OPPORTUNITIES FOR MARKETING FRESH PRODUCE TO THE INSTITUTIONAL SECTOR OF THE FOOD SERVICE INDUSTRY

by

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The authors investigated the possible barriers to marketing fresh fruits and vegetables to the institutional sector of the food service industry.

Prior to the development of the railroad, the U.S. fresh fruit and vegetable industry had been described as a spatially diffuse production and marketing system. Technological advances in transportation, refrigeration, storage, and packing brought about specialization and concentration of production and marketing (Free).

Such advances in technology also encouraged the development of mass-retailing of fruits and vegetables. Retailer requirements for large volumes of fresh produce procured in a timely efficient manner contributed to the evolution of large specialized producing areas of the U.S. Consequently many producers have faced a market access problem because they are located outside the major producing areas such as California and Florida.

However, changing economic forces of recent years may result in yet another shift in the production and marketing pattern of fresh produce in the U.S. The forces of change include: 1) higher transportation costs as a result of OPEC, 2) a shift in the population of the U.S. from North to South, and 3) a national trend towards a greater awareness of nutrition, diet, health, and increased per capita consumption of fresh produce.

These forces of change may allow the reversal of the tendency toward concentrated production of fresh produce in regions of prior comparative advantage. If this reversal is actually occurring, or if there is real potential for such a reversal, producers and potential producers in other regions of the U.S. may have opportunities for entering the major fresh fruit and vegetable markets of the U.S. Such potential has been explored recently for major food chain market channels (Free, et al.; Ellerman and Law; Solverson and Ellerman; and Brooker, et al). However, the expanding food service markets have been largely ignored.

Purpose and Methodology

The purpose of this research was to ascertain possible market access barriers and opportunities for marketing fresh fruits and vegetables to the institutional sector of the food service industry. A questionnaire was developed and administered in 1981 to 62 buying agents representing county correctional institutions, state correctional institutions, school systems, and military installations in Georgia to determine the origin of fresh produce for this portion of the food service industry. Reasons were ascertained why present sources of supplies are used and why other potential sources are not. Requirements for market entry by southeastern producers who wish to supply fresh produce for the institutional market were also discovered.

Analysis

Source of Produce

The surveyed institutional buying agents representing county correctional institutions, state correctional institutions, school systems, and military installations were asked to identify current sources of produce. Among the sources of supply identified were independent wholesalers, the Defense Personnel Support Center (DPSC), field buyers, retail stores, state farmers' markets, independent produce markets, and local growers (Table 1).

The independent wholesaler category includes marketing firms that are capable of performing such wholesale functions as receiving, storage, and forward physical distributon of products. The DPSC is an agency of the Department of Defense which supervises the activities of Defense Subsistence Offices located in key areas throughout the U.S. These offices are responsible for the acquisition, storage, distribution and inspection of fresh fruit and vegetable supplies acquired wholesale for military services. A field buyer is an individual who is employed to visually examine quantities of fresh produce normally acquired from growing areas, or storage and packing sheds. Field buyers normally take title to products themselves or in behalf of the organization they represent.

In general, most buying agents reported independent wholesalers as the major source of supply for fresh fruits and vegetables. As expected, the DPSC was also a major source of supply for military installations.

Utilization of Georgia-grown produce by institutional units seems to be greatest among school systems with 30.77 percent of the buying agents reporting growers in Georgia as the secondary source of supply. However, the greatest barriers to marketing fresh produce to the surveyed institutional representatives appear to involve state correctional units where purchases from growers were not indicated. Georgia growers, nevertheless, play a direct role as suppliers of fresh produce to county correctional units and military installations. Buying agents for 23.08 percent of the county correctional units and 11.76 percent of the military installations reported partially obtaining fresh produce supplies directly from Georgia growers.

Produce Purchased from Georgia Growers

Identification of the types of produce purchased, the frequency of purchases, and the percentage of total annual volume purchased from Georgia growers is of particular concern in determining the relative importance of Georgia-grown produce to buying agents operating in the institutional market sector.

The most obvious indication of an access barrier is reflected in the large percentage of buying agents reporting that Georgia-grown produce is not

Table 1. Frequency with Which Institutional Buying Agents Purchase Produce from Various Supply Sources by Type of Institution, Georgia, 1981

Sources of Supply	County Correctional Institutions (no.)	County Correctional Institutions (%)[a]	State Correctional Institutions (no.)	State Correctional Institutions (%)[a]	School Systems (no.)	School Systems (%)[a]	Military Installations (no.)	Military Installations (%)[a]
Independent wholesalers	10	76.92	6	100.00	26	100.00	11	64.71
DPSC[b]	-	-			-	-	12	70.58
Retail store	3	23.08	-	-	3	11.54		-
Field buyers	-	-	-				2	11.76
State farmers' market	1	7.69	-	-	-			-
Independent produce market	1	7.69	-	-	-			-
Local grower	3	23.08	-	-	8	30.77	2	11.76
Number of buying agents	13		6		26		17	

[a]Percentages based on the number of respondents identifying various sources of supply.
[b]The Defense Personnel Support Center, located in Birmingham, Alabama, is a military agency which supplies 31 military installations in four states, Florida, Alabama, Mississippi, and Georgia with fresh fruits and vegetables.

Table 2. Frequency of Produce Purchases from Georgia Growers by Type of Institution, Georgia, 1981

Item	County Correctional Institutions (no.)	County Correctional Institutions (%)[a]	State Correctional Institutions (no.)	State Correctional Institutions (%)[a]	School Systems (no.)	School Systems (%)[a]	Military Installations (no.)	Military Installations (%)[a]
None	10	76.93	6	100.00	18	69.23	15	88.24
Apples	-	-	-	-	4	15.36	-	-
Butter beans	1	7.69	-	-	-	-	-	-
Butter peas	1	7.69	-	-	-	-	-	-
Beans	1	7.69	-	-	-	-	1	5.88
Cabbage	-	-	-	-	2	7.69	2	11.76
Cantaloupe	1	7.69	-	-	-	-	1	5.88
Corn	1	7.69	-	-	-	-	1	5.86
Cucumber	-	-	-	-	-	-	1	5.88
Greens	2	15.38	-	-	1	3.65	2	11.76
Okra	2	15.38	-	-	-	-	-	-
Peas	1	1.69	-	-	-	-	2	11.76
Pepper	-	-	-	-	-	-	1	5.88
Potatoes	1	7.69	-	-	-	-	1	5.88
Squash	-	-	-	-	-	-	2	11.76
Sweet potatoes	-	-	-	-	2	7.69	1	5.88
Tomatoes	1	7.69	-	-	1	3.85	1	5.88
Watermelons	1	7.69	-	-	3	11.54	2	11.76
Avg. % of total annual volume purchased from local growers[b]		2.38		0.00		0.88		1.47
Standard deviation		5.96		-		2.16		4.92
Buying agents	13		6		26		17	

[a]Percentages based on the total number of respondents.
[b]Average of percentages reported by all buying agents within type of institution.

purchased (Table 2). But, for those who did buy locally, a variety of commodities were purchased.

Method of Produce Purchase

In a further attempt to determine the source of barriers to entry for fruit and vegetable growers to institutional markets, the method of produce purchase was analyzed. Since a purchasing contract with current handlers would prevent direct sales of produce from growers to buying agents servicing institutional markets, buying agents were asked if contract bids were utilized when purchasing fresh produce from current suppliers (Table 3).

Of interest was the percentage of state correctional institutions and military installations engaged in contract bidding. All state correctional units utilized contract bids in procuring fresh produce, In addition, approximately 59 percent of the buying agents for military installations reported the use of contract bidding in acquiring fresh produce.

Products Handled

In an attempt to measure the marketability of Georgia-grown produce, buying agents were asked to identify: 1) the three most important products handled, and 2) the percentage of total annual volume which the three most important items comprise. The results are presented in Table 4.

The annual volume of the three top products handled averaged 76.15 percent for county correctional institutions, 74.15 percent for state correctional institutions, 53.21 percent for school systems, and 35.11 percent for military installations (Table 4). Based on these estimates, it would appear that buying agents representing school systems and military installations are more diversified in produce purchases than either county or state correctional institutions. This is further substantiated by the large number of buying agents for school systems and military installations reporting purchases of a full line of fresh produce (Table 4).

Such apparent diversity in produce purchases reported by school system and military installation buying agents indicates greater opportunity for existing and potential producers in Georgia. Such opportunity is reflected in a wide range of production alternatives in which to engage. Based on the top three produce items reported in greatest demand by institutional buying agents, production alternatives incorporating apples, cabbage, cucumbers, peppers, potatoes, squash, and tomatoes appear to offer the greatest potential for Georgia producers in penetrating institutional fresh product markets.

Factors Influencing Purchases From Current Supply Sources

Buying agents were asked to identify factors or conditions which influence their decisions to purchase fresh produce from current supply sources. Key factors discovered were convenience, availability of suppliers, good service, variety, quality, volume, dependability, packaging, and the perceived stipulation requiring military installations to purchase directly from the DPSC (Table 5).

Upon further investigation of military buying procedures, it was found that the Department of Defense is particularly "anxious" to establish contracts with small business firms, disadvantaged business firms, and firms in labor surplus areas. Furthermore, it was found that the Department of Defense is ready to do business on a competitive basis with competent firms which can supply the products or services needed. However, it was further acknowledged by the Department of Defense that purchases are generally for small quantities of items, or for specific services needed

Table 3. Frequency of the Use of Contract Bids in Purchasing Fresh Fruits and Vegetables by Type of Institution, Georgia, 1981

Frequency	County Correctional Institutions (no.)	County Correctional Institutions (%)[a]	State Correctional Institutions (no.)	State Correctional Institutions (%)[a]	School Systems (no.)	School Systems (%)[a]	Military Installations (no.)	Military Installations (%)[a]
Weekly	-	-	5	83.33	1	3.85	5	29.41
Monthly	1	7.69	-	-	-	-	-	-
Annually	-	-	-	-	1	3.85	-	-
Daily	-	-	-	-	-	-	1	5.88
Bi-monthly	-	-	-	-	1	3.85	-	-
Nonspecific	1	7.69	1	16.67	-	-	4	23.53
None	11	84.62	-	-	23	88.46	4	23.53
No response	-	-	-	-	-	-	3	17.65
Number of buying agents	13		6		26		17	

[a]Percentages based on the total number of respondents within type of institution.

Table 4. Frequency with Which Various Fruits and Vegetables were Reported as One of the Three Most Important Products Purchased by Type of Institution, Georgia, 1981

Item	County Correctional Institutions (no.)	County Correctional Institutions (%)[b]	State Correctional Institutions (no.)	State Correctional Institutions (%)[b]	School Systems (no.)	School Systems (%)[b]	Military Installations (no.)	Military Installations (%)[b]
Full line[a]	3	23.03	-	-	23	88.46	17	100.00
Apples	3	23.03	-	-	3	11.54	4	23.52
Cabbage	13	100.00	5	83.33	20	76.92	5	29.41
Carrots	2	15.38	-	-	5	19.23	-	-
Celery	-	-	-	-	1	3.84	-	-
Citrus fruit	1	7.69	-	-	-	-	-	-
Cucumber	-	-	1	16.67	-	-	-	-
Lettuce	6	46.15	6	100.00	22	84.61	17	100.00
Onions	3	23.03	5	83.33	4	15.38	2	11.76
Pepper	1	7.69	-	-	-	-	-	-
Potatoes	4	30.77	-	-	1	3.84	16	94.11
Rutabaga	1	7.69	-	-	-	-	-	-
Squash	1	7.69	-	-	-	-	-	-
Tomato	3	23.03	1	16.67	16	61.53	7	41.17
Avg. % of total annual volume of top three products[c]		76.15		74.15		53.21		35.11
Standard deviation		18.38		7.35		11.76		14.45
Number of buying agents	13		6		26		17	

[a]Full line refers to a wide assortment of fruits, vegetables, and dry grocery goods.
[b]Percentages based on the number of respondents identifying specific produce items as being one of the top three products handled relative to the total number of respondents within type of institution.
[c]Average percentages based on the volume of the top three products relative to the total volume of produce purchased by institutional unit. Percentages not additive.

Table 5. Factors Influencing the Purchase of Fruits and Vegetables from Current Supply Sources by Type of Institution, Georgia, 1981

Factors	County Correctional Institutions		State Correctional Institutions		School Systems		Military Installations	
	(no.)	(%)[a]	(no.)	(%)[a]	(no.)	(%)[a]	(no.)	(%)[a]
Convenience	3	23.08	-	-	3	11.54	-	-
Only place available	5	38.46	-	-	2	7.69	-	-
Good service, variety, volume, quality, & dependability	3	23.08	-	-	25	96.15	5	29.41
Cheaper price, lowest bid	1	7.69	5	83.33	3	11.54	6	35.29
Can get items other than produce from this source	-	-	-	-	2	7.69	-	-
Gives credit	1	7.69	-	-	-	-	-	-
Packaging	-	-	-	-	4	15.38	-	-
Tradition	-	-	-	-	2	7.69	-	-
Required to buy from DPSC	-	-	-	-	-	-	13	76.47
Don't know why	-	-	1	16.67	-	-	-	-
Not answered	1	7.69	-	-	-	-	-	-
Number of buying agents	13		6		26		17	

[a]Percentages based on the number of respondents identifying specific factors as influencing purchases of fruits and vegetables from current supply sources relative to the total number of respondents within type of institution. Percentages not additive.

Table 6. Scale Ranking of Factors Reported by Institutional Buying Agents as Affecting Decisions to Purchase Products from New Supply Sources by Type of Institution, Georgia, 1981

Factors[a] (Rank 1-7)	County Correctional Institutions	State Correctional Institutions	School Systems	Military Installations
Competitive price:				
Average rank	2.00	1.33	2.68	1.83
Respondents	6	6	25	12
Consistent quality:				
Average rank	1.75	2.00	1.11	1.21
Respondents	12	6	26	14
Adequate volume:				
Average rank	-	-	4.61	3.75
Respondents	-	-	21	4
Dependable supply:				
Average rank	3.00	-	3.56	3.63
Respondents	1	-	23	11
Prepackaged product:				
Average rank	-	-	5.25	3.33
Respondents	-	-	8	3
Proximity to other suppliers:				
Average rank	-	-	7.00	-
Respondents	-	-	1	-
Only place available during season:[b]				
Average rank	1.50	-	4.7	-
Respondents	6	-	3	-
Good service:				
Average rank	2.66	2.00	3.16	3.57
Respondents	6	2	25	8
Convenient:				
Average rank	2.00	-	-	-
Respondents	1	-	-	-
Number of buying agents	13	6	26	17

[a]Factors ranked from 1 to 7 with 1 = most important. Ranking is within type of institution.
[b]A school system buying agent ranked eight factors. This category was ranked eighth. The response is not included in the table.

by the installation initiating the purchase (U.S. Department of Defense). The written preference by the Department of Defense is in contrast to procedures followed by military installation purchasing agents. Increased sales of Georgia produce to military installation could be anticipated if buying agents adhere to standard operating procedures encouraging purchases of lcoally grown produce.

The lack of available suppliers as reported by some institutional buying agents indicates further opportunity for producers in Georgia to gain entry and supply increased amounts of fresh produce to institutional markets. The desire by most institution respondents for good service, quality, volume, variety, and dependability reveals the importance of producer initiative in developing individual marketing expertise for sustained market penetration.

Factors Influencing Purchases From New Supply Sources

Surveyed buying agents were asked to rank factors or conditions which influence decision to purchase from a new supply source. Overall, the greatest potential barrier in supplying fresh produce to most institutions is the ability to provide consistent quality at a competitive price (Table 6). Although county correctional institution representatives ranked the availability of suppliers as the most important consideration when purchasing from a new supply source, consistent quality was the most frequent response.

The requirements of good service and dependable supply surfaced as potential barriers for many growers. These factors indicate the importance of the need for producers to develop goodwill and a dependable reputation for quality and service.

School system and military installation requirements for a prepackaged product and adequate volume may present additional barriers for Georgia producers. In order to overcome barriers to market entry, producers may have to invest heavily in state-of-the-art packing and storage facilities to insure quality and reduce waste while providing adequate volume over a longer season.

CONCLUSION AND IMPLICATIONS

Perhaps the most stirring finding was the small percentage of institutional buying agents purchasing fresh produce directly from Georgia growers. In fact, the study revealed that less than 1.2 percent of the fruits and vegetables utilized by institutional entities studied in Georgia were puchased directly from Georgia growers.

Most produce items reported as purchased through current suppliers could have been obtained in Georgia. Items grown in Georgia which appear to have the greatest potential in penetrating institutional markets are apples, cabbage, cucumbers, onions, peppers, potatoes, squash, and tomatoes. These products were reported as important produce items and are purchased locally by some institutions.

Market opportunities exist for Georgia-grown produce in institutional markets. However, exploitation of these opportunities will depend on producer initiative in developing individual market outlets. If producers wish to access institutional markets, they must meet the requirements for trading with institutional buying agents. Results indicate that major factors influencing purchases of fresh produce from current suppliers are capabilities of providing good service, variety, volume, quality and dependability at a competitive price.

A factor reported by some institutional buying agents, which further emphasizes the importance of producer initiative in developing individual market outlets, was the response that current supply sources offer the only produce supplies available. Some 38.46 percent of the county correctional institution buying agents reported the lack of other sources of supplies as a major factor for purchasing from current supply sources. This seems to indicate that competition may be lacking among current suppliers to these institutional units and further indicates the need for producers to contact potential buyers prior to production to determine the state of existing competition and market channel requirements for sustained market entry.

Results indicate that the greatest barrier for new suppliers attempting to access institutional markets is the ability to provide consistent quality at a competitive price. All respondents required good service, while most indicated the importance of a dependable supply with adequate volume. These factors indicate the importance of developing goodwill and a reputation for dependability if sustained market access is to be realized.

School system and military installation requirements for a prepackaged product and adequate volume may present additional barriers for Georgia producers. In order to overcome such barriers, producers will likely have to invest heavily in state-of-the-art packing and storage facilities to insure quality and reduce waste while providing adequate volume over a longer season.

Prevalent use of contract bidding by state correctional institutions and school systems may constitute an access barrier for some producers. Purchasing contracts with current handlers would prevent direct sales of Georgia-grown produce to buying agents servicing institutional markets.

Increased market access for Georgia-grown produce to buying agents servicing institutional markets could be enhanced via independent wholesalers if producers can adequately satisfy market channel requirements. Further opportunities for increased sales of Georgia produce to military installations could be anticipated if buying agents were to adhere to standard operating procedures encouraging purchases of locally grown produce.

New opportunity for Georgia producers to develop inroads into institutional markets and, indeed, the entire food service industry through changes in the form of fresh produce items for more convenient consumption could significantly increase the demand for Georgia-grown produce. The food service industry may prefer receiving fresh produce in processed form if the vegetables are prepared for salad bar facilities. A windfall advantage for producers would be substantial increases in per acre yield and variety of useable product, lower cull rate at the packing facility, and reduced harvest cost per unit of product. Implications for the food service industry include substantially reduced cost of fresh produce and a wider variety of produce items for salad bar utilization.

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