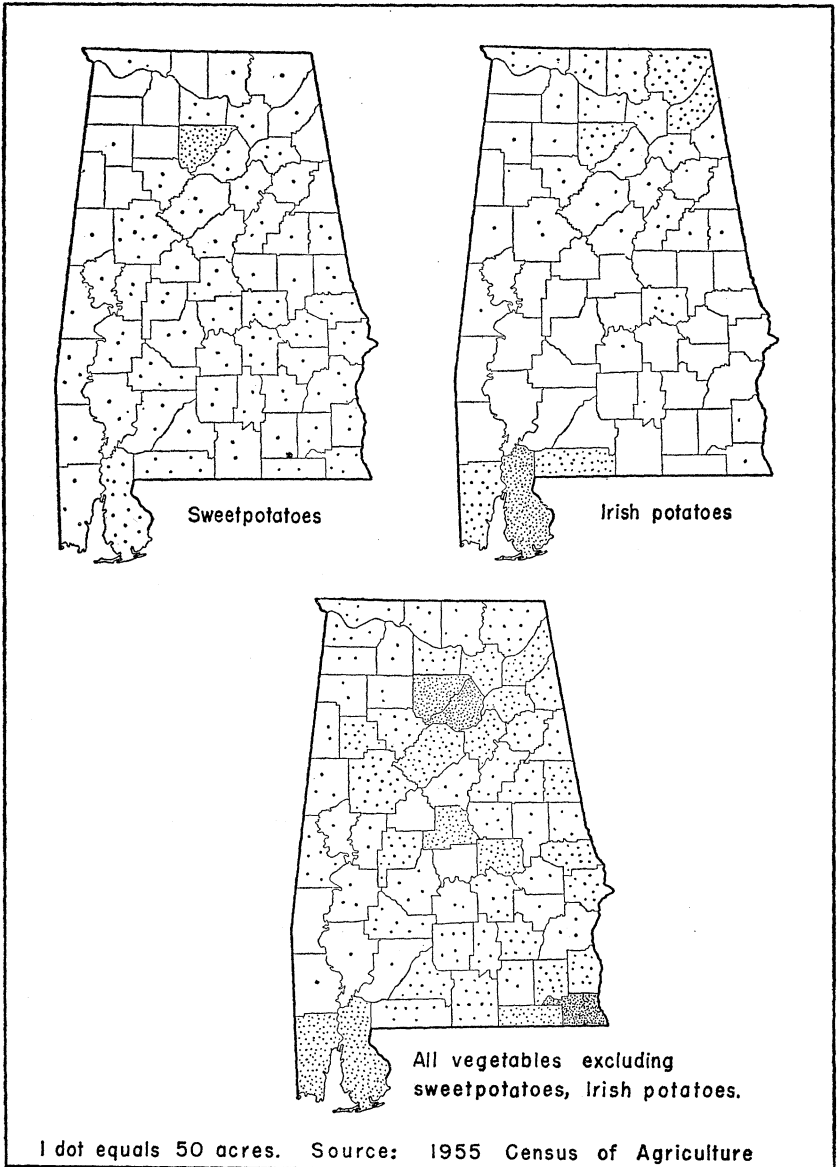
ference between profit or loss for an enterprise in a given season. Production of most of the State's truck crops is classified in the early and late spring groups of producing states, Appendix Table 2. Much of the State's production, therefore, is marketed during May and June, when many other producing areas are shipping. Although weather risks are tremendous in commercial truck crop operations, these can be reduced by certain production techniques, use of recommended varieties, irrigation, processing facilities, and the availability of capital to permit growers to try for early marketing.

### **Acreage, Yield, and Production**

Probably no group of factors has greater influence on market development than do the existing production characteristics of an area, including acreages and yields of important crops. These factors determine whether to establish markets, types of facilities needed, and chances for success.

Commercial production of truck crops in Alabama is concentrated principally in four major producing areas, Figure 1. In order of their relative importance, these four areas are located in the southwestern, north central, southeastern, and central parts of the State. Over 70 per cent of the truck crop acreage in 1954 was in 12 counties in these areas, Appendix Table 3. With the exception of Irish potatoes, small acreages per farm are characteristic of all truck crop production in Alabama. Diversity of crops is a further characteristic of the areas considered. Although watermelon production is well distributed in the State, Irish potatoes, sweetpotatoes, tomatoes, field peas, and mixed vegetables are important in one or more of the specific sections outlined. Market development is affected by the problems identified with specific commodities, although market outlets are the same for many commodities produced in specific areas. The intensive managerial and labor requirements necessary for most truck crops give an advantage to the established producing areas in achieving success in market development. For these reasons it is difficult for non-commercial or new areas to achieve the volume necessary for development.

With the exception of tomatoes and watermelons, acreages of all important truck crops produced for the fresh market in Alabama declined between the 8-year period, 1940-47, and the period



**FIGURE 1.** Acreage of important truck crops harvested for sale in 1954 in Alabama is shown by dots on the maps.



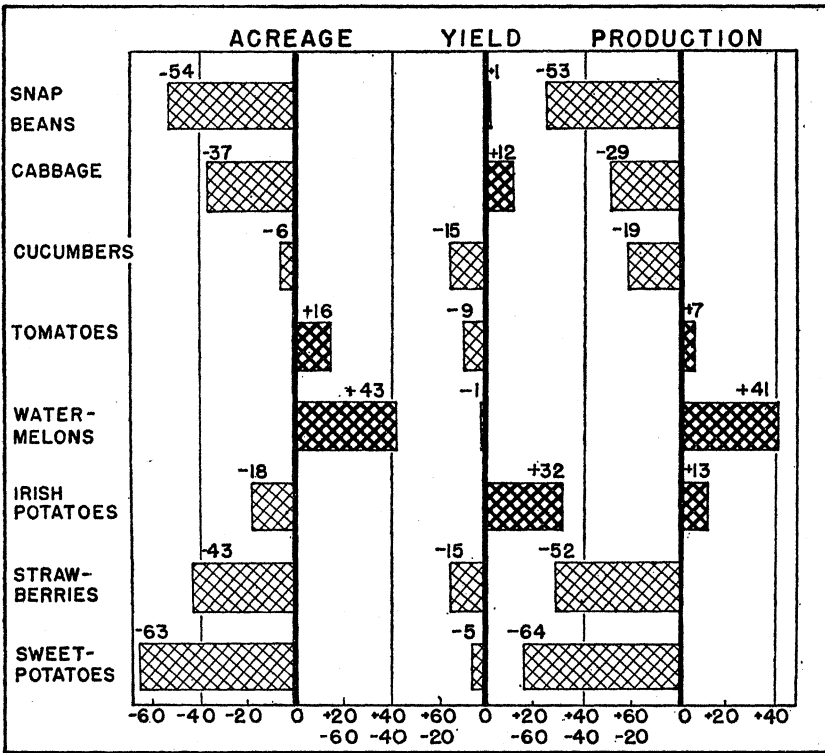


FIGURE 2. Percentage changes in acreage, yield, and production of major vegetables produced for fresh market in Alabama, 1940-47 to 1948-55, are shown above.

1948-55, Figure 2 and Appendix Table 4. Acreage declines in sweetpotatoes, strawberries, snap beans, and cabbage were particularly severe between the two periods, being somewhat above that of competing states. Scarcity of labor, chiefly because of opportunities for off-farm employment and more limited market outlets following World War II, was an important factor in these reductions. Alabama's acreage of all truck crops listed in Appendix Table 4 amounted to about 10 per cent of the total for all states compared during 1948-55, down only slightly from the 1940-47 period.

Wide yield variations existed in Alabama as compared to competing states. State yields were well above the average for watermelons, strawberries, and cucumbers, and below the average of competing states for snap beans, cabbage, tomatoes, Irish potatoes, and sweetpotatoes. For all crops, Alabama's yield as a

percentage of that for competing states was 94 per cent in the 1940-47 period and 86 per cent in 1948-55.

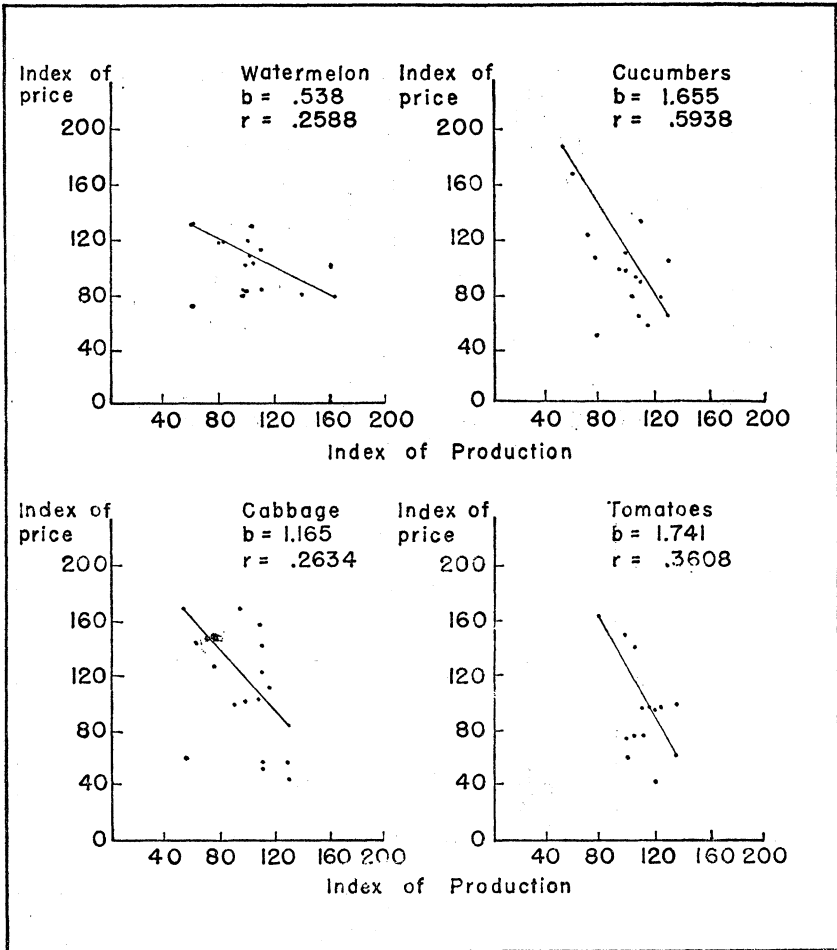
Total Alabama production of the combined crops was 8 per cent of that for all states during 1948-55 or 2 percentage points less than for the 1940-47 period. This difference resulted primarily from yield differences in Alabama relative to competing states. Even with a decline in Irish potato acreage between the two periods, Alabama production increased as a result of yield increases. In order of importance, production increases in Alabama between the two periods were greatest for watermelons, Irish potatoes, and tomatoes. Sweetpotato production declined by 64 per cent between the two periods. High labor costs and the prevalence of insects in certain sections were deterrents to maintaining production of this important crop.

### PRICES and VALUE

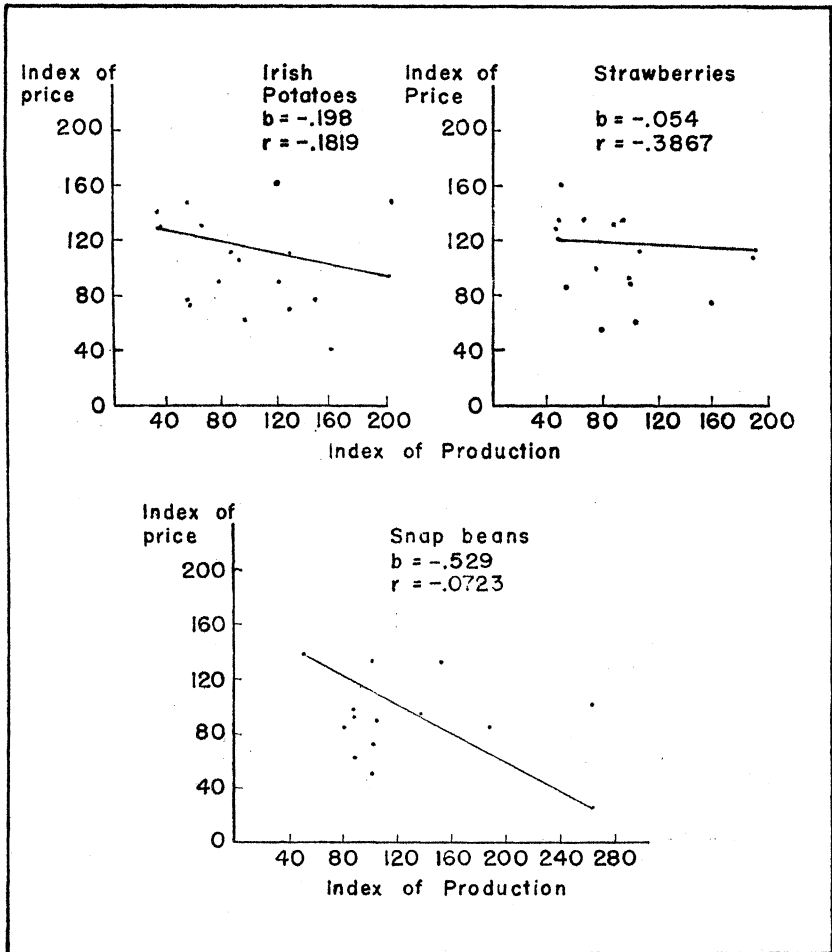
Price and income instability have been cited as the primary concern of the commercial farmer; thus, his major problem is to be found in the market place. An effective program of marketing should assist growers in getting high net returns from high quality production or in producing commodities consistent with market demands. This should be the primary purpose of market development. An examination of price and value changes for Alabama produce points out conditions as they exist and shows opportunities for bringing about some measure of stability.

Total market supplies of individual truck crops are usually inversely related to prices received for these crops; i.e., the larger the crop marketed, the lower the price received. Although this is often true, a relatively large quantity of Alabama produce placed on the market was not consistently related in this manner to price, Figure 3 and 3A. With exception of snap beans and cucumbers, the relationship between price and production was not statistically significant.<sup>2</sup> Since most truck crops grown in Alabama generally comprise only a minor part of total market supplies, economic forces apart from Alabama production invariably influence price. Such factors may include (1) general level of economic conditions, (2) climatic conditions prevailing in all growing areas for all truck crops placed on the market, and (3) carryover of processed products from previous seasons. Stocks

<sup>2</sup> Significance relates to the degree of confidence placed in b and r.



**FIGURE 3.** Relationship between truck crop prices and production based on the preceding year is shown for four vegetable crops for 1939-55 in Alabama.



**FIGURE 3A.** Relationship between truck crop prices and production based on the preceding year is shown for three vegetable crops for 1939-55 in Alabama.

of Irish potatoes on hand at the beginning of the year, for example, were found to be important in influencing the price of early Alabama Irish potatoes.

In comparing Alabama with competing states, average truck crop price variation over a 17-year period was quite similar, 38 and 36 per cent respectively, Table 2. This means that price changes varied by these amounts on a seasonal basis. Specific commodity price changes varied more.

Average changes in value for Alabama truck crops and those

TABLE 2. VARIATIONS IN VALUE OF COMMERCIAL VEGETABLES FOR FRESH MARKET, ALABAMA AND COMPETING STATES, 1939-55

Crops	Value variation		Price variation	
	Alabama	Competing states	Alabama	Competing states
	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
Late spring beans.....	45	34	37	28
Cabbage.....	47	47	38	52
Sweet corn <sup>1</sup> .....	26	6	---	---
Cucumbers.....	33	35	45	32
Tomatoes.....	39	35	36	37
Watermelons.....	47	38	38	35
Early potatoes.....	43	42	36	33
Strawberries.....	13	25	35	34
Average variation.....	32	33	38	36

<sup>1</sup> Price and value data incomplete for Alabama.

$$V = \frac{\sigma}{x} \cdot 100$$

of competing states for the 17-year period were 32 and 33 per cent, respectively.

In Figure 4 the same vertical distance anywhere on the chart shows the same percentage change between Alabama prices with those of competing states. A high degree of relationship is generally shown between the comparable price data. Since 1943 Alabama prices have been above those of competing states for many commodities, with strawberries being an exception. Irish potato and tomato prices in both instances have remained close together, whereas cucumber prices have been more variable.

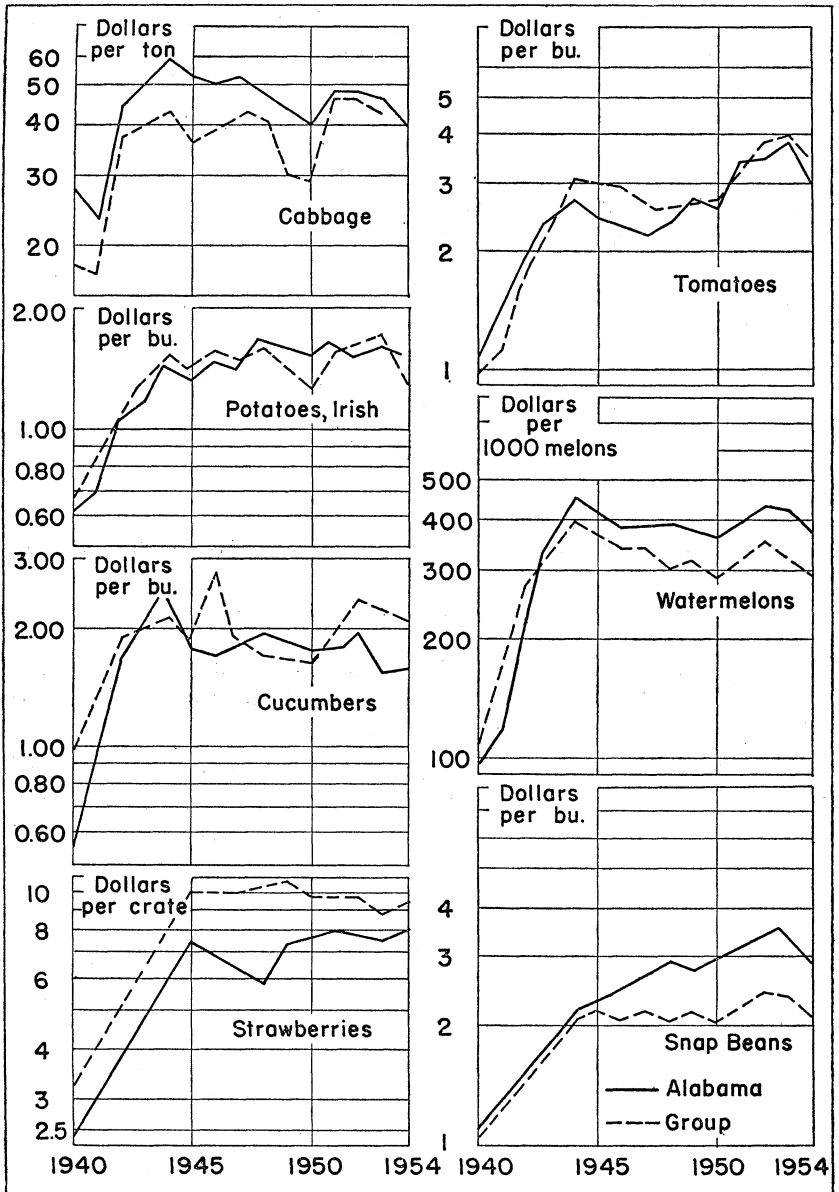


FIGURE 4. Shown above are 3-year moving average prices of specified truck crops received by producers in Alabama and the competing groups of states during 1939-55.

Purchasing Power

Trends in the purchasing power of prices received for truck crops is an additional indicator of the economic well-being of truck farmers, although not a final determinant. The trend in the ability of dollars received per unit for certain truck crops to maintain purchasing power or parity rose steadily during the war years, but declined rapidly thereafter, Figure 5. An exception to the general trend was tomatoes, which maintained a high level

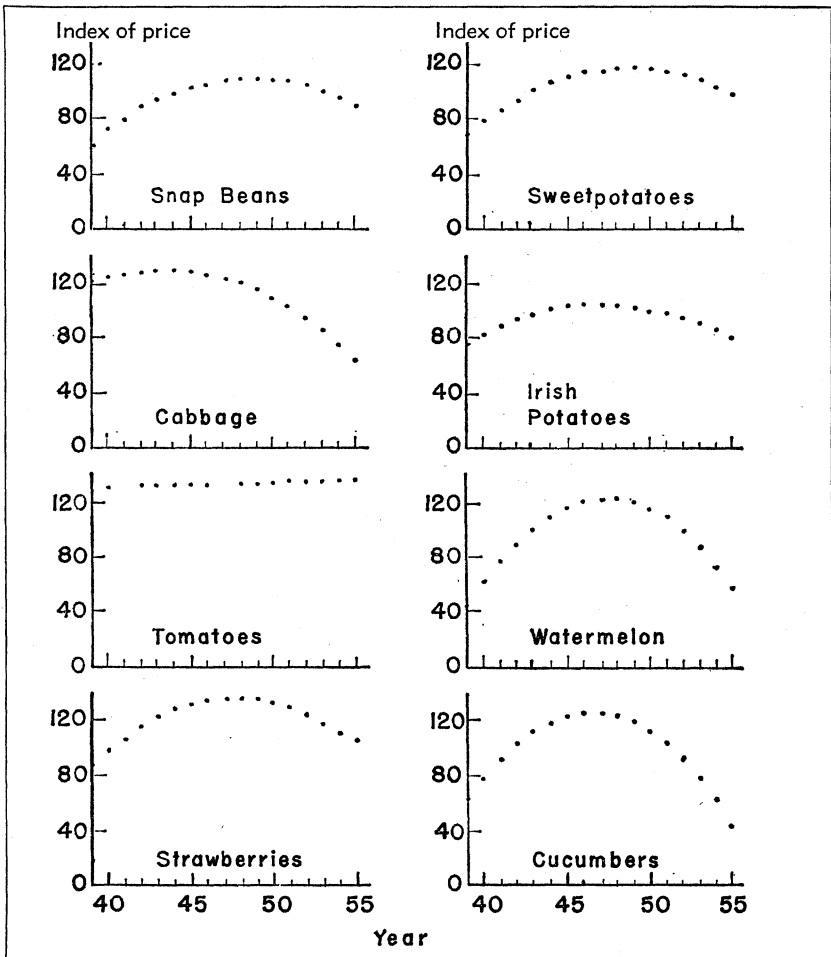


FIGURE 5. A comparison of purchasing power of 8 commodities during 1939-55 in Alabama is shown above. Prices were adjusted by the "wholesale price index of all commodities," 1947-49 = 100.

of purchasing power throughout the years given. Interest in market development for this particular commodity has increased as is revealed in the Alabama acreage increases cited earlier.

### MARKET AREAS

In addition to supplying produce to the growing markets in the Southeast, Alabama growers and buyers have shipped their produce to many parts of the country during recent years. Over an 8-year period, 1949-56, Alabama produce was received by each of the 100 United States and 5 Canadian cities for which data on states of origin are kept. Although these destination points are well distributed geographically, the highest average receivers of Alabama produce are located in the eastern part of the country. Transportation advantages coupled with high demand potentials in these metropolitan centers probably account for the choice of these markets, Figure 6 and Appendix Table 5. Irish potatoes comprised about three-fourths of the carlot shipments made to all markets and 88 per cent of the shipments to Chicago, Cincinnati, and St. Louis. Over a 7-year period, these 3 markets received an average of 450 cars of Alabama produce yearly. Watermelons comprised 86 per cent of Alabama's shipments to New Orleans and 12 per cent to Detroit and Pittsburgh.

Shipments from points of origin within the State had wide yearly variations. Between 1949 and 1956, the range in Irish potato carlot shipments was from 472 to 4,309 cars with an average of 2,850 cars, Appendix Table 6. During the same period, wide variability was also evident in shipments of sweet corn, watermelons, cucumbers, and cabbage. Fluctuations are due mainly to economic and climatic conditions and are of special concern in developing dependable outlets. Under present conditions, it is not unusual for many of the State's truck crops to go unharvested during a shipping season because prices are too low to pay even harvesting costs.

Movement of produce by truck has increased in importance in recent years. The fast, convenient service of trucks often becomes more important to shippers than the privilege of diverting or reconsigning shipments by rail. For 1956 percentage of truck shipments of Alabama produce to the markets cited ranged from 100 per cent in Atlanta and New Orleans to 11 and 16 per cent in Cincinnati and Pittsburgh, respectively. Anticipating sudden changes in prices during the shipping season may cause shippers



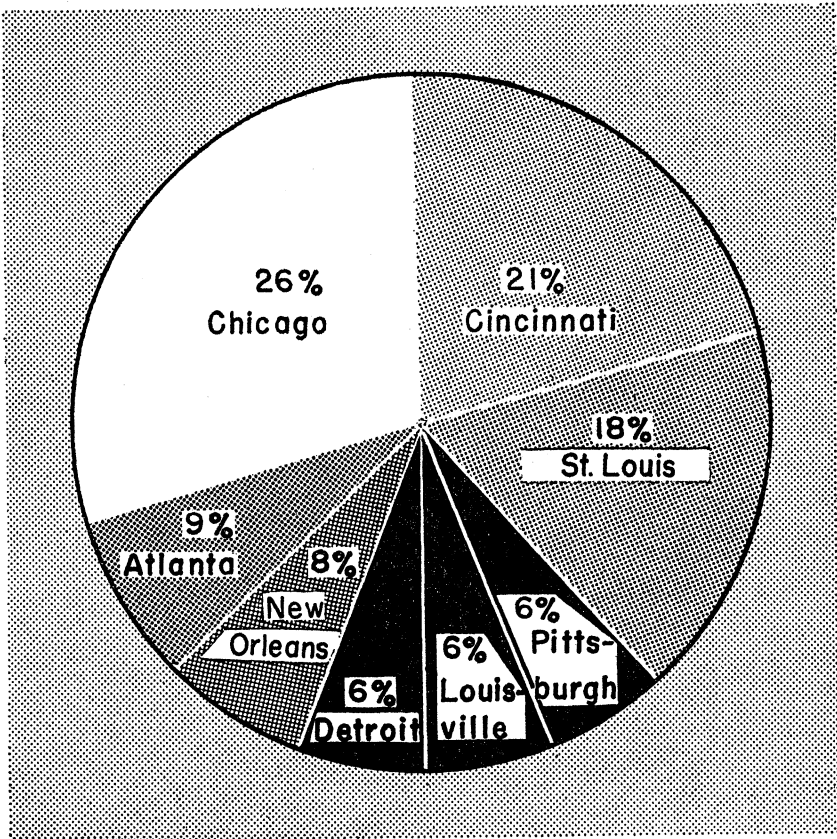


FIGURE 6. Above is distribution of carlot shipments of Alabama produce unloaded in cities that received 100 cars or more per year during 1949-55.

to shift the mode of transporting produce. For example, expecting price changes from low to high in southern Alabama during the Irish potato season may result in shippers changing from rail to truck to take advantage of price increases.

**OPPORTUNITIES for DEVELOPMENT**

In terms of gross cash receipts to Alabama farmers, truck crops, including Irish potatoes, generally amount to less than 5 per cent of total cash receipts, Appendix Table 7. However, as cited earlier, production is in rather well defined areas of the State and truck crops are important sources of cash receipts in these areas.

In meeting market needs of growers in specialized areas, it is not necessary to follow a fixed pattern of development. However, the criterion for any successful produce market is that farmers and buyers trade rapidly at prices reflecting existing supply-demand conditions in the market area. An objective of market development is to broaden the extent of this area or to provide greater efficiency within the same area. The trend among some large growers has been to deal directly with wholesalers at distant points. This, however, is usually not feasible for many small growers. Local outlets are utilized by many of them, although this has not been entirely satisfactory to either growers or buyers. Looking for dependable supplies, buyers often procure produce elsewhere even while Alabama commodities are being marketed. Market prices consequently suffer greatly as local markets become glutted. This results in dissatisfaction among growers and "in and out" production patterns result. Organized handling is required to reach the more distant markets and to perform the many functions often required beyond the capacity of the small grower. At least his produce must be assembled and packed to reach some of the wider channels of trade.

Development may proceed with forms of vertical integration, such as cooperative marketing or private contractual arrangements, or it may proceed with private or public assembly markets. Different marketing arrangements may be used to perform the same marketing functions. Growers may continue, as many are now doing, to relinquish ownership at the assembly point. However, they often complain of fluctuating prices within a short time, particularly where it is felt that these variations do not reflect central market conditions. This could be improved by more adequate communications among market participants and by alternative means of disposing of commodities produced.

The cooperative arrangement permits the grower to maintain title to the commodities past the assembly point. He agrees to pool his products and to receive the pool price on a quality and grade basis. In the past, farmers wanted as large a payment as possible in the beginning and were not readily willing to await the pool settlement. In this arrangement farmers own and control the facilities, assume all risks not insured against, and receive all gains over costs or suffer any losses incurred. Experience shows the need for a sound educational approach in accepting this alternative.

Producers may contract in advance with buyers to grow specific truck crops. In the past, this has worked primarily in the processing industry. However, it is conceivable that such plans could permit risk sharing under fresh market conditions, in addition to furnishing some measure of stability to an otherwise widely fluctuating price situation.

Regardless of the marketing system chosen, facilities of some type are generally needed for assembly purposes. These may be provided by farmers, private buyers, or public agencies. Past experience provides a basis for appraising future possibilities. Several things are necessary for successful future development. One of the most important is careful planning and strong leadership. This leadership should come from producers. The needs for a program of research to determine production and market potentials in specific areas follow these requirements. Based on the production concentration necessary for market establishment, the following counties in Alabama have sufficient production density for some type of organized market: Mobile, Baldwin, Houston, Elmore, Autauga, Chilton, Jefferson, Blount, and Cullman.<sup>3</sup>

Also needing examination in evaluating development potentials in these areas is existing marketing facilities along the relative locations of consuming centers and supply areas already established by buyers. A conservative approach in development would require that facilities not be overbuilt in the beginning, but that room for expansion be allowed.

Development plans for operational procedures might include the following: (1) adequate communications in the market, (2) grade reputation established based on wide promotional activities, and (3) year-round educational programs with producers to bring about desired attitude changes to satisfy demands of the trade.

---

<sup>3</sup> Based on a method of classifying counties with respect to production potential. By: King, R. A. and Seale, A. D., Jr., *Vegetable Market Structure Classes in the Southeast*, A. E. Information Series No. 35, North Carolina State and United States Department of Agriculture Cooperating, October 1954.

**Note:** Density areas were outlined as follows: 1. Low density counties—estimated vegetable sales of less than \$200,000 within a 20-mile radius or less than \$25 per 100 acres of total land in the county. 2. High density counties—estimated vegetable sales of more than \$200,000 within a 20-mile radius or more than \$25 per 100 acres of total land in the county. 3. Large farm area—estimated vegetable sales of \$2,500 or more per farm. 4. Small farm areas—estimated vegetable sales of less than \$2,500 per farm. 5. Non-vegetable area—estimated vegetable sales averaged less than \$500 per farm.

Several types of markets are available from which to choose in constructing facilities. Based on the State's present production pattern, size of urban centers, and markets presently in operation, however, it is likely that future interest in Alabama markets will center around the assembly type market or the assembly-terminal type.

Recorded in the minutes of the State Markets Board meeting soon after it was organized is the testimony of a marketing specialist that Alabama should consider one or more large markets in preference to several smaller ones. This idea warrants further consideration in future development. The idea advanced is that competitive marketing can best be achieved where large numbers of market participants gather for trading in volume.

Based on actual cost estimates of markets constructed in recent years, the expenditures for a complete terminal-assembly produce market may involve \$1.5 million or more, Appendix Table 8. Smaller markets or markets with fewer facilities could be constructed for less. Also, changes in the general price level and in local conditions would influence costs of constructing such facilities.

Farmers' produce markets are financed in several different ways throughout the United States. Market rentals from jobbers, collections from farmers, and public funds are some of the more important methods.<sup>4</sup>

## SUMMARY *and* CONCLUSIONS

Agricultural adjustments in Alabama resulting from economic change have focused attention on truck crops as possible outlets for unused farm resources. However, post-war declines occurred in the Alabama acreage and production of sweetpotatoes, cabbage, cucumbers, strawberries, and snap beans. Conversely, there were increases in acreage and production of tomatoes and watermelons. Increased yields of Irish potatoes have been more than enough to offset decreases in acreage, thus resulting in production increases.

The limited success of certain produce markets established during the 1940's was primarily the result of internal management

<sup>4</sup> See: "Wholesale Produce Markets, Management, Operating Expenses and Income," United States Department of Agriculture, Agricultural Marketing Service, April 1955, for a full discussion of market operations.

problems and of inability of producers to accept their responsibilities under cooperative conditions. The markets failed to serve farmers on a continuing basis and were unable to permit amortization of state funds out of market collections. These experiences emphasize the difficulty of depending heavily on potential rather than actual production for successful market development.

Market development in the future requires strong leadership and objective planning. Competitive conditions will exist where large numbers of market participants gather for trading in volume. In addition, information concerning supply, demand, and price will contribute to competitive conditions.

In terms of production density, the following counties might be considered as centers for future market development: Mobile, Baldwin, Houston, Elmore, Autauga, Chilton, Jefferson, Blount, and Cullman. Existing facilities in these areas along with consuming centers and supply areas already established are also factors to be considered.

A continuing program of research and education should accompany market development. This would deal both with technical and economic aspects of truck crop production and marketing. Additional information needed would include the following: (1) costs of producing specific truck crops under Alabama conditions and their relative profitableness, (2) procurement problems of buyers, including needed adjustments in supply areas to meet trade demands, (3) opportunities for establishing processing facilities consistent with trends in consumer demands and grower needs, (4) studies in consumer preference for new commodities and in more adequately merchandising old ones, and (5) possibilities for establishing alternative marketing arrangements and facilities in particular situations.



## APPENDIX

APPENDIX TABLE 1. VALUE OF MAJOR TRUCK CROPS PRODUCED FOR FRESH MARKET AND PROCESSING IN SELECTED STATES, 1956

State and U.S.	Irish potatoes	Sweet- potatoes	Other truck crops	Percentage of truck crops sold for: <sup>1</sup>	
				Fresh market	Processing
	<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>	<i>Per cent</i>	<i>Per cent</i>
Alabama.....	\$ 7,600	\$ 825	\$ 5,066	96	4
Mississippi.....	142	911	3,463	86	14
Tennessee.....	671	627	4,258	53	47
Louisiana.....	963	9,696	4,570	95	5
Texas.....	5,922	2,128	70,694	96	4
Florida.....	24,450	353	148,782	98	2
South Carolina.....	2,600	1,174	10,110	96	4
North Carolina.....	8,973	4,172	13,125	88	12
Georgia.....	367	1,144	13,257	94	6
U. S. ....	417,069	38,050	1,122,634	72	28

<sup>1</sup> Excludes Irish potatoes and sweetpotatoes. Source: "Vegetables—Fresh Market," Annual Summary, Acreage Production and Value of Principal Crops by Seasonal Groups and States, USDA, AMS, 1956. "Vegetables—Processing," Annual Summary, Acreage, Production and Value of Principal Crops by States, USDA, AMS, 1956. "Potatoes and Sweetpotatoes, Estimated by States and Seasonal Groups," USDA, AMS, August, 1957.

APPENDIX TABLE 2. USUAL PLANTING AND HARVESTING DATES OF IMPORTANT TRUCK CROPS IN PRINCIPAL PRODUCING AREAS

Group	Crop	States in group	Alabama				Major producing counties in Alabama
			Planting dates	Harvesting dates			
				Begin	Active	End	
Mid-spring	Snapbeans	Ala., La., Miss., Ga.	Mar. 1- Apr. 15	May 1	May- June	July 15	Chilton, Mobile, Sumter, Montgomery
Late summer	Snapbeans	Ala., Ga., N.C., Va.	May 15- Aug. 15	July 1	July- Sept.	Oct. 31	Blount, St. Clair, Etowah, Cullman, Jefferson, Sumter
Early spring	Cabbage	Ala., La., Miss., Ga., S.C., Calif.	Nov. 15- Nov. 31	Mar. 1	Apr.	May 10	Mobile, Baldwin
Late spring	Sweet corn	Ala., Ga., S.C., Calif.	Mar. 1- Mar. 15	June 1	June	July 10	Baldwin
Late spring	Cucumbers	La., Ala., Ga., S.C., N.C., Ark., Calif.	March	May 15	May 15- June 15	July 10	Baldwin
Late spring	Irish potatoes <sup>1</sup>	Ala., Calif., La., Miss., Ga., S.C., Tex., Okla., Ark., Tenn.	Jan. 15- Mar. 15	Apr. 20	May- June	July 15	Baldwin, Escambia, Mobile
Early spring	Strawberries	Ala., Tex., La.	Nov. 1- Feb. 28	Mar. 25	Apr.	May 31	Chilton, Butler, Conecuh, Cullman
Early summer	Tomatoes	Ala., Calif., Tenn., N.C., Va., Ky., Ill., Mo., Ohio, Md., Del.	Mar. 15- Apr. 15	June 1	July- Aug.	Aug. 31	Elmore, Cullman, Blount, Mobile, Houston, Chilton, St. Clair, Jefferson
Early summer	Watermelons	Ala., La., Miss., Ga., S.C., N.C., Ark., Okla., Mo., Tex., Ariz., Calif.	March- May	June 10	July	Aug. 15	Baldwin, Mobile, Houston, Geneva, Chilton, Autauga

<sup>1</sup> May 1951 Report. Source: "Commercial Vegetables for Fresh Market," Usual planting and harvesting dates and principal producing areas by seasonal groups and states, USDA, December, 1954.



APPENDIX TABLE 3. TOTAL VEGETABLE ACREAGE OF MAJOR TRUCK CROPS IN SELECTED COUNTIES, ALABAMA, 1954

Crops	Southwestern counties			Southeastern counties			Central counties			North-central counties			State total
	Baldwin	Mobile	Escambia	Houston	Geneva	Dale	Autauga	Chilton	Elmore	Cullman	Blount	Jefferson	
	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>
Snapbeans.....	93	55	28	50	10	8	28	103	23	229	176	30	2,190
Green limas.....	30	154	32	488	29	41	107	97	204	614	341	191	3,606
Cabbage.....	342	346	22	16	4	2	59	8	27	21	11	43	1,135
Cucumbers.....	782	78	60	75	74	12	6	48	28	25	54	12	1,642
Blackeye and other peas.....	116	166	75	2,734	548	256	1,088	492	468	1,023	596	203	11,145
Tomatoes.....	27	86	12	1,533	185	40	73	611	131	652	1,166	92	6,228
Watermelons.....	2,466	3,355	49	3,946	1,004	348	1,972	1,495	556	361	1,409	115	21,925
Other vegetables <sup>1</sup> .....	2,750	612	72	442	48	118	157	363	344	2,994	2,842	1,484	17,072
Strawberries.....	1	10	66	0	0	2	0	82	0	189	7	4	862
Sweetpotatoes.....	690	136	227	215	94	98	90	102	202	3,232	133	146	9,913
Irish potatoes.....	12,149	1,286	1,861	27	5	7	9	22	241	663	94	54	20,598
	19,446	6,284	2,504	9,526	2,001	932	3,589	3,423	2,224	10,003	6,821	2,374	96,316
Per cent of State total.....	20.2	6.5	2.6	9.9	2.1	1.0	3.7	3.6	2.3	10.4	7.1	2.5	

<sup>1</sup> Includes: Sweet corn, okra, sweet peppers, pimentos, and other. Source: 1955 Census of Agriculture.

APPENDIX TABLE 4. ACREAGE, YIELD, AND PRODUCTION OF SPECIFIED VEGETABLES PRODUCED FOR FRESH MARKET, ALABAMA AND COMPETING STATES<sup>1</sup> 1940-47, 1948-55

	Alabama			Competing states <sup>1</sup>			Alabama as a per cent of competing states	
	1940-47 average	1948-55 average	Per cent change	1940-47 average	1948-55 average	Per cent change	1940-47	1948-55
<b>Acres</b>	<i>Acres</i>	<i>Acres</i>	<i>Pct.</i>	<i>Acres</i>	<i>Acres</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
Snap beans.....	2,638	1,212	-54	29,675	29,669	2	9	4
Cabbage.....	1,750	1,100	-37	25,962	19,662	-24	7	6
Cucumbers.....	1,181	1,108	-6	13,535	14,240	+5	9	8
Tomatoes.....	4,425	5,112	+16	37,375	31,981	-14	12	16
Watermelons.....	9,612	13,725	+43	245,538	282,062	+15	4	5
Early potatoes.....	24,925	20,500	-18	157,938	117,281	-26	16	17
Strawberries.....	2,538	1,438	-43	17,588	11,850	-33	14	12
Sweetpotatoes.....	68,000	25,000	-63	419,250	240,125	-43	16	10
<b>Yields</b>	<i>Units</i>	<i>Units</i>	<i>Pct.</i>	<i>Units</i>	<i>Units</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
Snap beans, bu.....	71.0	72.0	+1	116.0	120.0	+3	61	60
Cabbage, tons.....	4.8	5.4	+12	5.2	5.8	+12	92	93
Cucumbers, bu.....	142.0	121.0	-15	104.0	115.0	+11	137	105
Tomatoes, bu.....	85.0	77.0	-9	141.0	157.0	+11	60	49
Watermelons.....	310.0	307.0	-1	240.0	229.0	-5	129	134
Early potatoes, bu.....	113.0	149.0	+32	186.0	296.0	+59	61	50
Strawberries, cr.....	75.0	64.0	-15	61.0	59.0	-3	123	108
Sweetpotatoes, bu.....	78.0	74.0	-5	86.5	86.7	2	90	85
<b>Production</b>	<i>Units</i>	<i>Units</i>	<i>Pct.</i>	<i>Units</i>	<i>Units</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
Snap beans, 1,000 bu.....	198	88	-53	3,559	3,603	+1	5	2
Cabbage, tons.....	8,325	5,938	-29	137,525	107,325	-22	6	6
Cucumbers, 1,000 bu.....	165	132	-19	1,365	1,586	+16	12	8
Tomatoes, 1,000 bu.....	366	393	+7	5,524	5,425	-2	7	7
Watermelons, 1,000 m.....	2,978	4,212	+41	59,021	64,487	+9	5	7
Early potatoes, 1,000 bu.....	2,776	3,136	+13	30,886	37,401	+21	9	8
Strawberries, 1,000 cr.....	191	92	-52	1,039	681	-34	18	14
Sweetpotatoes, 1,000 bu.....	5,290	1,926	-64	35,598	21,696	-39	15	9

<sup>1</sup> For groups of competing states see Appendix Table 2. Slight revisions in groups of states have occurred in recent years.

<sup>2</sup> Less than 0.5 per cent. Source: "Commercial Vegetables for Fresh Market, Acreage, Production, and Value," 1939-50, Annual Summaries, 1951-55.

APPENDIX TABLE 5. CARLOT SHIPMENTS OF ALABAMA PRODUCE RECEIVED IN SPECIFIED U. S. MARKETS, 1956

Market	Carlot shipments	Received by	
		Rail	Truck
	No.	Per cent	Per cent
Atlanta.....	496	<sup>1</sup>	100
Chicago.....	418	66	34
Cincinnati.....	379	89	11
Detroit.....	118	47	53
Louisville.....	146	27	73
New Orleans.....	280	0	100
Pittsburgh.....	120	84	16
St. Louis.....	538	24	76

<sup>1</sup> Less than 0.5 per cent. Source: "Carlot Unloads of Certain Fruits and Vegetables in 100 U.S. and 5 Canadian Cities," USDA, AMS, 1956.

APPENDIX TABLE 6. RAIL CARLOT SHIPMENTS OF SPECIFIC TRUCK CROPS, ALABAMA, 1949-56

Crop	Years shipped crop 1949-56	Total cars shipped 1949-56	Average per year shipping	Range years shipped	Shipping points within counties—counties ranked in order of importance <sup>1</sup>					
					Baldwin	Mobile	Escambia	Geneva	Jackson	Other
	No.	No. cars	No. cars	No. cars	(1)	(3)	(2)		(4)	
Potatoes.....	8	22,803	2,850	472-4,309	Foley Loxley Summerdale Robertsdale	St. Elmo Mobile Theodore	Atmore Huxford	0	Scottsboro	0
Sweet corn.....	8	1,688	211	107-344	Loxley Robertsdale	0	0	0	0	0
Watermelons.....	8	1,318	165	19-467	(1) Foley	(3)	0	Hartford	0	(2)
Cucumbers.....	8	814	102	15-175	Robertsdale Summerdale Foley	0	0	0	0	0
Cabbage.....	7	383	55	2-124	0	Mobile Theodore	0	0	0	0

<sup>1</sup> Number in parenthesis represents the order of importance of the counties of origin. Source: "Fresh Fruit and Vegetable Carlot Shipments by Commodities, States, Counties, and Stations," USDA, AMS, 1949-56.

APPENDIX TABLE 7. CASH RECEIPTS FROM FARM MARKETINGS AND RELATED DATA, ALABAMA, SPECIFIED YEARS

Year	Average size of farms	Cash receipts from farm marketings		Percentage of total cash receipts										
		Total	Per farm	Cattle, calves	Hogs	Dairy products <sup>1</sup>	Broilers	Chickens	Eggs	Corn	Cotton	Peanuts	Truck crops <sup>2</sup>	Other
	Acres	Mil.dol.	Dol.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
1924	70	161	643	2.6	4.0	2.3	—	1.3	2.8	1.2	71.8	2.9	2.5	8.6
1929	68	188	726	2.8	2.5	3.8	—	1.1	3.2	.6	74.7	1.9	2.0	7.4
1934	72	119	441	2.5	1.8	4.1	—	.7	2.8	1.2	72.4	3.3	1.7	9.5
1939	83	87	354	7.8	7.6	7.4	—	1.9	4.5	2.8	45.8	3.9	4.1	14.2
1944	85	277	1,237	7.1	8.5	6.1	1.0	1.8	4.5	3.4	47.7	7.9	2.5	9.5
1949	99	356	1,609	8.7	9.4	6.4	2.2	1.6	4.9	2.7	42.3	7.6	3.8	10.4
1954	118	396	2,117	13.0	12.5	7.7	8.2	.5	4.6	1.6	35.3	2.9	5.1	8.6
1955	—	460	2,569	11.2	10.8	6.6	7.1	.4	4.0	1.4	40.1	2.5	3.8	12.1
1956	—	461	—	11.7	7.5	7.3	10.4	.3	5.3	3.6	31.9	4.9	5.3	11.8

<sup>1</sup> Wholesale and retail.

<sup>2</sup> Including Irish potatoes. Source: "Cash Receipts From Major Farm Commodities by States, as Percentage of State Totals, 1924-55," USDA, AMS, May 1956. "The Farm Income Situation," September 1955-57.

APPENDIX TABLE 8. ESTIMATED COSTS OF LAND AND CONSTRUCTION FOR A HYPOTHETICAL TERMINAL-ASSEMBLY PRODUCE MARKET<sup>1</sup>

Cost item	Cost per unit	Units	Total cost
	<i>Dollars</i>	<i>Number</i>	<i>Dollars</i>
Merchants' store building units <sup>2</sup> .....	11,400	60	684,000
Farmers' shed-stalls, concrete platform steel roof (units 10 by 20 feet).....	1,300	300	390,000
Paving, square yards.....	1.15	50,000	57,500
Service station, pumps.....		6	15,000
Administration building.....			40,000
Railroad trackage, linear feet.....	8.50	3,000	25,500
Fencing, linear feet.....	3.50	6,000	21,000
Processing plant.....	---	---	30,000
Electrical equipment.....	---	---	5,000
Maintenance equipment.....	---	---	2,500
Office equipment.....	---	---	3,000
TOTAL.....			1,273,500
Architects' and engineers' fees <sup>3</sup> .....			76,410
Land, acres <sup>4</sup> .....	3,000	50	150,000
GRAND TOTAL.....			1,499,910

<sup>1</sup> Estimates are based on costs per unit of markets built between 1947 and 1953.

<sup>2</sup> 22½ by 60 feet (steel and concrete) platforms 24 feet front and 12 feet rear.

<sup>3</sup> Six per cent of construction cost.

<sup>4</sup> Cost of land includes storm and sanitary sewer installation charges. Source: "Wholesale Produce Markets," Management, Operating Expenses and Income, Report No. 91, USDA, AMS, April 1955, p. 51.