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DIRECT MARKETING OF PRODUCE
The Shelby County Farmers' Market Case

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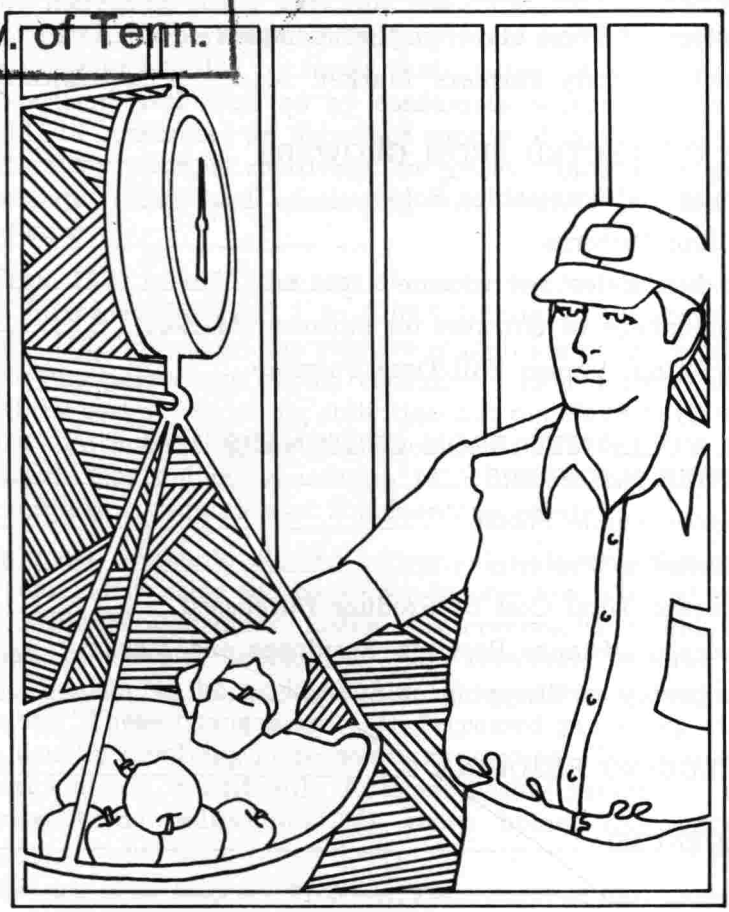

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Direct Marketing of Produce: The Shelby County Farmers' Market Case

by John R. Brooker and Earl G. Taylor*

SINCE the end of World War II, large food firms have been integrating into the food marketing system in the U.S. on a steadily increasing scale. [2] This integration has facilitated important gains in operational efficiency, as a partial result of the larger volumes handled by fewer participants. Also, the integration has been well received by consumers because it has made available to consumers an abundant supply of good quality food, and, for many years, at relatively low prices. However, beginning in the late 1960's and continuing into the 70's, prices have been rising.

From 1970 to 1975, the cost of marketing food in the United States increased from $71.1 to $103.7 billion, an increase of 46 percent. [10] However, the relative magnitude of the marketing margin (the percentage of the consumer's food dollar that goes toward the cost of marketing activities) has remained fairly stable. In 1970, the marketing margin accounted for 67 percent of the consumer's food dollar, whereas in 1975 it accounted for 65 percent, actually a reduction of 2 percentage points.

In most economic studies concerned with the demand for food, commodity price and consumer income are assumed to fluctuate, whereas consumer tastes, preferences, and habits are assumed to remain unchanged. [3] However, several major changes appear to be occurring in the consumers' food-buying behavior. "These changes are: (1) Increased purchases of basic foods, usually involving more home preparation, (2) a willingness to participate in multifamily food-purchasing groups . . . , (3) increased home cultivation, (4) more home preservation of

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foods . . . , and (5) greater patronage of farmers' markets, roadside markets, and pick-your-own offerings". [9] These five apparent changes emphasize the concern of consumers regarding nutritional intake and food costs. [16] This concern has important implications for the commercial food marketing system and for small farmers close to population centers.

Farmers and consumers are increasing their participation in the marketing of food. Consumer groups organized as multifamily purchasing groups (usually referred to as food-buying clubs or cooperatives) are growing rapidly. Also, individual consumer participation at roadside markets, at pick-your-own operations, and at traditional farmers' markets has increased in recent years in many regions of the Nation. Numerous reports containing discussions of the growth of these outlets have been published by trade papers such as the "Progressive Grocer" and "The Packer," by private associations such as the Georgia Farm Bureau; and by public agencies such as the Pennsylvania Department of Agriculture, the New Jersey Department of Agriculture, and the Cooperative League of the U.S. [18, 9, 16]

Interest in increased farmer-consumer participation in the marketing of food has also been expressed by the U.S. Congress. A bill entitled "Farmer-to-Consumer Direct Marketing Act of 1976" was passed during the second session of the 94th Congress. The purpose of the Act is . . . "to promote, through appropriate means and on an economically sustainable basis, the development and expansion of direct marketing of agricultural commodities from farmers to consumers". [5, p. 1]

The term "direct marketing" has been used in many articles and publications for any situation in which part or all of the marketing functions are performed by consumers or consumer groups. Thus, direct marketing may refer to a situation in which consumers perform the retailing functions by purchasing directly from wholesalers. On the other hand, it may refer to a situation in which consumers or farmers, or both, perform the wholesaling and retailing functions when they purchase in quantity directly from a producer for resale. In this report, use of the term "direct marketing" will be limited to its purest form, in which farm foods are sold directly by the producer to the consumer without the assistance of packers, shippers, processors, wholesalers, or retailers.

The direct marketing of farm foods by producers to consumers is primarily limited to foods that do not require extensive processing, because health regulations and processing requirements for dairy products, poultry, meats, bakery products, and numerous canned or frozen fruits and vegetables make their direct transfer from producers to consumers difficult. The objectives of this study were: 1) To examine the direct marketing of produce (fresh fruits and vegetables) in the study area through a farmer's market[1] outlet and 2) to evaluate the potential for growth of direct marketing of produce in the study area and in other areas.

BACKGROUND OF THE STUDY

The existing farmers' market in Memphis, Tennessee, the Shelby County Farmers' Market, was the source of data for the study reported herein. In this section of the report the Memphis trade area and the Shelby County population are briefly presented, the history of food marketing in Memphis is reviewed, and the operating characteristics of the farmers' market in Shelby County are described.

Memphis Trade Area

In 1973, the Bureau of the Census defined the Memphis Standard Metropolitan Statistical Area (SMSA) as consisting of Tipton County and Shelby County (including the City of Memphis) in Tennessee, Crittenden County in Arkansas, and Desoto County in Mississippi. This SMSA is the largest one in the area bounded by Dallas on the west, New Orleans on the south, Atlanta on the west, and St. Louis on the north. Trade and commerce generated from the Memphis SMSA dominates smaller regional areas such as Nashville, Tennessee; Jackson, Mississippi; and Little Rock, Arkansas. [1] The Mississippi-Arkansas-Tennessee Council of Governments projected Shelby County's population to increase from 750,314 in 1973 to 842,000 in 1980 and to 974,000 in 1990. [1]

Memphis, the largest urban area in Tennessee, is strategically located at the center of the Midsouth region.[2] The Memphis "trade area" covers 70 counties (Figure 1), and nearly all counties outside

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[1]A farmers' market is a specific geographic location where space and facilities are available for farmers' use in parking vehicles and in displaying produce and selling it directly to consumers.

[2]The area designated as the Midsouth covers 105 counties in six states—Alabama, Arkansas, Kentucky, Mississippi, Missouri, and Tennessee.

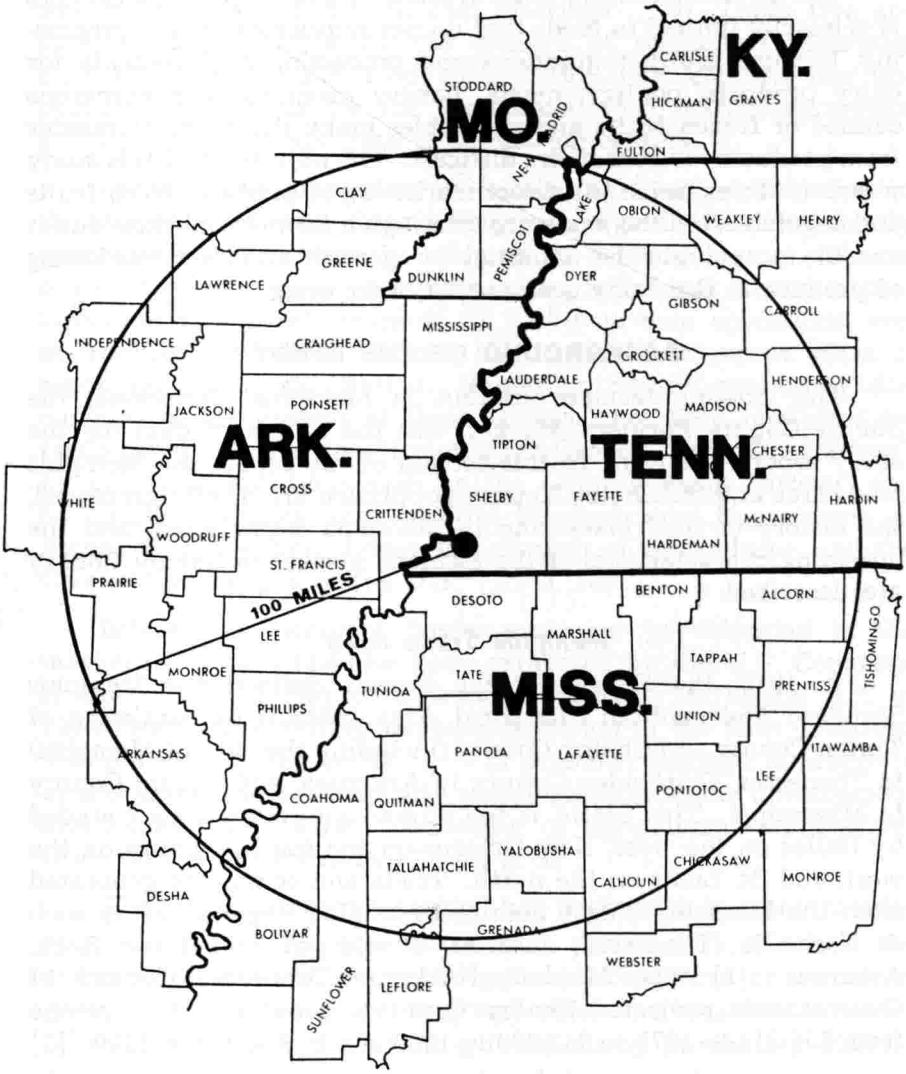

Figure 1. Memphis Trade Area, showing portion of the area within a 100-mile radius of Memphis.

the Memphis SMSA are rural and agricultural. [17] According to the 1969 Census of Agriculture, there were 82,943 farms in the 70 counties, and 63 percent had total sales of agricultural products of less than $5,000. Those farms are the potential suppliers of produce for direct-to-consumer marketing activity in the SCFM. In 1969, 9,403 farms in the 70 counties were growing fruits and vegetables on 67,149 acres. [11, 12, 13, 14, 15] About three-fourths of them are within a 100-mile radius of Memphis (Figure 1).

History of Food Marketing in Memphis

Memphis has shown an interest in food marketing facilities for more than 150 years. [7] About 1820, the first market was established at Auction Square. It was operated by private businessmen for about 25 years.

During the 1840's, the city constructed two facilities closer to the centers of population—the North Market at Poplar Street and Law Street (Danny Thomas Boulevard) and the South Market at Beale and Third Streets. The two facilities consisted of large sheds 300 feet long that housed meat stalls on one side and fruits and vegetables on the other. The standard rental was 25 cents for a wagon space. The markets closed at 10:30 a.m., but jobbers were permitted to peddle unsold produce through city streets.

For about 30 years, fruits, vegetables, and meats were sold only in North and South Markets. In fact, it was against the law for other retail stores in the city to sell these perishable foods. Then, in 1872 controls were relaxed so that grocery firms could sell fruits and vegetables. Later those firms added meats and became full-line grocery stores.

In 1896 the city once again entered the food business by constructing a large, three-story brick building on the South Market site to provide a public retail market. Farmers brought produce to the rear of the facility for purchase by the grocers and, thus, a wholesale market developed. By 1900 the location was no longer practical as a retail market, and the facility became predominantly a wholesale market.

In 1929, due to wholesalers' dissatisfaction with the facility on the South Market site, because of congestion, expanding demand, and inadequacy of the facility, the city relocated the market again. Sheds were constructed on the river slope at Front and Poplar Streets. This time, a cold storage plant was included.

In 1934 many wholesalers were discontent with the city administration of the market. As a result, a group of farmers formed the Shelby County Growers Association (SCGA) and developed facilities on 4 acres at Washington and High Streets in downtown Memphis. The new market, known as the Shelby County Farmers' Market (SCFM), remained in that location until the early 1950's, when the site became overcrowded. Then the SCGA relocated the SCFM from downtown Memphis to a 22-acre site in the northwest section of the city that is bounded by Scott Street, Cyprus Creek, and South Pershing Street extended. That location is 2½ miles northeast of the population center of Shelby County, and 3½ miles northeast of the population center of Memphis. The facilities occupy 14 acres of the 22-acre site.

Shelby County Farmers' Market

The SCFM market sales section contains two street-level, roofed farmers' sheds, each with 100 stalls that are separated by painted lines on the floor. In addition, five single-story buildings provide facilities for wholesalers, a restaurant, a market office, public restrooms, and a gatehouse to control ingress and provide security for the fenced site. At the gatehouse, entrance fees are collected from both buyers and sellers who enter the market during the local growing season.

Refrigerated storage space is maintained by wholesale firms and by jobbers who rent space in the farmers' sheds. The refrigerated storage space consists of a prefabricated cooler and a refrigerated trailer, both provided by the tenants at their expense. The only materials-handling equipment in the market is that used by individual wholesale firms primarily for street level unloading operations. General sanitation, trash pickup, and security are the responsibility of the market management. Water, overhead lighting, electric outlets, and general sanitation are provided to the farmers' sheds. Water is supplied to wholesale facility tenants; however, all electrical requirements, refrigeration, and interior sanitation are their individual responsibilities.

The farmers' market is open year-round; however, most of the direct farmer-to-consumer sales activity occurs from the middle of June through September. This period coincides with the produce harvesting season in the Midsouth.

Gate receipt records during the 14-week harvesting season in 1975 revealed that slightly more than 78,000 retail customers' vehicles entered the farmers' market site during that time. In addition to the retail traffic, 17,450 wholesale buyers' vehicles entered the market. The produce buyers, both retail and wholesale, were supplied fresh fruits and vegetables in about 12,520 trucks, as follows: Pickup trucks, 10,700; 1-ton trucks, 640; 1½-ton trucks, 250; 10-wheel trucks, 900; and 18-wheel trucks, 30.

The value of the SCFM as a direct-to-consumer outlet depends upon mutual benefit to both consumers and farmers. Farmers must be able to sell an adequate quantity at a satisfactory price and consumers must be satisfied with quantity, quality, and cost. In the next two sections of this report, we present data collected from growers and customers in the SCFM to provide insight into the value of direct marketing for both groups of participants.

DATA COLLECTED FROM GROWERS

During the summer of 1975, 150 growers in the SCFM were interviewed[3] and data were obtained on their direct marketing of produce. The data gathered covered fruits and vegetables sold, selling patterns, produce sales and income, dependence of growers on the SCFM as a produce outlet, and part-time versus full-time farmers. The interviews were conducted between 1:00 and 9:00 p.m. during a 1-week period in each of the months June, July, and August. The 150 growers interviewed were all of the growers in the market when the survey was conducted.

Fruits and Vegetables Sold

All growers surveyed were selling at least one produce item that they had produced; i.e.: they were growers, not jobber-retailers.[4] Eighteen types of produce items were sold by these growers (Table 1). Forty-three percent of the growers in the SCFM sold tomatoes, the most popular produce item sold, and 33

[3]Most of the field work was conducted by James Morris, a summer employee of the Department of Agricultural Economics and Rural Sociology.

[4]Jobber-retailers assemble small quantities of produce from local growers and wholesalers and resell the produce at either wholesale or retail. They perform an important function in the SCFM, but were excluded from the survey.

Table 1. Products sold by 150 growers, Shelby County Farmers' Market, Memphis, Tennessee, June-August, 1975

Item	Number of growers	Percentage of growers
Apples	5	3.3
Butterbeans	14	9.3
Cabbage	2	1.3
Cantaloupes	25	16.7
Cucumbers	10	6.7
Eggplant	4	2.7
Grapes	2	1.3
Okra	15	10.0
Peaches	12	8.0
Peas, southern	49	32.7
Peppers, all types	18	12.0
Plums	1	0.7
Potatoes	5	3.3
Snapbeans	22	14.7
Squash, yellow	17	11.3
Sweet corn	28	18.7
Tomatoes	65	43.3
Watermelons	15	10.0

percent sold southern peas, the second most popular produce item sold. The next three most popular produce items sold were sweet corn, cantaloupes, and snapbeans, sold by 19, 17, and 15 percent of the growers, respectively.

Selling Patterns

During the harvesting period for a particular crop, 55 percent of the growers made daily trips to the market and 35 percent made weekly trips (Table 2). The remaining 10 percent made selling trips to the market on an infrequent, irregular basis. About 3 percent of the growers were in the market for more than 2 days during a given selling trip.

Most of the growers specialized by selling only one or two products in the market. Of the 150 growers interviewed, eight (5 percent) sold five or more products.

A vital area of concern in the marketing of any product is the determination of price. Less than a third of the growers said they try to appraise the current supply and demand conditions and set prices accordingly. More than half of the growers said they merely ask other growers in the market the "going" price on that particular day.

Another area of concern to growers and to the management of a farmers' market is disposal outlets for excess produce. The disposition of excess or unsold produce when a grower decides he must leave the market can seriously affect a market's price stability. The survey revealed that 79 percent of the growers in the SCFM either destroy excess produce, feed it to livestock, sell it elsewhere, or give it away elsewhere. The other 21 percent reported that they "stay until it's sold" or sell it to a jobber-retailer. These growers then may continue to lower prices until

Table 2. Selling patterns of 150 growers in Shelby County Farmers' Market, Memphis, Tennessee, June-August, 1975

Item	Number of growers	Percentage of growers[a]
Month interviewed:		
June	56	37.3
July	79	52.7
August	15	10.0
Totals	150	100.0
Frequency of selling trips to market:		
Daily	73	54.5
Weekly	47	35.1
Other	14	10.4
No response	16	—
Totals	150	100.0
Selling time in market per trip:		
12 hours or less	107	75.9
13-24 hours	20	14.2
25-48 hours	10	7.1
49 or more hours	4	2.8
No response	9	—
Totals	150	100.0
Number of products sold per grower:		
One product only	73	48.7
Two products	36	24.0
Three products	18	12.0
Four products	15	10.0
Five or more products	8	5.3
Totals	150	100.0
Method used for determining price:		
Ask other growers the "going" price	85	59.9
Supply and demand conditions	40	28.2
Percent markup	12	8.5
Buyers set price	5	3.5
No response	8	—
Totals	150	100.1[b]

Table 2 (continued)

Item	Number of growers	Percentage of growers[a]
Outlets for excess produce:[c]		
Destroy it	60	40.5
Feed it to livestock at farm	29	19.6
Sell it to jobber-retailer	26	17.6
Sell it elsewhere	23	15.5
Give it away elsewhere	5	3.4
Stay until it is sold	5	3.4
No response	2	—
Totals	150	100.0
Sold produce through other Memphis outlets:		
Yes	23	15.3
No	127	84.7
Totals	150	100.0
Types of other Memphis produce outlets used:		
Retail grocers	14	66.7
Retail customers	3	14.3
Wholesaler	3	14.3
Truck jobber	1	4.8
None (including two "no responses")	129	—
Totals	150	100.1[b]
Sold produce for other growers:		
Yes	13	8.7
No	137	91.3
Totals	150	100.0
Selling location in market:		
Front shed	84	56.0
Rear shed	66	44.0
Totals	150	100.0
Sales in open ever required:[d]		
Yes	12	8.0
No	138	92.0
Totals	150	100.0

[a]Percentages are based on the number of growers that responded to a particular question.

[b]Does not equal 100 due to rounding of decimal values.

[c]Excess produce is produce unsold when the grower would like to leave the SCFM.

[d]Selling from a location unprotected by a roof.

they sell out under the pressure of time and, possibly, jobber-retailers. Such a clearing action would have the potential of undermining prices of the products for the growers remaining in the market and for the new growers arriving the next day. Another potential effect of such a clearing action would be the possibility that the purchasing jobber-retailers will offer the produce for sale in the market the next day, after its freshness has deteriorated, and customers may think they are purchasing "farm fresh" produce.

Most of the growers did not sell produce through any Memphis outlet other than the SCFM. The growers who reported selling produce through another outlet sold primarily to retail grocers.

Produce Sales and Income

Produce sales in the SCFM during the 1974 summer season totaled less than $5,000 for 86 percent of the growers. Nearly 10 percent sold from $5,000 to $10,000 worth of produce; and 4 percent had sales of $10,000 or more (Table 3). Total produce sales per grower ranged from $44 to more than $20,000. Obviously, the growers who had large sales in the SCFM were able to sell considerable quantities to local wholesalers who patronize the market. Such sales are a desirable consequence of operating a traditional farmers' market adjacent to or in conjunction with produce wholesalers.

When the growers were asked about their expectations regarding produce sales in the SCFM during the summer of the survey as compared with their sales of the previous year, 44 percent responded that they expected to sell a larger volume, 37 percent expected to sell about the same volume, and 19 percent expected to sell a smaller volume.

Table 3. Total produce sales in SCFM in 1974, percentage of total produce income from SCFM sales, and descriptive factors of 150 growers, Shelby County Farmers' Market, Memphis, Tennessee, June-August, 1975

Item	Number of growers	Percentage of growers[a]
Total produce sales in SCFM during 1974 season:		
Less than $5,000	87	86.1
$ 5,000-$ 9,999	10	9.9

Item	Number of growers	Percentage of growers[a]
$10,000-$14,999	1	1.0
$15,000-$19,999	1	1.0
$20,000 or more	2	2.0
No response	49	—
Totals	150	100.0
Sales expectation for 1975:		
Greater than last year	66	44.0
Same as last year	56	37.3
Less than last year	28	18.7
Totals	150	100.0
Percentage of total produce income obtained from SCFM sales:		
Less than 25%	23	15.6
25- 49%	10	6.8
50- 74%	19	12.9
75- 89%	14	9.5
90-100%	81	55.1
No response	3	—
Totals	150	99.9[b]
Percentage of total income from farming:		
Less than 30%	13	9.5
30- 59%	14	10.2
60- 89%	7	5.1
90-100%	103	75.2
No response	13	—
Totals	150	100.0
Number of years selling in SCFM:		
First year	20	13.3
2- 5 years	46	30.7
6-10 years	31	20.7
11-20 years	23	15.3
21-30 years	30	20.0
Totals	150	100.0
Distance from farm to market:		
50 miles or less	45	31.5
51- 75 miles	72	50.3
76-100 miles	21	14.7
101 or more miles	5	3.5
No response	7	—
Totals	150	100.0

[a]Percentages are based on the number of growers that responded to a particular question.

[b]Does not equal 100 due to rounding of decimal values.

An important consideration in the evaluation of a market outlet is the proportion of the grower's total produce production that is marketed through the outlet. Notably, 55 percent of the growers interviewed obtained 90-100 percent of their total produce income through sales in the SCFM, and 22 percent obtained less than 50 percent of their total produce income there.

Most of the growers depended on farming for 90-100 percent of their total annual income, whereas only a small percentage received less than 30 percent of their total annual income from farming.

Dependence of Growers on Farmers' Market

The growers were separated into two groups, based on their share of total produce income generated from sales in the SCFM. The first group, comprising 45 percent of the growers, received less than 90 percent of their total produce income from sales in the market (Table 4). The second group, comprising 55 percent of the growers, was considered to be highly dependent on the SCFM because they received 90-100 percent of their total produce income from sales in the market.

The average value of produce sales in the SCFM per grower in 1974 was slightly higher for the "less-than-90 percent" group than for the "90-100 percent" group, $3,070 and $2,915, respectively. In the "90-100 percent" group, 91 percent received less than $5,000 in produce sales in the market, whereas, in the "less-than-90 percent" group, 79 percent received less than $5,000. In both groups two growers reported produce sales in the SCFM of $10,000 or more.

Table 4. Relationship of growers' dependence on Shelby County Farmers' Market to produce sales, total income, and descriptive factors, Memphis, Tennessee, June-August, 1975

Item	Percentage of total produce income from sales in this market			
	Less than 90 percent		90-100 percent	
Number of growers[a]	66		81	
Percentage of growers[b]	44.9		55.1	
Average value of produce sales in SCFM, 1974 season	$3,069.93		$2,914.90	
	Number	Percent[b]	Number	Percent[b]
Total produce sales in SCFM during 1974 season:				
Less than $5,000	34	79.1	52	91.2

$ 5,000-$ 9,999	7	16.3	3	5.3
$10,000-$14,999	0	0.0	1	1.8
$15,000-$19,999	1	2.3	0	0.0
$20,000 or more	1	2.3	1	1.8
Sales expectation for 1975:				
Greater than last year	28	42.4	36	44.4
Same as last year	26	39.4	29	35.8
Less than last year	12	18.2	16	19.8
Percentage of total income from farming:				
Less than 30%	8	13.3	5	6.7
30- 59%	4	6.7	10	13.3
60- 89%	3	5.0	4	5.3
90-100%	45	75.0	56	74.7
Number of years selling in SCFM:				
First year	9	13.6	9	11.1
2- 5 years	23	34.8	23	28.4
6-10 years	10	15.2	21	25.9
11-20 years	9	13.6	13	16.0
21-30 years	15	22.7	15	18.5
Distance from farm to market (chi sq. = 6.95):[c]				
50 miles or less	20	31.3	24	31.2
51- 75 miles	29	45.3	43	55.8
76-100 miles	10	15.6	10	13.0
101 or more miles	5	7.8	0	0.0
Location of grower's farm:				
Tennessee	44	66.6	44	55.7
Arkansas	12	18.2	18	22.8
Mississippi	6	9.1	11	13.9
Missouri	4	6.1	6	7.6

[a]Three growers did not respond to the question as to the percentage of their produce income derived from sales in the SCFM.

[b]Percentages are based on the number of growers responding to a particular question.

[c]Statistically significant at the 90 percent level.

Sales expectations for the two groups were nearly identical. Both groups had more than twice as many growers who expected their sales in 1975 to be greater than in 1974 than expected their sales to be less than in 1974.

Dependence upon farming for total income was about equal for the two groups of growers. In both groups, 75 percent of the growers depended almost totally on farming for family income.

Notably, the distributions of growers strongly dependent on the SCFM ("90-100 percent" group) and the distributions of growers less dependent on the SCFM ("less-than-90 percent" group) were similar with respect to the number of years they had been selling on the market, distance from farm to market, and the state in which the farm was located. One meaningful observation was that 8 percent of the "less-than-90 percent" group and none of the "90-100 percent" group traveled more than 100 miles from farm to market.

The distribution of growers based on dependence on the SCFM differed significantly[5] with respect to the frequency of selling trips to the market (Table 5). The less dependent growers made

[5]Statistical significance based on chi square statistic calculated from contingency tables.

Table 5. Relationship of growers' dependence on Shelby County Farmers' Market to selling patterns, Memphis, Tennessee, June-August, 1975

Item	Percentage of total produce income from sales in this market[a]			
	Less than 90 percent		90-100 percent	
	Number	Percent[b]	Number	Percent[b]
Month interviewed:				
June	26	39.4	28	34.6
July	33	50.0	46	56.8
August	7	10.6	7	8.6
Frequency of selling trips to market (chi. sq. = 6.73):[c]				
Daily	33	60.0	40	51.3
Weekly	13	23.6	33	42.3
Other	9	16.4	5	6.4
Selling time in market per trip:				
12 hours or less	46	75.4	60	75.9
13-24 hours	8	13.1	12	15.2
25-48 hours	4	6.6	6	7.6
49 or more hours	3	4.9	1	1.3
Method used for determining price:				
Ask other growers the "going" price	38	60.3	46	59.7
Supply and demand conditions	19	30.2	20	26.0
Percent markup	5	7.9	7	9.1
Buyers set price	1	1.6	4	5.2

Table 5—Continued

Item	Percentage of total produce income from sales in this market[a]			
	Less than 90 percent		90-100 percent	
	Number	Percent[b]	Number	Percent[b]
Outlets for excess produce:				
Destroy it	24	36.4	34	42.5
Feed it to livestock at farm	12	18.2	17	21.3
Sell it to jobber-retailer	13	19.7	13	16.3
Sell it elsewhere	14	21.2	9	11.3
Give it away elsewhere	0	0.0	5	6.3
Stay until it is sold	3	4.5	2	2.5
Sold produce through other Memphis outlets (chi sq. = 10.72):[d]				
Yes	18	27.3	5	6.2
No	48	72.7	76	93.8
Types of other Memphis produce outlets used:				
Retail grocers	11	64.7	3	75.0
Retail customers	3	17.6	0	0.0
Wholesaler	2	11.8	1	25.0
Truck jobber	1	5.9	0	0.0
Sold produce for other growers (chi sq. = 3.55):[e]				
Yes	9	13.6	3	3.7
No	57	86.4	78	96.3
Selling location in market:				
Front shed	37	56.1	45	55.6
Rear shed	29	43.9	36	44.4
Sales in open ever required:				
Yes	6	9.1	6	7.4
No	60	90.9	75	92.6

[a]Three growers did not respond to the question concerning the percentage of their produce income derived from sales in the SCFM.

[b]Percentages are based on the number of growers responding to a particular question.

[c]Statistically significant at the 95 percent level.

[d]Statistically significant at the 99 percent level.

[e]Statistically significant at the 90 percent level.

more daily selling trips and more irregular selling trips than did the growers who were strongly dependent on the market.

The distribution of growers who sold produce through other Memphis outlets and those who sold produce for other growers also differed significantly. However, the distributions of the two grower groups ("less-than-90 percent" and "90-100 percent") were similar with respect to selling time per trip, method used for determining price, outlets for excess produce, types of other Memphis produce outlets used, selling location in the market, and number of times required to sell in the open.

Although a few significant[6] differences related to dependence on the SCFM were revealed, generally the dependence factor did not substantially affect selling patterns or total produce sales in the market.

Part-Time Versus Full-Time Farmers

Growers who reported receiving 90 percent or more of their total annual income from farming were classified as full-time farmers. Based on this classification, 75 percent of the growers were full-time farmers and averaged $3,412 in produce sales in the SCFM in 1974 (Table 6). The part-time farmers averaged $1,751 in produce sales, about 50 percent of the full-time farmers' average.

Even though the average total produce sales in the market for full-time farmers was twice that of part-time farmers, most growers in both groups reported sales of less than $5,000. However, all growers in the sales categories of $10,000 to $20,000 or more were classified as full-time farmers.

Sales expectations for 1975 as compared with sales in 1974 were similar for full-time and part-time farmers. The full-time farmers were slightly more optimistic than the part-time farmers.

More than half of both groups received 90-100 percent of their total produce income from sales in the SCFM. Twice as many full-time farmers as part-time farmers obtained less than 25 percent of their total produce income from sales in this market.

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[6]Statistical significance based on chi square statistic calculated from contingency tables.

Table 6. Relationship of part-time and full-time farming by growers using the Shelby County Farmers' Market to total produce sales in SCFM in 1974, percentage of total produce income from SCFM sales, and descriptive factors, Memphis, Tennessee, June-August, 1975

Item	Part-time farmers		Full-time farmers	
Number of growers[a]	34		103	
Percentage of growers[b]	24.8		75.2	
Average value of produce sales in SCFM, 1974 season	$1,750.96		$3,411.90	
	Number	Percent[b]	Number	Percent[b]
Total produce sales in SCFM during 1974 season:				
Less than $5,000	22	88.0	59	86.8
$ 5,000-$ 9,999	3	12.0	6	8.8
$10,000-$14,999	0	0.0	0	0.0
$15,000-$19,999	0	0.0	1	1.5
$20,000 or more	0	0.0	2	2.9
Sales expectation for 1975:				
Greater than last year	14	41.2	47	45.6
Same as last year	14	41.2	38	36.9
Less than last year	6	17.6	18	17.5
Percentage of total produce income obtained from SCFM sales:				
Less than 25%	3	8.8	17	16.8
25- 49%	5	14.7	5	5.0
50- 74%	4	11.8	14	13.9
75- 89%	3	8.8	9	8.9
90-100%	19	55.9	56	55.4
Number of years selling in SCFM:				
First year	6	17.6	12	11.7
2- 5 years	8	23.5	34	33.0
6-10 years	7	20.6	21	20.4
11-20 years	3	8.8	17	16.5
21-30 years	10	29.4	19	18.4
Distance from farm to market:				
50 miles or less	9	28.1	34	33.3
51- 75 miles	19	59.4	50	49.0
76-100 miles	4	12.5	13	12.7
101 or more miles	0	0.0	5	4.9
Location of grower's farm:				
Tennessee	23	69.7	59	57.8
Arkansas	6	18.2	21	20.6
Mississippi	2	6.1	14	13.7
Missouri	2	6.1	8	7.8

[a]Thirteen growers did not respond to the question concerning whether they were full-time or part-time growers.

[b]Percentages are based on the number of growers responding to a particular question.

A significant[7] difference occurred with respect to the frequency of selling trips (Table 7). Full-time farmers were more concentrated in the daily visit category than were the part-time farmers. Nearly 20 percent of the part-time farmers visited the market on an irregular or infrequent basis.

[7]Statistical significance based on chi square statistic calculated from contingency tables.

Table 7. Relationship of part-time and full-time farming by growers using the Shelby County Farmers' Market to selling patterns, Memphis, Tennessee, June-August, 1975

Item	Part-time farmers[a]		Full-time farmers[a]	
	Number	Percent[b]	Number	Percent[b]
Month interviewed:				
June	19	55.9	32	31.1
July	14	41.2	58	56.3
August	1	2.9	13	12.6
Frequency of selling trips to market (chi. sq. = 4.62):[c]				
Daily	12	38.7	54	58.7
Weekly	13	41.9	30	32.6
Other	6	19.4	8	8.7
Selling time in market per trip:				
12 hours or less	25	78.1	73	73.7
13-24 hours	7	21.9	13	13.1
25-48 hours	0	0.0	10	10.1
49 or more hours	0	0.0	3	3.0
Method used for determining price:				
Ask growers the "going" price	21	61.8	58	58.6
Supply and demand conditions	8	23.5	29	29.3
Percent markup	3	8.8	9	9.1
Buyers set price	2	5.9	3	3.0
Disposal outlets for unsold produce:				
Destroy it	13	38.2	42	41.6
Feed it to livestock at farm	4	11.8	23	22.8
Sell it to jobber-retailer	1	2.9	4	4.0
Sell it elsewhere	6	17.6	13	12.9
Give it away elsewhere	1	2.9	4	4.0
Stay until it is sold	2	5.9	3	3.0
Sold produce through other Memphis outlets:				
Yes	2	5.9	18	17.5
No	32	94.1	85	82.5

Table 7 (continued)

Item	Part-time farmers[a]		Full-time farmers[a]	
	Number	Percent[b]	Number	Percent[b]
Types of other Memphis produce outlets used:				
Retail grocers	1	50.0	13	76.5
Retail customers	0	0.0	2	11.8
Wholesaler	1	50.0	2	11.8
Truck jobbers	0	0.0	0	0.0
Sold produce for other growers:				
Yes	5	14.7	6	5.8
No	29	85.3	97	94.2
Selling location in market:				
Front shed	21	61.8	53	51.5
Rear shed	13	38.2	50	48.5
Sales in open ever required:				
Yes	1	2.9	11	10.7
No	33	97.1	92	89.3

[a]Thirteen growers did not respond to the question concerning whether they were full-time or part-time growers.

[b]Percentages are based on the number of growers responding to a particular question.

[c]Statistically significant at the 90 percent level.

DATA COLLECTED FROM CUSTOMERS AND OTHER SHOPPERS

During the same 3 weeks in which the growers were interviewed, 200 shoppers in the SCFM, selected at random, were interviewed.[8] Information was obtained on socioeconomic factors and purchasing patterns, and relationships between socioeconomic factors and purchasing patterns were identified.

Socioeconomic Factors

Most shoppers, 55 percent, were in the 40- to 59-year age group (Table 8). The second largest age group, 35 percent, was the 20- to 39-year age group. Only 10 percent of the interviewed shoppers were 60 years of age or older group. Noticeably absent were any shoppers in the under 20 age group.

[8]Wholesale customers who purchased for resale were not interviewed.

Table 8. Socio-economic factors for 200 shoppers, Shelby County Farmers' Market, Memphis, Tennessee, June-August 1975

Item	Number of shoppers	Percentage of shoppers[a]
Age of shopper:		
Under 20	0	0.0
20-39	67	34.7
40-59	106	54.9
60 and over	20	10.4
No response	7	—
Totals	200	100.0
Annual family income:		
Less than $5,000	9	4.6
$ 5,000-$ 9,999	47	23.9
$10,000-$14,999	52	26.4
$15,000 and over	89	45.2
No response	3	—
Totals	200	100.1[b]
Sex of shopper:		
Single female	5	2.5
Single male	9	4.6
Family group	65	33.0
Male-female couple	85	43.1
Couple of same sex	33	16.8
No response	3	—
Totals	200	100.0
Location of shopper's residence:		
Shelby County, Tennessee	183	91.5
Tennessee (excluding Shelby Co.)	11	5.5
Mississippi	3	1.5
Arkansas	2	1.0
Kentucky	1	0.5
Totals	200	100.0
Distance from residence to market:		
Less than 5 miles	56	29.9
5- 9.9 miles	56	29.9
10-14.9 miles	44	23.5
15-19.9 miles	11	5.9
20 miles or more	20	10.7
No response	13	—
Totals	200	99.9[b]

[a]Percentages are based on the number of shoppers responding to a particular question.

[b]Does not equal 100 due to rounding of decimal values.

Annual family income for 45 percent of the shoppers was reported to be $15,000 or greater.[9] The $10,000 to $14,999 income group contained 26 percent of the responding shoppers and was closely followed by the $5,000 to $9,999 income group with 24 percent. The lowest annual family income category of under $5,000 contained less than 5 percent of the shoppers. Clearly, upper income shoppers were utilizing the SCFM, and the market was not predominantly patronized by lower income families.

Most of the shoppers interviewed, 43 percent, were shopping with a member of the opposite sex. Family groups were next in importance with 33 percent of the shoppers. Somewhat surprising was the small number of unaccompanied female shoppers (2.5 percent). Their small number may indicate their concern regarding the location and environment of the market.

Most of the shoppers, 92 percent, were residents of Shelby County, Tennessee. However, 6 percent of the shoppers were residents of other Tennessee counties, and a combined total of 3 percent were residents of Mississippi, Arkansas, and Kentucky.

Most of the shoppers interviewed on the SCFM (60 percent) were less than 10 miles from home. Of those shoppers, one-half lived less than 5 miles from the market. Nearly a fourth of the shoppers lived between 10 and 14.9 miles from the market (Table 8). A few shoppers (6 percent) had residences that were 15 to 19.9 miles away from the market, and 11 percent lived 20 or more miles from the market.

Purchasing Patterns

Twenty-four kinds of fruits and vegetables were purchased by the 200 shoppers included in the survey (Table 9). The shoppers' lists of purchased produce items contained six fruits and vegetables that were not produced and sold by any of the 150 surveyed growers. Those six items, and many of the other items, were sold to customers by small independent jobber-retailers. The jobber-retailers purchase many items from growers in bulk containers at wholesale prices and resell them in smaller retail units.

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[9]Median family income in Memphis (1975) was estimated to be $12,692, which was calculated by multiplying the 1969 Bureau of Census value of $8,646 by the consumer Price Index of 146.8 from the Department of Labor.

Table 9. Products purchased by 187 of 200 shoppers interviewed, Shelby County Farmers' Market, Memphis, Tennessee, June-August, 1975

Item	Number of customers	Percentage of customers[a]
Apples	5	2.7
Bananas	1	0.5
Butterbeans	22	11.8
Cabbage	1	0.5
Cantaloupes	23	12.3
Cucumbers	15	8.0
Eggplant	2	1.1
Flowers, cut	2	1.1
Grapes	1	0.5
Honeydew melons	1	0.5
Lettuce	1	0.5
Molasses	2	1.1
Okra	25	13.4
Onions	8	4.3
Peaches	57	30.5
Peas, southern	62	33.2
Peppers, all types	19	10.2
Plums	9	4.8
Potatoes	7	3.8
Potted Plants	1	0.5
Pumpkins	1	0.5
Snapbeans	35	18.7
Squash, yellow	16	8.6
Sweet corn	55	29.4
Tomatoes	72	38.5
Turnip greens	3	1.6
Watermelons	56	30.0

[a]Percentages are based on the 187 customers who made a purchase on the day they were interviewed.

They also bought supplies from other local wholesalers to be able to display a larger variety of items than just those grown and sold by "local" growers.

The produce item purchased most often was tomatoes, which was purchased by 38 percent of the surveyed customers who made a purchase on the market (Table 10). Next, in order of sales, were southern peas, peaches, watermelons, and sweet corn. Five other produce items were also purchased by more than 10 percent of the customers.

Table 10. Purchasing or shopping patterns of 200 shoppers interviewed, Shelby County Farmers' Market, Memphis, Tennessee, June-August, 1975

Item	Number of customers or shoppers	Percentage of customers or shoppers[a]
Products purchased:		
Tomatoes	72	38.5
Peas, southern	62	33.2
Peaches	57	30.5
Watermelons	56	30.0
Sweet corn	55	29.4
Snapbeans	35	18.7
Okra	25	13.4
Cantaloupes	23	12.3
Butterbeans	22	11.8
Peppers, all types	19	10.2
Squash, yellow	16	8.6
Cucumbers	15	8.0
Others[b]	45	24.1
Number of products purchased:		
One product	32	17.1
Two products	54	28.8
Three products	52	27.8
Four products	32	17.1
Five or more products	17	9.1
Totals	187[c]	99.9[d]
Total cost of purchases:		
Less than $5.00	21	11.9
$ 5.00-$ 9.99	60	34.1
$10.00-$14.99	51	29.0
$15.00-$19.99	25	14.2
$20.00-$49.99	19	10.8
No response	11	—
Totals	187[c]	100.0
Frequency of shopping trips to market:		
Daily	6	4.2
Weekly	57	39.6
Biweekly	12	8.3
Monthly or less frequently	69	47.9
No response	56	—
Totals	200	100.0
First trip to market:		
Yes	21	10.5
No	179	89.5
Totals	200	100.0

Table 10 (continued)

Item	Number of customers or shoppers	Percentage of customers or shoppers[a]
Shopper's source of produce when market is closed:		
Full-line grocery stores	50	46.7
Specialty produce stores	43	40.2
Do not buy fresh	11	10.3
Other sources	3	2.8
No response	93	—
Totals	200	100.0
Reason for shopping at market:		
Prices	36	18.8
Quality	62	32.5
Volume	51	26.7
Recreational outing	19	9.9
Convenient location	10	5.2
Other	13	6.8
No response	9	—
Totals	200	99.9[d]

[a]Percentages are based on the number of shoppers or customers responding to a particular question.

[b]Other products purchased included: Plums, honeydews, lettuce, potatoes, apples, eggplant, bananas, cabbage, grapes, squash, pumpkins, turnip greens, potted plants, flowers, and molasses.

[c]Percentages for products purchased, number of products purchased, and total cost of purchase are based on 187 purchasers of produce of the 200 shoppers interviewed. Other percentages are based on the full number of 200 shoppers interviewed.

[d]Does not equal 100 due to rounding of decimal values.

Few customers, 9 percent, bought five or more products. Most of the customers purchased two or three products. Customers evidently use the market for obtaining specialty items.

Slightly more than a third of the customers buying on the day they were interviewed spent $5.00 to $10.00. Twenty-nine percent of the customers spent $10.00 to $15.00 on produce items. The number of customers who spent $20.00 or more was almost as large as the number who spent less than $5.00. The largest single customer purchase was reported to be $35.00.

Another important factor considered was the frequency of shoppers' trips to the SCFM. As expected, very few shoppers

visited the market daily. Nearly half of the shoppers, 48 percent, visited the market on a monthly basis, or even less frequently. However, 40 percent of the shoppers visited the market on a weekly basis.

Because the SCFM operates on a seasonal basis, another factor of concern with respect to the purchasing patterns of market shoppers was the shoppers' source of produce during the off season. Somewhat surprisingly, 10 percent said they did not buy fresh produce when it was not available at the SCFM. Most shoppers, 87 percent, reported that they bought fresh produce from full-line grocery stores or specialty produce stores during the off season.

Prices, quality, and volume were the predominant reasons given by shoppers for shopping in the SCFM. Of these reasons, quality was noted by the largest percentage (33 percent) of the shoppers. Almost 10 percent of the shoppers interviewed considered their trip to the market to be a recreational-type outing in addition to a shopping trip. Thus, the number of family groups reported earlier was at least partly explained. A few of those interviewed said they shopped at the market because they enjoyed buying food direct from the farmer, or they thought they were helping the farmer by their direct purchase of produce.

Average Total Cost of Produce Purchased

The average total cost per customer of the produce bought on the SCFM was $10.49 (Table 11), excluding those customers who did not respond to this question and shoppers who did not buy produce. Customers who reported that volume available was an important reason for shopping at the market spent more money, averaging $11.98, than did customers specifying other reasons. The lowest "average total cost of purchases" was by the customers who said they shopped at the market because it was a convenient location.

Neither the age of customers nor the level of annual family income had a consistent effect on the average total cost of produce purchased (Table 12). Average total cost of produce purchased varied from $9.31 for the families with less than $5,000 annual income to $10.98 for the families with incomes of $15,000 or more. The average total cost of produce bought by customers in the 40-59 year age group was higher than that of produce bought by the other two age groups.

Table 11. Relationship of cost of produce purchased and distance traveled to purchasing patterns of 187 customers, Shelby County Farmers' Market, Memphis, Tennessee, June-August, 1975

Item	Average total cost of produce purchased[a]	Average distance from residence to market[a]
	Dollars	Miles
Total	10.49	10.3
Total cost of purchases:		
Less than $5.00	2.69	10.4[b]
$ 5.00-$ 9.99	6.75	7.8[b]
$10.00-$14.99	10.78	7.6[b]
$15.00-$19.99	15.66	14.1[b]
$20.00-$49.99	23.32	24.1[b]
Frequency of customer trips to market:		
Daily	14.75	11.3
Weekly	9.88	7.8
Biweekly	11.60	8.5
Monthly or less	11.53	10.8
First trip to market:		
Yes	10.49	15.0
Customers' source of produce when market closed:		
Full line grocery store	11.26	10.5[c]
Specialty produce store	10.15	6.1[c]
Do not buy fresh	9.36	10.2[c]
Other sources	8.00	30.7[c]
Reason for shopping at market:		
Prices	9.96	12.5
Quality	10.27	10.6
Volume available	11.98	8.2
Recreational outing	10.25	15.2
Convenient location	9.14	4.1
Other	9.77	7.7

[a]Averages for total cost of purchase and distance are based on 187 purchasers of produce of the 200 shoppers interviewed.

[b]Statistically significant at the 99 percent level with an F ratio of 4.30.

[c]Statistically significant at the 95 percent level with an F ratio of 3.17.

Table 12. Relationship of cost of produce purchased and distance traveled to socio-economic factors for 187 customers, Shelby County Farmers' Market, Memphis, Tennessee, June-August, 1975

Item	Average total cost of produce purchased[a]	Average distance from residence to market[a]
	Dollars	Miles
Age of customer:		
20-39 years	9.92	10.1
40-59 years	11.28	10.4
60 years and over	10.18	13.5
Annual family income:		
Less than $5,000	9.31	5.8
$ 5,000-$ 9,999	10.24	10.6
$10,000-$14,999	9.98	8.6
$15,000 and over	10.98	11.5
Sex of customer:		
Single female	9.20	4.0
Single male	6.72	5.6
Family group	11.23	13.7
Male-female couple	10.31	8.9
Couple of same sex	11.22	9.2
Location of customer residence:		
Shelby County, Tennessee	9.97[b]	7.7
Tennessee (excluding Shelby Co.)	14.67[b]	20.4
Mississippi	16.00[b]	62.5
Arkansas	15.50[b]	35.0
Kentucky	30.00[b]	140.0
Distance from residence to market:		
Less than 5 miles	9.11[c]	2.5
5- 9.9 miles	9.68[c]	6.2
10-14.9 miles	10.62[c]	11.0
15-19.9 miles	9.88[c]	15.3
20 miles or more	15.13[c]	39.4

[a]Averages for total cost of purchase and distance are based on 187 purchasers of produce of the 200 shoppers interviewed.

[b]Statistically significant at the 99 percent level with an F ratio of 5.35.

[c]Statistically significant at the 99 percent level with an F ratio of 3.73.

The average total cost of produce purchased was lower for Shelby County residents than for other Tennessee residents and out-of-state customers. The differences in these average purchases was significant[10] and may reflect the larger purchases that might be made by some of those who travel longer distances and shop less often. This hypothesis was supported by the significant variation in purchases associated with distance from residence to market.

The average total cost of produce purchased by customers shopping with another person or with family members was higher than that of produce purchased by either single male or female shoppers. The average total cost of produce purchased by single males was $6.72, which was the lowest value for any of the five customer categories examined.

Neither the month nor the day of the week in which the customer was shopping had a significant effect upon the average total cost of produce purchased. The average total cost was lower on Wednesday and Thursday and higher on all the other days of the week (Table 13). Saturday and Sunday were the best days of the week in average total cost of produce purchased, $11.77 and $10.74, respectively.

Customers' purchases were significantly[10] affected by the time the customers patronized the SCFM. The two time periods during which the average total cost of produce purchased was highest was from 3 to 4 p.m. and 8 to 9 p.m. These two times of highest purchase may reflect the desire of growers to "sell-out" so they can return home. By midafternoon, some growers may lower prices to entice customers to increase purchases so they can "sell-out" and return home before dinner. By 8 p.m., some of the remaining growers may lower prices to increase sales so they may return home that evening with an empty truck, or at least to have made enough sales to pay for the trip.

Average Distance Between Residence and Market

The average distance between customers' residence and the market was 10.3 miles (Table 11). A 10-mile radius extending from the market encompasses all of the residential areas in Shelby

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[10]Statistical significance based on F ratio statistic calculated from one-way analysis of variance.

County that have a population density of 15 or more persons per acre. [1]

The average distance traveled from residence to market differed significantly when categorized by the total cost of produce purchased. Except for the customers who purchased less than $10.00 in produce, the average total cost of produce purchased increased as the average distance between residence and market increased.

Surprisingly, the customers who visited the market on a daily basis during the summer season averaged 11.3 miles between residence and market. This distance was greater than that traveled by customers who visited the market on a weekly, bimonthly, or monthly basis. The shortest distance was traveled by the weekly customers, who averaged 7.8 miles.

Family groups, one of the five customer classifications under the title "sex of customer" (Table 12), averaged traveling a considerably longer distance between residence and market (13.7 miles) than those in the other four customer classifications. Single females averaged the shortest distance (4.0 miles).

Month the customers were interviewed and time of day they were shopping did not have a significant relationship with the distance traveled, yet the day of the week did have a significant[11] relationship (Table 13). On Mondays and Fridays, the average distances traveled between residence and market were 7.2 and 7.9 miles, respectively. In contrast, on Saturdays, the average distance traveled was 25.3 miles.

Frequency of Shopping at SCFM

All shoppers were asked whether they shopped at the SCFM regularly or occasionally. Three-fourths said they shopped there regularly and one-fourth said they shopped there occasionally. The latter included "first-time" as well as "repeat" shoppers.

The average distance traveled between the regular shopper's residence and the market was less than half that traveled by the

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[11]Statistical significance based on F ratio statistic calculated from one-way analysis of variance.

Table 13. Relationship of distance traveled and produce purchased to time, day, and month in which 200 people were shopping in Shelby County Farmers' Market, Memphis, Tennessee, June-August, 1975

Item	Number of shoppers	Average total cost of produce purchased[a]	Average distance from residence to market[a]
		Dollars	Miles
Month interviewed:			
June	88	10.50	11.5
July	63	10.18	10.7
August	49	10.88	7.6
Day of week interviewed:			
Sunday	37	10.74	10.8[c]
Monday	20	10.63	7.2[c]
Tuesday	27	11.10	8.3[c]
Wednesday	26	9.61	8.8[c]
Thursday	18	9.47	9.9[c]
Friday	54	10.30	7.9[c]
Saturday	18	11.77	25.3[c]
Time of day interviewed:			
1-2 p.m.	17	9.88[b]	17.1
2-3 p.m.	13	10.58[b]	9.2
3-4 p.m.	9	16.42[b]	10.2
4-5 p.m.	15	7.37[b]	12.8
5-6 p.m.	15	9.29[b]	18.9
6-7 p.m.	18	9.88[b]	6.9
7-8 p.m.	63	10.08[b]	8.3
8-9 p.m.	50	12.07[b]	8.8

[a]Averages for total cost of purchase and distance are based on 187 purchasers of produce of the 200 shoppers interviewed.

[b]Statistically significant at the 90 percent level, with an F ratio of 2.04.

[c]Statistically significant at the 99 percent level, with an F ratio of 3.34.

occasional shopper (Table 14). The distance traveled by regular and occasional shoppers differed significantly.[12]

The percentage of regular and occasional shoppers in each of the subgroupings of age, income, and sex was approximately equal.

The distribution of regular and occasional shoppers for the five purchase-cost categories differed significantly[12] (Table 15). A

[12]Statistical significance based on chi square statistic calculated from contingency tables.

Table 14. Relationship of frequency of shopping at the Shelby County Farmers' Market to selected socio-economic factors for 195 shoppers, Memphis, Tennessee, June-August, 1975

Item	Frequency of shopping			
	Regularly		Occasionally	
Number of shoppers[a]	147		48	
Percentage of shoppers[b]	75.4		24.6	
Average distance of residence from market (miles)	8.0		16.9	
	Number	Percent[b]	Number	Percent[b]
Distance from residence to market (chi. sq. = 8.60):[c]				
Less than 5 miles	46	32.9	10	23.3
5- 9.9 miles	47	33.6	8	18.6
10-14.9 miles	28	20.0	14	32.6
15-19.9 miles	7	5.0	4	9.3
20 miles or more	12	8.6	7	16.3
Location of shopper's residence:				
Shelby County, Tennessee	139	94.6	40	83.3
Tennessee (excluding Shelby Co.)	6	4.1	5	10.4
Mississippi	2	1.4	0	0.0
Arkansas	0	0.0	2	4.2
Kentucky	0	0.0	1	2.1
Age of shopper:				
20-39 years	45	31.9	21	44.7
40-59 years	82	58.2	21	44.7
60 years and over	14	9.9	5	10.6
Annual family income:				
Less than $5,000	6	4.2	2	4.2
$ 5,000-$ 9,999	34	23.6	13	27.1
$10,000-$14,999	38	26.4	12	25.0
$15,000 or more	66	45.8	21	43.8
Sex of shopper:				
Single female	4	2.8	1	2.1
Single male	7	4.8	2	4.3
Family group	46	31.7	16	34.0
Male-female couple	61	42.1	22	46.8
Couple of same sex	27	18.6	6	12.8

[a]Five shoppers did not respond to the question concerning whether they shopped at the market regularly or occasionally.

[b]Percentages are based on number of shoppers who responded to a particular question.

[c]Statistically significant at the 90 percent level.

Table 15. Relationship of frequency of shopping at the Shelby County Farmers' Market to purchasing or shopping patterns of 195 shoppers, Memphis, Tennessee, June-August, 1975

Item	Frequency of shopping			
	Regularly		Occasionally	
Number of shoppers[a]	147		48	
Percentage of shoppers[b]	75.4		24.6	
Average total purchase	$10.75		$9.41	
	Number	Percent[b]	Number	Percent[b]
Total cost of purchase (chi sq. = 12.80):[c]				
Less than $5.00	10	7.6	11	27.5
$ 5.00-$ 9.99	47	35.6	12	30.0
$10.00-$14.99	41	31.1	9	22.5
$15.00-$19.99	21	15.9	3	7.5
$20.00-$49.99	13	9.8	5	12.5
Shopper's source of produce when market is closed:				
Full-line grocery stores	42	45.2	8	61.5
Specialty produce stores	40	43.0	2	15.4
Do not buy fresh	10	10.8	1	7.7
Other sources	1	1.1	2	15.4
Month interview conducted (chi-sq. = 22.91):[d]				
June	50	34.0	35	72.9
July	52	35.4	9	18.8
August	45	30.6	4	8.3
Reason for shopping at market:				
Prices	26	18.3	10	22.2
Quality	43	30.3	16	35.6
Quantity	42	29.6	8	17.8
Recreational outing	12	8.5	7	15.6
Convenient location	10	7.0	0	0.0
Other	9	6.3	4	8.9
Day of week:				
Sunday	26	17.7	10	20.8
Monday	17	11.6	3	6.3
Tuesday	22	15.0	4	8.3
Wednesday	19	12.9	6	12.5
Thursday	15	10.2	3	6.3
Friday	38	25.9	14	29.2
Saturday	10	6.8	8	16.7

Table 15 (continued)

Item	Frequency of shopping			
	Regularly		Occasionally	
	Number	Percent[b]	Number	Percent[b]
Time of day:				
1-2 p.m.	11	7.5	6	12.5
2-3 p.m.	8	5.4	5	10.4
3-4 p.m.	5	3.4	4	8.3
4-5 p.m.	9	6.1	6	12.5
5-6 p.m.	9	6.1	5	10.4
6-7 p.m.	16	10.9	1	2.1
7-8 p.m.	46	31.3	14	29.2
8-9 p.m.	43	29.3	7	14.7

[a]Five shoppers did not respond to the question as to whether they were regular or occasional shoppers at the SCFM.

[b]Percentages are based on number of shoppers who responded to a particular question.

[c]Statistically significant at the 95 percent level.

[d]Statistically significant at the 99 percent level.

much larger percentage of the occasional shoppers (28 percent) than of the regular shoppers (8 percent) bought less than $5.00 worth of produce the day interviewed.

Most of the occasional shoppers visited the market during the first month of the season, 73 percent in June. The distribution of regular shoppers among the 3 months of the summer season was quite uniform. Since most of the occasional shoppers in June were making a "first-trip" to the SCFM, advertising and promotion of the market throughout the season might attract a few more "new" shoppers.

The largest percentage of occasional shoppers, 36 percent, were attracted to the market in search of quality produce. None of the occasional shoppers reported that they were shopping at the market because of its convenient location, and only 7 percent of the regular shoppers were there because of location. As with the occasional shoppers, the largest percentage of regular shoppers (30 percent) were looking for quality produce.

The distribution of occasional shoppers throughout the afternoon and early evenings was fairly uniform. The smallest percentage of occasional shoppers interviewed (2 percent) were shop-

ing between 6 and 7 p.m., just before the largest percentage interviewed (29 percent) between 7 and 8 p.m. The largest percentage of regular customers interviewed (72 percent) were shopping throughout the evening hours from 6 to 9 p.m.

CONCLUDING REMARKS

THE VOLUME of produce sold directly to customers through a farmers' market outlet is small when compared with the total volume of produce sales. One basic restraint to such direct sales is the limited time period during which locally grown produce is available. Yet the sales activity in a farmers' market can still be of considerable importance to participating consumers and growers.

For many of the growers surveyed, the produce sales through this farmers' market were vitally important. Fifty-five percent of the growers indicated that 90-100 percent of total annual produce sales were made on this market. Another 22 percent reported that they depended on the SCFM for selling 50-89 percent of the produce they sold. Thus, the SCFM is utilized as an important sales outlet by these growers.

The volume of produce available for sale in the market could be expanded if the demand were evident. Previous studies have shown that the many farmers with small acreages in the Memphis Trade Area have the resources to provide a fairly substantial volume of produce. [4] The studies also revealed that those farmers would be interested in growing or in expanding their vegetable production if they had a sales outlet.

The demand for fresh produce at a farmers' market is an important factor for consideration. Information obtained from the customers interviewed provided insight into opportunities for expanding consumer participation in direct purchase of fresh produce from growers. Notably, the SCFM customers were not as price conscious as they were quality conscious. Also, 72 percent of the customers had annual family incomes of $10,000 or more. And, the small number of unaccompanied female shoppers indicated a possible concern regarding location and environment of the market. Therefore, there may be potential for increasing the number of participating customers through advertising (market awareness), and improved market access and environment.

Consumer participation in buying fresh produce from farmers' markets may be effectively increased at this time due to their increasing concern about good nutrition and to their interest in bypassing traditional marketing channels as a means of stretching their food dollars. The extent to which these trends will affect consumer buying habits and the longevity of these trends cannot be determined at this time.

The potential for sales of produce directly to consumers through farmers' markets in other areas of the state and country appears to depend upon two primary factors, as follows:

1. A sizable number of growers with small acreages of fruits or vegetables is necessary for the provision of an adequate supply base. As revealed by the growers interviewed in the SCFM, most of them had other sources of income besides farming and their farming situation allowed them the time required for direct marketing. Direct-to-consumer sales will probably be less desirable for farmers with large operations that restrict the time available for lengthy sales activities than it will be for those with small operations.
2. The second required factor is an adequate population in the area of the farmers' market so a reservoir of customers will be available. Based on the evidence available, the establishment of guidelines as to the minimum size population that can support a direct-to-consumer farmers market does not seem realistic. Basic economic theory requires that the demand and supply curves intersect at a satisfactory level if both producers and consumers are to participate; but, it does not specify the minimum exchange level. A minimum exchange level is determined by cost considerations of the individual growers and the cost of operating the farmers' market facility.

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