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Fruit and Vegetable CONCENTRATION MARKETS

In North Carolina, South Carolina, Georgia, and Alabama

AGRICULTURAL EXPERIMENT STATION
of the ALABAMA POLYTECHNIC INSTITUTE

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FOREWORD

This regional research study has been a joint activity of the Agricultural Experiment Stations of North Carolina, South Carolina, Georgia, and Alabama, and the Georgia Agricultural Extension Service, with the United States Department of Agriculture, Bureau of Agricultural Economics, cooperating.

The project was begun in 1939. At that time, a cooperative agreement was drawn up between the cooperating parties. A member of the staff in each state was designated to conduct the research in that state while the representative of the Bureau proceeded to work actively and directly in planning the procedure, developing the schedules, coordinating the work, and preparing the preliminary drafts of the manuscript.

A tentative report giving the results of the study was completed early in 1942. Unfortunately, however, transfers of personnel to war agencies and the armed services prevented completion of a final publication at that time. This delay was unavoidable and is regretted. Since, however, conditions of supply and distribution after the immediate postwar adjustment period may closely resemble those at the time of the early work on this study, the findings of this survey may be of as much or even more interest than data pertaining to more recent years. Furthermore, as materials for building new facilities have been largely unavailable, and as the attention of personnel chiefly concerned with building programs for marketing facilities has been absorbed with other matters, issuance now may actually prove more timely than if it had been made available during the war years.

Since this study was begun, State Experiment Stations and Extension Services in cooperation with State District Offices of the War Food Administration have pursued somewhat similar studies to obtain additional information on market needs and requirements in the area.

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This publication represents the results of a joint study by the Agricultural Experiment Stations of North Carolina, South Carolina, Georgia and Alabama, the Agricultural Extension Service of Georgia and the Bureau of Agricultural Economics, United States Department of Agriculture.

SUMMARY

Since about 1925 concentration markets have been a factor of increasing importance in the assembly of fruits and vegetables from small-lot growers in North Carolina, South Carolina, Georgia, and Alabama, with city wholesalers and jobbers, independent shippers, chain store buyers, commission buyers, merchant truckers, retailers, and others obtaining substantial portions of their requirements through purchases at these markets.

While fruit and vegetable production is not a chief source of agricultural income in any of the states studied, it is the major source in localized areas of each, and provides supplemental cash income on a large number of general farming units. Returns from fruit and vegetable crops, exclusive of potatoes, amounted to about 5 percent of the value of all farm produce sold or traded from the area in 1939, ranging from 3.2 in North Carolina to 7.6 in Georgia.

The four states covered by this study realize certain advantages in the production of fruits and vegetables for the fresh market. Advantages include mild climate, permitting early maturity and premium prices; light well drained soils; generally adequate labor; and relative proximity to large consuming centers. For the 10-year prewar average, 1932-1941, about 91 percent of harvested acreage was for the fresh market, and there appears to have been little shift in proportions since that period. Concentration markets are not of particular significance in marketing fruits and vegetables to processors.

Among owners and operators of concentration markets are included states, counties, municipalities, private individuals, cooperative associations, buyers, businessmen, chambers of commerce, civic clubs, banks, and grower organizations.

About 80 percent of the 26 auctions surveyed in 1941 reported estimated cash outlays of $1,000 or less on physical facilities, and about half of the nine country private-sale markets reported $2,000 or less. Estimates from the eight city markets ranged from $5,000 to about $150,000. These figures offer little indication of the investments which may be necessary for a properly equipped facility, particularly since labor, land, building materials, and equipment have in many cases been donated or provided at nominal figures. Most of the markets in 1941 offered no grading or packing equipment and no storage space or accommodations for buyers.

Three-fourths of the market managers estimated that 90 percent or more of volume sold originated within 25 miles of the market, there being considerable difference in the area of origin between the country markets and the city markets. Over three-fourths of the markets reporting estimated that 75 percent or more of sales would move out of the state to areas of distribution ranging up to 35 states.

In the four states there are over 500 fruit and vegetable packing houses and shipping sheds located on railroad lines, often in connection with a general freight depot. These facilities are seldom

part of a concentration market facility but are located in large tree-fruit, potato, and cabbage areas and serve largely private shippers, large commercial growers, and cooperative sales agencies.

Bases of charges varied among markets. Fifty-seven percent charged by the package, 19 percent on the dollar volume of sales, 19 percent on the load or by the day. The remainder made no charges whatever. Charges per package averaged 1.6 cents and 3.1 cents for private-sale and auction markets respectively; as a percentage of sales the average was 7.0 and 4.8 respectively. Charges per load or per day averaged 37 cents at private-sale markets. Auctions did not use this method of charging. Flat charges per package tend to penalize the low value commodity and a flat percentage of sales, the high value commodity. Equitable variations are possible.

Regulatory practices, usually in the form of fees and licenses, are designed by market managers and by local governments to correct fundamental difficulties. These, however, may be used by resident groups to protect themselves from competition, as, for example, when the transient buyer is permitted to avoid an excessive license requirement only by trading through a licensed local buyer.

Less time is required by growers for selling on auction markets, the average load of produce being approximately 40 minutes compared with the average of 3½ hours at private-sale markets, a difference attributable partly to the fact that hours for trading are not regulated on the latter.

Managers in four-fifths of the auctions and in one-half of the country private-sale markets estimated that 70 percent or more of total sales were to resident buyers. Resident buyers operating in the immediate area of the country market purchase on an average an estimated one-half to three-fourths of their produce at concentration markets.

Operating season of the auctions reporting averaged an estimated 2.7 months, with seasons for private-sale markets averaging considerably longer. Gross profit **per package** averages about one cent in the reporting country markets. A market selling only one commodity and operating for only a brief season can return a reasonable profit per package if (a) high volume of that commodity is available, or (b) fixed charges are low, even though volume may not be high. This does not mean, however, a reasonable profit to the market as a whole.

On the basis of this study, essentials for successful market operation relate to adequate volume, suitable location, available transportation, adequate facilities, competitive regulations, and impartial financing and sound management.

The adequacy of volume to support a country market may be estimated by determining concentration of acreages grown, specific

kind produced for the fresh market, volume produced by individual growers, adequacy of existing marketing agencies, and the attitude of all concerned toward the need for the facility.

The country market should be located so that the length of haul for growers will not exceed 25 to 30 miles. Care should be exercised to avoid location at closer intervals than justifiable by available volume. Also, since city markets possess superior drawing power, country markets should not be in too close proximity to them.

Any market should be located in the area at a point which will make it easily accessible to all available transportation facilities and as nearly as possible at natural concentration points.

Facilities should be laid out with room for expansion; should observe certain basic principles of design with regard to platform height, extension of roof, width of streets, accessibility of rail sidings, etc.; should be equipped to perform a maximum number of services for sellers and purchasers. However, excessive investment in facilities should be avoided especially until the existence of adequate volume is established.

All restrictions and regulations should be examined carefully to avoid discriminatory licenses, taxes, fees, and credit restrictions.

Similar problems are encountered in construction or improvement of both country and city concentration markets. Areas of supply and distribution vary greatly, however, and the needs of each city market constitute a complex and individual problem. The lack of coordinate grouping of all assembly and wholesaling functions within the same area, the lack of rail connections, and the general congested conditions of streets within the market are among the chief problems of design upon which the planners of city markets should focus attention.

Method of financing should be kept impartial because in practice it has been found difficult to separate financing of facilities from management. Regardless of what agency or group finances and constructs a market or market system, there should be assurance that duplicating and unnecessary facilities will be avoided; the facility will be properly located, designed, and equipped; costs will be held to a minimum so that any savings through increased efficiency may be passed back to the grower or forward to the consumer; and all regulations upon the use of the facility will be pointed to the interest of the entire produce industry and of the consumer.

Two current developments in the distribution of fruits and vegetables are consumer packaging and air transportation. Until these two interrelated practices become widespread in the produce trade and among retailers, neither may directly affect the small-lot growers who chiefly supply country markets in the Southeast. However, such changes should be taken into consideration when new markets are built.

FRUIT AND VEGETABLE CONCENTRATION MARKETS IN NORTH CAROLINA, SOUTH CAROLINA, GEORGIA, AND ALABAMA[1]

INTRODUCTION

A number of factors have contributed to the growing interest in fruit and vegetable concentration markets. Some of them are: (1) improved highways, which have increased the possibilities for hauling produce from farm to market by motor truck; (2) increased efficiency of motor trucks; (3) needed outlets for expanded commercial production in some areas; (4) dissatisfaction with farm-retail price spreads in fruit and vegetable marketing and with the ratio of prices received for farm products to prices paid for implements, fertilizers, rent, and farm power; (5) dissatisfaction with services performed by existing marketing agencies; and (6) relatively low cost of selling through concentration markets and the low margins taken, particularly by auctions, as compared with other agencies.

Since 1925, concentration markets have been a major factor in performance of the concentration fuction for produce from small-lot growers in certain Southeastern areas, with independent shippers and packers, chain store buyers, merchant truckers, commission buyers, and other agencies obtaining substantial portions of their needs through purchases at these markets.

The concentration function as a phase of marketing is here used with reference to the act of assembling small lots into carlots or trucklots for intermarket shipment, and includes the function of grading, packing, inspection, hauling, and sale to first receiver.[2] The chief concentration function performed through use of country markets in the four-state area is sale to the first receiver. Other functions such as grading, packing, storage, and shipping, incident thereto, are usually performed before or after the produce passes through this facility, although it is believed that much often would

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1 The following are co-authors of this bulletin: Clarence P. Austin and Hugh L. Cook, Bureau of Agricultural Economics, United States Department of Agriculture; G. W. Forster, North Carolina Agricultural Experiment Station; W. T. Ferrier, South Carolina Agricultural Experiment Station; N. M. Penny, Georgia Agricultural Experiment Station, and L. E. Farmer, Georgia Agricultural Extension Service; J. N. Mahan, Alabama Agricultural Experiment Station.

Helpful suggestions beginning from the inception of the study to its final publication have been received from sources too numerous to mention. For all such contributions and assistance the authors are fully conscious and extend grateful acknowledgment. They alone, however, accept responsibility for what has been written.

2 The term "hauling" is used to distinguish transportation to packing houses or processing plant, or up to the point of loading upon intermarket carrier, as opposed to intermarket transportation.

be gained by providing facilities for performance of these additional functions within the facility.[3]

City and country markets located in this four-state, surplus-producing area perform essentially the same functions, except that in the smaller community little of the produce assembled is required for local consumption. As a consequence, some of them perform only minor wholesaling functions. This difference in functions is reflected in the design of the facilities in the different markets. In well organized city concentration markets, for example, wholesale stores are provided in addition to facilities for growers and truckers and for buyers who ship by rail. Country markets, on the other hand, contain facilities largely if not entirely for growers and truckers.[4] For convenience, facilities located in cities in excess of 50,000 population in this area are called "city concentration markets." Facilities in communities of less than 50,000 are referred to as "country concentration markets." The real distinction, however, lies not in the size of the community, but in the layout of the market and in the proportion of produce assembled for local consumption.

Major emphasis in this survey has been placed on concentration markets. No effort has been made to analyze marketing of heavy commercial fruit, or of potatoes in the commercial sections where producers with large acreage handle much of their own packing and marketing, or where it is done by cooperative associations and sales agencies. Since very few of the trading facilities in the four-state area are owned by cooperative associations, the activities of these organizations have been given only incidental attention.

Some indication of the significance and growth of various types of fruit and vegetable concentration markets in the Southeast may be seen by reference to Table 1. Sixty percent of the markets in the area studied had operated five years or less prior to 1940, the last normal prewar year.

Purpose and Method of Study

Further improvement in concentration market operation and in existing facilities in the Southeastern States calls for examination of market organization and facilities now existing.[5]

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3 Since this survey was made, for example, a limited number of grading machines has been installed in Georgia State Farmers' Markets at country points.

4 Local produce shippers sometimes maintain a wholesale store in a country market area.

5 In this publication the term "Southeastern States" refers in particular to North Carolina, South Carolina, Georgia, and Alabama.

Table 1.—Method of sale in 40 fruit and vegetable concentration markets, classified according to years operated, for Southeastern States, 1940[1]

Years operated	Method of sale			Percent of total
	Auction	Private sale	Total	
Years	Number	Number	Number	Percent
1 - 5	11	13	24	60.0
6 - 10	7	2	9	22.5
11 - 15	4		4	10.0
16 - 20	3		3	7.5
All	25	15	40	100.0

[1] For explanation of method of sale see pages 31-33.

The general purpose of the study is to note the fruit and vegetable production of the area, examine methods of marketing, and investigate present facilities in order to determine how needed concentration markets should be located, laid out, equipped and operated, and how existing facilities may be improved.

More specifically the purposes include such things as the following: Examining the position occupied by concentration markets in the assembly of fruits and vegetables in the Southeast; evaluating the nature of fruit and vegetable production in specific areas to determine whether such crops may be more efficiently and more profitably marketed through concentration facilities; obtaining information as to organization features and operating methods of concentration markets; appraising the operating results from these markets; observing the attitude of various growers, marketing officials, and marketing agencies toward markets; and on combined bases of data and observation, determining those factors which contribute toward success or failure of a concentration market.

Market managers were interviewed personally by representatives of the cooperating states and of the Bureau of Agricultural Economics during 1940 and the spring of 1941. An effort was made to visit all markets during the peak of their operating season. Data were obtained from 41 fruit and vegetable concentration markets. Findings obtained in this manner were supplemented by interviews with county agents, fruit and vegetable growers, dealers and trucking companies in the more concentrated fruit and vegetable producing areas, and by information obtained from the various state extension services, the state marketing agencies, the state highway departments, and the railroads.

Certain materials have been incorporated which reflect current and future developments in fruit and vegetable marketing within the area. These include photographs of markets established and of grading equipment installed since the date of the field survey, and an analysis of the possible effect of prepackaging and air transportation upon the design of concentration facilities. These current marketing trends experienced marked developments during the war period.

PRODUCTION AREAS AND THEIR INFLUENCE ON CONCENTRATION MARKETS

General Importance of Fruit and Vegetable Crops

There were over two million acres of fruits, nuts, vegetables, and potatoes grown in the four states, North Carolina, South Carolina, Georgia, and Alabama, in 1939, with a value to the area of over 100 million dollars. Some of this, of course, was used on the producing farm and did not enter commercial market channels. The value of vegetable crops, with the addition of white potatoes and sweet potatoes, amounted to approximately half of this figure, and that of the white and sweet potatoes above about 30 percent. The value of the fruit crops, of which peaches and apples were most important, was over 20 million dollars.

While fruit and vegetable production is not a chief source of agricultural income in any of the states studied, it is the chief source of income in important areas of each state. For the four states, returns from fruit, nut, and vegetable crops (exclusive of potatoes) amounted to $24,020,557 in 1939, or about 5 percent of the value of all farm products sold or traded.[6] By states the range was from 3.2 percent in North Carolina to 7.6 percent in Georgia (Table 2).

Table 2.—Value of farm products sold or traded in four Southeastern States, 1939[1]

Product	North Carolina		South Carolina		Georgia		Alabama	
	Value	Percent Total	Value	Percent Total	Value	Percent Total	Value	Percen Total
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percen
Livestock and livestock products	25,763,530	12.9	10,480,975	12.0	24,249,246	19.8	19,054,687	24.8
Field crops[2]	163,451,078	82.1	70,672,899	80.9	84,558,439	69.2	52,450,394	68.2
Vegetables harvested for sale	3,637,272	1.8	3,352,393	3.8	3,574,302	2.9	1,330,139	1.7
Fruits and nuts	2,804,711	1.4	1,771,467	2.1	5,717,820	4.7	1,832,453	2.4
Horticultural specialties	1,135,830	0.6	305,047	0.3	1,338,081	1.1	859,456	1.1
Forest products	2,299,641	1.2	787,469	0.9	2,841,796	2.3	1,425,541	1.8
Total	199,092,062	100.0	87,370,250	100.0	122,279,684	100.0	76,952,670	100.0

1 Source: Census of Agriculture, 1940
2 Includes value of Irish and sweet potatoes

Yearly the area furnishes northern and eastern markets with substantial quantities of fresh produce. In addition to the cash value returned to the producer from local and inter-regional sales, fruit and vegetable crops furnish valuable foods for on-farm consumption.

Location of Commercial Areas

Vegetables.—While vegetable production is widely distributed over the four states, much of the commercial acreage is concentrated in a few areas in each state. On a commodity basis generally, the important commercial vegetable and potato areas are confined to

6 Value of fruits and nuts are listed together in the Census of Agriculture (as are planted fruit and nut trees, See Figure 5) and are often treated as one general classification. However, the quantity of nuts sold through concentration markets is almost negligible.

the Coastal Plains, while the fruit acreages are confined to the Piedmont region. In other areas where vegetable crops are grown largely for home use, small surpluses are also available for market. The major part of this produce is disposed of in or near the location where it is produced.

Over 30 vegetable crops in addition to Irish potatoes and sweet potatoes are grown in these areas for sale, though the production of many of these items would not classify as "commercial." Included are asparagus; beans—lima (green); beans—snap, string or wax; beets (table); broccoli; cabbage; cantaloupes; muskmelons, honeydews, etc.; carrots; collards; corn (sweet); cowpeas (green); cucumbers; kale; lettuce; okra; onions (dry); peas (green); peppers —sweet and pimento; radishes; spinach; squash; tomatoes; turnips; turnip greens; watermelons; and mixed vegetables. In some sections acreage is confined almost entirely to one or two crops while in other sections a wide variety of vegetables is grown.

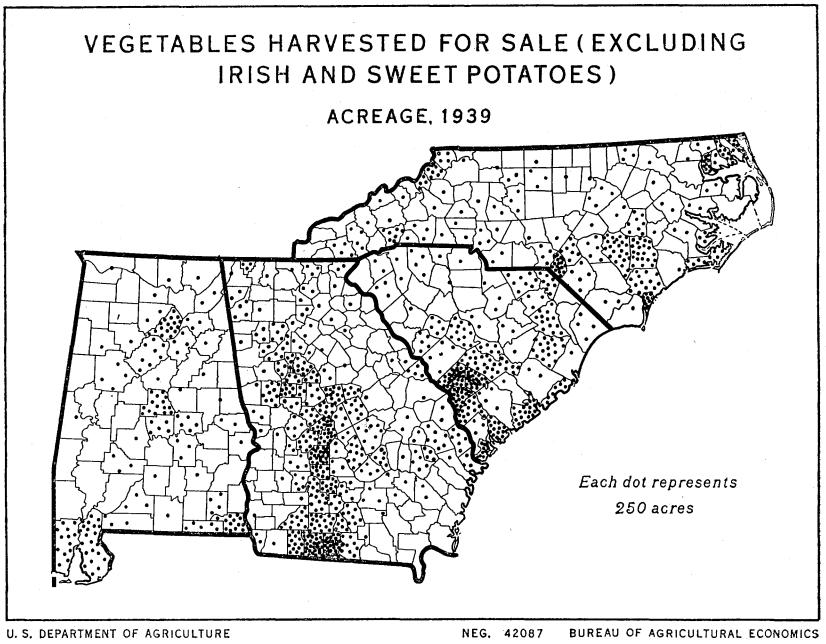

Figure 1

Irish potatoes.—Irish potatoes are grown generally over the four states for home use and small surpluses are marketed locally. However, the region has some large and very important commercial areas particularly in the coastal sections.

It is estimated that approximately two-thirds of the 1939 crop was sold, chiefly from the important commercial areas, with only

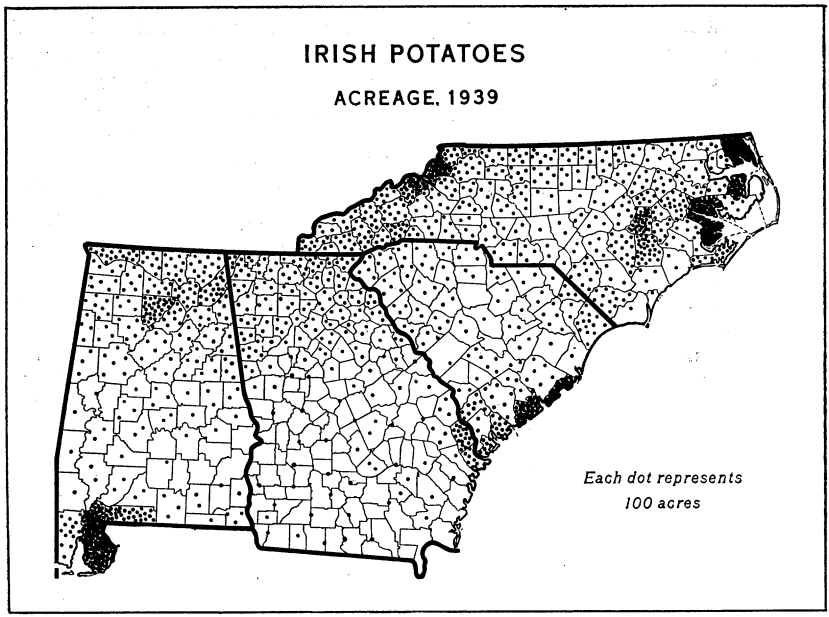

Figure 2

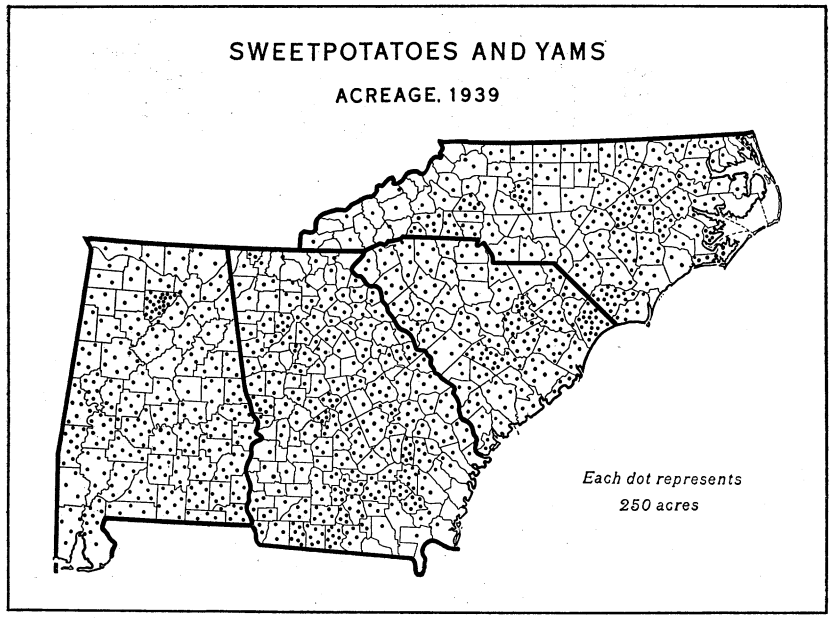

Figure 3

small quantities from sections where potatoes are grown largely for home consumption.

Sweet potatoes.—Sweet potatoes are grown extensively over the four states. Most of the production is for home use, with only an estimated one-fourth of the 1939 crop being sold.

Strawberries.—Commercial strawberry acreage is largely concentrated in North Carolina and Alabama. A small acreage is grown around Atlanta and Augusta, and a large acreage in a few northwestern Georgia counties. The largest acreage in South Carolina is in Horry county, adjacent to North Carolina's heavy producing section. Acreages in the western third of North Carolina, though important in the cash crop production of the county, are small compared with those in six or seven counties in the southeastern part of the state. Strawberry acreage in Alabama is largely concentrated in three areas—Butler, Conecuh, and Escambia counties in the southern part of the state; Chilton county in the central part; and Cullman county in North Alabama. These are all important commercial sections.

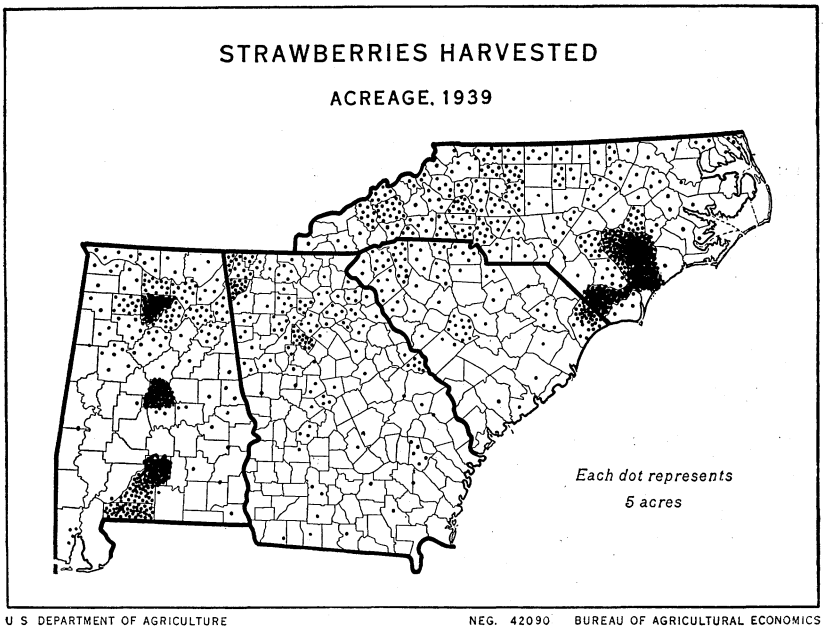

Figure 4

Tree and Vine Fruits and Nuts.—The most important tree fruits of the area are apples and peaches, the latter being more important in quantity and value. In many sections the production is for home use, with only small surpluses for sale. However, there are some very important commercial areas. (Figure 5) The heavy concen-

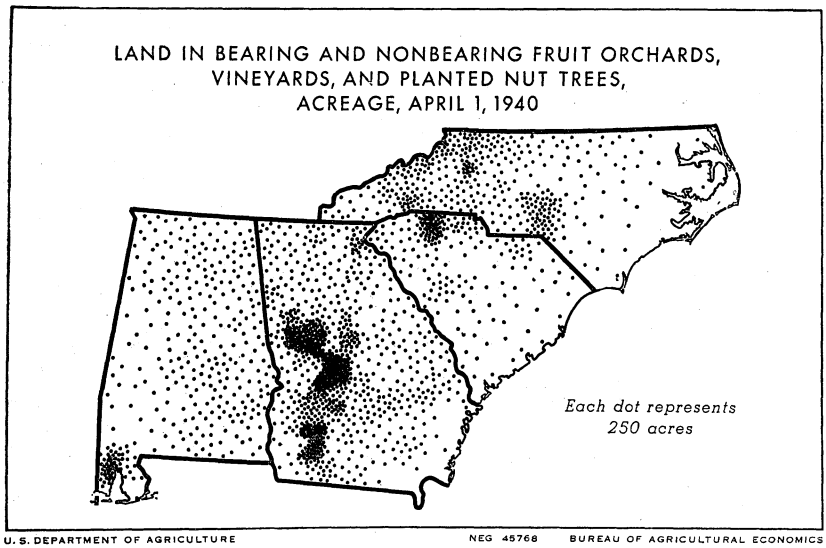

Figure 5

tration of dots in central western Georgia is the center of Georgia's peach belt. Smaller acreages occur from there toward the northeastern corner of the state. The concentration in northwestern South Carolina is the important commercial peach belt of that state, largely in Spartanburg county. The concentration of dots in south central North Carolina indicates another area of heavy commercial acreage.

Commercial apple production is confined largely to the eastern front of the Blue Ridge Mountains, in the west Carolinas and north Georgia.

In Alabama most of the apples and peaches are grown for home use. Unlike the other states, no large sections in Alabama can be termed important commercially. In the central part of the state (Chilton county) there is a small locality where commercial peach acreage is increasing rapidly, and a few counties in the northeastern part of the state have limited surpluses for market.

North Carolina is the major grape state in the area. Largest number of grapevines occurs in the Nort Carolina counties of Buncombe, Burke, Gaston, and Polk; in the South Carolina counties of Chesterfield, Greenville, Lexington, and Spartanburg; in the Georgia counties of Walker and Pike; and in the Alabama counties of Blount, Cullman, DeKalb, and Morgan.

Georgia is the heaviest producer of pecans in the area, with major plantings concentrated in the southwestern counties of Crisp,

Dougherty, Lee, Macon, Mitchell, Peach, Sumter, and Tattnall. Trees in North Carolina are largely in Wake and Columbus counties, and in South Carolina largely in Florence and Orangeburg. Fairly heavy plantings occur in the Alabama counties Montgomery and Mobile.

Importance of Fresh Produce

The Carolinas, Georgia, and Alabama enjoy certain advantages in the production of fruits and vegetables, particularly in production for the fresh market. These are mild climate; light, well drained soils; generally adequate labor; and relative proximity to large consuming centers.

Mild climate is perhaps the region's most valuable asset in production for the fresh market. In most of the area, early fruit and vegetable crops mature two to eight weeks earlier than in more northern areas, thereby commanding premium prices. Likewise, a fall crop is often possible, because of a longer growing season. In addition the light well drained soils desirable in the production of certain kinds of fruits and vegetables are scattered throughout the area. These soils warm quickly and may be cultivated with less expense than heavier soils. Though unfortunately fertilizer is usually necessary, the cost is offset in part by the relatively low cost of land. The farm labor supply is generally adequate.

Though the distances involved are significant, the four-state area is nearer the large consuming centers of the northeast than are major fresh market areas of Florida, Texas, and California. Much of the area is within 24 hours by motortruck of Washington, Baltimore, Philadelphia, and New York. For example, the distance from South Georgia to Philadelphia is 980 miles and to New York, 1068 miles. South Carolina's principal vegetable-producing region is only 680 (overnight) from Philadelphia.

Only very small quantities of crops grown for processors move through any type of concentration facility. A brief comparison of acreages grown for processing as compared with production for the fresh market is desirable, however, for the reason that (1) there is a tendency for persons estimating volume produced in the area of a proposed facility to include all production regardless of the market for which it is grown and regardless of whether any advantage may be gained by marketing through a concentration facility, and (2) some marketing specialists in the area see a growing emphasis upon processing. If fresh production should be de-emphasized, effects upon concentration facilities should be examined.

Table 3 shows a comparison, by states in the area, of acreage, production, and farm value of commercial truck crops harvested for the fresh market as compared with the processed market, for the 10-year prewar average and for 1942.

Table 3.—Truck crops, commercial: acreage, production, and farm value of commercial truck crops for fresh market and for processing, four Southeastern States, 1932-41 (average) and 1942[1]

	North Carolina		South Carolina		Georgia		Alabama		Total 4 States	
	Average 1932-41	1942	Average 1932-41	1942	Average 1932-41	1942	Average 1932-41	1942	Average 1932-41	1942
For fresh market										
Acres	49,090	44,450	67,070	63,100	95,430	68,610	12,010	8,200	223,600	184,360
Prod. (tons)	106,792	110,669	127,820	117,072	217,346	190,218	44,943	33,566	496,901	451,525
Value (1000$)	2,663	3,881	3,217	5,271	2,791	4,475	488	634	9,159	14,261
For processing										
Acres	4,760	9,200	1,940	5,850	14,880	20,950	1,820	1,880	23,400	37,880
Prod. (tons)	9,810	15,590	3,850	7,510	16,810	25,995	2,930	2,910	33,400	52,005
Value (1000$)	232	510	56	232	497	1,106	75	70	860	1,918
Total										
Acres	53,850	53,650	69,010	68,950	110,310	89,560	13,830	10,080	247,000	222,240
Prod. (tons)	116,602	126,259	131,670	124,582	234,156	216,213	47,873	36,476	530,301	503,530
Value (1000$)	2,895	4,391	3,273	5,503	3,288	5,581	563	704	10,019	16,179
Fresh as percentage of total										
Acres	91.16	82.85	97.19	91.52	86.51	76.61	86.84	81.35	90.53	82.96
Prod. (tons)	91.59	87.65	97.08	93.97	92.82	87.98	93.88	92.02	93.70	89.67
Value (1000$)	91.99	88.38	98.29	95.78	84.88	80.18	86.68	90.06	91.42	88.15

1 Source: Agricultural Statistics, 1944

There appears to have been a slight increase in the acreage grown for processing as compared with that for fresh sale when 1942 is compared with the average for the 10 years preceding. However, this can hardly be called significant, and it remains to be seen whether the trend continues after the postwar adjustment period. Comparisons with the war years subsequent to 1942 become increasingly difficult as abnormal influences such as rationing, price ceilings, labor and transportation shortages, and alternative uses for capital make themselves felt. As a consequence, it is tentatively assumed that prewar production ratios are most nearly representative. For the 10-year prewar average (1932-1941), about 91 percent of harvested acreage was for the fresh market, the largest proportion (97 percent) being in South Carolina, and the smallest (86.5 percent) being in Georgia.

On the basis of the 10-year average, the important crops for processing were peppers 89 percent of the acreage harvested; cucumbers 30.7 percent; tomatoes 18.7 percent; green lima beans 6.6 percent; and snap beans 4.8 percent. In addition, relatively minor quantities of beets and cabbage were processed in certain years.

Utilization data on strawberries, grapes, and tree fruits for this specific area are not available. However, in most instances rough estimates may be made. The 10,870 acres of strawberries harvested during the average 10-year period probably were sold largely to the fresh market, only small quantities being packed by producers of jams, preserves, and ice creams. Small quantities were packed frozen, largely for institutional and commercial sales. All quantities packed probably were not in excess of 4 percent. Probably all of the one to one and a half million bushels of market pears usually produced are sold to the fresh market. Most of the 10 to 11 thousand tons of grapes produced are sold to fresh markets. Quantities sold to processors would seldom amount to 10 percent of total quantities marketed. The proportion of the peaches processed would seldom equal 7 percent, and perhaps at times is less than 1 percent, due to the premium prices this early fruit commands in the fresh market. Not more than 35 percent, and seldom more than 10 percent, of the usual 15 million bushels of apples (produced chiefly in North Carolina) are canned, dried, or processed into vinegar, cider, and juice.

ORGANIZATION FEATURES, OPERATING METHODS, AND RESULTS

Ownership and Control

Many agencies in commercial producing regions have interested themselves in marketing, an interest which has frequently resulted in the establishment of some type of concentration market. It has not been uncommon to find markets sponsored or financed by one group and operated by another.

Of 43 concentration markets surveyed in 1940, eleven were privately owned (eight by buyers); 12 were owned by municipalities; seven by states; seven sponsored by civic-minded groups—chambers of commerce, civic clubs, businessmen, etc.; three were owned by cooperatives; and one each by a county, a railroad, and a growers' organization (Table 4).

Ownership and control are frequently not in the hands of the same agency. Although seven of the 12 municipalities owning markets were actively engaged in their control, some preferred to establish the facilities and turn them over to a board made up of growers and buyers, or to some local buyer or civic group. In Georgia, for example, funds for building state farmers' markets often come from local regions in which the market is to be established. After construction, the facility is either deeded or leased to the State Bureau of Markets for operation. A manager is then furnished by the Bureau and operation is supervised by it.

Table 4.—Ownership and control of 43 fruit and vegetable concentration markets by method of sale, four Southeastern States, 1940

Agency	Auction		Private-sale	
	Ownership	Control	Ownership	Control
	Number	Number	Number	Number
State	2	2	5	5
Municipality	10	5	2	2
County			1	1
Private (buyers, etc.)	8	9	3	2
Cooperative	1	1	2	3
Businessmen, chambers of commerce, banks, etc.	4	5	3	1
Railroads	1			
Boards		4		2
Growers' agency			1	1
Total	26	26	17	17

In this study some markets privately owned by buyers were controlled by the owner. Two markets owned by private persons, other than buyers, were controlled and operated by the owners. One privately owned market was turned over to a cooperative association to operate, and one to a board of farmers and buyers.

Of the seven markets owned by civic groups, five were controlled by the same type of management, and one sponsored by a civic group was turned over to a board for control and operation. Civic groups also controlled one municipally owned market.

Three of the markets were cooperatively owned and controlled, and one privately owned market was leased and operated by a cooperative association. Of the remaining markets, one was owned and operated by a county, one was owned by a railroad and leased to private persons, one was owned and operated by a growers' organization, and one municipally owned market was operated by a buyer.

In brief, states, counties, municipalities, private individuals, cooperative associations, businessmen, chambers of commerce, civic clubs, banks, and grower organizations are all engaged in ownership or operation of concentration markets. All except the informal groups of businessmen and railroads are actively engaged in operation of markets within the area.

Markets sponsored by chambers of commerce, local civic clubs, informal groups of businessmen, and similar groups often begin with a suggested idea. A local committee visits a market reputed to be successful and makes a report; the idea seems good, money is raised, and a facility is constructed. The design is often very similar to that of the market visited; the facility may be neither adequate nor the right type for efficient use in that area; it may bear idiosyncrasies of those promoting the enterprise and may be too elaborate or expensive for the volume of produce handled.

After the construction is under way the next problem is, "How is the market to be managed?" Often the sponsors prefer to step aside and turn the facility over to someone else to operate, and thus the sponsoring agency assumes the role of promoter only. Some buyer or private person may be willing to operate it. It may be placed in the hands of a board made up of farmers, buyers, or both, or perhaps of a cooperative association.

Securing efficient management is one of the most difficult problems of establishing a market, and is often the difference between a successful market and a failure. Markets operating throughout the year are in much better position to attract capable managers than many of the country markets operating for only a few weeks or months, where it is often difficult to get the type of person needed for so brief a period.

Establishment of market facilities should be extended only after careful consideration of the need in each case and with due regard to the services expected to be rendered. There is danger in having too many markets or in having them poorly located with regard to sources of supply and distribution. Additional markets may lower the volume available to existing facilities, cut down on the number of buyers and sellers and result in several uneconomic markets where a smaller number could have operated with profit. The expansion of markets should proceed with expansion of production and the need for facilities. The failure of a market may discourage establishment of a market in the same trade center even after expanded production fully justifies the existence of such a market.

Types of Facilities

Many types of facilities are being used for concentration markets. Lack of uniformity in design may be explained in a number of ways: Methods of selling, whether auction or private-sale; location of the market, whether in country or city; and the needs of the community. Some variations can be explained only by the fact

that buildings not intended for markets have been adapted to them. In still other cases, those designing the layout and facilities have been inexperienced in marketing.

For the purposes of this discussion, types of facilities will be grouped into three general classes: (1) Country concentration markets selling at auction, (2) country concentration markets selling by private-sale, and (3) concentration markets in cities.

Figure 6 shows location of 26 auctions, 18 private-sale markets, and 35 cooperative marketing associations and sales agencies. Locations of cooperatives, as a factor in total market organization, are shown, although these organizations are not subjects of the survey.[7]

In some cases facilities located on this map may have discontinued operation or others may have been established since 1941. However, the list is believed to be reasonably accurate as of that date, except for a few small markets which may or may not be classified as "concentration markets."

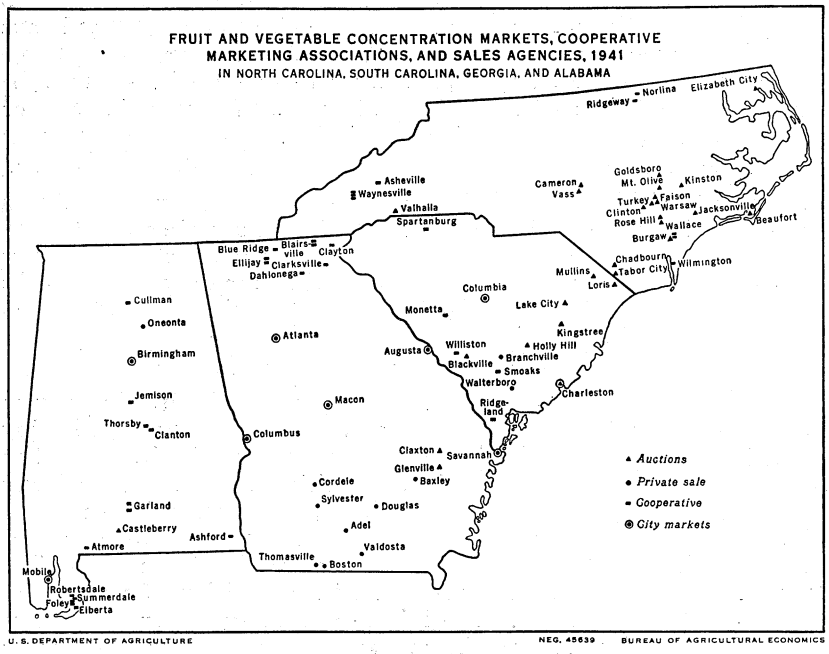

Figure 6

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7 Auctions were located at the following points in 1941: North Carolina—Goldsboro, Mt. Olive, Faison, Clinton, Warsaw, Turkey, Rose Hill, Wallace, Burgaw, Chadbourn, Tabor City, Cameron, Vass, Jacksonville, Beaufort, Val Halla, Elizabeth City; South Carolina—Blackville, Holly Hill, Charleston, Loris, Lake City, Kingstree; Georgia—Glennville, Claxton; Alabama—Castleberry.

Private-sale, South Carolina—Columbia, Branchville, Walterboro; Georgia—Atlanta, Macon, Columbus, Cordele, Sylvester, Thomasville, Boston, Valdosta, Douglas, Baxley, Savannah, Augusta, Adel; Alabama—Mobile, Birmingham, Oneonta.

Cooperative, North Carolina—Asheville, Burgaw (2), Waynesville (3), Wilmington Norlina, Ridgeway; South Carolina—Ridgeland, Monetta, Spartanburg (2), Smoaks, Williston; Georgia—Dahlonega, Clarksville, Clayton, Elberta, Foley (2), Garland (2), Jemison, Robertsdale, Summerdale, Thorsby.

Some duplications occur as a result of attempts to separate types of facilities and markets.

Country concentration markets selling at auction.—Country auctions make use of one of two general types of facility—the **auction block** and the **platform.** The most common of the two is the so-called "auction block," which in this area is usually an open shed that will accommodate two lines of traffic. The tendency is to construct a small stand with overhanging roof. The vehicles pass under the roof on either side of the stand, which is occupied by auctioneer, buyers, and clerks. In about 40 percent of the cases,

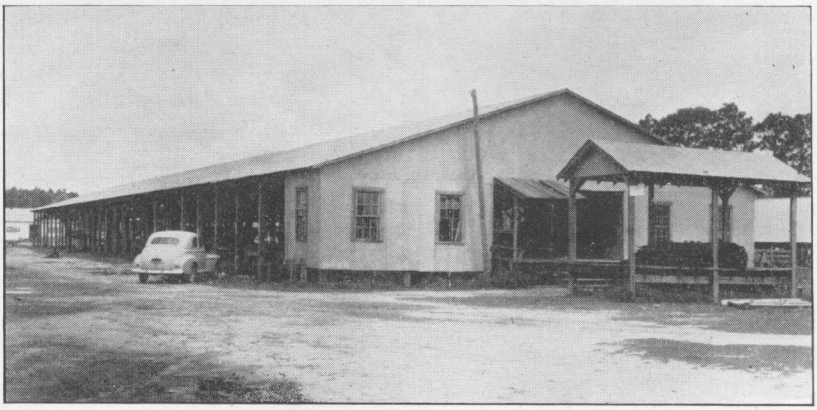

Figure 7.—State Farmers' Market (auction) at Glennville, Georgia. Auction block may be observed in foreground. Larger shed is facility at which buyers assemble loads

samples are removed from the truck or wagon and placed on the stand for inspection at the time of sale. After sale to the highest bidder, drivers deliver their produce to the point where the buyer is assembling his purchases. Facilities providing for two lines of traffic expedite selling in that the load on one side of the stand may be sold while the vehicle on the other moves into place. This also permits opportunity to display samples from one vehicle while the sale is being made from another on the opposite side of the stand. In order to avoid congestion from bystanders, platforms for visitors are frequently constructed outside the lines of traffic but under the shed.

Height of stand usually ranges from about 18 inches to the height of a truckbed. The latter facilitates lifting samples on the stand and returning them to the vehicle. If stands are built at lower levels, more inconvenience is incurred.

The other type of facility used for country auction markets will be referred to here as the **platform type,** so called because the auction is held on a long platform instead of the "block." This type of facility may be an open shed or enclosed construction.

The shed at Faison, North Carolina, is an example of the former. The platform is covered by an open shed and occupies the entire area of the roof. Lines of traffic pass on opposite sides of the

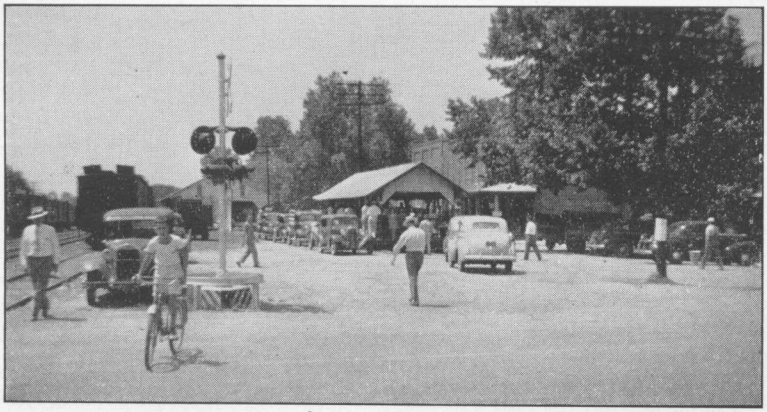

Figure 8.—Open shed platform type auction market facility at Faison, North Carolina

platform occupied by buyers, auctioneer, and clerks. To avoid congestion, a place for visitors has been penned off the end of the platform.

The market at Lake City, South Carolina, is an example of the enclosed platform type. The building is an enclosed brick building approximately 80 x 200 feet, with two driveways and a platform between running full length of the building. Between each drive and the outside wall there is another platform, utilized for drink stands, offices, and by buyers who care to rent space.

Vehicles are admitted until there is a continuous line in each driveway the full length of the building. Samples from each load are placed on the platform between the driveways, after which the market manager rings a bell to inform buyers and sellers that trading is to begin. The auctioneer, buyers, and clerks start at the opposite end of the building from which the buyers entered and move from sample to sample selling the loads. As soon as each lot is sold, the grower returns the sample to his vehicle and drives out of the building. If the farmer accepts the bid, the load is delivered to the buyer. When all the produce in the building has been sold, the procedure is repeated as many times as necessary to sell all the offerings. Growers move into place in order of arrival. If offerings are small, sales are usually held on the hour.

The enclosed brick structure at Lake City cost approximately $25,400. The open platform sheds can be constructed for a small part of this figure. With the exception of the market office and perhaps the drink concession, it is doubtful if the side platforms are as useful as an equivalent amount of space arranged otherwise.

Presumably, the side platforms were designed for use by buyers in assembling loads. Since walls prohibit loading from the outside, all loading and unloading must be from the lanes where selling is taking place, rendering the side platforms almost useless for assembling loads. If the building is to be used exclusively for marketing fruits and vegetables, it is doubtful if this facility has any advantages over open construction with overhanging roof, to which trucks may also back up.

At this type of market facility, additional sheds are sometimes provided where buyers may assemble their loads. When such provisions are not made for assembling loads rent free or at a nominal charge, a buyer frequently assembles loads at his trucks, at some nearby vacant building rented for the purpose, or at the railroad station. If building accommodations for assembling produce are needed by buyers, it would appear desirable to build them in connection with the market and, at the same time, locate them so they will be convenient for shipment by either rail or truck.

In a few places fruits and vegetables are being sold at auction in other facilities, such as tobacco warehouses, railroad station platforms, etc. At Goldsboro, North Carolina, for example, loaded vehicles pass by a small platform projecting from a side door of a large tobacco warehouse. The auctioneer, buyers, and clerks occupy the platform. A sample is examined and the load sold and delivered to the place the buyer designates. In another area a small platform was constructed near the middle of a tobacco warehouse. The wagons and trucks enter one side of the building, pass by the platform, and after the produce is sold, vehicles leave the building by another door to avoid congestion. Some buyers assemble their loads in the warehouse, others outside.

Country concentration markets selling at private sale.—The simplest type of facility for a country concentration market selling at private-sale usually consists of an open shed platform where produce may be displayed and offered for sale by growers. Such sheds are similar to the platform type of auction facility. The platform, which can be approached from either side, permits the grower to back his truck up to one side, display a sample, or if he wishes, unload the entire load on the platform. An overhanging roof ordinarily protects the grower's load from the weather. Buyers walk along the platform and deal directly with the growers; or in the event the market manager has charge of the selling, with the market manager. If growers occupy one side of the platform, the other side may be used by the buyer for loading purposes.

The overhanging roof is quite popular, but if it is too high the rain may blow under it, or if it is too low, trucks with stationary tops are unable to back under it. Experience seems to indicate that the roof should be as low as possible to permit large trucks to back under. A desirable height is generally conceded to be about 13 to 14 feet.

Figure 9.—Farmers' Market at Tifton, Georgia

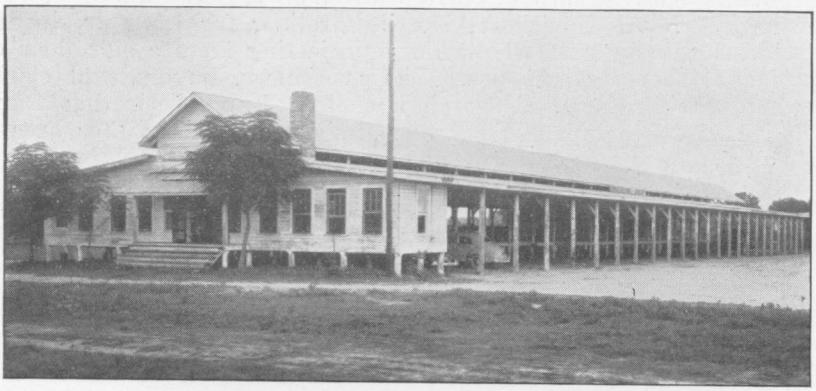

Figure 10.—Farmers' Market at Valdosta, Georgia

Concentration markets in cities.—Of the 43 marketing facilities (exclusive of packing houses and shipping sheds) surveyed, eight were located in cities of 50,000 or more population. Among the others, six were located in cities of 5,000 to 50,000, and 29 in towns of less than 5,000. City markets in this area usually provide stores for fruit and vegetable wholesalers, in addition to providing facilities for growers similar to country private-sale markets. These markets perform several functions of assembly in addition to the regular wholesaling functions. A well designed city market might include (1) a concentration market section, composed of sheds and display platforms for growers and truckers, and, in some cases, packing sheds with direct rail connections for outbound shipments; and (2) a section for fruit and vegetable wholesalers.

The wholesaling functions of these city markets consist of distributing in wholesale or jobbing lots any produce locally assembled or shipped in to the city in larger lots. The concentration functions include (1) assembling large lots from growers during the current producing season, for local distribution and consumption, or for outshipment; (2) assembling lots of produce which have been concentrated at country markets, for local consumption, or for outshipment; and (3) acting as "clearing houses" for inter-regional truck movement of produce.

Figure 11.—Private sale facility at Cullman, Alabama

Experience has shown that it is highly desirable to group all the fruit and vegetable marketing, other than retail, in one place, and that all groups engaged in assembly and wholesale marketing functions should plan accordingly. In one city within the area farmers decided to build a new facility, but with the wholesalers refusing to cooperate, each group sponsored its own market. Results have been unsatisfactory, the farmers and wholesalers returning to the cramped facilities from which they moved. Today they both operate in the original facility although two other facilities, both superior in design and construction, are available.

Problems involved in improving existing markets will vary greatly among the eight cities, since each is individual in area of supply, functions performed, and design. Since specific suggestion for improvement is not within the scope of this study, it is desirable only to mention broad classifications of problems.

Perhaps the lack of coordinate grouping of all wholesaling functions within the same area, the lack of rail connections, and

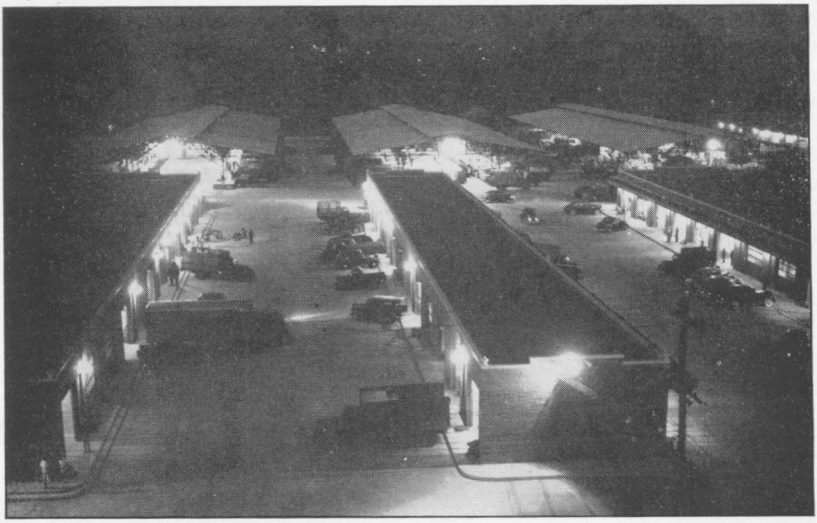

Figure 12.—State Farmers' Market, Atlanta, Georgia, (night view) completed during the early part of 1941. In foreground are wholesale stores; in background are growers' and truckers' sheds

the general congested condition of the street within the market are the chief problems upon which planners of city markets should focus attention.

Many city wholesale fruit and vegetable markets have no rail connections; any produce received by rail has to be trucked from the freight car to the market. Although this distance may not be great, the movement is expensive. Therefore, in planning a market, arrangements should be made to take care of receipts by rail so that they can be unloaded from the car into the store of the wholesaler without the extra hauling charge.

Many of the older markets were designed before transportation by motortruck was prevalent. With increased use of motortrucks in hauling fruits and vegetables and with the increase in size of the motortrucks, many of these markets are hopelessly congested. Even in the designing of new facilities, frequently the tendency is to be too conservative with land, resulting in insufficient parking space and driveways too narrow to accommodate large motortrucks. The Columbia market provides an example of the latter (Figure 13).

Cash Expenditures for Physical Facilities

Twenty of the 24 auctions which reported a figure estimated actual investment at $1,000, or less, in physical facilities (Table 5). Five of the nine country private-sale markets estimated an investment of $2,000 or less. Estimates from city markets ranged from $5,000 to about $150,000.

Figure 13.—City market at Columbia, South Carolina. (Note narrow streets within market area, which cause overflow of traffic during busy hours.)

These figures offer little indication of the investment which may be necessary for properly designed facilities. Many of the existing markets reported no cost for land, it having been donated. If land must be bought, a substantial investment may be necessary. Also, most of these markets at that time offered no grading and packing equipment, no storage space, or other accommodations for buyers. Though the presence of these services will not make a market, volume being perhaps the only indispensable factor, the addition of facilities to provide these services in many instances would increase the general efficiency of the market as well as returns to the grower. Although the investments here reported appear low, they have not in all cases provided some of the facilities needed. Particular care, however, should be taken to avoid overinvestment. In the country markets and to a lesser extent in the city markets, no correlation exists between investment and volume of business, as far as can be determined from findings of this survey.

Areas of Supply and Distribution

Distance growers traveled to market.—Of the 41 market managers reporting volume by origin 14 estimated that 90 percent or more of total volume sold originated within 15 miles of the market; 31 thought that this proportion originated within 25 miles of the market; and 36 within 50 miles of the market. If these estimates are correct, all except five of the markets surveyed obtain nine-tenths of their produce within a radius of 50 miles and all except 10 within a radius of 25 miles.

Table 5.—Fruit and vegetable concentration markets classified according to cash expenditures for physical facilities, four Southeastern States, 1940

Range[1]	Auction	Private-sale	City markets
Dollars[2]	Number	Number	Number
1 - 1,000	20	2	
1,001 - 2,000	1	3	
2,001 - 5,000	1	2	
5,001 - 25,000	1	2	4
25,001 - 50,000	1		2
50,001 - 150,000[3]			2
Total	24	9	8

1 The range was from $50.00 to $150,000.00. Note that the class intervals are uneven.
2 Includes land, buildings, and "other." "Other" includes scales, reported by two country private-sale markets, and one small sum not otherwise specified; for city markets includes grading equipment, public address systems, pavement, light equipment, office furniture, and fixtures. Does not include filling stations, cafes, truckers' hotels, etc., operated upon premises of market, but not a part of the fruit and vegetable marketing enterprise.
3 The most expensive market facility in the area in 1946 was the one in Atlanta, the original cost of which was placed at $150,000.00 by the state market bureau that built it. Investment in the present facility, constructed in 1941, is: construction $220,646.42; ice plant $7,793.08; outing sheds, etc. $2,822.20; cafe $7,500.00; paving, grading, etc. $162,306.46; total $461,068.16.

When markets are classified as country markets and city markets, there is considerable difference in the area of origin. Approximately all of the produce sold through country markets originated within 50 miles of the market; whereas in a large city market, such as Atlanta, it was estimated that less than one-fifth of the produce sold came from within 50 miles. These percentages are determined to some extent by proximity of the producing region, type of growers, type of market, and nearness and effectiveness of other sources of outlet. Most farmers are not willing to drive more than 25 or 30 miles to market; small growers find it unprofitable to haul produce as far to market as large growers. In the case of the city market, large quantities are assembled by merchant truckers and shippers in country markets and hauled or shipped greater distances to city markets. Apparently, both large and small growers are willing to drive farther to a city market than to a country market, probably owing to the attraction of the large shopping area.

Motortruck movements of fruits and vegetables.—The relative importance of various highways in the movement of fruits and vegetables is useful as a cross-section picture of fruit and vegetable movement by motortruck and as some indication of best locations for concentration markets.

Data for this part of the instant study are based on sample traffic counts obtained in highway planning surveys, conducted by the state highway departments, in cooperation with the Public Roads Administration in 1937. These data have been converted into graphic form and are presented here as Figure 14. The figure shows the routes over which move the bulk of the motortruck shipments of fruits and vegetables in this area and the **relative** importance of the various routes for this purpose.

It will be observed that Atlanta is the converging point for a tremendous movement of fruits and vegetables from Florida, South Georgia, South Alabama, as well as for commodities from northern points moving south. Columbia, South Carolina, also is a heavy point of concentration for produce from commercial areas in South Carolina and other southern points, and also for fruits and vegetables moving southward. Raleigh, North Carolina, is situated in the general line of movement from commercial areas to consuming centers. Each of these cities is an important consuming center as well. Other cities also occupy positions of more or less significance in the line of movement.

This produce traffic-flow map should be of considerable assistance in planning the location of major and minor facilities for taking care of present and prospective movements of fruits and vegetables in this area.

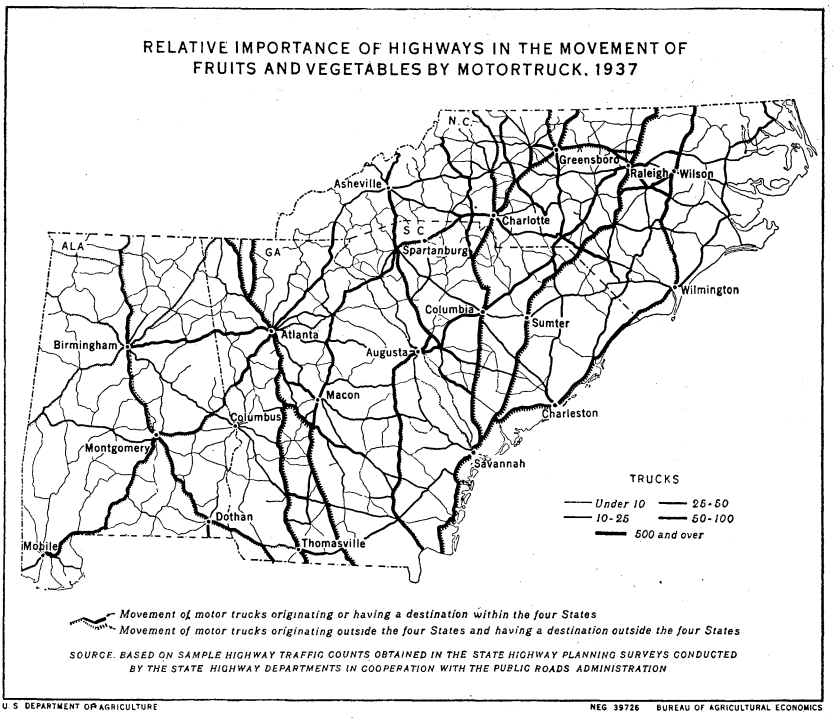

Figure 14

Over three-fourths of the markets supplying information on the destination of produce sold through them estimated that 75 percent or more of all sales were destined for out-of-state consumption. The number of states to which shipments were made ranged up to 35,

with almost half of the country markets reporting outlets in eight or more states, and city markets reaching even a wider area.

Inasmuch as country markets are assembling points for local production, the market of necessity must be located with regard to the producing region. City markets, on the other hand, are not located with primary regard for proximity of the producing area and they assemble supplies both from local and more distant growing areas. In a few city markets as much as 75 percent of sales entered channels leading to local consumption. Some shipments were destined for one of the other states in the area, but a substantial part of the total produce moved north and east, with a smaller percentage to south and west.

Packing houses and shipping sheds located on railroads.—Locations of packing houses and shipping sheds on railroads provide supplemental information on areas of supply. These facilities are located in large commercial tree-fruit, nut, potato, and cabbage areas. Packing houses are used largely by private shippers and packers or by large growers or cooperatives performing the same functions. The shipping sheds serve one or more of the above or may be part of a trading facility (concentration market); however, most concentration markets in this area are not located on railroads.

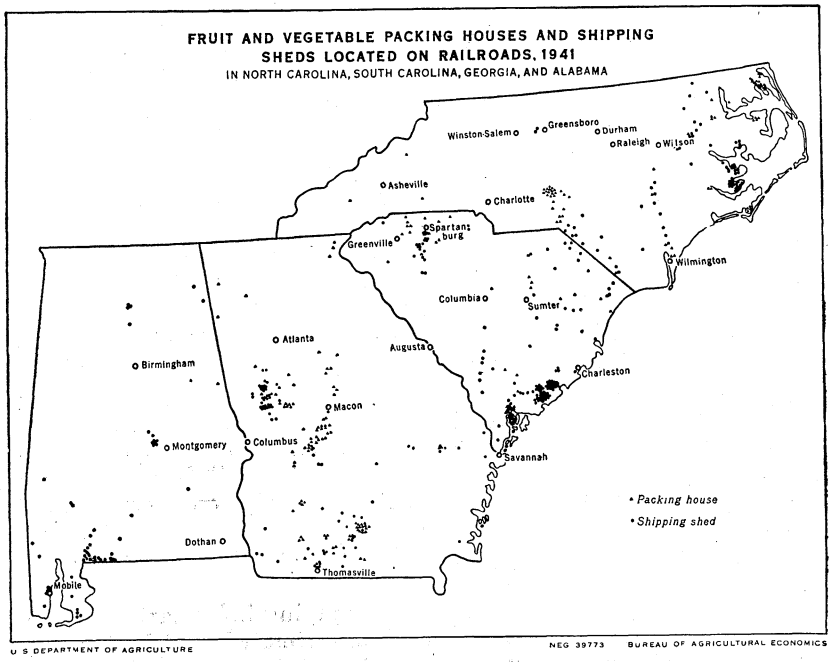

Figure 15

In the four states there are over 500 fruit and vegetable packing houses and shipping sheds located on railroad lines, often in connection with a general freight depot. Included among these are such things as storage houses for produce such as peppers; tobacco warehouse used for fruit and vegetable marketing; freezing plants; and canning plants. Of the total number of such facilities shown approximately half are owned by the railroads, though sometimes privately leased, and half are privately owned, usually by grower or shipper.

Packing and shipping sheds concentrated along the eastern coast of North Carolina are in the heavy potato producing sections. Packing sheds just east of Charlotte are used largely for the movement of peaches. Facilities north of Wilmington are located in North Carolina's large vegetable and potato areas along the coast and in the eastern part of the state, or in the peach section around Spartanburg. In Georgia there are three concentrations of sheds: two southwest and west of Macon are in the heart of the peach section, and one in the southern part of the state serves the south Georgia vegetable area. This type facility in Alabama is largely confined to the Mobile-Baldwin county area in the southwestern part of the state.

These structures are frequently used to supplement facilities of established concentration markets by furnishing a place for buyers to assemble their loads for shipment. At many points, however, the facilities are used inefficiently, if at all. Loss of business to motortrucks has been responsible for decline in use of some of them.

Operating Methods

Method of sale.—Concentration markets sell either at auction or by private sale. Sales at auction are made by an auctioneer to the highest bidder. In a private-sale market trading is carried

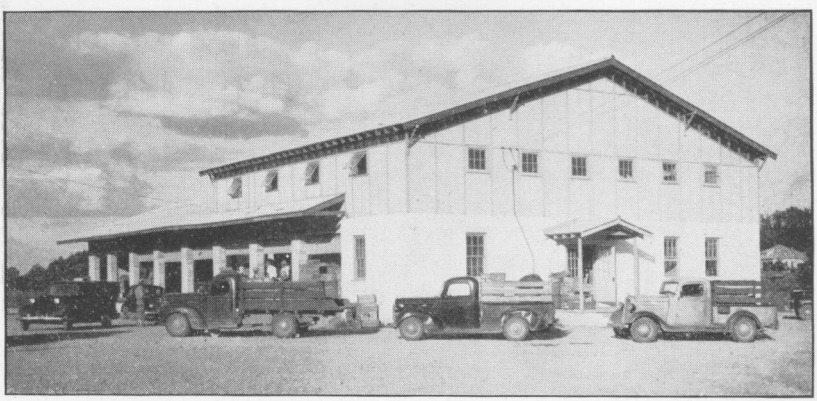

Figure 16.—Blount County Truck Growers' Association Market, Oneonta, Alabama. This is a private sale market and is located in a heavy producing commercial vegetable area

on privately between individual buyers and sellers. The farmer may appear at the market with his produce, display it, and deal with the buyers himself; or the market manager may accept the produce, display it, and sell it for the grower. Where the manager does the selling he may, in addition to dealing with buyers who visit the market, locate buyers by telephone and frequently make sales in the same manner. Even where the farmer sells his produce, market managers frequently locate outlets and otherwise assist growers in locating buyers.

Of the 43 markets surveyed in the area in 1940, 26 sold at auction and 17 by private sale. All but one of 18 markets operating in North Carolina sold at auction, whereas only one of the markets in Alabama made use of this method. In South Carolina six of nine concentration markets sold at auction and in Georgia only two of the 13. Practically all of the city markets make use of the private-sale method.

Only one market made use of private-sale by the market manager exclusively; at another market growers could either sell their own produce or leave it with the market manager for sale. At the one market where all sales were made by the owner-manager, the growers' produce was accepted, displayed, and sold for whatever it would bring. Usually sale was made to itinerant truckers and the grower was charged 10 percent commission for the service. Other than the fact that the manager operated in a typical farmers' market facility and performed the functions of the ordinary country market, he was actually a commission dealer catering to truckers.

Almost all the concentration markets making use of private-sale permit, or even require, the grower to sell his own produce. If the market manager sells for the grower, there may be friction. When prices for one commodity on the same day vary among growers (and there may be reasons why they should) growers frequently become suspicious. On markets where the system of sale by the manager was practiced, it was found desirable to keep adequate records in order that sellers may know the details of all transactions. A much more common method of private-sale is for the grower to sell his own produce. Sometimes, however, when the farmer sells his own produce he is unable to bargain effectively with experienced buyers. Some growers have little information as to supplies; others may be less aggressive than is desirable. The market manager can be of assistance in bringing buyers and sellers together and in giving the growers any available information regarding prices.

To summarize selling operations in the 17 private-sale markets in the four states, in 15 the grower sold his own produce, in one he turned it over to the manager for sale, and in the other the method of sale was optional.

Auction selling is relatively much more popular in North and South Carolina than in Georgia and Alabama. This may be due to customary use of tobacco auctions in these states, the availability of auctioneers, and the presence of commercial producing areas, which attract buyers. While the auction method of selling has received much favorable attention, some auctions are unable to attract enough buyers to promote active competition.

Although the number of buyers is not the only factor to be considered in a competitive market, some feel that the larger the number of buyers the less likely the chance for "agreement" as to price. While it is true that the grower selling at auction can reject the bid, this bargaining power is often ineffective in selling perishable commodities where alternative sources of outlet are distinctly limited. It is not uncommon for two or three local buyers apparently to do most of the buying, a situation which local buyers are inclined to encourage. (See Regulatory Practices)

Methods of charging for services.—Charges for the use of concentration markets are generally made on a package basis, percent of sales, by the load and/or by the day. Shedules for 42 of the 43 concentration markets surveyed in 1940 revealed that 58 percent of those reporting made their charges on a package basis, 19 percent charged on a percent of sales, 19 percent made charges by the load or by the day, and the remainder made no charges at all. (Table 6)

When charges were made on a package basis, a flat rate per package, regardless of commodity or size, was usually charged. Five of the markets made use of two rates; four of these varied the charge by commodities. For instance, a market might charge two cents a package for selling beans, and five cents a package for strawberries; or the charge might be two cents a package for all commodities except strawberries, and five cents per package for strawberries. The difference appears to have been determined to some extent by value of the product. One market having two rates varied its charge by type of user. This market was operated by a cooperative association which pursued the policy of charging members one-half cent less than nonmember users, a practice which would not permit them to qualify for income tax exemption.

Rates charged by concentration markets basing their charges on percent of sales, ranged from 3 percent to 10 percent. One market used two rates; the grower was charged 3 percent if he made his own sales, or 5 percent if he preferred to have the market manager sell his produce for him. The most common rate was 5 percent, used by nearly half of the markets charging on a percentage basis.

Per load or per day charges were usually 25 cents to 50 cents per load and/or per day. This method of charging is common in markets where the grower does his own selling. Space is provided so that the grower can display and sell his produce, a flat fee

Table 6.—Method of charging for use of fruit and vegetable concentration markets, from whom collected, and average amount of charge, in four Southeastern States, 1940

Method of charging	Number of markets[1]		Collected from						Average amount of charge	
			Grower		Buyer		Grower and buyer			
	Auction	Private sale	Auction	Private sale	Auction	Private sale	Auction	Private sale	Auction	Private sale
	Number	Number	Number	Number	Number	Number	Number	Number	Cents	Cents
By the package	20	4	12	3	1	1	7	0	3.1	1.6
By the load or day	0	8	0	7	0	0	0	1	—	37.5
By dollar value of sale	6	2	6	2	0	0	0	0	Percent 4.8	Percent 7.0

1 Two markets selling by private sale make no charge for use of the market, one market rents to buyers, and one rents to dealers.

being charged for its use. Some markets vary the fee with the size of the load, charging perhaps 25 cents for a small load and 50 cents for a large load. Moreover, some have varied the rates by type of user, charging growers one rate and merchant-trucker sellers a higher one. Although this differentiation is frequently made in city markets, where much trading is done by truckers, it is uncommon in country markets where truckers seldom offer fruits and vegetables for sale.

Two markets made no charges for use of the facilities. One of these was municipally owned and the other was financed by a group of businessmen. In both cases the markets were considered community enterprises, publicly available to buyers and growers without charge.

Some markets have no facilities available that may be used by buyers for assembling and loading. Those having such facilities either rent them to buyers at a nominal charge or furnish the facility free as an added attraction.

Markets selling at auction made their charges on a flat rate per package or as a percentage of sales value. Actually 77 percent of the auctions made their charges on a package basis, whereas 23 percent charged a percent of sales. Popularity of the package basis is explained in part by the fact that charges based on packages are easier to collect. Furthermore, auction selling is more or less standardized and sales are usually made by the package or field box. Since size of load frequently varies, the charge per package or as a percent of sales value appears the more equitable. However, the charge based on the package tends to penalize the low-value commodity.

Private-sale markets, on the other hand, were inclined to charge on the rental basis of a fee per load per day. One-half of the markets operating on a private-sale basis made charges on the basis of so much per load, usually the equivalent of the same sum per day, since most growers make only one trip per day to market; one-fourth charged by the package; one-eighth based the charge on percent of sales; and an equal number made no charge at all. The per load per day method of charging lends itself quite well to private sale, where a wide variety of produce is sold, particularly when packaging is not uniform or when unit of sale varies widely.

By charging on a package basis or percent of sales, the grower pays for the use of the market in proportion to the amount that he uses it. With the exception that where a few packages are sold at a time, costs are more than where a grower takes a large quantity of one or two commodities to market for sale.

If the farmer receives as much as $1.00 per package for his produce, the usual 5 percent charge would cost him over twice as much as when the rate is one or two cents per package.

Type of ownership does not within itself explain methods of charging. There are privately owned markets making charges on a package basis, from two to five. However, all markets basing charges on percent of sales are privately owned and controlled—some by buyers.

The charges for use of the markets are generally paid by the grower or deducted from his returns if payment is made through the market. In some cases buyers deduct the charge and in turn pay the market. Nearly 71 percent of the markets operating in 1940 collected from the grower for use of the market. Five percent collected from buyers, 19 percent collected part of the charge from the buyer and part from the grower, and 5 percent of the markets made no charge.

On most of the markets where buyers are charged for use of the market, this is done because payment is thought easier to collect from them. Collection probably is easier where most of the volume is bought by a few local established buyers.

Methods of Payment for Produce.—Settlement for produce sold in concentration markets is usually handled in one of three ways. First, and by far the most common method, is for the buyer to pay the grower. Many markets merely furnish the facilities for trading but take no active part in handling payments. Thirty-five of the 43 markets followed this procedure. The chief difficulty encountered through direct payment is that the grower sometimes assumes the risk of bad checks.

A second method is for the payment to be made through the market. Six of the 43 markets (chiefly auctions) collected from buyers and remitted to the growers. In two markets operated by local banks, the bank assumed this function. When payments are made through the market, the market assumes risks of payment. For protection the buyer is ordinarily required to establish his credit or deposit cash with the market adequate to pay for any purchase made. After the purchases are made, the market collects from the buyer and in turn pays the grower for his produce.

A third method for handling payments is for the outside buyer to negotiate through the local buyer. Many outside buyers prefer to have some local representative rather than do their own trading. The local buyer underwrites ability to pay. Although this method may have other disadvantages (See Regulatory Practices page --), the grower is in a much better position to know and find out about local buyers than outside buyers.

Usually the farmer receives his money the day he sells his produce or one or two days later. In 37 of the 41 markets reporting on this, payments were made to growers the day of purchase; four made payments on "pay day," a rather common procedure where payments are made through the market. These "pay days" may

occur the next day, but more often the second day following the sale. The reason generally given for delaying payment is that it relieves a certain amount of congestion caused by calculating amounts and writing checks during the rush hours of sale.

Growers usually prefer cash payment at the time the produce is sold. Unless collections are handled by the market, or unless outsiders buy through local buyers, the grower must collect for his produce at time of sale to avoid unnecessary risks.

Regulatory Practices.—In order to cope with problems originating in operation of concentration markets, states, counties, and cities have enacted legislation, and organized markets have made rules to regulate trading. Although many of these measures have been designed to correct fundamental difficulties and to promote the general welfare, the chief stimulus for some has been the desire of particular groups to protect themselves from competition. Toward these purposes regulations have ranged from simple protective measures to outright prohibition.

The most common restrictions are those which either directly or indirectly affect use of the market by certain groups, and those which protect growers from buyers about whom they are inadequately informed.

Restrictions prohibiting any group of growers from using the market are unusual; however, many markets have discouraged use of the market by certain buyers and truckers. It is uncommon for a market to prohibit specifically certain groups, but such instances are on record. In fact, two city markets covered in this study, both cooperatively owned, deny use of the market to nongrowers; one altogether, the other in the event that the produce offered for sale competes with that being sold by local growers.

It is doubtful whether the tendency to prohibit truckers from bringing produce into the market accomplishes its real purpose. For example, if a Michigan trucker with a load of fruit comes into the Atlanta market, his trip to Georgia was no less motivated by his intention to buy a load of something else. As a matter of fact, no trucker would haul into the Atlanta market from a great distance a product which is currently in season in Georgia to sell in competition with the local crop. Furthermore, it is advantageous to any city market to concentrate as nearly as possible the total available supplies. Buyers are then attracted because they would know the supply is there; the supply is there because sellers know the buyers are there. The same is true for country markets. When truckers are excluded, they tend to bypass the market entirely and go directly to the growers, a situation which tends to destroy the market as a price-making mechanism.

Instead of directly prohibiting certain groups from using the market, it is much more common to acomplish this purpose indirectly.

A license system, for example, may be used in such a way as to place certain types of operators at a disadvantage, thus discouraging or actually prohibiting their operating in the market.

Five of the markets covered in this study required either licenses or trading through local dealers. A prospective buyer must purchase a license or buy through a licensed local buyer. Licenses range from $5.00 to $50.00. Two city markets charge $50.00; however, in one a person who wants to sell only a truckload can operate one day for a license charge of $1.00, plus 25 cents for parking space, thus providing for transient truckers. The other market requires a $50.00 license from all persons, in addition to fees for use of the facility. Unless the trucker plans to sell produce in this market frequently, this license tends to be prohibitive. Trade groups often feel that they can do away with the trucker by discouraging him or even prohibiting him from using the market altogether, without regard to his value to the marketing system.

The problem might be solved, as has been done in one of the city markets mentioned, by requiring all wholesale merchants, whether they are wholesale truckers or not, to pay a license of, for example, $50.00 a year, or $1.00 per day. It might also include basic charges by the quarter or by the month. If the license fee is paid for shorter periods than a year, it could be sufficiently higher to pay the additional cost of collecting. Then, every wholesaler, whether he hauls by rail, truck, or boat, and whether he is a resident or a transient, may take his choice as to method of payment.

Two country markets required of the buyer a license of $10.00, and one required a $5.00 license, nominally to protect the grower. However, the fee is merely a charge and does not guarantee the good faith of the buyer. For the buyer who plans operating in the market throughout the season, the cost is reasonable, but the buyer of only a load or two finds it economical to make his purchases through the local buyer on a commission basis. Such a system tends to reduce competition.

Regulation designed to protect growers from bad debt losses is somewhat common. Before making purchases at 22 of the 43 markets the buyer must make some type of financial arrangement. Fourteen of these markets required the buyer to establish credit or buy through a local buyer. At four of the 14 he would have to deposit only $5.00 or $10.00 to assure the market of the fee on the goods purchased, or buy through a local dealer, paying him a fee per package. At two, where markets are operated by banks, the buyers would have to establish credit at the bank or buy through a local buyer, and at seven places he would have to deposit cash or cashier's check to cover the purchase price of any produce bought before buying, or buy through a local buyer. One market put the credit problem on a character basis; the market manager reported, "The buyer would have to look all right."

Frequently the same regulations, designed to protect the grower, may be used by certain groups to protect themselves from new types of competition, such as merchant-truckers.

The mere presence of a number of buyers in the market does not necessarily assure the farmer the highest possible price. In some instances, for example, if a large volume is sold through a few buyers, efficiency may be increased in that the buyer's cost per unit may be extremely low. The buyer may then pass part of this savings in cost back to the farmer. Individual farm-price studies must be made before the local price mechanism can be pronounced competitive or noncompetitive. In general, however, the presence of a large number of buyers is a tangible evidence of demand.

Time spent by growers in selling.—Estimates of market managers and others associated with the markets indicate that growers spend 20 minutes to 8 hours selling a load of produce at the various markets (Table 7). The average time spent at auction markets is approximately 40 minutes, whereas the average time spent at private-sale markets is about 3½ hours. The minimum time required at auction markets was 20 minutes and the maximum was an hour. At private-sale markets the time ranged from 30 minutes to 8 hours.

The difference in the amount of time required is due largely to methods of operation. At the auction market a time is ordinarily set for selling. Many private-sale markets do not restrict hours of selling. If the market is rather inactive, much time is consumed awaiting buyers. If a buyer or two appears and makes offers that the grower feels are too low, he may await other buyers. Activity of the market determines whether the waiting is a matter of minutes or hours.

In private-sale markets much can be done to reduce time spent at the market by setting up hours of sale; however, a market must attract a certain volume before regulation of hours can be effected.

Table 7.—Time spent by growers in selling fruits and vegetables at concentration markets, four Southeastern States, 1940

Time required (hours)	Number of markets	
	Auction	Private-sale
1/3	1	
1/2	10	1
2/3	1	
3/4	11	
1	2	1
1–3/4		1
2		3
2–1/2		1
3–1/2		1
4		2
5		1
6		1
8		1
Average time spent	39 min.	206 min. (3.4 hrs.)

Operating Results

Commodities sold.—Generally speaking, all kinds of fruits and vegetables are sold in concentration markets. As previously pointed out, growers who produce large volume, particularly of the "hard-ware" items, such as potatoes, cabbage, dried onions, and apples, may have their own connections in central markets and ship their commodities direct by the car or truck load. For small growers, however, concentration markets furnish the marketing machinery for assembling small lots into carlots and trucklots for economical handling and shipping. For those growers even bulky, relatively nonperishable commodities are sold through the concentration facility.

Managers were requested to state the six heaviest-volume commodities in terms of usual units of sale moving through the market, the percentage of total "packages" (or units) sold represented by each, and total "packages" sold in the market. The results have been tabulated and are presented in Table 8. This table cannot be taken to indicate the number of markets at which any one commodity occurred as an item of sale. Beans, for example, may have been sold in more than 20 markets but were reported as a leading commodity in only that number. The 731,106 packages sold likewise cannot be taken to indicate the quantity of beans sold through these country markets but rather the amount sold through those markets reporting beans as one of the six leading items. It will be observed that beans, berries, peppers, peas, tomatoes, and watermelons in that order represent the six largest unit selling items,

Table 8.—Relative (unit package) importance of commodities sold through country fruit and vegetable concentration markets, four Southeastern States, 1940[1]

Commodity	Type of package or unit of sale	Markets reporting[2]	Units sold	
			Number	Percent of total
Beans (all)	Bushel hamper	20	731,106	27.3
Berries (all)	32-quart crate	6	371,527	13.9
Peppers	Bushel basket or hamper	4	206,887	7.7
Peas	Bushel hamper	9	187,506	7.0
Tomatoes	32-pound lug	8	186,131	7.0
Watermelons	Each	3	171,333	6.4
Cucumbers	Bushel basket	13	170,544	6.4
Sweet potatoes	Bushel basket or hamper	4	155,404	5.8
Corn	Bushel crate	5	113,346	4.2
Turnips	Bushel hamper or 50-lb. bag	2	103,500	3.9
White potatoes	100-lb. sack or 11-pk. barrel	9	71,911	2.7
Cantaloupes	Crate of 24	6	68,932	2.6
Cabbage	1-1/2 bushel hamper	1	52,400	2.0
Squash	Bushel hamper	10	37,165	1.4
Okra	Bushel hamper	2	11,926	.4
Onions	50-lb. bag	1	1,750	.1
Other			34,045	1.3
Total			2,675,413	100.0

1 Data from 18 auction and six private-sale markets (excluding cooperative sales agencies and city markets) reporting sufficient data upon which to calculate volume. These are believed typical.
2 Reports are on basis of whether commodity ranks among top six items from standpoint of "units" sold.

while beans, cucumbers, squash, peas, white potatoes, and tomatoes were mentioned by the largest number of markets.

There is a great deal of variation between the number of commodities handled in the markets. The average city market usually handles many times the number of commodities sold in the average country concentration market. This is because city markets assemble not only local produce but also many commodities for local consumption from other producing areas, while country markets handle only the commodities produced in the adjacent areas. One country auction market in this region sold as high as 23 commodities during a season, but the average number sold by all country auctions in the area was only five. Eight auctions sold only one commodity each. The average number of commodities sold through private-sale markets was considerably above the average for the auction markets. It was not uncommon to find private-sale markets selling over 20 commodities during the course of the season.

Volume handled.—In the four-state area, probably not more than an estimated 2 or 3 percent of all produce was sold through the country concentration market. However, in the **actual area of the individual market, within a narrowly defined radius,** probably one-third of all produce, except tree fruits and the "hardware" items, was sold through this type of facility (Table 9).

Sales to itinerant truckers, direct sales to wholesale receivers, jobbers, and brokers, and to resident cash buyers chiefly account for proportions not sold through the market.

Volume data collected in this study appear inadequate upon which to base overall-estimates as to the proportion of total commercial production passing through the various market channels. However, data from an earlier study comprising part of the same area show that in North Carolina during 1936 over 60 percent of all strawberries, lima beans, string beans, and green peppers commercially produced in the state were sold at auction; in South Carolina over 20 percent of the same items, and also of green peas, were sold at auction.[8]

Insufficient detail was collected to show specific outlets at country markets on a volume basis. Managers in four-fifths of the auctions and in one-half of the country private-sale markets estimated that 70 percent or more of sales were to "resident buyers," that is, "buyers who come into the market for a week, month, or season." This would include country shippers, local jobbers and retailers, as contrasted with itinerant truckers and other transient buyers. Some such buyers depend heavily upon the country market for supplies, but they cannot be taken to represent all of the agents

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8 Cake, Ervin W., Operation of Small-Lot Country Fruit and Vegetable Auctions, Farm Credit Administration, Circular C-118, May 1940, p. 24.

Table 9.—Type of outlet for selected fruits and vegetables grown within 25 miles of country concentration markets, by type of facility, four Southeastern States, 1940[1]

Type of reporting facility	Type of outlet[2]									
	Concentration facility	Retail stores	Itinerant truckers	Resident cash buyers[3]	Transient buyers	Wholesale receivers, jobbers and brokers	Roadside stands	Another concentration facility	Hauled out by farmer's own truck	All outlets
Auction										
Packages	1,020,860	2,470	70,940	26,980	12,500	589,200	37,500	49,000	38,000	1,847,450
Percent	55.3	.1	3.8	1.5	.7	31.9	2.0	2.6	2.1	100
Private-sale										
Packages	373,720	92,320	399,400	182,960	89,830	683,390	--------	--------	154,860	1,976,480
Percent	18.9	4.7	20.2	9.3	4.5	34.6	0	0	7.8	100
Both types										
Packages	1,394,580	94,790	470,340	209,940	102,330	1,272,590	37,500	49,000	192,860	3,823,930
Percent	36.4	2.5	12.3	5.5	2.7	33.3	1.0	1.3	5.0	100

1 Market managers provided estimates on sales (both through their own facility and otherwise) of chief truck and small fruit crops grown within a 25-mile radius. These included beans (all kinds), berries (all kinds), squash, cucumbers, watermelons, cantaloupes, turnips, tomatoes, peas, field peas and turnip greens. Cabbage, corn, sweet and white potatoes were also occasionally mentioned. Reports were received from 10 auction and 4 private-sale markets—not necessarily a representative sample.

2 Does not include buyers or middlemen who buy in or use the market.

3 Buyers who come into a place for a week, month, or season.

Table 10.—Summary income and expense statement of 13 auction and four private-sale country fruit and vegetable markets in four Southeastern States, by number of packages sold, 1940

Facility	Sales volume total packages	Gross annual income			Gross annual expense			Gross profit or loss	Profit or loss per package
		Fees	Rent	Total	Direct expense	Indirect [1]	Total		
	Number	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Cents
Auction									
	350,000	5,800	235	6,035	1,700	1,240	2,940	3,095	.88
	313,530	18,000	-------	18,000	9,170	100	9,270	8,730	2.82
	268,380	5,450	-------	5,450	-------	-------	5,450	-------	0.
	177,300	8,865	-------	8,865	-------	-------	4,687	4,178	2.36
	136,000	1,594	-------	1,594	930	85	1,015	579	.43
	109,660	3,325	-------	3,325	2,265	25	3,290	35	.03
	70,000	1,500	-------	1,500	-------	-------	750	750	1.07
	50,690	1,521	100	1,621	275	120	395	1,226	2.42
	50,000	1,000	75	1,075	-------	-------	400	675	1.35
	42,475	846	-------	846	725	65	790	56	.13
	35,000	600	200	800	-------	-------	500	300	.86
	35,000	1,040	-------	1,040	410	10	420	620	1.77
	10,000	400	-------	400	395	5	400	0	0
Private-sale									
	271,775	350	-------	350	1,760 [2]	225	1,985	−1,635	−.60
	55,500	400	-------	400	-------	-------	300	100	.18
	29,180	750	120	870	360	145	505	365	1.25
	21,260	215	-------	215	-------	-------	150	65	.31
Total	2,025,750							19,119	.94 (Av.)

1 Indirect expense includes largely depreciation, fixed rents, and interest on bonded indebtedness.
2 A large proportion of the direct expense of this market was the manager's salary. However, this manager had duties not confined to running the market.

in that category. It is estimated that those resident buyers operating in the immediate area of the country market purchase on an average between one-half and three-quarters of their produce at concentration markets.

Income and expenses.—Gross annual income and expense data are reported by type of facility in Table 10. Income includes fees for use of the market, rentals for stalls, cafes, storage space, filling stations, etc., and gross receipts from hampers and crates handled. Most markets received income from only two sources; namely, fees and rentals from stall space. Only one market reported receiving income from a grading service.

Expenses include chiefly the salaries and wages of management, the auctioneer, if used, and the clerks, who regulate the operations of the market. Very litle expense is incurred for rent and depreciation; market grounds are usually located in the suburbs of a village where land values are not high, and buildings are usually simple structures. A considerable portion of income is returned as profits to private operators and as patronage dividends if the market is cooperative. In this study gross profit per package is indicated to have averaged about one cent per package in 1940 (Table 10).

A more comprehensive analysis of marketing margins for fruits and vegetables has been made by the Bureau of Agricultural Economics, and a summary of its findings is presented in Tables 11 - 14. The comparatively small expenses incurred for selling at country markets is due in part to relatively few services which they offer, in contrast to grading, packing, risk-taking, transportation, and outlet service rendered by cooperative marketing associations and private packers. With the exception of temporary warehousing and the creation of a market place where buyers and sellers can meet, country markets offer relatively little in the way of service.

Table 11.—Country shippers: Estimated average expenses and profit as percentage of sales and margins, 1939

Expense and operating profit	Percentage of sales			Percentage of margins		
	Including packing	Excluding packing	Weighted average	Including packing	Excluding packing	Weighted average
	Percent	Percent	Percent	Percent	Percent	Percent
Wages and salaries	13.4	6.0	11.0	44.8	44.5	44.8
Other expenses and operating profit	16.6	7.5	13.5	55.2	55.5	55.2
Total	30.0	13.5	24.5	100.0	100.0	100.0

Source: Hoecker, R. W., Frank, Arnold, and Kling, William, **Marketing Margins for Fruits and Vegetables and How to Reduce Them,** Bureau of Agricultural Economics, 1946.

ıble 12.—Cooperative marketing associations: Estimated average expenses and profit as percentage of sales and margins, 1939

Expense and operating profit	Percentage of sales			Percentage of margins		
	Including packing	Excluding packing	Weighted average	Including packing	Excluding packing	Weighted average
	Percent	Percent	Percent	Percent	Percent	Percent
'ages and salaries	12.4	1.6	7.0	49.6	40.0	48.3
ent, depreciation, repairs, and utilities	1.5	.2	.8	6.0	5.0	5.5
ontainers, twine, and other packing materials	9.0	.2	44.6	36.0	5.0	31.7
elephone and telegraph	.1	.1	.1	.4	2.5	.7
rokerage and commission	1.3	1.3	1.3	5.2	32.5	9.0
dvertising	.1	.1	.1	.4	2.5	.7
ther expenses and profit	.6	.5	.6	2.4	12.5	4.1
Total	25.0	4.0	14.5	100.0	100.0	100.0

Source: Hoecker, R. W., Frank, Arnold, and Kling, William, **Marketing Margins for Fruits and egetables and How to Reduce Them,** Bureau of Agricultural Economics, 1946.

Table 13.—Commission buyers: Estimated average expense and operating profit as percentage of sales and margins, 1939

Expenses and operating profit	Percentage of sales	Percentage of margins
	Percent	Percent
Wages and salaries	6.2	65.3
Other expenses and profit	3.3	34.7
Total	9.5	100.0

Source: Hoecker, R. W., Frank, Arnold, and Kling, William, **Marketing Margins for Fruits and Vegetables and How to Reduce Them,** Bureau of Agricultural Economics, 1946.

Table 14.—Shipping-point auctions: Estimated average expenses and operating profit as percentage of sales and margins, 1939

Expenses and operating profit	Percentage of sales	Percentage of margins
	Percent	Percent
Wages and salaries	.9	45.0
Rent, depreciation, repairs and utilities	.1	4.0
Travel	*	.6
Telephone and telegraph	*	.5
Advertising	*	.3
Other expenses and profit	1.0	49.6
Total	2.0	100.0

* Less than 0.1 percent.
Source: Hoecker, R. W., Frank, Arnold, and Kling, William, **Marketing Margins for Fruits and Vegetables and How to Reduce Them,** Bureau of Agricultural Economics, 1946.

Operating season as a factor in profit.—All but one of the reporting auctions estimated its operating season at four months, or less, with an average of about 2.7 months. Private-sale markets operated over about 8½ months. There appears to be a correlation between the length of operating season and the number of commodities sold but none between those two combined and profit

per package. Two factors seem to be responsible for this lack of correlation, neither of which is generally present in other business enterprises.

(1) Although the longer the season the greater the volume over which fixed charges may be spread, some markets have few fixed charges. Specifically, land for many markets has been donated. Such markets may also be tax-free. Buildings may have been built by W.P.A. labor from donated building materials, resulting in adequate buildings without high fixed cost.

(2) Normally, the better managers demand "year-around" employment. In those instances the longer the period of operation, other things being equal, the greater the volume over which to distribute managerial salaries. Some markets, however, are able to get local school teachers, reasonably well trained in business methods, for the brief operating period, who require remuneration only for periods employed.

In brief, a market selling only one commodity over a short season may "succeed" if (1) a high volume of that commodity is available, or (2) fixed charges are low, even though volume may not be exceptionally high.

ESSENTIALS FOR SUCCESSFUL CONCENTRATION MARKET OPERATION

Results of this survey indicate that fruit and vegetable marketing in North Carolina, South Carolina, Georgia, and Alabama could be improved by constructive changes in existing markets, discontinuance of a few markets in areas where there are too many, making arrangements for marketing (such as pool-car shipping) of commodities in areas having small volume and haphazard methods, and establishment of new markets in areas where volume is sufficiently large.

Civic groups and trade organizations, together with state and municipal agencies, in the area are interested in improving the marketing system for fruits and vegetables. Findings of this survey, even though of a broad, general nature, seem to indicate certain essentials that may guide such groups in surveying for specific facts upon which to plan, locate, equip, and operate a market. The same criteria may be useful in evaluating the functioning of existing markets with the object of improvement.

The principles that are thought to be useful relate to: (a) volume; (b) location; (c) transportation; (d) facilities; (e) regulations; (f) financing and management. Observations as to these are directed particularly to the country concentration markets of this area.[9]

Volume

Adequacy of volume is the chief factor to be considered in planning the construction of a "concentration" market facility or in considering improvements to an existing marketing system. As a matter of fact, most of the other factors to be considered are so closely related to volume as to be almost inseparable. The question of volume necessary to justify a facility cannot be answered in absolute terms.

In making this estimate, the number of commodities produced is not a controlling factor.

The survey showed that some markets handled as few as one and some as high as 50 different commodities at a time, and that there was no correlation between the number and the financial success of the market. Substantial volume of one commodity is more important than a wide diversity of small-volume items.

Furthermore, in making the estimate of volume which will be sold through a facility, knowledge as to physical quantity produced in the area is not sufficient. Acreage grown or tonnage produced must be further analyzed to determine (a) concentration of production; (b) specific kinds of fruits and vegetables produced for the fresh market, because of variations in marketing practices among the different kinds; (c) volume produced by individual growers, whether producers of large commercial acreage, of smaller but substantial acreage, or of "subsistence" acreage produced only as a side line to commercial crops other than fruits and vegetables; (d) the adequacy of existing marketing agencies and the attitude of these agencies toward the need for the projected facility. There follows a brief explanation of each of these various aspects of volume.

No country concentration market should be established where the volume of produce grown within 25 or 30 miles of the market will not attract several carlot buyers during the peak of the season.

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9 Several sources are available for information regarding the essentials of a good city market. To name only a few: Calhoun, W. T., Erdman, H. E., and Mehren, G. L., **Improving the San Francisco Wholesale Fruit and Vegetable Market,** Bureau of Agricultural Economics in cooperation with University of California, Feb. 1943, p. 33. Crow, William C., Calhoun, W. T., and Park, J. W., **The Wholesale Fruit and Vegetable Markets of New York City,** U. S. Dept. Agri., April, 1940, p. 61. Crow, William C., **Wholesale Markets for Fruits and Vegetables in 40 Cities,** Circular 463, U. S. Dept. Agri., Feb. 1938. Rasmussen, M. P., **Marketing Fruits and Vegetables on Farmers' Markets, New York Metropolitan District,** Cornell University Agri. Experiment Station, Bulletin 709, Dec., 1938, p. 46.

If each buyer is counted on for at least a truckload or a carload a day, if the market is to be attractive for 6, 8, or 10 buyers, it must assemble corresponding quantities of produce. Many markets operate with much smaller quantities offered for sale, but many of them attract only 1 or 2 buyers. This gives the grower an outlet only for such commodities as these buyers need and at such prices as they are willing to pay.

Some local buyers and a few buyers from nearby cities may be attracted to small offerings, but, as a rule, buyers from central markets are forced to deal in relatively large quantities for economical transportation and handling.

The survey shows that only small proportions of such heavy-volume produce as apples, peaches, cabbage, potatoes, and sweet potatoes will be sold through a country concentration facility, chiefly by the small producer. This is due partly to the fact that these items are less highly perishable. They can be held in field or orchard unharvested for a few days until carlot quantities are matured, or, with the exception of peaches, if harvested can be stored on the farm until a carlot is accumulated. Also these holding qualities give the grower more flexibility in choosing his marketing agent.

Large-volume growers will sell through a country shipper and packer, with whom in many cases they have made contracts, or sometimes such growers will pack and ship their own commodity. Apples, for example, would be packed probably in a cooperative packing house and consigned to the terminal auction or to a commission receiver in the terminal market. These growers will usually have a sales representative of some type in the terminal market who, by selling on an auction or by shopping around among wholesale receivers, will determine the best competitive price.

Estimates of volume that may be sold through a concentration facility probably should not include any apples, peaches, cabbage, potatoes, and sweet potatoes, and probably should not include quantities of other commodities produced by any grower who can ship a carlot or a trucklot of one commodity per time.

A survey of a contemplated market location should take into account the adequacy of existing marketing channels within the area to handle the physical volume of commodities likely to be produced within the area.

Persons analyzing results of the survey should guard against the conclusion that a market should be established because there appear to be too few buying agencies in the area. Too many agencies may hamper effective functioning of the price mechanism in some cases. When volume is small and is divided among a number of buyers, costs of each may be high, and the farmer's share may actually be less than where the smaller number of buyers,

realizing certain economies of scale, pass some of the savings back to the grower. It is doubtful if the number of buyers alone is a factor of direct significance, unless factual evidence is obtained to show that a monoply position is being exercised.

The attitude of the existing marketing agencies toward the establishment of such a market should be determined. The attitude should not be taken as a literal indication of the possible success or failure of the market, because these buyers, if antagonistic, may come to realize that the market functions to their advantage, if the market does actually become the center of community fruit and vegetable trading. Principal outside buyers will appreciate any location where a large volume of produce, properly graded and packed, is available.

Local operators may come to realize that such a facility functioning properly, though perhaps reducing their gross profit, may actually increase their net profit by performing more efficiently some of their previous functions.

Almost any marketing agency may make purchases through the concentration market, though they will do so only where the market offers some tangible advantage. Chain store buyers and representatives of cooperative buying groups, for example, will seek the best source of supply. Such buyers will come to the concentration facility only if carlots or trucklots of the desired commodity can be obtained there more conveniently or more cheaply than direct from the fields of the large grower or than direct from a country shipper and packer. In an area where a large percentage of the available produce is grown by producers of small volume, the chain stores and cooperative buyers may be unable to supply their needs elsewhere and will patronize the concentration market.

Canners and other processors normally do not buy very much through a concentration facility. Experience has proven that a large-scale processing enterprise cannot be operated without an assured supply. Consequently, canners and other processors usually contract with the grower, and either pick up produce field-run at the farm or accept delivery at the cannery door.

Location

Contacts with growers indicated their general dislike for hauling produce more than 25 or 30 miles to market, since transportation cost for medium-sized lots in excess of that distance becomes prohibitive. However, it is perhaps even less desirable to locate facilities too close, in an effort to minimize transportation. The study indicated that both transportation into and out of the facility are of equal importance in considering the economics of location.

In one or two areas studied an excessive number of facilities had been built. If markets are located seven to 10 miles apart, many growers may visit more than one market seeking the top price for their commodities, and may force buyers likewise to do so in an effort to find sufficient supplies of quantity and quality needed. Consequently, much time is wasted and expense incurred. One centrally located concentration market, attracting all the buyers that are distributed at the three or four small markets, would not only perform the functions of all the small markets and make shopping for price unnecessary but would make the entire assembly process more efficient.

Rather than locate the facilities at closer intervals than justifiable by available volume, pooling arrangements should be worked out to benefit "small growers" who market only 10 to 15 packages at one time. Extension specialists and other people interested in marketing, in some cases, have encouraged small growers to combine lots for more economical transportation to a centrally located facility.

The location with relation to the nearest city provides an additional factor for consideration. Growers living within a two- or three-hour drive of a city concentration market, such as Atlanta, might prefer to load and drive to that city rather than stop en route to sell on a farmers' market. There are reasons other than nearness of market which impel a grower to take his produce to the city market, if one is within a radius of a few hours' drive. The farmer combines a trip to the city market with a shopping trip. Feeds, machinery, fertilizers, etc., which the farmer may purchase in the city, will provide a return load for his truck.

Transportation

Transportation from the concentration facility to the terminal market, sometimes called "intermarket transportation," in 1939 accounted for 19.0 percent of the consumer's dollar spent for fruits and vegetables. In light of the fact that the farmer receives only about 35.0 percent of the consumer's dollar, this expense item is significant, being over half as large as the farmers' share. Any savings in intermarket transportation will in the long run make it possible for buyers to pay better prices to farmers.

The market should be located in the area at a point which will make it accessible to all available transportation facilities. If there is a railroad in the area, it is imperative that the market be located on it, even though only a small part of the produce may be shipped by rail. In some cases markets have been located a quarter of a mile, one-half a mile, or even farther, from a railroad line; produce sold for rail shipment must be transported to the railroad, thereby increasing costs and reducing the farmers' "share." It is equally urgent that the market be situated on the main high-

way, both for convenience to growers and to facilitate movement of the produce from facility to consuming centers by motortruck.

While shipments of fruits and vegetables by air is still in the experimental stage, planners of location for most types of facilities for assembling, packing, or processing should not ignore possible developments in this field.

The advantage of one type of transportation over another type is always a relative matter. Shipments to one terminal or for one receiver may be more economical by truck; in a separate situation advantages may favor another type of carrier; furthermore, technological progress constantly shifts advantages among alternative carriers. When a market is located so that the shipper can use whatever means of transportation he chooses, any advantages to be gained by utilization of one method over another reduces marketing costs. Also, in period of emergency, shippers are not entirely dependent upon one means of transportation.

Facilities

Results of this study fail to indicate that the method of operation, whether auction or private-sale, is of major consequence. The method of operation should be determined by the preference of the users and is important only in that it permits users to trade in accordance with local customs and habit. However, the layout and design of the market will vary, depending upon the preferred method of operation. The facilities will also vary, depending upon the functions to be performed at the facility. The kind of fruits and vegetables produced in an area, which will probably be assembled in the facility, will determine the kind of equipment needed —that is to say, whether grading, packing, or packaging equipment should be installed at the facility. However, the usefulness of some of the existing facilities can be definitely increased by providing additional services to the users. The plan for improvement or erection of any facility should carefully consider needed services.

The layout and design of the facility are here considered separately for a private-sale and the auction type of marketing, assuming in both cases a simple trading facility, the complexity of which will be varied as other functions are to be performed, which would involve installation of other equipment.

If the market is to be a private-sale market, sufficient space must be provided for growers to display their products. In one or two markets in the area, limited platform space has necessitated abandonment of facilities. In at least one place, trading was impeded to the extent that all marketing was transferred to the platform of the local railway station, and the facility, relatively new, was abandoned.

Platforms should be covered, preferably with overhanging roof to give protection to both trader and produce during loading and unloading. Platforms should be constructed to permit approach from either side, thus permitting the grower to back up to one side for unloading and the buyer to back up to the other for loading, and should be the height of the truck floor or railroad car, to facilitate handling. The eaves of the platform roof should be high enough to permit motortrucks with stationary tops to back up to the platform. However, if the roof is too high, the produce will be exposed to the sun and blowing rains. Thirteen to 14 feet seems to be the most satisfactory height.

The survey of facilities indicated that two types of auction facilities were in use—the auction block and the platform. It seems doubtful that the platform sufficiently increases marketing efficiency to justify an additional expense of five to six times that of the auction-block type of facility.

The auction block should be covered and the layout should provide for the handling of two lanes of traffic so that a load can be sold on one side of the block while the next load is moving into place on the opposite side.

An auction block already constructed for one lane of traffic could accommodate two lanes with only a small additional outlay. The auction facility should be so constructed that the roof will cover both lanes of traffic at time of sale in order to protect trader and produce from weather. To facilitate inspection of samples the floor should be approximately the height of the floor in the truck.

Regardless of whether the auction is of the block or platform type, it appears desirable to provide separate covered platforms, accessible to the auction and to transportation facilities, at which buyers may assemble loads. Some existing markets do not have private sheds or platforms for assembling loads, in which cases grading of products, assembling of loads, loading, and other functions may be performed in the streets, parkways, and adjacent lots.

The loading platforms also should be the height of the floor in a motortruck or railroad car and should be approachable from either side by truck. Parallel to one side there should be a railroad siding which would permit loading of cars directly from the assembly platform.

Streets within any type of facility should be at least 60 feet wide—and in the case of large city markets, perhaps even 100 feet—to permit trucks to back up to the platforms without congesting traffic.

It is desirable to get as much of this traffic as possible off public thoroughfares. If space is inadequate or the market is

located near streets on which there is much traffic, vehicles awaiting their turn are likely to cause serious congestion.

The costs of the marketing facilities should be held to a minimum. Ultimately the cost of the facility must be charged on a per unit basis to the produce handled. Therefore, costs incurred should be directly related to the estimated volume. Since the volume after the best of calculations remains to some extent an unknown factor, it may be preferable to design a modest building, with room for expansion even when prospects for volume appear good.

An elaborate facility is unnecessary for a country market. Excessive space should be avoided except as actually needed for some phase of trading or servicing functions. Two or three simple wooden buildings designed to move eight to 10 carloads per day, such as the auction block and loading shed previously suggested, should seldom cost in excess of $2,500.00 exclusive of the cost of land and of equipment. A private-sale facility which may comprise only one building may run to twice that figure. These estimates would assume labor and building material costs at 1939 to 1941 levels.

Regulations

Certain discriminatory regulations are more liable to be found in city than in country concentration markets. However, in drawing regulations for any market, care should be taken to avoid forcing or encouraging any buying or selling group to bypass the facility. The performance of the assembly function should not be limited by excluding any reputable buyer or any seller who offers good merchandise.

Types of restrictions which should be carefully examined by groups contemplating establishment or improvement of a market are those which discriminate against out-of-state growers and/or truckers, in the form of discriminatory licenses, taxes, and other fees, or against outside buyers, in the form of unfavorably high license charges and restrictions concerning credit of the buyer. Restrictions of out-of-state truckers appear directly to limit performance of the assembly function of the market. Since out-of-state truckers often purchase a truckload of some item currently out of season in his own state for the return haul, he thereby provides further outlet for home-grown produce in addition to increasing supplies available for other buyers.

Instead of establishing license and other fees on a flat basis, thereby discouraging itinerant buyers from using the facility, licenses and fees should be levied on a sliding scale. For example, if a license of $50.00 per year is charged, a temporary license of $1.00 per day would make it possible for the itinerant buyer or trucker to operate in the market.

The findings of the survey indicate that restrictions regarding credit of outside buyers tend to discourage such agencies from trading on their own account. Credit should be kept as fluid as possible. Care should be taken to protect growers from losses by sales to unscrupulous buyers. However, many buyers will represent a carlot receiver whose credit is well established. In such cases, even though the buyer is unknown, restrictions which force the buyer to establish local credit or buy through a local buyer should be avoided. In some cases buyers might pay the market management directly for all purchases, and remittance to growers might be made by the market management, as is now done in many auctions. In other cases the buyer could establish bond through a well known firm. Whatever arrangements are made, credit should be kept sufficiently fluid that outside buyers may freely elect or reject to trade through local buyers.

Rules and regulations as to time of sale should be such as to avoid long waits by buyers and sellers.

Financing and Management

If the financing of facilities could be separated from management, the method of financing would make little difference, but such separation has been difficult in practice.

Since each of several groups or agencies who may finance a market often has different criteria for the success of the enterprise, which obviously affect the policy of market management, it is appropriate to examine briefly some of the attitudes toward success of the market, together with weaknesses of management which may result from a policy governed solely by each one.

Markets owned and operated by private agencies are most likely to measure success on a profit basis though some municipal governments have regarded the market as a source of revenue. Two of the markets in this study were unique in that fees were charged that were calculated to do appreciably more than pay the cost of operating the market, in order that a fund might be built up to buy commodities when the market was inactive. Weaknesses which grow out of the profit basis for judging the success of the market may include (1) discriminatory regulations, (2) excessive fees, and (3) delayed development of markets in desirable locations.

Political agencies operating markets are often less inclined to judge success by profit but look more toward service to growers. As a method of attracting consumer purchasers, for example, canning plants have been installed in three Georgia private-sale State Farmers' Markets where consumers may buy (in jobbing lots) and use the facilities of the market for canning.

There are serious weaknesses, however, which grow out of measuring success on a service basis alone. For example, without

economic criteria there is no assurance that markets will be well located. "Service" alone does not necessarily promote efficient operation. There is a danger that the markets might be located as a result of political expediency rather than on the basis of research, and without the profit motivation there are perhaps fewer criteria for intelligent location or efficient operation. If a market is not efficiently located and operated, it does not provide an economical means of distribution, regardless of who pays for it.

"Self-support" as a measure of financial success seems to achieve the desirable aims of public service plus the economic motive, without the excesses of either. A basis of "self-support" means that when a market is so operated its income will balance costs, but no net profits are anticipated. Such a market would not have to be permanently underwritten by any agency, nor would the market be used by a municipality as a means of raising revenue or by its owners for profits. At the same time the management must carefully fix fees and examine expenses because the budget must balance.

There have been some differences of opinion regarding the applicability of self-support where several markets are operated by one agency. Some observers have favored placing each market on a self-supporting basis, others have favored placing the system on a self-supporting basis. A self-supporting system may result in fixing charges so that growers who sell in active markets "underwrite" marketing for growers in areas where markets may be poorly located and/or operated. This, however, is not necessarily true. The practice is sanctioned by big business, in which markets may be stratified and one enterprise or product may be carried at a loss for a short period of time, during the organization and promotion period, during a localized slump, or for purposes of entering a market in which local monopolies exist. In spite of this parallel, there are two chief differences between pursuit of this principle in a multi-unit business and in a marketing system. The new business enterprise must be economically located in the opinion of qualified experts and the cost of carrying the new enterprise will be borne by the central treasury, to which all profits and losses must be balanced. On the other hand, a newly established state farmers' market might be located as a result of political expediency, and the farmer and consumer in a successful trade area may bear the losses in a newly developed trade area without subsequently sharing profits. If establishment of markets is contemplated in which the system only is to be self-supporting, careful attention should be given to these advantages and disadvantages.

Few actual conclusions may be drawn from this study as to desirability of one type of financing and management over another. Profitable markets occur under all types, and in varying degrees all units render services to growers and to the public.

Regardless of what agency or group constructs and finances a market facility or a system, there should be assurance that (a) duplicating and unnecessary facilities will be avoided; (b) the facility will be properly located, designed, and equipped; (c) costs will be held to a minimum so that any savings through increased efficiency may be passed back to the grower or forwarded to the consumer; and (d) all regulations upon the use of the facility will be pointed to the interest of the entire produce industry and of the consumer.

Some marketing specialists feel that in order to assure well balanced objectives the market or marketing system should be built either

(1) by private enterprise, subject to certain regulations perhaps similar to those imposed upon public utilities;

(2) by a public corporation or market authority set up by local agencies of government for the specific purpose of establishing and operating a facility, or a system of facilities;

(3) by a cooperative, subject to standard regulations.

Some of the facilities in two of these four states are now (1946) subject to supervision by a state bureau of markets or its equivalent and a third state is in process of establishing such supervision.[10]

CURRENT DEVELOPMENTS IN MARKETING AND THEIR POSSIBLE EFFECT UPON CONCENTRATION MARKETING FACILITIES

Experimental developments in distribution to improve the competitive position of fresh fruits and vegetables as compared with processed forms, should be of particular interest to southern producers, since the South as a fruit and vegetable producing area has been primarily interested in the fresh market. Many of such changes as may come about may be initiated in southern producing areas. For this reason any discussion of marketing facilities should consider the effects which future marketing practices may have upon design.

One of the current experimental developments in the distribution of fruits and vegetables is consumer packaging, sometimes called prepackaging, which may require some adjustments in various types of marketing facilities if packaging is done at the source.

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10 For a discussion of powers, limitations of authority, and advantages which may attach to this system see references listed under footnote nine.

Experimental operations have not yet furnished a basis for conclusions regarding the point at which prepackaging is likely to be done. Packaging at point of origin and destination both have advantages and disadvantages. If prepackaging becomes an established practice, certain items probably will be packaged at the source and other items at terminal points.

Prepackaging is essentially a processing function, and as such is subject to many of the problems which apply to the canning and freezing industries. If prepackaging develops extensively, a new marketing agent may be introduced into the distributive channel for fresh fruits and vegetables. If this "processor" should be located in the producing area, he may tend to replace the country shipper. This agent may maintain packaging and shipping facilities, and may attempt to assure himself a steady supply of produce through contracting with growers, but may also purchase part of his supply of some items through concentration markets as do many canners, packers of frozen foods, and country shippers.

Another of the current experimental developments in the distribution of fruits and vegetables is air transportation, which is, in a measure, tied up with prepackaging. Since the chief purpose of air transportation will be to put the product in the housewife's market basket as soon as possible after harvesting, it follows that the more of the washing, trimming, and packaging operation that is performed at the source (in those cases where it may be more efficiently performed at that point), the fewer time-consuming functions must be performed by receiving agencies. Also, the vital question of reduced bulk and weight for air cargo could force the removal of nonedible portions from any vegetable which can be hulled, husked, or stemmed. Prepackaging in some cases may, conversely, call for air transportation of any farm product from which the naturally protective pod or husk has been removed preliminary to packaging. Regardless of how well packaged or refrigerated, such produce must be delivered rapidly to the consumer.

The possibilities of future developments in the shipment of fruits and vegetables by air may have only a minor effect upon the type of concentration market facilities needed in the Southeast.

Because of the large investment involved in providing each producing community with a landing strip, together with auxiliary cold storage depots, a direct provision of facilities for air shipments will be largely impractical. Therefore, air tonnage probably will be trucked to established air fields from the packing shed or market area, particularly during the early stages of air freight service.

Designers of concentration facilities and packing sheds can adjust plans to such possible development by locating in the least congested area available. Other things being equal, access to high-

ways and rail sidings should receive primary consideration, but possible future developments should not be ignored.

Installation of grading and packing equipment has been extended in Georgia State Farmers' Markets in "feeder" areas since the date of this survey. This equipment may be observed at the Thomasville market. Farmers bring in produce, grade and pack it by use of this machinery, under the direction of the market manager, before it is offered for sale. This practice is justified by the belief that the farmer is made less dependent upon "middlemen" to perform grading and packing functions, and that as a result the farmer's outlet is broadened and his returns are increased.