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An Analysis of the Retail-Level Market Potential for Locally Grown Shiitake Mushrooms in North Alabama

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This study analyzed the market potential for locally grown shiitake mushrooms at the retail level in North Alabama. The data for this study were taken from a survey administered to produce managers of 79 retail stores in the region. Of the 79 stores in the sample, only 32 sold shiitake mushrooms. Results revealed that shiitake mushrooms were the third most retailed mushroom in North Alabama. Furthermore, supermarkets and specialty stores were more likely to stock shiitake mushrooms than were grocery stores. Among the shiitake types, fresh shiitake mushrooms were the most common, followed by packaged and dried forms, respectively. When sourcing for shiitake mushrooms, quality, freshness, and price were the three most important factors considered by produce managers.

Introduction

Shiitake mushrooms, once grown in Japan and China, are now produced profitably throughout Asia, Europe, and North America. This mushroom is the second most popular mushroom cultivated in the world—after the *agaricus* mushroom, which is known as the button mushroom. The increased popularity, according to Suzuki and Oskima (1997), stems from the numerous uses and benefits derived from this mushroom. Shiitake mushrooms have natural antiviral and immunity-boosting properties and are used nutritionally to fight viruses, to lower cholesterol, and to regulate blood pressure. According to Suzuki and Oskima (1997), three ounces of raw shiitake eaten daily for one week can lower serum cholesterol by 12 percent, while shiitake extract in concentrated forms of lentinan could be used to treat cancer, AIDS, diabetes, fibrosystic breast disease, and other conditions with impressive results. In 1997, more than 6.23 million pounds of shiitake mushrooms were produced in the United States (USDA-NASS, 1998). The mushroom can be grown on natural logs or synthetic wood media; however, most shiitake production in the United States is produced on natural logs (Sabota, 1988).

Due to the increased interest in shiitake mushrooms, the consumption of fresh shiitake in the United States has soared, resulting in a total sale of 5.92 million pounds in 1997 (USDA-NASS, 1998). As a result, interest is growing regarding the introduction and adoption of shiitake mushrooms as an alternative crop for farmers, especially small and limited resource farmers. Shiitake mushroom is a high-value agricultural product with great potential to improve the incomes of small farmers if quality and the necessary volume are achieved at minimum cost (North Carolina Extension Service, 1988).

Inspite of the potential high premium associated with shiitake production, adoption by farmers and potential growers is limited, primarily due to a lack of market information and underdeveloped or inadequate market channels. Evidence suggests that, with better information on market outlets and potential buyers, shiitake mushrooms could be an important alternative enterprise for farmers (North Carolina Extension Service, 1988).

The objective of this paper is to determine the necessary attributes to attract retailers to purchase locally grown shiitake mushrooms and to examine the relationship between selected store characteristics and interests in stocking shiitake mushrooms. The next section presents a review of relevant literatures. This is followed by the methodology employed and a description of the data used. The results of the analysis, conclusion, and implication are then presented.

Review of Relevant Literature

A review of relevant literature revealed that the shiitake mushroom has high potential as an

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alternative crop for farmers, especially small and limited resource farmers, in the United States. However, there is a great need to understand and explore market possibilities, in order to take advantage of the benefit from producing this commodity.

Degner and Williams (1991) evaluated the market potential for direct sales of shiitake mushrooms to Asian grocery stores, independent ethnic restaurants, and produce wholesalers in the North Florida area, using data obtained from the *Asian Food Stores and Oriental Restaurants 1991–92 Florida Business Directory* and the restaurant contact list augmented with Tablecloth/Gourmet listings from the 1990–91 *Directory of High Volume Independent Restaurants*. The results indicated that there was no significant market outlet in the area for the North Florida mushroom producers because of low expected volume. Of the 14 oriental restaurants in the sample, none used shiitake mushrooms. Very few kitchen managers were familiar with shiitake mushrooms; however, several managers expressed interest in trying shiitake mushroonms in their food preparations. Of the six Italian restaurants in the study, only three used shiitake mushrooms; therefore, Italian restaurants have the potential for direct sales, if the necessary volume will be achieved. Similarly, the study found that French and American restaurants provide high opportunity for direct sales to growers, but supply has to be consistent with the necessary volume; therefore, the relatively small number of users, the geographic dispersion, and the small weekly volumes would negatively impact the growers' ability to serve the market efficiently with direct sales. The greatest potential for immediate sales exists with produce wholesalers that serve the foodservice trade. The results also showed that eight produce wholesalers expressed interest in obtaining shiitake mushrooms directly from North Florida growers. Six of the produce wholesalers reported weekly sales ranging from 35–200 pounds, with virtually all shiitake mushrooms going to upscale restaurants. The study indicated that deliveries to produce wholesalers would be more stable and more efficient than direct sales to restaurants would be, and because most shiitake mushrooms are obtained from out-of-state sources, Florida-grown mushrooms might have a slight shelf-life advantage as well as a transportation cost advantage that would help make them competitive. Overall, the market outlet for shiitake mushrooms in North Florida was found to be small for the North Florida mushroom producers.

Pickford (1989) evaluated Ohio Shiitake mushrooms in Columbus, Cincinnati, and Cleveland, Ohio, using data collected by telephone survey. Produce distributors, grocery wholesalers, and the retail distributors of shiitake mushrooms were the focus of this study. Responses were collected from all three cities, but greater emphasis was placed on the Columbus market area. Of the 25 full-time produce distributors in Columbus, 10 sold shiitake mushrooms. Two of the distribution firms accounted for 62 percent of the shiitake mushrooms sold in the produce market in Columbus. The study found that the produce wholesalers shared many similarities regarding shiitake in the three cities. Volume through this distribution channel was also similar among the cities, with the major wholesalers averaging sales of 150 pounds per week in Cincinnati, 320 pounds per week in Cleveland, and 200 pounds per week in Columbus. In Cincinnati, the wholesalers primarily sold their supply of shiitake mushrooms to the restaurant chains. The study also revealed that the Columbus grocery market was dominated by two chains (Kroger and Big Bear), which sold approximately 250 pounds per week, while in Cleveland, the total volume sold was approximately 405 pounds per week. The Cincinnati market sold 365 pounds of shiitake per week, with a high proportion sold to restaurant chains. The available data revealed that the retail grocery market for shiitake mushrooms was less developed in Cincinnati than were the markets in other Ohio cities and the nation as a whole. The study found that between 268 and 330 pounds per week of shiitake mushrooms were consumed in restaurants, and 250 pounds per week were purchased by consumers at supermarkets. A very small proportion (5–10 pounds/week) was sold in specialty stores. In certain parts of the United States, shiitake mushroom distributors claimed that specialty stores sold substantial quantities of shiitake locally. In Columbus, there were few specialty grocery stores, and only two actually sold fresh shiitake mushrooms.

Furthermore, the volume sold was usually small, averaging only three pounds per week. Only one store sold shiitake regularly. Generally, this study disagrees with the assertion that specialty stores are substantial outlets for shiitake mushrooms.

Method of Analysis

A logit model was used to analyze the data. The use of a logit model in analyzing survey data has been well-documented (Amemiya, 1985; Barkley and Flinchbaugh, 1990; and Gujarati, 1995). A logit model was used to examine the relationship between store types, locations and the stores' interest in retailing shiitake mushrooms. In both situations, the dependent variable was dichotomous or qualitative in nature, taking a "one" or "zero" value.

The model reflecting the probability of stocking shiitake mushrooms is specified below.

$$(1)\quad P_i = E(Y = 1 \mid X_i) = \delta_1 + \delta_2 X_i,$$

where X is a vector of explanatory variables and δ is a vector of coefficients to be estimated. Y = 1 means that a store stocks shiitake mushrooms, and Y= 0 means that a store does not stock shiitake mushrooms. In general, the model is expressed as

$$(2)\quad P_i = E(Y = 1 \mid X_i) = \frac{1}{1+e^{-(\delta_1+\delta_2 X_i)}},$$

where e is the base of the natural logarithm. This can be expressed as

$$(3)\quad P_i = \frac{1}{1+e^{-Z_i}},$$

where $Z_i = \delta_1 + \delta_2 X_i$, with Z_i ranging from $-\infty$ to ∞, and P_i between 0 and 1. If P_i in 3 represents the probability of stocking shiitake mushrooms, then $(1-P_i)$ represents the probability of not stocking shiitake mushrooms. This can be written as

$$(4)\quad 1 - P_i = \frac{1}{1+e^{Z_i}}.$$

Equations (3) and (4) can be combined as shown below:

$$(5)\quad \frac{P_i}{1-P_i} = \frac{1+e^{Z_i}}{1+e^{-Z_i}} = e^{Z_i},$$

where $P_i/(1- P_i)$ is simply the *odds ratio* in favor of stocking shiitake mushrooms. This is the odds ratio of the probability of stocking shiitake mushrooms to the probability of not stocking shiitake mushrooms. Taking the natural log of equation 5, we have

$$(6)\quad L_i = \ln\left(\frac{P_i}{1-P_i}\right) = Z_i = \delta_1 + \delta_2 X_i,$$

where L is called the logit, the log of the odds ratio. This is the model that was estimated to analyze the data.

To facilitate the analysis, a dichotomous random variable, Y_i, which corresponds to the survey response of stocking or retailing mushrooms will be defined. For instance, i = 1 represents stores responding that they stocked shiitake mushrooms, and i = 0 represents those responding that they did not stock shiitake mushrooms. Thus, the probability of a store selecting a given response depends on a vector of independent variables associated with store i, X_i (the characteristics associated with the store).

Data Description

The data for this study was taken from a survey of retail stores conducted between 1997 and 1998 in four cities in North Alabama. The four cities are Huntsville, Decatur, Athens, and Florence. The survey was designed to collect information that is pertinent in analyzing interest in the purchase of shiitake mushrooms from a local producer. The targeted retail stores were stores that stock and sell mushrooms in the area. A list of addresses and telephone numbers of all the retail establishments in the four cities was first generated through the telephone directory and the 1998 American Business Information System. The identified stores were called to verify whether they sold mushrooms. Stores that stocked and sold mushrooms were retained for the study, while those that did not stock mushrooms were eliminated. Information on the necessary attributes—such as form, quality, and volume, and other factors that affect purchasing decisions—were solicted. The survey instrument was administered to the store owner or the produce manager. A total of 79 stores, which stocked and sold mushrooms, were

interviewed. These stores comprised 44 stores in Huntsville, 12 stores in Decatur, 10 stores in Athens, and 13 stores in Florence.

In addition, zip code secondary data on sociodemographic variables corresponding with the location of each store were taken from the 1990 U.S. Census to supplement the primary data. Some of the zip code variables used in this study include percent foreign born, percent born in state of residence, percent unemployed, per capita income, total population, and percent ethnic groups (Hispanic and Asian or Pacific Islander) in a zip code area.

Results

The number of stores and the types of mushrooms sold by retail stores in North Alabama are presented in Table 1. Of the various types of mushrooms sold, nearly all the retail stores in the sample (93.7 percent) sold Button mushrooms. Following the Button mushroom, the Portabella mushroom was sold by 48 percent of the stores. The next popular mushroom was the Shiitake mushroom, which was sold by 41 percent of the stores. Thirty-four percent of the stores sold the Oyster mushroom, while 27 percent carried the Crimini mushrooms. Twenty-two percent of the retail stores sold the Enoki mushroom, while only six stores (7.6 percent), located in Huntsville, sold other types of mushrooms.

In Huntsville, 89 percent of the retail stores stocked and sold the Button mushroom, while all the stores in Decatur, Florence, and Athens sold the button mushroom. The Portabella mushroom was retailed by 67 percent of the stores in Decatur stores, 52 percent of the stores in Huntsville, 40 percent of the stores in Athens, and 23 percent of the stores in Florence. With regard to Shiitake mushrooms, 55 percent of the stores in Huntsville carry them, while 33 percent and 31 percent of the stores in Decatur and Florence, respectively, carry the Shiitake mushrooms. Conversely, no stores in Athens sold the Shiitake mushrooms. The Oyster mushroom was retailed by 48 percent of the stores in Huntsville, 31 percent of the stores in Florence, and 17 percent of the stores in Decatur. None of the stores in Athens carry the Oyster mushroom. In the case of the Crimini mushroom, 36 percent of the stores in Huntsville, 31 percent of the stores in Florence, and only one store in Decatur sold the crimini. Again, no store in Athens sold the Crimini mushroom. For the Enoki mushroom, 25 percent of the stores in Huntsville and Decatur, respectively, sold the Enoki mushroom, while 15 percent of the stores in Florence and only 1 percent of the stores in Athens sold the Enoki.

In Table 2, the stores identified to carry Shiitake mushrooms in the four cities were classified into grocery, supermarkets, and specialty stores. None of the stores in Athens sold Shiitake mushrooms; therefore, those stores were excluded in the analysis. Of the 79 stores interviewed, only 32 stores (41 percent) sold Shiitake mushrooms; therefore, the table was based on those stores. The table shows that 78 percent of the stores that sold Shiitake mushrooms were supermarkets; 16 percent were specialty stores; and only 6 percent were grocery stores.

Of the 44 retail stores in Hunstville, 24 stores sold Shiitake mushrooms. Of those 24 stores, only one was a grocery store. Eighteen were supermarkets, and five were specialty stores. Four stores out of the 12 retail stores interviewed in Decatur sold shiitake mushrooms. Of those four stores, one was a grocery store, and the other three were supermarkets. In Florence, only four retail stores sold Shiitake mushrooms, and the four stores were supermarkets.

Table 3 shows the types of Shiitake mushrooms marketed and the number of stores selling different forms in each city. Shiitake mushrooms are sold in different forms including fresh, dry, processed, and packaged. Of the total stores that stocked shiitake mushrooms, 22 stores sold Shiitake in fresh form; 13 stores sold dry Shiitake; 15 stores sold packaged Shiitake; and only two stores sold Shiitake in processed form.

All of the stores in Decatur and Florence sold fresh Shiitake mushrooms, while 14 stores of the 24 stores in Huntsville sold fresh Shiitake mushrooms. Twelve stores in Huntsville and two stores in Decatur sold Shiitake mushrooms in packaged form. Only one of the four stores in Florence sold packaged Shiitake mushrooms. Two stores in Florence and 11 stores in Huntsville sold Shiitake mushrooms in dry form, while in Decatur, no store sold dry Shiitake mushrooms. Two stores in Huntsville sold processed Shiitake mushrooms.

To test the difference between group mean in these markets, Decatur and Florence were

Table 1. Number of Retail Stores and Type of Mushrooms Sold.

Type of Mushrooms & Location of Stores	# of Stores Carrying Type of Mushrooms	% of Stores for Each City	Total # of Stores Interviewed for Each City
Button			
Huntsville	39	88.6	44
Decatur	12	100	12
Florence	13	100	13
Athens	10	100	10
Total	74	93.7	79
Portabella			
Huntsville	23	52.3	44
Decatur	8	66.7	12
Florence	3	23.1	13
Athens	4	40	10
Total	38	48.1	79
Shiitake			
Huntsville	24	54.5	44
Decatur	4	33.3	12
Florence	4	30.8	13
Athens	0	0	10
Total	32	40.6	79
Oyster			
Huntsville	21	47.7	44
Decatur	2	16.7	12
Florence	4	30.8	13
Athens	0	0	10
Total	27	34.2	79
Crimini			
Huntsville	16	36.4	44
Decatur	1	8.3	12
Florence	4	30.8	13
Athens	0	0	10
Total	21	26.6	79
Enoki			
Huntsville	11	25	44
Decatur	3	25	12
Florence	2	15.4	13
Athens	1	1.3	10
Total	17	21.5	79

Table 2. Classification of Shiitake Mushroom Retail Stores in Each City.

Cities	Grocery Stores		Supermarkets		Specialty Stores		Total Stores	
	# of Stores	% of Stores**	# of Stores	% of Stores**	# of Stores	% of Stores**	# of Stores	% of Stores**
Huntsville	1	4.2	18	75	5	20.8	24	100
Decatur	1	25	3	75	0	0	4	100
Florence	0	0	4	100	0	0	4	100
Total	2	6.25	25	78.1	5	15.6	32	100

** % of stores refer to the % of stores in each city.

Table 3. Forms and Number of Stores Selling Shiitake Mushrooms in Each City.

Total In Each City	Fresh		Dry		Processed		Packaged	
	# of Stores	% of Stores	# of Stores	% of Stores	# of Stores	% of Stores	# of Stores	% of Stores
Huntsville (24)	14	58.3	11	45.8	2	8.3	12	50
Decatur (4)	4	100	0	0	0	0	2	50
Florence (4)	4	100	2	50	0	0	1	25
Total (32)	22	68.8	13	40.6	2	6.3	15	46.8
**Pearson Chi-Square	4.848	—	1.080	—	.711	—	.376	—
**Degree Of Freedom	1	—	1	—	1	—	1	—
Significance Level	0.028	—	.299	—	.399	—	.539	—

**Critical Value of chi-square: .01 Level, 1df = 6.635 and .05 Level, 1df = 3.841.

Note: For the chi-square test, Decatur and Florence are combined into one category in an attempt to meet the minimum five expected cases per cell.

Combined and compared with Huntsville data. In Table 3, the chi-square test for fresh Shiitake in Huntsville and Decatur-Florence retail stores was 4.848. Since 4.848 > 3.841 (table value), we reject the H_0 hypothesis of no significant difference between Huntsville retail stores and Decatur-Florence retail stores in the marketing of fresh shiitake mushrooms. However, the null hypothesis of no significance between the two groups for the other forms of shiitake mushrooms was not rejected, because the values are less than the table value of 3.841. This suggests that there is little or no difference between Huntsville stores and the Decatur-Florence stores in the marketing of dry, processed, and packaged shiitake mushrooms.

In Table 4, the retailers were asked to identify the most important factor considered when buying shiitake mushrooms. Due to multiple answers, the sum of the percent of stores exceeded 100 percent. Of the various factors considered, quality was cited by 88 percent of the retailers as the most important factor. About 72 percent of the retailers cited freshness as the second most important factor, and 66 percent of the retailers indicated that price was the most important factor. Following those factors, 38 percent of retailers said color was the most important factor, and 31 percent said that quantity was the most important factor. All the retailers in Decatur indicated that quality was the most important factor, while 88 percent and 75 percent of the retailers in Huntsville and Florence, respectively, considered quality as the most important factor. Similarly, all the stores in Florence considered freshness as an important factor, while 75 percent of the retailers in Decatur, and 67 percent of the retailers in Huntsville considered freshness important. Seventy-five percent of the retailers in both

Table 4. Factors Considered by Retailers When Buying Shiitake Mushrooms.

Cities	Price		Quality		Freshness		Color		Quantity		Other	
	#	%	#	%	#	%	#	%	#	%	#	%
Huntsville (24)	15	62.5	21	87.5	16	66.7	8	33.3	8	33.3	1	4.2
Decatur (4)	3	75	4	100	3	75	3	75	2	50	0	0
Florence (4)	3	75	3	75	4	100	1	25	0	0	0	0
Total (32)	21	65.6	28	87.5	23	71.8	12	37.5	10	31.2	1	3.1
**Pearson Chi-Square	0.416	—	.000	—	1.288	—	.711	—	.194	—	0.344	—
** Degree Of Freedom	1	—	1	—	1	—	1	—	1	—	1	—
Significance Level	.519	—	1.000	—	).256	—	.399	—	.660	—	.577	—

** Critical Value of chi-square test: .01 Level, 1 df = 6.635 and .05 Level, 1df = 3.841.

Note: For the chi-square test, Decatur and Florence are combined into one category in an attempt to meet the minimum five expected cases per cell.

Decatur and Florence considered price as an important factor when buying shiitake mushrooms, while 63 percent of the retailers in Huntsville considered price important. In Decatur, 75 percent of retailers considered color an important factor, while 33 percent of the retailers in Huntsville and 25 percent of the retailers in Florence considered color an important factor. Fifty percent and 33 percent of the retailers in Decatur and Huntsville, respectively, considered quality an important factor.

Again, to evaluate the chi-square test of the group mean, the stores were classified into two: Huntsville and Decatur-Florence combined. The chi-square tests of no significant difference were not rejected, suggesting that there is no significant difference in the factors considered by retailers when buying shiitake mushrooms in Huntsville and Decatur-Florence.

In Table 5, the supply sources for the acquisition of shiitake mushrooms are presented. Of the five different sources investigated, 20 out of 32 retailers (63 percent) got their shiitake mushroom supply from wholesalers. Six of the retailers indicated that they got their supply of shiitake mushrooms from the grocery stores, while three retailers received their shiitake supply from individual producers. Two retailers received their shiitake supply from brokers, while only one retailer and a specialty store received shiitake supply from farmer cooperatives.

The break-down by cities shows that 14 retailers in Huntsville and four retailers in Decatur indicated that they received their shiitake supply from wholesalers, while two retailers in Florence indicated receiving their shiitake supply from wholesalers. In Huntsville, four retailers received shiitake from other retail grocery stores, and two retailers in Florence received their shiitake supply from some other grocery retail outlet.

Results of the Logit Model

In Table 6, the results of the Logit model, predicting the sale of shiitake mushrooms were presented. Due to a strong multicollinearity problem among the selected zip code variables, they were excluded from the analysis, except the ratio of city to total city population. This variable was used as a proxy for city population. The logit model correctly classified 84 percent of the stores in the analysis. For the variables included in the analysis, special stores, supermarkets, and the city population were among the most important predictors of shiitake mushroom retailing. Supermarkets and specialty stores were both significant at the .01 percent level. The results showed that both specialty stores and supermarkets have greater odds of selling shiitake mushrooms. For example, for each unit increase in the number of specialty store, the odds of carrying shiitake mushrooms increases by 17.5. Also, for each unit change in the number of supermarkets, the odds of stocking shiitake mushrooms increase by 27.89. Similarly, there was a positive but non-significant relationship between the city population and shiitake mushroom retailing. The odds ratio indicates that stores located in bigger cities are eight times more likely to carry or stock shiitake mushrooms.

Table 5. Sources of Acquisition of Shiitake Mushrooms.

Cities	Individual Producer		Farmer Co-Op		Wholesaler		Broker		Grocery Store (Retail Outlets)		Total Stores	
	#	%	#	%	#	%	#	%	#	%	#	%
Huntsville	3	12.5	1	4.2	14	58.3	2	8.3	4	16.7	24	100
Decatur	0	0	0	0	4	100	0	0	0	0	4	100
Florence	0	0	0	0	2	50	0	0	2	50	4	100
Total	3	9.3	1	3.1	20	62.5	2	6.25	6	18.7	32	100

Table 6. Estimates of the Logistic Regression for Shiitake Mushrooms.

Variable	B Coefficients	Standard Error	Wald Test	Significance Level	Odd Ratio
Constant	-3.5080	.9083	3.862	.0001**	
Specialty Store	2.8625	1.0595	2.701	.0069**	17.5
Supermarkets	3.3284	.8181	4.068	.0000**	27.89
Ratio of City to Total Population	2.0865	1.3234	1.60	.1149	8.06

** Significant at the .01 level

*** 84 percent of the stores were correctly predicted to be selling shiitake mushrooms or not to have sold shiitake mushrooms. An updated data set for 1999 was also used to test the model, and 94 percent of the stores were correctly classified.

*** The odd ratio was calculated by taking the exponential of the B coefficients.

Summary and Conclusion

This study analyzed the retail-level market potential for locally grown shiitake mushrooms in North Alabama. Of the 32 stores in the sample, 24 stores were located in Huntsville, four in Decatur and Florence, respectively, and none in Athens.

The results showed that shiitake mushrooms were the third most popular type of mushroom sold in the North Alabama area, following the button and the portabella mushrooms, repectively. With respect to the attributes necessary to enhance shiitake mushrooms sale, quality was ranked first by most retailers (88 percent). The next most important attribute was freshness (72 percent), followed by price (66 percent). Also, the majority of the stores indicated that they purchase their shiitake mushrooms from wholesale outlets (58 percent), and only three stores located in Huntsville get their supply of shiitake mushrooms from individual producers. With regard to the packaging of shiitake mushrooms, the majority of the retail stores (75 percent) prefer small packages to large packages. Very few stores get their supply of shiitake mushrooms from a local source, indicating that most of the shiitake mushrooms sold in the area are from outside the local area. When managers were asked why they do not buy from a local source, a good number of them indicated that they did not have the authority to make the decision.

The results of the logistic regression indicated that specialty stores and supermarkets were more likely to carry shiitake mushrooms than the grocery stores were. Similarly, the size of the city had a positive relationship with stores carrying shiitake mushrooms. The larger the city population, the higher the probability that the stores in that city would carry or stock shiitake mushrooms.

In conclusion, the study showed that there is a potential for locally grown shiitake mushrooms in North Alabama. However, in order to penetrate the market, producers must produce quality and fresh product at a competitive price. Furthermore, specialty stores, supermarkets, and stores located in heavily populated cities were more likely to stock shiitake mushrooms and, therefore, would probably be more interested in purchasing locally grown shiitake mushrooms.

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