Assessing the Interests of Wholesale-ProduceBuyers in the Lower Mississippi Delta Region

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The need to expand the market share of Alabama fruits and vegetable producers necessitates an understanding of the attributes that would attract potential wholesale-produce buyers in the Lower Mississippi Delta Region (LMDR). A survey was developed and administered to over three thousand produce wholesale buyers in the LMDR; 317 returned surveys were analyzed for this study. Results indicate that non-Alabama wholesale-produce buyers would buy Alabama produce if the produce meet expected quality if adequate volume existed, if it were convenient, and if they were aware that the produce existed in Alabama. Produce such as peaches, sweet corn, beans, potatoes, and watermelons have greater market potential if volume is adequate and price competitive.

The need to expand the market share of Alabama fruits and vegetable producers necessitates an understanding of the interests of potential wholesale-produce buyers in the Lower Mississippi Delta Region (LMDR). Studies revealed that when sourcing for produce, wholesale buyers consider several important factors, including the quality and volume of the produce and the distance from the supply source to the warehouses. For example, James and Drake (1989) identified lack of uniform packaging and grading, no prior relationship between buyers and producers, low quality, and insufficient volume as barriers to marketing fresh produce from Northeast Ohio. Brooker (2000) observed that the major problem confronting most Tennessee fruit and vegetable growers is the difficulty of gaining access to commercial wholesale buyers due to the relatively large number of small-scale operations. Therefore, an insight into the interests of produce buyers would provide Alabama producers with pertinent information to organize and produce products that are acceptable and satisfactory to potential wholesale buyers.

Given the current economic plight of farmers, such pro-active measures are necessary to increase total sales and remain competitive. The objective of this study is two-fold. First, the study examined the interests and needs of produce buyers in the region. Second, the behavior of produce buyers who patronize Alabama producers was compared and contrasted with those of other produce buyers who do not patronize Alabama producers. The information generated will assist fruits and vegetable producers in general and Alabama producers in particular in developing appropriate strategies to attract potential wholesale produce-buyers and thus increase their total market share.

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Data and Method of Analysis

The directory of produce buyers in the LMDR was used to identify potential produce buyers in the region and a survey was mailed to each of the 3,283 produce buyers listed in the Alabama NASS. The survey was pre-tested and corrected prior to mailing. A total of 317 questionnaires (10 percent) were completed and returned. The returned surveys were coded and entered into the computer by the NASS. Further processing and final analysis were conducted at Alabama A&M University.

Of the 317 respondents who returned the surveys, 36 respondents indicated that they never bought Alabama produce and did not answer any other questions, while two other respondents indicated they bought Alabama produce but did not answer any other questions. These 38 produce buyers were excluded from the analysis, resulting in a total of 279 useable surveys. The data was analyzed using descriptive statistics.

Results

Wholesale-produce buyers were asked if they purchased any horticultural product from Alabama during 1997–1999 (Table 1). About 43 percent of the respondents indicated that they bought Alabama produce while approximately 49 percent reported that they did not buy Alabama produce. Another 8.6 percent of the respondents were unsure whether or not they bought Alabama produce.

Produce buyers who did not buy Alabama produce were asked to choose from a variety of reasons provided in Table 2. About 51 percent of those buyers indicated that their firms have an established relationship with other suppliers, while another 50 percent said they were not aware that the produce exists in Alabama. Only about six percent of the buyers did not buy Alabama produce due to insufficient volume, and 4.4 percent suggested that Alabama did not meet their quality needs. Another four percent were concerned with the reliability of Alabama producers, while two percent of the non-Alabama buyers mentioned transportation as the reason they did not buy Alabama produce.

The non-Alabama-produce buyers were also asked to indicate under what circumstances they would consider purchasing Alabama produce in the future. The result is presented in Table 3. The table

Table 1. Did You Purchase Alabama Horticultural Products in the Past Three Years (1997 to 1999)?

Category	# Of Respondents	% Of Respondents
Yes	119	42.7
No	136	48.7
Don't Know	24	8.6
Total	279	100

Table 2. Reasons Alabama Horticultural Products Were not Purchased (N=136).

Category	# Of Respondents	% Of Respondents
Products not available in quantities needed	8	5.9
Products did not meet quality requirement	8	4.4
Products not prepared the way needed	-	-
Sellers reliability less than satisfactory	5	3.7
Not aware product exists in Alabama	68	50.0
Firm already has relationship with other suppliers	69	50.7
Transport	3	2.2
Other	18	13.2

Table 3. Under What Circumstances Would You Purchase Alabama Horticultural Products in the Near Future (n=160)?

Category	# Of Respondents	% Of Respondents
Assurance of adequate supply	65	40.6
Quality and uniformity meet requirements	82	51.5
Convenience	52	32.5
Promise of long term contract	19	11.9
Other	21	13.1
None	38	23.8

shows that about 50 percent of the produce buyers would buy Alabama produce if the produce meets expected quality and uniformity requirements. Another 41 percent said they would purchase Alabama produce in the future if there were an adequate supply of the produce, while 33 percent of the respondents indicated they would buy Alabama produce only when it is convenient. About 12 percent of the respondents indicated they would buy Alabama if they had a guaranteed long-term contract. About 24 percent of the respondents would not buy Alabama produce under any circumstance.

To identify Alabama produce with great market potential, the non-Alabama-produce buyers were asked to indicate the horticultural produce from Alabama they would be interested in buying if the supply, price, and quality met expected requirements. These results are presented in Table 4. About 12 percent of the buyers indicated they would be interested in buying peaches, while 11 percent of the respondents would be interested in purchasing beans. Eleven percent would be interested in buying sweet corn and eight percent would want tomatoes. Seven percent would be interested in buying potatoes while six percent will buy watermelons. Approximately six percent would be interested in buying blueberries, while five percent would be interested in squash. Only about four percent would be interested in greens, strawberries, cabbage, and cantaloupes, respectively.

Alabama-produce buyers were asked to identify the produce they actually purchased and the percentage of such produce that came from Alabama during the year. Table 5 shows that about 45 percent of the respondents bought tomatoes, and a majority of these buyers (85 percent) bought an average of about 16 percent of their tomatoes from Alabama. The maximum percent of tomatoes bought from Alabama by a buyer was 73, and the minimum purchase was one percent, with a standard deviation from the mean of 16.11. Another 42 percent bought watermelons; of those, 84 percent bought approximately 20 percent of their watermelons from Alabama. In this case, the maximum percentage of watermelons bought from Alabama was 80 while the minimum was again one percent, with a standard deviation 20.48. About 39 percent bought potatoes; 87 percent of these produce buyers bought an average of 8 percent of their potatoes from Alabama. The maximum purchase from Ala-

Table 4. Which Horticultural Products Produced in Alabama Would You be Interested in Purchasing if Your Supply-Price Requirements were Met (n=160)?

Category	# Of Respondents	% Of Respondents
Greens (all)	6	3.8
Peaches	19	11.9
Potatoes	11	6.9
Cabbage	6	3.8
Cantaloupes	7	4.4
Squash	8	5.0
Sweet Potatoes	2	1.3
Okra	4	2.5
Beans (all)	17	10.6
Tomatoes	13	8.1
Cucumbers	1	0.6
Strawberries	6	3.8
Sweet corn	18	11.3
Watermelons	10	6.3
Peppers	1	0.6
Apples	4	2.5
Blueberries	9	5.6
Others	11	6.9

bama was 25 percent while the minimum purchase was again one percent with 7.37 deviation from the mean. Thirty-six percent of the respondents bought sweet potatoes; 88 percent bought an average of 25 percent of their sweet potatoes from Alabama. Twenty-four percent of the buyers bought cabbage, and of those, 75 percent bought an average of nine percent of their cabbage from Alabama. Twenty-one percent of the buyers bought peaches and squash, respectively; 88 percent bought about 50 percent and 13 percent, respectively, of their peaches and squash from Alabama. Nineteen percent indicated they bought cucumbers, with about 82 percent buying an average of 11 percent of their cucumbers from Alabama. Eighteen percent bought beans; 76 percent bought an average of 12 percent of their beans from Alabama. Seventeen percent of the buyers bought sweet corn; 75 percent bought an average of 12 of their sweet corn from Alabama. Buyers of Alabama produce were asked why they have not purchased higher percentages of Alabama horticultural products (Table 6). Forty-three percent of the respondents indicated that their firms have a standing relationship with other suppliers. Twenty-four percent did not buy higher percentages of Alabama produce because of insufficient volume, while about 18 percent did not purchase Alabama produce because of seasonal concerns. A further eighteen percent had quality concerns, 13 percent were concerned about the reliability of Alabama producers, and about eight percent were concerned about the way the produce was prepared. Only about three percent of the buyers were concerned about transportation problems, while less than one percent were concerned about price.

Alabama produce buyers were asked to indicate the percentage and quantity of produce bought from different market channels. Table 7 shows that 50 percent of the buyers bought an average of 77 percent of their produce directly from farmers, while 48 percent bought an average of 73 percent of their produce from brokers. About 19 percent of the respondents bought approximately 51 percent of their produce from other wholesalers, while eigh-

Table 5. Percentage of Alabama Products Purchased by Respondents (n=119).

Category	# Of Respond.	% Of Respond.	Mean %	N	Std Dev	Max	Min
Beans (all)	21	17.6	11.5	16	12.62	45	1
Blueberries	10	8.4	40.0	9	41.08	100	5
Cabbage	28	23.5	8.9	21	9.43	30	1
Cantaloupe	16	13.4	14.83	12	10.55	40	5
Cucumbers (Fresh)	22	18.5	11.39	18	9.48	30	1
Greens (all)	19	16.0	45.24	17	35.47	100	1
Okra	11	9.2	37.22	9	29.17	80	5
Ornamental, Flowers, etc.	4	3.4	67.5	4	39.48	100	10
Peaches	26	21.0	49.52	23	32.83	100	1
Peas	8	6.7	27.43	7	31.46	75	2
Potatoes	46	38.7	8.25	40	7.37	25	1
Pumpkins	5	4.2	25.0	3	22.91	50	5
Squash	26	21.0	12.96	24	9.66	35	1
Sweet Potatoes	43	36.1	24.79	38	26.37	99	1
Sweet corn	20	16.8	12.27	15	13.46	50	1
Tomatoes	54	45.4	16.33	45	16.07	73	1
Watermelons	50	42.0	19.5	42	20.48	80	1
Peppers (all)	2	1.7	75.0	1	-	75	75
Others	4	3.4	18.75	4	23.54	54	5

teen percent bought about 58 percent of their produce from the terminal markets. Three percent of the respondents bought an average of 34 percent of their produce from the cooperatives.

Table 8 reports the preference of produce wholesalers in the LMDR regarding vegetable-melon-potatoes produce and fruit-berries produce. A majority of the wholesale buyers of vegetable-melon produce (56 percent) prefer fresh bulk commodities. Forty-six percent of the respondents prefer fresh packaged products and 10 percent prefer processed products. About 2 percent prefer their produce in other forms. However a majority of the fruits-berries wholesale buyers (42 percent) prefer fresh packaged products ready for sale. Twenty-eight percent prefer fresh bulk quantities, while five

Table 6. Reasons For Not Purchasing Alabama Horticultural Products in Higher Percentages (n=119).

Category	# Of Respondents	% Of Respondents
Products not available in quantities needed	28	23.5
Products did not meet quality requirements	21	17.6
Products not prepared the way needed	9	7.6
Reliability of sellers was less than satisfactory	16	13.4
Seasonal concerns	21	17.6
Transportation problems	3	2.5
Price concerns	1	0.8
Firm has relationship with other supplier	51	42.9
Other	15	12.6

Table 7. Alabama-Produce Buyers' Percentage of Purchases From Different Sources (n=119).

Category	# Of Respond.	% Of Respond.	Mean % Bought	Std. Dev.	Max.	Min.
Direct from farmers	60	50.4	76.58	27.57	100	2
Brokers	57	47.9	72.56	33.88	100	1
Cooperative	4	3.4	33.75	44.60	100	5
Wholesalers	22	18.5	51.14	34.26	100	5
Terminal markets	21	17.6	57.62	36.16	100	10
Other	1	0.8	100	-	100	100

Table 8. Produce Wholesalers Preference For Produce Types (n=279).

	Vegetables-Melons-Potatoes Produce		Fruits-Berries Produce	
Category	# Of Respond.	% Of Respond	# Of Respond	% Of Respond
Fresh-Bulk Produce	155	55.6	78	28
Fresh-Packaged ready for sale	128	45.9	118	42.3
Processed ready for sale	28	10	13	4.7
Dried-Bulk Produce	-	-	1	0.4
Dried-Packaged ready for sale	-	-	3	1.1
Other	5	1.8	4	1.4

percent prefer processed products. Only one percent prefer dried and packaged products and less than one percent prefer dried and bulk commodities.

Produce buyers were asked to choose their preferred delivery method from the three listed in Table 9: pick-your-own, delivered sale, and other methods. A majority of the buyers (64 percent) prefer their product to be delivered to them, while about 27 percent prefer to pick up their produce by themselves. Only four percent prefer other types of delivery method.

Wholesaler buyers were also asked if they are interested in organic produce (Table 10). Nineteen percent of the total respondents indicated interest in organic produce; of those, nine percent would buy less than $50,000 of organic produce per year, while approximately five percent would buy between $50,000 and $100,000 of organic produce per year, and five percent would need at least $100,000 of organic produce per year.

Delivery methods preferred by Alabama buyers and non-Alabama buyers are shown in Table 11. A majority of the wholesale buyers (73 percent) prefer their produce to be delivered to them. Of the 105 buyers that bought Alabama produce, 75 percent prefers their produce delivered, while 72 percent of the 174 non-Alabama buyers prefer their produce delivered. The results show no significant difference between Alabama-produce buyers and non-Alabama-produce buyers. Thirty-three percent of non-Alabama-produce buyers and 27 percent of Alabama-produce buyers prefer to pick up their produce. Altogether, thirty-one percent of the wholesale buyers prefer the pickup delivery method. Again, there was no significant difference between Alabama buyers and non-Alabama buy-

Table 9. Produce Wholesalers' Preferred Delivery Method (n=279).

Category	# Of Respondents	% Of Respondents
Pick up by firm	86	27.1
Delivered Sale	204	64.4
Other	14	4.4

Table 10. Wholesalers' Organic Produce Needs Per Year (n=279).

Category	# Of Respondents	% Of Respondents
Less than $50,000	26	9.3
$50,000 - $99,999	13	4.7
$100,000 +	14	5.0
Total	**53**	**19.0**

Table 11. Produce Buyers and Preferred Delivery Method.

	Pick-up By Firm			Delivered Sale			Other		
Produce Buyers	**# Of Resp.**	**% Of Resp.**	**Total**	**# Of Resp.**	**% Of Resp.**	**Total**	**# Of Resp.**	**% Of Resp.**	**Total**
Alabama Buyers	28	27	105	79	75	105	4	3.8	105
Non-Alabama Buyers	58	33	174	125	72	174	10	5.7	174
Total	86	31.1	279	204	73	279	14	5.0	279
Sig. Level		0.15			0.317			0.339	

ers with regards to this method of delivery. About four percent of Alabama-wholesale buyers and six percent of non-Alabama buyers prefer other delivery methods. There was no significant difference between Alabama buyers and non-Alabama buyers at the 10-percent-significant level as shown by the chi-square value.

Alabama-produce buyers and non-Alabama-produce buyers were asked about their interest in organic produce. The result shows that there was no significant difference between Alabama-produce buyers and non-Alabama-produce buyers (Table 12). Approximately 22 percent of Alabama-produce buyers and 17 percent of non-Alabama buyers indicated interest in organic produce. Altogether, only 53 produce buyers (19 percent) expressed interest in buying organic produce.

To gain more insight into their interest in organic produce, produce buyers were asked to indicate what dollar volume of organic produce they would need per year. A total of 26 produce buyers (nine percent) need less than $50,000 of organic produce per year, 13 buyers (five percent) would buy between $50,000 and $100,000 of organic produce per year, and 14 buyers (five percent) need more than $100,000 of organic produce per year (Table 13). The only significant difference between Alabama-produce buyers and non-Alabama-produce buyers is with those needing less than $50,000 of organic produce per year. Fourteen percent of Alabama-produce buyers but only six percent of non-Alabama-produce buyers would need of less than $50,000 of organic produce per year. Approximately five percent of both Alabama- and non-Alabama-produce buyers would buy between $50,000 and $100,000 of organic produce per year, and five percent of non-Alabama-produce buyers and three percent of Alabama-produce buyers would need more than $100,000 of organic produce per year. There was no significant difference between Alabama produce buyers and non-Alabama produce buyers in either of these categories.

Summary and Conclusion

The results of this study are consistent with previous studies, suggesting great potential for producers of horticultural products in the region in general and Alabama in particular. However, advertising and promotion are necessary to inform potential wholesale buyers. A majority of the non-Alabama-produce buyers indicated they did not buy Alabama produce either because they were not aware that the produce exists in Alabama or because they already had an existing relationship with other suppliers. The results of this study revealed that non-Alabama-produce wholesale buyers would buy Alabama produce if the produce met expected

Table 12. Produce Buyers and Interest in Organic Produce.

Categories	# Of Respond.	% Of Respond.	Total	Sig. Level
Alabama Buyers	23	21.9	105	0.21
Non-Alabama Buyers	30	17.2	174	
Total	53	19	217	

Table 13. Produce Buyers' Organic Produce Needs Per Year.

	< $50,000			$50,000–$99,000			$100,000+		
	# Of Resp.	% Of Resp.	Total	# Of Resp.	% Of Resp.	Total	# Of Resp.	% Of Resp.	Total
Alabama Buyers	15	14	105	5	4.8	105	3	2.9	105
Non-Alabama Buyers	11	6.3	174	8	4.6	174	11	5.3	174
Total	26	9.3	279	13	4.7	279	14	5.0	279
Sig. Level		0.024			0.581			0.158	

quality requirements and standards, if they were assured of sufficient volume, and if it were convenient. Produce such as peaches, sweet corn, beans, potatoes, and watermelons have greater market potential if volume is adequate and price competitive.

Most Alabama wholesaler produce buyers purchase their produce either directly from farmers or through brokers. This suggests that wholesaler buyers would buy directly from farmers if the produce met their requirements. Produce wholesalers also get their supply through other wholesalers or the terminal markets, but very few wholesale buyers bought produce from cooperatives. Produce wholesalers of both fruits and vegetables prefer fresh bulk commodities or fresh packaged products ready for sale. A majority of the vegetable buyers prefer fresh bulk vegetables, while a majority of the fruit buyers prefer fresh packaged fruits. Few buyers expressed interest in processed or dried products. Most of the produce buyers preferred produce to be delivered.

Finally, only 19 percent of the produce buyers expressed interest in organic produce, and most of these buyers would buy less than \$50,000 of organic produce per year. Only five percent of the produce buyers would buy more \$100,000 of organic produce per year.

References

Brooker, J. 2000. "Competitiveness and Access to Produce Markets for Smaller-Volume Tennessee Producers." *Journal of Food Distribution Research* 31,3 (November).

Eastwood, D. and J. Brooker. 2000. "Small Fresh Fruit and Vegetable Growers in Tennessee: Factors Associated with Their Use of Commercial Outlets." *Journal of Food Distribution Research* 31,2 (July).

James, R. and B. Drake. 1989. "Marketing of Selected Fresh Agricultural Products." Research Reports. Proceedings Issue 29th Annual Meeting of the Food Distribution Research Society. *Journal of Food Distribution Research* 20,1 (February).