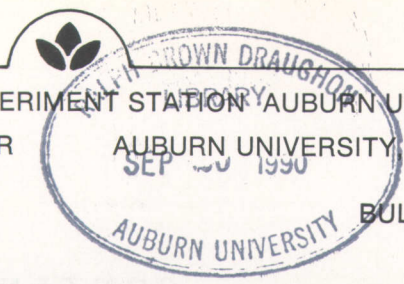


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PICK-YOUR-OWN and FARMERS' MARKETS

Direct Marketing Alternatives for Alabama Growers



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*Information contained herein is available to all persons
without regard to race, color, sex, or national origin*

PICK-YOUR-OWN AND FARMERS' MARKETS:

Direct Marketing Alternatives for Alabama Growers*

John Adrian and Veronica Vitelli**

INTRODUCTION

INCREASED ATTENTION has been given to direct farmer-to-consumer marketing in recent years. Impetus for this resurgence of interest resulted from direct outlets being capable of satisfying particular needs in the marketplace. For example, limited resource farmers and gardeners with excess production are provided generally accessible means for supplementing income through produce sales. Consumers can also benefit in that they are provided the opportunity to select and purchase fresh, locally grown produce, often at lower prices. Higher transportation costs associated with higher energy prices plus consumers' renewed awareness of the importance of fresh fruits and vegetables in their diets have also been important factors influencing interest in direct marketing.

Direct marketing alternatives for fruits and vegetables include: farmers' markets, roadside markets, pick-your-own (PYO) operations, and mobile market alternatives such as food fairs, tailgating, or peddling. These alternatives are similar in that each shortens the marketing channel between the producer and consumer by shifting the incidence of marketing functions normally performed by middlemen.

METHOD OF STUDY AND OBJECTIVES

Separate surveys of farmers' markets and PYO operations in Alabama were conducted during the summer of 1981 and serve as the basis of this report. To gain an understanding of the nature of PYO marketing, a questionnaire was developed, pretested, and mailed to 90 operators of PYO units identified by extension personnel. Analyses of characteristics of PYO operators and outlets were conducted with 33 of the usable returned forms.

The nature of, problems with, and potential for farmers' mar-

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kets in Alabama were ascertained through a survey using personal interviews with those involved with these outlets. Data were collected, compiled, and analyzed for 24 managers or overseers of markets plus 118 consumers and 113 farmers/sellers at markets. Characteristics of markets and users (buyers and sellers) of markets were determined.

The focus of this report involves defining the nature of direct markets — farmers' markets and PYO operations in particular. Advantages and disadvantages of these outlets are identified along with their characteristics. The following section deals with the general nature and characteristics of direct markets while the two subsequent sections offer a discussion of the information derived from the respective surveys.

NATURE OF DIRECT-MARKETING

One reason for the renewed interest in direct marketing is the rise in food prices experienced in recent years. Using the Consumer Price Index (CPI) as a measure of price change, prices for all food, and fresh fruits and vegetables in particular, more than doubled during the last decade, 1972-81. The all food index increased by 123 percent and the fresh fruit and vegetable index evidenced a 121 percent increase (7). Similarly, during the last 5 years, 1977-81, prices for all food rose by 43 percent while prices for fresh fruits and vegetables increased by 46 percent.

The farmers' share of the retail value of fresh fruits and vegetables was generally less than one-third during the last decade, with levels of 25 to 30 percent being common for both fruit and vegetable groupings. Both farmers and consumers, being aware of the wide price spread between what the farmer receives and the consumer pays, are receptive to direct marketing when market conditions are conducive to such activity. The relative distribution of the margin generated by direct sales between farmers and consumers is not well documented. However, regardless of the distribution, there is an opportunity for two-thirds to three-fourths of the retail value to accrue to the consumer and/or farmer. It should be noted that all of this margin is not profit to the farmer or savings to the consumer because it may be partially or totally offset by the provision of services by the farmer or consumer. The consumer may drive greater distances and, in some cases, perform the harvesting or other marketing functions. Similarly, the farmer may provide services such as grading, packaging, and transporting

that would normally be performed at intermediate stages in the market.

From the farmer's perspective, direct sales may be the only viable market alternative. It is difficult for small, dispersed, part-time producers to provide sufficient quantities of fruits and vegetables; coordinate production of these items; assemble and pack this product in proper grades, packs, and quantities; and deliver it to more commercial market outlets. This is particularly true since many of the larger food distribution chains do not permit individual store managers the option of buying locally grown produce. Thus, most produce sold through these outlets originates at particular shipping points — areas that are capable of amassing quantities of standardized quality for large volume shipments to regional warehouses for distribution to local stores. To the extent that direct markets provide increased marketing opportunities for small acreage farmers, their ability to remain in agriculture and be successful is enhanced. To be successful, direct markets, like all other marketing channels, must meet the expectations and aspirations of both the farmer and consumer. These markets must compete successfully with other modes of food distribution.

With direct marketing, the grower is, in effect, practicing a form of vertical integration in that the operation is expanded from the production segment to include the retailing or marketing segment. Adding the retail function increases costs in terms of the farmer's time and resource commitment. The extent of the additional commitment depends on the type of direct marketing alternative utilized.

For direct markets, production should be coordinated with expected market potential. In this process, the grower should attempt to anticipate market needs and available supplies and plan production to offer the desired quantity and quality product when needed. Determination of the appropriate product mix (specific crops and varieties) plus allocation of space and timing of plantings is important. If the production season is long, late plantings or varieties to supply the late market may require production practices different from early season production. For example, insect control must generally be more rigorous for late plantings.

Marketing direct means that growers must become "price setters" rather than "price takers" as is the usual case. Cost of production plus marketing cost and a desired return represents one

approach to pricing. Good records must be maintained for each fruit or vegetable enterprise so that costs and returns can be allocated and "asking prices" established. Consideration of competition in the market area is also extremely important in the pricing process. Knowledge of prices for comparable products at grocery stores or other direct markets can be useful in guiding pricing decisions. Pricing should be used as a tool to ration the available product in the case of scarcity or to promote sales when product is abundant relative to the market.

Another important consideration in direct marketing involves determination of the appropriate units of measure for sales — volume, count, bunches, and weight. If weight is selected, scales must be accurate and should be checked periodically by the appropriate agency. If volume is used, a standard measure should be maintained so that each customer is treated fairly. The measure utilized should be the unit used for budgeting and pricing.

Growers who use direct selling alternatives must be concerned with public relations and, in general, like to interact with people. This can be a problem for some growers who lack the disposition for increased contact with the public. Growers who sell from the farm or their own facilities should be concerned with the safety of their premises and should purchase adequate liability insurance.

With the exception of farmers' markets for which advertisement is a function of the market, effective advertisement by the grower is important to the viability of the market. Advertisements should be of an informative nature giving product availability, time and days open, etc. Newspapers and radio are common modes of advertisement. However, word-of-mouth is probably the most important mode in terms of generation of business. Thus, care must be exercised in establishing an effective balance among product availability, pricing, and advertisement. Much good will can be lost and potential sales foregone if customers become dissatisfied with a market or its personnel.

Direct marketers should determine whether and how various institutional factors affect their business. Government regulations relative to licenses, sales tax, health codes, building and zoning codes, and inspection and labeling should be understood prior to initiation of production.

PICK-YOUR-OWN MARKETS (PYO)

Pick-your-own marketing is not a new concept. Historically, it was used to harvest residual or uneconomical produce primarily

in commercial production areas — either excess supplies or produce left after the primary harvest. Today, it is commonly used in many areas to harvest an entire crop. PYO operations are most feasible for crops which mature at one time or for those items for which maturity is easily identified.

In addition to providing a means of increasing net returns to growers through potential reductions in harvesting, handling, container, and transportation costs, PYO offers consumers a good source of quality produce plus the opportunity for a recreational experience. However, PYO is not without its shortcomings as a marketing alternative. Primary among these are the necessity for the producer becoming a retailer to some extent, the assumption of additional liability due to customers being on the farm premises, and the long hours. Some producers do not desire to accept this added responsibility and liability. Since PYO is the most demanding of the direct marketing alternatives, it should be evaluated carefully by those contemplating its adoption.

Survey Results

The 33 producers who supplied information concerning their PYO operations had been in business 1 to 23 years with the average being 6.6 years, table 1. Average size of the plots was 23 acres with a range from .1 to 100 acres. Expected maximum acreage specified by producers ranged from 3 to 100 acres with an average of 30 acres, 7 above the current average size. Producers sold from one to six items at these outlets with the average being three. A third of the operations specialized in one enterprise. In order of importance, field (southern) peas, butterbeans, corn, okra, squash, and strawberries were marketed with 55, 30, 24, 18, 15, and 12 percent of the producers reporting sales of these crops, respectively. Acreage devoted to these crops averaged 9.2, 2.2, 1.2, .5, .5, and .5 acres for field peas, butterbeans, corn, okra, squash, and strawberries, respectively.

Estimates of customers per season averaged 522 from the firms contacted with a range from 25 to 3,000. Producers estimated that visits per customer per season averaged three with a range from one to six. Average purchase per customer was estimated to be \$15 with a range from \$2 to \$50.

Location in close proximity to population concentrations is extremely important to the viability of direct markets. For the producers responding, average distance to the major source, dominant city, of customers was 14 miles and the average population of

TABLE 1. SELECTED CHARACTERISTICS OF FRUIT AND VEGETABLE PICK-YOUR-OWN OPERATIONS, ALABAMA, 1981

| Characteristic | Observations | Unit | Average response | Range | |
|---|--------------|------|------------------|-------|---------|
| | | | | Low | High |
| Years in operation | 33 | yr. | 6.6 | 1 | 23 |
| Acreage | 33 | ac. | 23 | .1 | 100 |
| Field (southern) peas .. | 33 | ac. | 9.2 | 0 | 50 |
| Butterbeans | 33 | ac. | 2.2 | 0 | 22 |
| Corn | 33 | ac. | 1.2 | 0 | 10 |
| Okra | 33 | ac. | .5 | 0 | 7.5 |
| Squash | 33 | ac. | .5 | 0 | 7.5 |
| Strawberries | 33 | ac. | .5 | 0 | 8 |
| Producer's expected maximum acreage | 28 | ac. | 30 | 3 | 100 |
| Products sold | 33 | no. | 3 | 1 | 6 |
| Field (southern) peas .. | 33 | pct. | 55 | | |
| Butterbeans | 33 | pct. | 30 | | |
| Corn | 33 | pct. | 24 | | |
| Okra | 33 | pct. | 18 | | |
| Squash | 33 | pct. | 15 | | |
| Strawberries | 33 | pct. | 12 | | |
| Customers per season | 29 | no. | 522 | 25 | 3,000 |
| Visits per customer | 29 | no. | 3 | 1 | 6 |
| Purchase per customer per visit | 22 | dol. | 15 | 2 | 50 |
| Location relative to customers: | | | | | |
| Dominant city— | | | | | |
| Population | 26 | pct. | 83,400 | 3,000 | 400,000 |
| Distance to | 30 | mi. | 14 | 1 | 50 |
| Buyers from | 19 | pct. | 54 | 9 | 100 |
| Secondary city— | | | | | |
| Population | 21 | no. | 69,200 | 4,000 | 225,000 |
| Distance to | 26 | mi. | 21 | 7 | 50 |
| Buyers from | 19 | pct. | 32 | 3 | 80 |
| Labor used: | | | | | |
| Family members | 30 | no. | 3 | 1 | 15 |
| Hired employees | 17 | no. | 2 | 1 | 7 |

these centers was 83,400, table 1. Fifty-four percent of the outlets' customers came from the dominant city on average. Secondary population centers which served as a source of customers were located an average of 21 miles from PYO outlets. These outlets had an average population of 69,200. Thirty-two percent of the customers came from this source.

While harvesting and handling labor requirements are reduced using PYO, other requirements for labor such as for field supervision, weighing, check-in, check-out, etc. are increased. Three family members and two hired employees encompassed the labor force, on average, for outlets surveyed. Seventeen of the producers hired labor beyond that supplied by family members.

About half of the producers indicated they selected PYO because harvest labor was not available, table 2. Eighteen and 15 percent noted they chose PYO due to the lack of other market outlets and the desire for larger returns, respectively. Acreage devoted to PYO was determined by guess, 54 percent, expected demand, 21 percent, and amount the family could manage, 18 percent.

Pricing is important in the management of PYO outlets. Thirty-nine percent of the producers used cost of production plus a markup to establish price. Another 29 percent each discounted the retail price at supermarkets, used the Market News Service's wholesale price, or used prices charged by neighbors as guides in the establishment of prices. Twenty-four percent of the operators reduced price during peak production to increase sales and 45 percent gave discounts for large volume sales.

Analyses indicated that the number of customers visiting a PYO outlet showed positive linear association significantly different from zero with the frequency of advertisement and use of newspapers as the advertising medium. Ninety-four percent of the producers advertised. Newspapers and radio were dominant media with 82 and 32 percent of the producers responding reporting use, respectively. Thirty percent used more than one advertising medium with road signs, telephone, and television being used in addition to that already stated. A mailing list of customers was maintained by eight operators for use in promoting sales during the current market period and for the next season.

Only 30 percent of the producers indicated problems with sufficient customers at their outlets. Producers also noted little problem with damage to crops from customers harvesting produce. Ninety-one percent indicated minor (63 percent) and negligible (28 percent) damage.

Availability of services at the market can make it more attractive to customers. Ninety-five percent of the markets responding provided containers for picking produce and 84 percent supplied containers to transport produce home, table 2. Restrooms, concession stands or soft drink machines, and picnic areas were provided at 82, 70, and 43 percent of the operations responding, respectively.

Seventy percent of the operations maintained regular picking hours during the season. Fifty-five percent of the farmers alternated picking areas so that customers would have adequate produce for harvest each day. Almost two-thirds of the operations had

TABLE 2. SELECTED RESPONSES OF PICK-YOUR-OWN FRUIT AND VEGETABLE OPERATORS REGARDING OPERATION AND PRACTICES, ALABAMA, 1981

| Characteristic | Observations | Response | |
|--|--------------|----------|-------------------------------|
| | | Number | Percent of total ^a |
| Why did you select PYO? | | | |
| Harvest labor was not available | 33 | 16 | 48 |
| No other market outlets | 33 | 6 | 18 |
| Desire larger returns | 33 | 5 | 15 |
| Other | 33 | 7 | 21 |
| How did you determine PYO acreage? | | | |
| No real thought-guess | 28 | 15 | 54 |
| Expected demand | 28 | 6 | 21 |
| Amount family could supervise | 28 | 5 | 18 |
| Other | 28 | 2 | 7 |
| How is price determined? | | | |
| Cost of production plus markup | 31 | 12 | 39 |
| Discount from retail price | 31 | 9 | 29 |
| Market News wholesale price | 31 | 9 | 29 |
| What neighbors charge | 31 | 9 | 29 |
| Other | 31 | 3 | 10 |
| Reduce price to increase sales during peak production? | | | |
| Give discounts for large volume sales? | 31 | 14 | 45 |
| Advertise? | 31 | 29 | 94 |
| Media: | | | |
| Newspapers | 28 | 23 | 82 |
| Radio | 28 | 9 | 32 |
| Roadsign | 28 | 3 | 11 |
| Other (T.V. and telephone) | 28 | 3 | 11 |
| Maintains a mailing list of customers | 32 | 8 | 25 |
| Have problems getting customers? | 33 | 10 | 30 |
| Damage to crops: | | | |
| Negligible | 32 | 9 | 28 |
| Minor | 32 | 20 | 63 |
| Serious | 32 | 1 | 3 |
| Very serious | 32 | 2 | 6 |
| Service provided: | | | |
| Containers for picking | 20 | 19 | 95 |
| Containers to take home | 19 | 16 | 84 |
| Restrooms or similar facilities | 11 | 9 | 82 |
| Concession stand or soft drink machines | 10 | 7 | 70 |
| Picnic areas | 7 | 3 | 43 |
| Maintained regular picking hours | 30 | 21 | 70 |
| Alternates picking areas | 31 | 17 | 55 |
| Carries liability insurance | 29 | 18 | 62 |

^aPercentages may sum to more than 100 because multiple responses were possible.

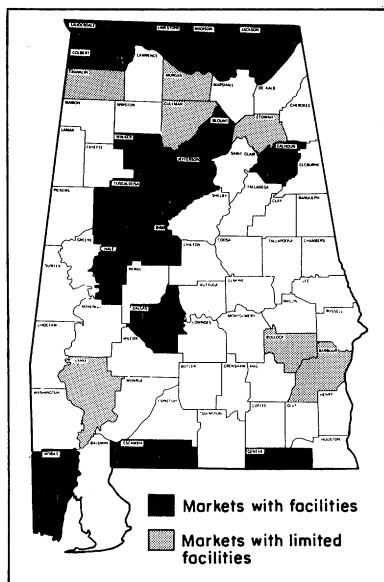
liability insurance policies to limit potential losses in the case of injury to customers.

FARMERS' MARKETS

Farmers' markets serve as important direct outlets for fresh fruits and vegetables in Alabama. Successful farmers' markets are

extremely helpful in increasing the incomes of limited resource producers. The number of these outlets has increased substantially in recent years and several markets are currently in the planning or construction stages. Twenty-four markets were in operation

in 23 counties in 1981, see figure. These ranged from locations having adequate fixed facilities to mere open lots being allocated for use by local farmers. Similarly, markets differed by the nature of activity. Some outlets such as those in Birmingham and Mobile permitted and encouraged wholesale activity in addition to direct farmer-to-consumer activity. Other smaller markets restricted such wholesale activity and limited participation to only "certified" local producers.



**Counties with Farmers' Markets,
Alabama, 1981.**

Farmers' markets exhibit various attributes that enhance use and popularity of these outlets. Among these are the limited liability

afforded farmers due to customers not being on the farm premises, reduced cost of advertising because this is a function of the market, reduced responsibility for facilities such as parking and restrooms and increased opportunity for sales because a more diverse supply of produce is available. With farmers' markets, the producer's product mix is not as crucial as with other direct outlets. Thus, the farmer can become more specialized with less risk of adverse effects. Shortcomings relate to policies of the markets (advertising, hours, rental space, etc.), location of markets, and time requirements for transportation and selling produce.

Survey Results

Markets

Of the 24 markets surveyed, 14 had hired managers. Eight of these markets had full-time managers while the rest served during the market season, table 3. Seven markets used volunteers to manage and coordinate activities. County extension and other local

TABLE 3. CHARACTERISTICS OF FARMERS' MARKETS, ALABAMA, 1981

| Characteristic | Observations | Response | |
|--|--------------|----------|-------------------------------|
| | | Number | Percent of total ^a |
| Management of markets: | | | |
| Full-time hired manager | 21 | 8 | 38 |
| Part-time hired manager (seasonal) | 21 | 6 | 29 |
| Volunteer manager | 21 | 7 | 33 |
| Growers organized in a market association: ... 23 | | | |
| Membership fee charged | 8 | 4 | 50 |
| Vendors at markets required to be association members | 8 | 3 | 38 |
| Services of facilities provided: | | | |
| Covered shelter | 24 | 17 | 71 |
| Electricity | 24 | 14 | 58 |
| Restrooms | 24 | 13 | 54 |
| Display tables and stands | 24 | 12 | 50 |
| Office for manager | 24 | 11 | 46 |
| Cooling facilities | 24 | 4 | 17 |
| Sink and cleaning facilities | 24 | 4 | 17 |
| Sheller | 24 | 4 | 17 |
| Major factors limiting successful operation of the market: | | | |
| Lack of adequate facilities | 20 | 11 | 55 |
| Competition from other direct market outlets | 20 | 6 | 30 |
| Lack of interest and use of market by farmers | 20 | 5 | 25 |
| Formally stated rules of operation provided ... | 24 | 15 | 63 |
| Vendors are required to sell only their produce | 22 | 18 | 82 |
| Market influences sales by establishing rules concerning: | | | |
| Price | 19 | 8 | 42 |
| Quality | 20 | 8 | 40 |
| Wholesale sales | 17 | 3 | 18 |
| Grade | 17 | 3 | 18 |
| Non-producers | 17 | 2 | 12 |
| Allocation of selling space: | | | |
| First come, first served | 21 | 13 | 62 |
| Rental | 21 | 7 | 33 |
| Other (reserved, registration) | 21 | 3 | 14 |
| Stall or rental fee charged | 23 | 15 | 65 |
| Market advertises: | | | |
| Media: | 22 | 18 | 82 |
| Newspaper | 19 | 15 | 79 |
| Radio | 19 | 14 | 74 |
| T.V. | 19 | 3 | 16 |

^aPercentages may sum to more than 100 because multiple responses were possible.

government personnel provided guidance relative to organizational and operational procedures for several markets.

Growers' marketing associations were formed in conjunction with eight markets. Four of these charged membership fees with the average fee being \$6.24 and the range being from \$5 to \$10

per season or year. Three of the markets required vendors to be association members to sell on the market.

Much diversity in facilities and equipment provided at markets was noted. Seventeen markets had a covered shelter, 14 had electricity, 13 had restrooms, 12 had display tables and stands, and 11 had an office for the manager. Four each had cooling facilities, sink and cleaning facilities, and a shelter. However, market managers or overseers noted the lack of adequate facilities as being the prime factor limiting successful operation of markets, 55 percent. Other important factors limiting successful operation of markets related to competition from other direct market outlets, 30 percent, and the lack of interest in and use of markets by farmers, 25 percent.

Fifteen markets had formally stated rules governing various activities at markets. Other markets were generally the more informal, open-air outlets. The majority of markets, 82 percent, specified that growers could only sell produce they had grown. Enforcement was based on the manager's judgment and possession of a grower's permit by sellers. Other common policies specified by markets related to pricing, 42 percent, quality, 40 percent, wholesale sales, 18 percent, and grade, 18 percent. Policies specifying the proper behavior of participants at markets, maintenance of grounds, fees, types of products that could be sold, and parking were frequently encountered.

Space was allocated primarily on a first come, first served basis, 62 percent, or by a rental fee, 33 percent. Almost two-thirds of the markets had a stall charge. The average fee was \$2.25 per day with the range being from \$1 to \$3. Fees were usually established by the board of directors of a market.

Eighteen of the markets advertised. Newspapers, 79 percent, were used most frequently with radio, 74 percent, and television, 16 percent, being the next most important media.

Farmer, Sellers

Most growers marketing at farmers' markets operated small acreage farms. Size of farms varied from 1 to 500 acres with the average being 26 acres, table 4. Experience in production of fruits and vegetables was extensive with producers averaging 20 years of such activity.

The product mix offered by producers was diversified with up to 13 different items marketed during the season. Farmers aver-

TABLE 4. SELECTED CHARACTERISTICS OF FARMERS/SELLERS USING FARMERS' MARKETS AND THEIR OPERATIONS, ALABAMA, 1981

| Characteristic | Observations | Unit | Average response | Range | |
|---|--------------|------|------------------|-------|------|
| | | | | Low | High |
| Fruit and vegetable acreage | 112 | ac. | 26 | 1 | 500 |
| Experience growing fruits and vegetables | 113 | yr. | 20 | 1 | 79 |
| Enterprises produced | 113 | no. | 6 | 1 | 13 |
| Farmers producing: | | | | | |
| Field (southern) peas | 115 | pct. | 67 | | |
| Corn | 113 | pct. | 67 | | |
| Sweet | 113 | pct. | 38 | | |
| Field | 113 | pct. | 28 | | |
| Tomatoes | 113 | pct. | 52 | | |
| Okra | 113 | pct. | 43 | | |
| Watermelons | 113 | pct. | 43 | | |
| Squash | 113 | pct. | 42 | | |
| Butterbeans | 113 | pct. | 36 | | |
| Greenbeans | 113 | pct. | 35 | | |
| Cucumbers | 113 | pct. | 32 | | |
| Cantaloupe | 113 | pct. | 31 | | |
| Markets produce of other growers | 112 | pct. | 6 | | |
| Distance from market — one-way | 113 | mi. | 26 | 1 | 260 |
| Coordination of production and marketing efforts: ^a .. | | | | | |
| Stagger planting | 102 | | | | |
| dates | 51 | pct. | 50 | | |
| Rotate and | | | | | |
| double crop | 39 | pct. | 38 | | |
| Variety selection | 23 | pct. | 23 | | |
| Early planting | 4 | pct. | 4 | | |
| Nothing-plant | | | | | |
| all at once | 17 | pct. | 17 | | |

^aSum is greater than 100 because farmer/sellers used multiple approaches to coordination.

aged offering six different items with field (southern) peas, corn, and tomatoes being prominent. Two-thirds of the producers sold field peas and corn, 38 percent sweet corn and 28 percent field corn, while half offered tomatoes. Other important produce items marketed were okra, 43 percent, watermelons, 43 percent, squash, 42 percent, butterbeans, 36 percent, greenbeans, 35 percent, cucumbers, 32 percent, and cantaloupe, 31 percent. Only six percent of the sellers indicated they sold produce of other growers.

Producers traveled an average of 26 miles one-way to access farmers' markets with some producers traveling great distances, table 4. When this is translated to an average of approximately 1 hour of travel time per day and is coupled with several hours of time spent at the market, marketing at farmers' markets can be

TABLE 5. EVALUATION OF VARIATION IN THE VALUE OF GROSS SALES OF FARMERS AT FARMERS' MARKETS, ALABAMA, 1981^a

| Variable and statistic | Unit | Coefficient | Standard error |
|--|------|--------------------|----------------|
| Intercept | dol. | 18.76 | 1,154.24 |
| Experience producing fruits and vegetables | yr. | -12.41 | 23.96 |
| Distance traveled to farmers' market (one-way) | mi. | 39.53 ^b | 12.73 |
| Fruit and vegetable acreage | ac. | 17.37 ^b | 5.81 |
| Number of enterprises | no. | 116.53 | 141.14 |
| Coefficient of determination: R ² | pct. | 36 | |
| Standard error of the estimate | dol. | 3,450 | |

^aEstimates of gross sales for 1980 were used to represent sales in 1981 because the 1981 marketing season was not complete at survey time.

^bSignificant at the .05 level.

seen as quite time consuming. Generally, labor must have few alternatives for this outlet to be economically feasible.

Efforts of farmers/sellers to coordinate production and marketing activities were limited, table 4. Seventeen percent indicated they did not attempt coordination. Half of the growers staggered planting dates so as to balance marketings over a period of time. Slightly more than a third rotated and double cropped while a fourth used variety selection to improve coordination of production and marketing.

Estimates of gross receipts from fruit and vegetable sales in the 1980 season were offered by 85 farmers/sellers. Average receipts were \$2,425 per year with the upper limit approaching \$20,000. Using estimates of gross receipts for 1980 to represent receipts for 1981 which were incomplete at survey time, 36 percent of the variability in gross receipts was explained with a model including variables reflecting experience in fruit and vegetable production, one-way distance traveled to the farmers' market, fruit and vegetable acreage, and number of fruit and vegetable enterprises produced, table 5. The value of gross sales tended to be larger for producers traveling greater distances and having larger acreages. This is consistent with expectations in that larger producers would have greater need to locate and use viable outlets due to the volume of produce. Standard errors of other variables were relatively large.

Pricing of produce at farmers' markets is extremely important. Prime factors to be considered in pricing decisions include the competitors' prices, availability of producers relative to customer

activity, and costs of production. Pricing should be used as a means to ration the available quantity in the case of scarcity and to promote sales when product is abundant or the marketing day is closing. A majority of the producers used these pricing practices, table 6. Prices charged by other farmers at the market was the dominant factor given consideration with 89 percent of the producers reporting use. Growers gave this factor a 1.5 ranking of importance on a scale from 1 to 5 with 1 being most important. Price charged at supermarkets was the next most important factor in terms of producer use with 89 of 112 farmers noting use. However, the cost of production plus a markup category was dominant in terms of the weighted average ranking of importance at 2.4. The time of day category fell between the two groupings in terms of use by producers and ranking of importance.

Most "selling labor" at markets was provided by the family. For 111 of the responding sellers, 72 percent of the selling labor was provided by the producers, table 7. Sixty-three sellers used other family members with their time amounting to 43 percent of the total. Only 14 producers hired labor for selling. Tuesday, Thursday, and Saturday were days most favored for marketing at farmers' markets. As would be expected, Saturday was the day of greatest sales, averaging 38 percent of the total sales for the 86 producers marketing on Saturday.

TABLE 6. FACTORS INFLUENCING THE PRICE CHARGED BY FARMERS/SELLERS AT FARMERS' MARKETS, ALABAMA, 1981

| Factor | Responses | | Ranking of importance ^a | | | | | Weighted average ranking |
|---|-----------|------------------|------------------------------------|----|----|----|----|--------------------------|
| | Number | Percent of total | 1 | 2 | 3 | 4 | 5 | |
| ----- Percent ----- | | | | | | | | |
| Prices charged by other farmers at the market | 101 | 89 | 61 | 31 | 6 | 1 | 1 | 1.5 |
| Prices charged at local supermarkets | 89 | 79 | 5 | 30 | 45 | 14 | 6 | 2.8 |
| Time of day | 64 | 57 | 17 | 27 | 27 | 29 | 0 | 2.7 |
| Cost of production plus markup | 63 | 56 | 24 | 37 | 21 | 10 | 8 | 2.4 |
| Make own price | 42 | 37 | 71 | 14 | 10 | 5 | 0 | 1.5 |
| Price quotes from Market News Service | 41 | 36 | 22 | 20 | 24 | 22 | 12 | 2.8 |
| Price charged by prominent grower | 27 | 24 | 11 | 4 | 15 | 41 | 29 | 3.7 |
| Last year's price adjusted upward | 16 | 14 | 6 | 13 | 0 | 25 | 56 | 4.1 |

^aRankings are arrayed from extremely important (1) to no importance (5).

TABLE 7. SELLING ACTIVITY AT FARMERS' MARKETS, ALABAMA, 1981

| Item | Observations No. | Average response ----- Percent | Range | |
|--|---------------------|---|-------|------|
| | | | Low | High |
| Portion of selling labor provided by: | | | | |
| Farmer/seller | 111 | 72 | 13 | 100 |
| Other family member | 63 | 43 | 4 | 100 |
| Personal friends | 2 | 50 | 50 | 50 |
| Hired labor | 14 | 37 | 1 | 100 |
| Portion of sales activity per day (June-August): | | | | |
| Monday | 31 | 20 | 5 | 50 |
| Tuesday | 77 | 25 | 5 | 100 |
| Wednesday | 50 | 25 | 10 | 100 |
| Thursday | 75 | 30 | 10 | 100 |
| Friday | 42 | 24 | 10 | 60 |
| Saturday | 86 | 38 | 10 | 80 |
| Sunday | 14 | 20 | 15 | 50 |

Forty-one percent of the growers used farmers' markets exclusively, table 8. Farmers estimated that on average three-fourths of their produce was marketed through these outlets. A preference for farmers' markets was noted primarily because of the attributes

TABLE 8. SELECTED CHARACTERISTICS OF MARKETS AND TRANSACTIONS AS EVALUATED BY FARMERS/SELLERS AT FARMERS' MARKETS, ALABAMA, 1981

| Characteristic | Observations | Response | |
|---|--------------|----------|-------------------------------|
| | | Number | Percent of total ^a |
| Used farmers' market exclusively as an outlet | 111 | 45 | 41 |
| Why sell at farmers' market? | | | |
| More buyers | 103 | 51 | 50 |
| Good outlet, easy way to sell | 103 | 45 | 44 |
| Close to home | 103 | 9 | 9 |
| Better prices | 103 | 6 | 6 |
| Other | 103 | 7 | 7 |
| Produce brought to market is sold: | | | |
| Always | 112 | 17 | 15 |
| Most of the time | 112 | 61 | 55 |
| Some of the time | 112 | 25 | 22 |
| Never | 112 | 9 | 8 |
| Future plans for use of farmers' market: | | | |
| Same | 110 | 65 | 59 |
| Less | 110 | 27 | 25 |
| More | 110 | 18 | 16 |
| Changes desired for market: | | | |
| Improved facilities | 92 | 55 | 60 |
| More and better advertising | 92 | 39 | 42 |
| More activity | 92 | 31 | 34 |
| Eliminate wholesalers and pinhookers | 92 | 13 | 14 |

^aPercentages may sum to more than 100 because multiple responses were possible.

of farmers' markets such as: presence of more buyers, 50 percent, easy way to sell, 44 percent, convenience, 9 percent, and better prices, 6 percent. Seventy percent of the producers stated they always, 15 percent, or usually, 55 percent, sold all of their produce brought to market. Overall, producers averaged using almost two, 1.7, outlets to market their produce. Other sales were distributed among roadside stands, pick-your-own operations, supermarkets and independent grocers, wholesalers and brokers, independent truckers, and home sales to neighbors.

Producers noted little expected change in the use of farmers' markets in the future. Fifty-nine percent planned the same use while 25 and 16 percent planned less and more use, respectively. Producers expressed the desire for several changes in existing markets. These included: improved facilities such as a shelter, restrooms, heating, and telephone, 60 percent, more and better advertising, 42 percent, more activity, 34 percent, and elimination of wholesale activity at markets, 14 percent.

Consumers

To be successful, farmers/sellers must recognize characteristics of consumers at farmers' markets and design their sales efforts to cater to the needs of these individuals. Shoppers at farmers' markets in Alabama can be generally classified as white females from average size households (3.5 members), tables 9 and 10. They were typically over 40 years of age, 69 percent. Almost a third were over 55 years of age. The largest number of customers, 41 of

TABLE 9. CHARACTERISTICS OF CONSUMERS AT FARMERS' MARKETS, ALABAMA, 1981

| Characteristic | Observations | Response | |
|--------------------------------|--------------|----------|------------------|
| | | Number | Percent of total |
| Age: | | | |
| Less than 25 years | 117 | 3 | 3 |
| 25 - 39 years | 117 | 33 | 28 |
| 40 - 55 years | 117 | 44 | 37 |
| over 55 years | 117 | 37 | 32 |
| Sex: | | | |
| Female | 104 | 93 | 89 |
| Race: | | | |
| White | 104 | 84 | 81 |
| Gross income of household: | | | |
| Less than \$8,000/yr. | 114 | 33 | 29 |
| \$ 8,000 - 15,000/yr. | 114 | 29 | 25 |
| \$15,001 - 25,000/yr. | 114 | 41 | 36 |
| Greater than \$25,000/yr. | 114 | 11 | 10 |

TABLE 10. SELECTED CHARACTERISTICS OF HOUSEHOLDS, PURCHASES, AND OUTLETS USED BY INDIVIDUALS SHOPPING AT FARMERS' MARKETS, ALABAMA, 1981

| Item | Observations | Unit | Average response | Range | |
|---|--------------|------|------------------|-------|------|
| | | | | Low | High |
| Household members | 115 | no. | 3.5 | 1 | 8 |
| Distance from residence to: | | | | | |
| Farmers' market (one-way) | 118 | mi. | 3.3 | .2 | 25 |
| Supermarket (one-way) | 118 | mi. | 1.5 | .2 | 12 |
| Grows own produce | 118 | pct. | 33 | | |
| Portion growing: | | | | | |
| Tomatoes | 39 | pct. | 95 | | |
| Okra | 39 | pct. | 38 | | |
| Squash | 39 | pct. | 33 | | |
| Hot pepper | 39 | pct. | 33 | | |
| Field (southern) peas | 39 | pct. | 26 | | |
| Cucumbers | 39 | pct. | 23 | | |
| Produce items purchased at farmers' market | 118 | no. | 4.4 | 1 | 10 |
| Portion of individuals purchasing: | | | | | |
| Field (southern) peas | 118 | pct. | 74 | | |
| Corn | 118 | pct. | 68 | | |
| Field | 118 | pct. | 39 | | |
| Sweet | 118 | pct. | 29 | | |
| Okra | 118 | pct. | 55 | | |
| Watermelons | 118 | pct. | 45 | | |
| Tomatoes | 118 | pct. | 43 | | |
| Butterbeans | 118 | pct. | 34 | | |
| Cantaloupe | 118 | pct. | 25 | | |
| Portion of fresh produce purchases made during the season at: | | | | | |
| Farmers' markets | 117 | pct. | 44 | 1 | 100 |
| Supermarkets and grocery store | 99 | pct. | 54 | 8 | 99 |
| Grow own | 22 | pct. | 45 | 1 | 99 |
| Roadside markets | 21 | pct. | 13 | 5 | 25 |
| Pick-your-own | 6 | pct. | 10 | 8 | 10 |

114, had incomes in the \$15,001 to \$25,000 range. Fifty-four percent had incomes below \$15,001 and 29 percent had incomes below \$8,000.

Consumers at markets lived near the outlet with the average one-way distance being 3.3 miles, table 10. From the standpoint of competition, consumers resided an average of 1.5 miles from a supermarket with the outer extreme being 12 miles. A third of the consumers at markets grew some produce themselves. Produce items commonly grown were: tomatoes, okra, squash, hot pepper, field (southern) peas, and cucumbers with 95 percent, 38 percent,

33 percent, 33 percent, 26 percent, and 23 percent of the consumers indicating production, respectively.

Consumers purchased an average of four different produce items at farmers' markets during the season with the range being from 1 to 10 items. Items purchased by over 50 percent of the consumers were: field (southern) peas, 74 percent, corn, 39 percent field corn and 29 percent sweet corn, and okra, 55 percent. Other commonly purchased items were watermelons, 45 percent, tomatoes, 43 percent, butterbeans, 34 percent, and cantaloupe, 25 percent.

Consumers surveyed averaged purchasing 44 percent of their fresh produce from farmers' markets during the local production season, table 10. These outlets were the sole source of fresh produce for 13 consumers during this time and they supplied 75 percent or more of the fresh produce for 34 consumers. As would be expected, supermarkets were a prime source of fresh produce with 99 consumers indicating that on average 54 percent of their purchases came from this source during the season. Gardens, roadside markets, and pick-your-own operations were other sources identified.

Price and freshness were by far the most important factors influencing consumers' decisions to purchase produce at farmers' markets with 117 and 115 noting these characteristics, respectively, table 11. In each case, half of the consumers ranked price and freshness as the prime consideration in making such purchases. Overall weighted rankings, 1.8, indicated substantially more importance for these factors than for other attributes such as appearance, 2.7, quantity available, 2.7, variety, 2.8, convenience, 3.4, or taste, 3.2.

TABLE 11. FACTORS AFFECTING CONSUMERS' DECISIONS TO PURCHASE FRESH PRODUCE AT FARMERS' MARKETS, ALABAMA, 1981

| Factor | Response | | Rank ^a | | | | | Weighted average ranking |
|--------------------------|----------|------------------|---------------------|----|----|----|----|--------------------------|
| | Number | Percent of total | 1 | 2 | 3 | 4 | 5 | |
| | | | ----- Percent ----- | | | | | |
| Price | 117 | 99 | 50 | 27 | 19 | 1 | 3 | 1.8 |
| Freshness | 115 | 97 | 50 | 34 | 6 | 7 | 3 | 1.8 |
| Appearance | 63 | 53 | 10 | 28 | 51 | 8 | 3 | 2.7 |
| Quantity available | 52 | 44 | 17 | 31 | 19 | 27 | 6 | 2.7 |
| Variety | 43 | 36 | 10 | 23 | 44 | 21 | 2 | 2.8 |
| Convenience | 33 | 28 | 15 | 15 | 15 | 37 | 18 | 3.4 |
| Taste | 10 | 8 | 10 | 20 | 30 | 20 | 20 | 3.2 |

^aRankings are arrayed from most important (1) to least important (5).

TABLE 12. SELECTED CHARACTERISTICS OF TRANSACTIONS AT FARMERS' MARKETS AS EVALUATED BY CONSUMERS, ALABAMA, 1981

| Characteristic | Observations | Response | |
|---|--------------|----------|-------------------------------|
| | | Number | Percent of total ^a |
| Frequency of visits to farmers' market: | | | |
| Once a week | 117 | 29 | 25 |
| Twice a week | 117 | 36 | 31 |
| Once a month | 117 | 20 | 17 |
| Twice a month | 117 | 18 | 15 |
| Other | 117 | 14 | 12 |
| Day usually shop at farmers' market: | | | |
| Monday | 118 | 8 | 7 |
| Tuesday | 118 | 36 | 31 |
| Wednesday | 118 | 24 | 20 |
| Thursday | 118 | 36 | 31 |
| Friday | 118 | 25 | 21 |
| Saturday | 118 | 28 | 24 |
| Time of day usually shop: | | | |
| Morning: | 99 | 77 | 77 |
| 7-8 | 99 | 9 | 9 |
| 8-9 | 99 | 29 | 29 |
| 9-10 | 99 | 15 | 15 |
| 10-11 | 99 | 15 | 15 |
| 11-12 | 99 | 9 | 9 |
| Afternoon | 99 | 23 | 23 |
| 12-1 | 99 | 8 | 8 |
| 1-2 | 99 | 2 | 2 |
| 2-3 | 99 | — | — |
| 3-4 | 99 | 5 | 5 |
| 4-5 | 99 | 5 | 5 |
| Later | 99 | 3 | 3 |

^aThe sum is greater than 100 because consumers selected more than one day as being used.

Fifty-six percent of the consumers visited farmers' markets on a weekly basis during the season with 31 percent noting twice per week visits and 25 percent visiting once per week, table 12. Tuesday, Thursday, and Saturday were days consumers usually shopped. Seventy-seven percent usually shopped in the morning with the most preferred hours being 8-9, 29 percent, 9-10, 15 percent, and 10-11, 15 percent. Preferences for these hours noted by consumers related to availability of a larger and better selection of produce and best and most convenient time to shop.

Variation in the percentage of produce purchases made by consumers at farmers' markets was analyzed using a model including variables reflecting distance of residence from the farmers' market and a supermarket; size and income of the household; whether produce is grown by the household; and age, race, and sex of the buyer. Twenty-two percent of such variation was explained by

TABLE 13. EVALUATION OF VARIATION IN THE PERCENTAGE OF FRESH PRODUCE PURCHASES MADE AT FARMERS' MARKETS, ALABAMA, 1981

| Variable and statistic | Unit | Coefficient | Standard error |
|--|------|--------------------|----------------|
| Intercept | pct. | 82.6 ^a | 19.2 |
| Distance from residence to farmers' market (one-way) | mi. | 1.1 | 1.0 |
| Distance from residence to supermarket (one-way) | mi. | 2.7 | 2.6 |
| Size of household | no. | -2.7 | 2.9 |
| Family grows some produce | | -16.8 ^a | 7.3 |
| Age: | | | |
| Less than 25 years | | 0.2 | 26.3 |
| 25 - 39 years | | -28.9 ^a | 12.8 |
| 40 - 55 years | | -16.5 | 10.9 |
| Over 55 years ^b | | | |
| Income: | | | |
| Less than \$8,000/yr. | | -17.8 | 15.6 |
| \$ 8,000-15,000/yr. | | - 1.8 | 14.2 |
| \$15,001-25,000/yr. | | 4.1 | 13.1 |
| More than \$25,000/yr. ^b | | | |
| Race: | | | |
| Black | | 22.6 ^a | 10.7 |
| White ^b | | | |
| Sex: | | | |
| Female | | -17.5 | 11.1 |
| Male ^b | | | |
| Coefficient of determination: R ² | pct. | 22 | |
| Standard error of the estimate | pct. | 32 | |

^aSignificant at the .05 level.

^bBase class omitted to avoid singularity and to be used in significance tests.

these factors, table 13. Significant differences in purchases were noted for consumers producing some of their own produce and by age and race classifications. Families growing some produce purchased 17 percent less from farmers' markets, other things being equal. Also, consumers who were from 25 to 39 years of age tended to purchase less than consumers who were over 55 years of age. Similarly, while nonwhite consumers were less frequent users of farmers' markets, they tended to purchase a larger portion of their produce at these outlets than did white consumers — 23 percent more with other factors held constant. Other factors analyzed had relatively large standard errors.

SUMMARY AND IMPLICATIONS

The purpose of this report was twofold: (1) identification of the nature of direct marketing of fresh fruits and vegetables with emphasis given to specification of considerations affecting producers and (2) specification of the status and nature of pick-your-

own operations and farmers' markets in the State. The goal of the analysis involved provision of a base of information concerning these outlets which would foster decision-making in this area, whether by government officials, grower groups, or interested individuals.

While experience with PYO seemed limited, producers seemed to be satisfied with their outlets. Two-thirds of them noted planned acreage increases for the near future and 70 percent noted no problems in getting customers. Customer numbers showed positive linear association with frequency of advertising and use of newspapers as the medium. Ninety-four percent of the producers advertised with 82 percent of these using newspapers and 32 using radio. An effective advertising program would seem to be extremely important in that PYO plots were located an average of 14 miles from the primary source (city) of customers and 21 miles from the secondary source.

Farmers' markets showed much diversity with the range being from open lots allocated for use to fairly well equipped facilities. Major shortcomings of markets noted by market managers and farmers/sellers related to inadequate facilities. Producer optimism related to these outlets was not as great as that noted for PYO operations.

Direct marketing has grown in popularity in Alabama in recent years with increased participation by both farmers and consumers. Many farmers and rural residents have been provided a means to supplement their income while consumers have been provided with a more diverse range of alternatives from which to purchase fresh produce. While improvement has been made, a system of viable direct market outlets does not exist in the State. A prime impediment to development of viable markets involves the lack of leadership, cooperation, and coordination among growers. Indications are that additional direct outlets can be supported, especially in counties which are more densely populated. Direct marketing can become a more important source of income for many small, part-time, retired or semi-retired farmers or rural residents in the State. The role of the Cooperative Extension Service and State Department of Agriculture can be extremely important in facilitating this process through provision of guidance and information.

Effective grower interaction suffers from the presence of many older, dispersed, independent-minded, part-time growers. Intermingled with this is the fact that many producers fail to consider

the relationship of production timing and marketing. Opportunities exist for improving the mix of products grown, expanding production and marketing seasons, and improved merchandising and promotion of produce.

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