Organic Food Adoption Decisions

By New Mexico Groceries*

by

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Abstract

Sales for organically grown foods, particularly organic fresh produce are increasing. This study focuses on the characteristics of grocery stores in New Mexico who sell or intend to sell organic foods. The results suggest most grocery stores do not carry organic foods because of low availability and perceived consumer demand. However, stores that sell organic foods reported consumer demand prompted them to carry organic foods. The results can provide information for grocery stores to further understand problems and benefits associated with adopting organic foods.

Introduction

Estimated annual sales of organic product in the United States have doubled since 1983 to about $1 billion (Waterfield, 1989). One reason consumers buy fresh organic produce is concern for synthetic pesticide residues in conventionally grown produce. About 75 percent of consumers polled by the Food Marketing Institute said they believe residues from pesticides and herbicides are a potential hazard (Meeker, 1987). Many grocers meet the changing needs of consumers by carrying organic foods, particularly organic produce. California chain stores generally regard organic foods positively (Jolly, 1990). The chains report organic foods are preferred over conventional foods because organics have fewer chemical residues and their production reduces environmental impacts. Eleven percent of the study's respondents said they would carry more organic products if they were available.

Not much is known about how New Mexico grocery stores are responding to consumer interest in organically-grown foods. Little is known about

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the problems New Mexico grocery stores face in obtaining and merchandising organic foods. Research is needed to analyze grocery store attitudes towards adoption of organic foods.

Past studies concerning grocery product adoption found most new products make a substantial contribution to total supermarket sales (Montgomery, 1975). Montgomery also suggests that knowing how product adoption decisions are made will help reduce new product failure rates, and help supermarkets specify how these decisions should be made.

Another obstacle in the organic industry is the subject of certification. Certification organizations offer assurance to the wholesaler, retailer, and customers who buy organic foods that the products are actually grown and processed according to accepted practices (Friedman, 1989). Grocers have expressed concern about the issue of certification (Stiven, 1989). There are no uniform federal or state policies and standards concerning certification of organically grown foods. However, the 1990 Farm Bill as recently passed in Congress establishes a single national standard for organic foods. Therefore, consumers may be less confused about the authenticity of organic food claims and they may buy more organic products (Charlier, 1990).

Objectives

The objectives of this study were to:

1. Identify which New Mexico groceries sell organic foods.
   a. Identify the characteristics and attitudes that distinguish those stores that sell organic foods and those that do not.

   b. Identify the characteristics and attitudes that distinguish those stores that intend to sell organic foods within a year and those that do not.

2. Identify the major reasons why grocers do not carry organic foods and what factors could influence them to do so in the future.

3. Define the problems and benefits associated with carrying organic foods.

Methodology

Data for this study were collected using a mail survey sent to all New Mexico groceries, health food stores, and specialty food stores. This list of merchants was obtained from the New Mexico Business Directory in Albuquerque, N.M. The steps for mail surveys outlined by Dillman (1978) were used. A reminder card was mailed one week after the mailing of the survey and cover letter. Another copy of the questionnaire with a new cover letter was mailed two weeks later to those who had not responded. Nonrespondents were not contacted again after mailing a second survey.

From the 409 questionnaires mailed, 55 were returned as undeliverable. From the remaining 354, 75 surveys were returned, a 21 percent response rate. Six of the 75 were unusable because they were incomplete, which left 69 surveys for analysis.

Attitudinal variables were included in the questionnaire to determine if there is a relationship between attitudes toward organic food issues and the decision to carry organic foods. The attitudinal questions focus on organic foods as a good marketing tool, whether or not organic foods are a fad, and whether all groceries will be carrying organic foods in the next five years.

The survey also asks those who sell organic foods to list which additional organic foods they would buy if more were available. In addition, the survey asks about the top ten items the stores now carry, how much they buy, and their source of organic products.

Responses to the questions were analyzed separately. The Chi-square test was used to determine if stores who sell or intend to sell organic foods differ significantly from those who do not sell or do not intend to sell with respect to store characteristics and attitudes toward organic foods.

Results

From the 69 usable surveys, 61 indicated they do not sell organic foods in their stores; 89 percent of the total usable surveys. Eight carry organic foods in their stores. The results from the eight stores who carry organic foods are explained using frequency data only because there is not enough data to perform Chi-square analysis.

Characteristics of Stores That Do Sell Organic Foods

Table 1 shows the categories of the stores that do sell organic foods. The majority are health food and full service grocery stores. One health food store indicated it is both a health food store and a member-owned cooperative.

Table 1

Categories of Stores
That Do Sell Organic Foods

Type of Store	Number of Stores
Health Food Store	3
Full Service Grocery	3
Member-owned Cooperative	2

These stores have been carrying organic foods for an average of nine years. They carry from one to 50 organic food items in their store. Six respondents said they would carry more organic items if they were available.

Three store respondents said some of the organic foods they carry are certified by an agency. Two respondents reported all the organic foods they carry are certified. However, three stores carry organic foods that are not certified. The most common agency that the stores listed for certifying organic foods is the California Board of Health or the State of California. The Colorado Board of Health was also mentioned as a certifying agency. There seems to be confusion about certifying agencies because none of these agencies are actually certifying organizations.

Table 2 shows the most commonly encountered problems with carrying organic foods. The respondents were asked to choose the top three problems from seven choices. The top problem reported was higher prices for the organic foods as compared to conventional foods.

Table 2

Problems Associated
With Selling Organic Foods

Problems	Rank
Higher price for organic foods	1
Insufficient variety available	2
Shorter shelf life	2
Supplies not always available	3
Difficulty in separating organic foods from conventional foods	3

Respondents for six stores indicated that they use a sign and labels on organic produce. Two stores use only labels on organic produce. Five respondents said they think it is necessary to separate organic produce from conventional produce in the store. Two respondents indicated that they had difficulty in displaying the organic produce separately from conventional produce.

Table 3 lists the stores' reasons for carrying organic foods. High consumer demand in the store was the main reason for carrying organic foods. However, a sense of helping the environment was one answer for the choice of "Other."

Table 3

Reasons Why Stores Carry Organic Foods

Reason	Number of Responses
Consumer demand is strong	5
Other	4
Organics are a good marketing tool	1
Can easily obtain supplies	0

Many stores reported a sufficient quantity of a few organic foods are available to them. Table 4 shows the responses to the question of availability of organic foods from the supplier or distributor.

Table 4

Availability of Organic Foods

Question	Number of Responses
Sufficient quantities of all organic foods are available	0
Sufficient quantities of most organic foods are available	3
Sufficient quantities of a few organic foods are available	4
Insufficient quantities of all organic foods are available	1

Five respondents reported that they pay as much as 25 percent more for organic foods as compared to conventional foods. Two of the eight said they pay 26 to 50 percent more for organic foods. One respondent reported paying 76 percent or more for organic foods.

The stores were asked if carrying organic foods had attracted new customers, and seven answered affirmatively. The stores were asked about the level of consumer demand for organic foods in their store. Table 5 indicates most respondents think consumer demand in their store is high or very high.

Table 5

Merchandiser Attitudes
Toward Consumer Demand

Response	Number of Responses
Very high demand	2
High demand	3
Low demand	3
Very low demand	0

Each store was asked who was responsible for making the decision to stock organic foods in the store. Four store representatives said decisions were made by the local store manager. Three others reported the produce manager made the decision to stock organic foods. In one case, the owner made the decision to stock organic foods.

A level of demand for organic foods has to be determined by each store to justify carrying them. The questionnaire asked how the demand for organic foods was determined. Three stores determined demand by a trial basis of carrying organic foods. Five stores determined demand simply by customer requests.

Table 6 lists additional organic food items the stores would buy during the months of June through August, if products were available. The average weekly quantities given by all the respondents is also listed. The respondents also listed basil, chile, corn, garlic, mushrooms, parsley, and squash as items they would buy, however, no quantities were given.

Table 6

Additional Organic Foods Requested by Stores

Item	Approximate Weekly Quantity
Avocados	13 lugs
Beans	40 pounds
Bell peppers	5 bushels
Broccoli	4 lugs
Cauliflower	4 lugs
Eggplant	20 pounds
Grapes	10 lugs
Melons	500 pounds
Nectarines	20 lugs
Onions	2 lugs
Peaches	20 lugs
Pears	7 lugs
Peas	50 pounds
Spinach	40 pound box
Strawberries	60-100 pounds
Tomatoes	30 lugs

* A lug ranges in weight from 20 to 30 pounds.

The stores also listed the top 10 fresh or processed organic products, in terms of dollar sales, handled during the summer months of June through August 1989. Table 7 lists those items the five respondents mentioned, and the number of stores that listed that particular item. A majority of the foods were purchased from New Mexico, especially from Grant County. California was the next largest supplier, followed by Colorado. Arizona and Texas were mentioned for supplying rice and carrots.

Table 7

Top Ten Organic Foods Sold June-August 1989

Item	Number of Responses
Lettuce	4
Tomatoes	4
Carrots	3
Broccoli	3
Squash	3
Oranges	2
Potatoes	2
Spinach	2
Various Herbs	2
Rice	2
Apple juice	2
Grapes	1
Apples	1
Watermelon	1
Raspberries	1
Beets	1

The attitudinal section of the survey asked the stores five questions concerning current issues about organic foods. In general, all the respondents who sell organics said organic foods are not a fad, and all supermarkets will carry organic foods within the next five years. All said they feel organic foods are an effective marketing tool. The respondents said they try to buy local organic and conventionally grown produce when possible. Most felt the media has not exaggerated the threat to public safety from pesticide residues on produce. Table 8 presents the attitudes of the respondents for each of these questions. The number of responses to each question are listed under each category of agreement or disagreement.

The last survey question asked what the retailer felt the chances are a consumer will get cancer from eating food that contains pesticide residues. Only four answered the question, and they all replied that people have a high chance of getting cancer from eating produce that contains pesticide residues.

Table 8

Merchandiser Attitudes Toward Organic Issues

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Most conventional grocery stores will carry organic produce within the next five years.	2	4	2	0	0
2. Organic produce is just a fad and its importance will decline in the future.	0	0	0	4	4
3. Carrying organic produce is a successful marketing tool.	3	4	1	0	0
4. When possible, our store tries to obtain local supplies of organic or conventional produce.	4	4	0	0	0
5. The media has exaggerated the threat to public safety from pesticides on produce.	0	2	1	1	4

Respondents were allowed to add additional comments about organic foods and marketing of these foods at the end of the questionnaire. Two respondents indicated a New Mexico organic code or certification program needs to be instituted. They stated the marketing of organic foods will increase if New Mexico retailers can prove the produce they carry is organically grown.

Other comments included concern for the environment. Four respondents said they feel that increasing production of organic foods will help to preserve the earth, and this is the trend of the future. Another concern was the lack of supply of organic foods in New Mexico. The grocers also noted that demand for organic foods is strong.

Characteristics of Stores That Do Not Sell Organic Foods

This section analyzes the 61 stores that do not sell organic foods. Stores were asked what the likelihood of their intention to carry organic foods is within the next year. Almost 7 percent of the respondents indicated it is highly likely they will sell organics in the next year. Twenty-five percent answered it is somewhat likely that they will carry organic foods, but there are no concrete plans right now. These two groups were categorized as stores intending to sell organics.

Thirty-eight percent responded it is not very likely, but possible, and 30 percent chose highly unlikely, and not interested. These two groups were combined into one group of stores who do not intend to sell organic foods.

Seventy-four percent of the 61 respondents are full service grocery stores. Forty-three percent reported the biggest reason preventing them from selling organic foods is their distribution channels do not carry organic items. Also, 27 percent indicated that low consumer demand in their store prevented them from carrying organic foods. In contrast, respondents from the eight stores who do sell organic foods reported high consumer demand. The local store manager buys for 39 percent of the stores who do not sell organics. Thirty-three percent of the respondents said they buy locally grown conventional produce when it is available. Thus, distribution channels may not be as big of an obstacle if more local growers would produce organically.

Fifty-nine percent of the merchandisers reported insufficient availability of all organic foods. This also differs from the stores who do sell organic foods. Only one reported insufficient availability of all organic foods.

Fifty-five percent responded negatively to organics being a suitable product to attract new customers. In addition, 74 percent of the store respondents answered they believe consumer demand in their store to be very low for organic foods. In comparison, the respondents from stores that do carry organic foods said they feel consumer demand in their stores is high to very high, and this was a main reason for carrying organic foods.

Some unexpected results are noted from the attitudinal questions. For example, only 21 percent of the stores who do not carry organics disagreed that most conventional grocery stores will carry organic foods within the next five years. The remaining respondents agreed with or were neutral to this question. Thus, recognition of organics as a permanent market niche does not necessarily mean the stores intend to address that niche in the next year.

Surprisingly, 56 percent strongly disagreed or disagreed with the statement that organic foods are just a fad and their importance will decline in the future. This also confirms that despite the attitude that organic foods are not a fad, the stores are unwilling to adopt the product at this time.

However, 58 percent of the stores disagreed or strongly disagreed that organic foods are a successful marketing tool. This may explain some hesitancy for the stores to adopt organic foods. They may believe organics are a trend for the future, but they do not see them as providing profits for their individual store.

Table 9 summarizes several Chi-square tests from the attitudinal questions of the survey. The results show that attitudes of the grocery store owner or manager have some impact on whether they intend or do not intend to sell organic foods.

Intention to sell organic foods is statistically related to attitudes concerning conventional grocery stores carrying organic foods within the next five years. Of those respondents who do not intend to sell, 34 percent agreed with the statement that most stores will carry organic foods within five years, compared to 68 percent of those who do intend to sell organics.

Forty-seven percent of the respondents that do not intend to carry organics disagreed that organic foods are a fad. This attitude may show that these stores are laggards, and will be the last to adopt organic foods.

Respondents that do not intend to carry organics were evenly divided on the question of organic foods being an effective marketing tool. A majority of the sample was neutral to this question. In contrast, 68 percent of those who intend to sell organics view organics as a successful marketing tool.

Both those who intend to sell and those who do not intend to sell showed positive attitudes toward buying locally grown foods. Those respondents who intend to sell were more inclined to try to obtain local produce when possible.

Intention to sell and attitudes toward the media exaggerating the danger of pesticides on foods are also statistically unrelated. Both groups agreed that the media has exaggerated the danger of pesticide residues on food.

Table 10 presents the relationships between the stores intention to sell organics with square footage of the produce department, organic foods attracting customers, and perceived level of consumer demand in the store.

Table 9

Chi-square Results

Statement	Stores That Do Not Intend to Carry Organics: Agree	Neutral	Disagree	Stores That Do Intend to Carry Organics: Agree	Neutral	Disagree
	(percent)			(percent)		
1.* Most conventional grocery stores will carry organic produce within the next five years.	34	37	29	68	21	11
2. Organic produce is just a fad and its importance will decline in the future.	21	32	47	0	28	72
3.* Carrying organic produce is a successful marketing tool.	29	42	29	68	26	5
4. When possible, our store tries to obtain local supplies of organic or conventional produce.	44	36	21	72	17	11
5. The media has exaggerated the threat to public safety from pesticides on produce.	47	32	21	44	17	39

NOTE: An asterisk (*) indicates the difference in responses by grocery stores are statistically significant at the .05 level, as indicated by the Chi-square test of association.

Table 10

Chi-square Results

Statement	Pfoot < 75 ft.	Pfoot > 75 ft.	*Attract Yes	*Attract No	*Consumer Demand Low	*Consumer Demand High
	(percent)		(percent)		(percent)	
1. Do intend to sell organics within the next year.	58	42	88	12	81	19
2. Do not intend to sell organics within the next year.	38	62	26	74	100	0

NOTE: An asterisk (*) indicates the differences in responses by grocery stores are statistically significant at the .05 level, as indicated by the Chi-square test of association. Pfoot is defined as the total square footage of the produce department. Attract is defined as the stores' perception of organics attracting new customers.

Do intend by Pfoot indicates that the total square footage of the produce department in the groceries is statistically independent of the stores' intention to sell organic foods. One might have expected that larger stores would be more likely to carry organic foods since they have more flexibility in trying new products.

The attitude that organic foods attract customers is statistically related to intention to sell. Eighty-eight percent of the stores that intend to sell organics agreed with the statement, while 74 percent of those who do not intend to sell disagreed with the statement.

Both groups, those who intend to sell, and those who do not intend to sell, perceived consumer demand for organics in their store to be low or very low. Even the stores who do intend to sell perceive demand for organic foods in their store to be low. This group may have more positive attitudes toward organic foods. They still intend to sell organics possibly because they expect demand to rise in the future.

More quantitative measures such as the type of store, square footage of the store, and the percentage of fruit and vegetable purchases were less significant. Surprisingly, the type of store was not statistically related to the stores' intention to sell organics. In addition, the amount of fruit and vegetables purchased by the store had no statistical relation to the stores' intention to sell organic foods.

Summary and Conclusions

The organic food industry has recently received considerable publicity. Consumers are more concerned about eating healthier foods and foods without pesticide residues. The marketing outlets in the past for organic foods have been health food stores, roadside stands, and farmers markets. Recently, grocery chains have begun expanding into this industry by carrying organic foods. Little is known about the groceries' adoption decisions to carry these foods. The focus of this analysis was to identify which New Mexico groceries are adopting organic foods, to find the major reasons why some grocers are not carrying organic foods, and to identify the problems associated with carrying organic foods.

The stores who do sell organic foods decided to adopt organic foods mainly from customer request. A majority of the eight stores that do sell organic foods reported that the main reason for carrying organics is the strong consumer demand in their store. The main problems these stores face with organics are higher prices, insufficient variety, variable supply, shorter shelf life, and difficulty in separating organic from conventional foods. Problems of higher prices, insufficient variety, and variable supply could be solved by increased production of organic foods. In addition, increased production would mean greater supplies on the market which would bring down prices. The fact that a majority of the respondents indicated they buy locally when possible may mean opportunities exist for local growers. The grocery stores that do sell organic foods exhibited positive attitudes toward organic farming and the environment. They tended to agree that organic foods will be in all groceries within five years, and that organics are a good marketing tool.

The group who do intend to sell organic foods within the next year exhibited positive attitudes toward organic foods being a good marketing tool, and that most conventional grocery stores will carry organic foods in the next five years. Surprisingly, those who do not intend to sell organic foods exhibited similar positive attitudes toward organics being more than a fad, and that most stores will carry organics in the next five years. These stores generally have positive attitudes toward organic foods, but are currently reluctant to carry organic foods. They may be slower in adopting because they may be waiting for other stores to try organics first.

Implications

Almost half of the stores who do not carry organics noted that current distribution channels do not carry organic foods. Fifty-six percent answered that insufficient quantities of all organic foods were available to them. In addition, 72 percent of the stores that do not sell organic foods feel that consumer demand for organics in their stores is very low. A more consistent, available supply of organic foods in the market may lead to more stores adopting organics in their store. Consumer demand for these items may be increased with the more consistent supply. Also, groceries may want to educate their consumers more about organic foods to increase demand.

Additional research is needed using a larger region to address whether attitudes are related to adopting organic foods. Additional work should also investigate the relationship of other variables such as distance to the production region, store location, city size, and social economic characteristics of the stores' consumers.

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