CONSUMERS' ATTITUDE TOWARDS ORGANIC FOODS IN THE REGION OF MAGNESIA, GREECE

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Abstract

This study presents the demographic, educational and employment characteristics of consumers familiar with organic foods in the region of Magnesia, located in central Greece. In addition, it explores the factors that make consumers to buy or not organic foods. It was found that the reasons consumers do not buy organic foods, even though they would like to, are the high price of organic foods and the distant location of stores selling them. Factors found to increase the awareness and the consumption of organic foods were the ecological conscience and the educational level of consumers. It is proposed that production of organic food should be a part of a livelihood rural system, which can contribute to family income and provide a better life mainly in areas with favourable weather conditions where extensive farming is not possible.

Keywords: Organic Foods, Consumption, Consumer behaviour.

Introduction

Organic farming is a system of sustainable production with limited degrees of freedom in terms of choice of fertilisers and plant protection compounds compared to conventional systems of production. The Organic or Sustainable or Ecological Farming includes all the systems that promote the environmentally, socially and economically healthy production of food. In addition, it reduces significantly the inputs in farming and uses environmentally friendly technology, facilitates optimum use of productive resources and generally approaches agricultural production in a holistic way (Fotopoulos, 1999).

During the last years there is an increasing public concern over food safety. The model of industrial farming, which uses high chemical inputs, has disorganised and destroyed the biosystems, harming the means that supply food (Fotopoulos, 1999). Moreover, it is common knowledge that agricultural, poultry and meat products may influence directly or indirectly the nutrition of people and consequently their health (Passos, 1997). Therefore, nowadays consumers are more interested for organic products.

It was from the beginning of this century mainly in North Europe that organic farming got into practice and began to grow significantly in the decade of 1980 and especially in 1986, after the nuclear accident of "Chernobyl' (Zannos, 1999). In Greece, the sector of organic farming has completed just its second decade. Nowadays, only 0,09% of agricultural soil is biologically fertile, although it has been observed that there is a constant progress. During 1993 there were 7,000 ha biological fertile soil, seven years later there was an increase to 200,000 ha. This rapid raise is connected to the application of the European Union Law 2078/92 in Greece and especially after 1995, when subsides were given to organic farmers (Fotopoulos, 1999).

Generally, organic farming is ideal for countries, like Greece, with mild weather conditions and small-scale farming. Moreover, since consumers' awareness for organic products is increasing, organic farming has good prospects for development. Therefore, the producers in their effort to meet the increased demand for organic products use alternative methods of production, more friendly to the environment. (Cavallaris, 1998). Also, organic farming as a livelihood strategy can improve the standards of living in rural areas by contributing to family income. Therefore, organic farming as a part of livelihood system within the rural sector, is an appropriate 'tool' for integrated local development in socio-economicaly mountainous or island disadvantaged areas (Corbett, 1996). In Greece, however, the increased demand and production of organic foods has not been followed by a proportional increase of their trade due to distribution problems. The result is that consumers can not always find organic foods at the market place. (Dicaros, 1996; Balbouzi, 1998).

Previous studies have examined the public concern over food safety issues, particularly pesticide residues on food. Studies in Greece have focused on producers' and consumers' attitude for organic food production and consumption (Dimitracoudi, 1999a & 1999b; Malissianou, 2000). Studies in other countries have shown that ecological conscience and education affect consumers' choices for organic products (Lampkin, 1998; Green, 1999; Thimm, 1993; Newsome, 1990; Lockeretz et all, 1984; Bourn, 1994; Lecerf, 1995; Woese et all, 1997; Worthington, 1998;). Nevertheless, no study has focused on the factors that make consumers to buy or not organic foods.

The objective of the present study was to present the characteristics of the consumers familiar with organic foods and explore the factors that make them to buy or not organic foods. For this reason, by using empirical social research methods, sample data were collected on the characteristics of consumers in the region of Magnesia, located in central Greece, where organic farming is practised extensively. The profile of consumers on the basis of their awareness of organic products was constructed and the factors that make them to buy or not organic foods were studied. Also, incomes were compared between producers practising organic farming and producers not practising it in order to examine whether organic farming can be proposed as an alternative livelihood strategy, which can contribute positively to the income of farmers.

Materials and Methods

The statistical frame of the study was based on a sample of 180 people randomly selected in the region of Magnesia, where urban and semi-urban areas are located. Eighty people were selected from semi-urban areas and 100 from urban areas. The persons selected lived with their own families and were older than 18 years.

Data on the characteristics of consumers along with their food shopping preferences were collected through a questionnaire survey during the spring of 2000. Investigators on location completed the questionnaires. The data collected were analysed by using descriptive statistics for calculating the means and standard deviations of continuous variables and the frequencies and percentages of discrete variables. Also, cross-tabulations were used to examine differences among the variables.

Results

According to the data analysis 50% of the sample were men. Fifty seven percent were aware about organic products. Thirty two percent of the responders were practising farming as a primary (7%) (13 persons) or secondary occupation (25%) (44 persons). The age of responders ranged from 18 to 74 years old. The mean age was 38. Most of

the individuals were married (63%) and the average number of children per responder was two (52%). The educational level of the consumers was mostly high school (32%), while for 31% was elementary school. Seventeen percent of the sample was public employees and 17% private. Forty four percent of the responders had monthly family income between €587 and €1170 (Table 1).

Table 1. Demographic characteristics of consumers (n=180)

Characteristic			no	(%)
Education	No school		2	(1)
	Elementary school		56	(31)
	High School		58	(32)
	Technical school		6	(3)
	3 years College		13	(7)
	University		37	(21)
	Graduate studies		7	(4)
	Other		1	(1)
		Total	180	(100)
Occupation	Public employee		30	(17)
	Private employee		31	(17)
	Scientists working in private sector		10	(6)
	Business men		11	(6)
	Merchants		3	(2)
	Workers		12	(7)
	Farmer		13	(7)
	University Students		17	(9)
	Retirees		17	(9)
	House keeping		29	(16)
	Unemployed		7	(4)
		Total	180	(100)
Monthly income (€)	0-586		36	(20)
	587-880		38	(21)
	881-1,170		41	(23)
	1,170-1,467		26	(14)
	1,468-1,762		19	(11)
	1,762-2,935		11	(6)
	> 2,936		9	(5)
		Total	180	(100)

Reasons for food selection were mainly health concerns (39%) and family dietary habits (31%). The economical situation and the information through media did not really affect dietary choices. People from the sample usually had their main meals in the house (95%). Food consumption attitudes were based mainly on the high nutritional quality of food (47%) and the price (12%). Responders said that they read always (37%) or often (33%) products' labels. Sixty one percent of the consumers said that they were satisfied from their dietary habits. Most of the responders (96%) replied that they enjoyed eating food cooked at home.

Nevertheless, 50% of the sample answered that they would like to change dietary habits. Specifically, 17% of the responders would like to have three meals per day, 38% to have more quality in their nutrition and 23% to consume less red meat and to increase fruits and vegetables consumption. Finally, only 10% of the consumers wanted to

decrease their fat intake and 12% answered that they wanted to decrease sweets and to consume more legumes. Eighty eight percent of the responders consumed mainly fresh vegetables and 66% had doubts about the food quality that they consume daily.
Fifty seven percent (103 persons) of the responders knew about organic foods and they consumed organic food from time to time. The profile of organic food consumers was as follows: fifty two percent of them were men and 51% were living in urban areas. Seventy percent were married and the average number of children was two. The educational level of organic food consumers was a mostly high school (29%), while 28% were university graduates. Twenty-three percent of organic food consumers were public employees and 15% private. Forty five percent had monthly family income between €587 and €1170. Food consumption was based mainly on the high nutritional quality of the product (99,9%) and not on the price. Organic food consumers read the product labels (47%) and were satisfied on their dietary habits (59%). Fifty two percent from those who were not satisfied with their dietary habits, wished to change them. Specifically, 37% of them wished their diet to have more quality, like higher consumption of fruits and vegetables (22%), and lower consumption of fat (7%).
Organic food consumers were interested very much for their health and were careful what kind of food they were consuming, but 59% of them were feeling insecure about the quality of the food they were eating everyday. Seventy one percent of them had knowledge on the damage of chemical inputs for bio-systems and their health.
Nevertheless, the frequency of consumption of organic foods was very low. Only 10% of organic food consumers consumed organic foods on a weekly basis. More specifically, table 2 shows that the exclusive organic fruit (1%) and vegetable consumption (2%) was very low in comparison to conventional ones. Usually, the persons who responded that consumed organic foods were those who produced organic fruits and vegetables in their back yard.

Table 2. Consumption of organic and conventional produce (n=180)

	Organic		Conventional		Both	
	No	(%)	No	(%)	No	(%)
Fruits	2	(1)	154	(86)	24	(13)
Vegetables	3	(2)	138	(77)	39	(21)
Legumes	1	(1)	178	(98)	1	(1)

Only 1% of the sample consumed exclusive organic legume, (Table 2). Also, the consumption of organic nuts and dry fruits was low, while the conventional nuts consumption was higher. Organic red meat, fish, chicken, eggs, milk and yoghurt were not part of the consumers' nutrition, even though the conventional red meat, chicken, fish and eggs were consumed weekly. Conventional cheese and milk were consumed once per day (49%). Conventional yoghurt was consumed twice to four times per week (22%). Also, 82% answered that they consumed organic oil some times per year, while 15% every day. Among all organic products examined, organic oil was the product with the higher consumption. Also, a general complain was that it was very difficult to find organic products on the stores most of the time.
Only 44% of the people who were aware about organic products had the ability to distinguish organic and conventional products and 83% preferred the organic. The main reason that responders (88%) preferred organic foods was that these products were considered healthier while the taste and look was not important reasons.

In regard to the reasons why consumers did not include organic products in their daily diet, 26% of responders replied that they could not find them in the market, 22% considered organic food expensive and 19% doubted if the products were really organic. Taste and look did not really affect their choices.
Thirty-five percent of the responders who knew about organic foods said that they found organic products straight from the producers, 8% from health stores, 5% from food markets and 2% from super-markets. It is notable that half of them said that they could not find organic products. The main information sources on organic products were media (31%), relatives (24%) and scientists and conferences (13%).
Eighty two percent from the responders who were aware about organic products were willing to buy them even in a higher price than conventional products. More specifically, 60% of the responders would buy organic products even if the price were 20 to 30% higher than the conventional, 17% even if the price were 50% more and 16% at any price.
Table 3 compares the responders who were conventional or organic farmers.

Table 3. Demographic characteristics of responders who had farming as primary or secondary occupation (n=57)

Characteristic		Organic farmers (n=16)		Conventional farmers (n=41)	
		No	(%)	No	(%)
Education	Elementary school	6	(38)	20	(49)
	High school	7	(44)	6	(15)
	Technical school		-	3	(7)
	3 years College	1	(6)	3	(7)
	University		-	9	(22)
	Graduate studies	2	(12)		-
	Total	16	(100)	41	(100)
Occupation	Public employee	2	(12)	6	(15)
	Private employee	6	(38)	6	(15)
	Workers	1	(6)	9	(21)
	Farmer	2	(12)	11	(27)
	Retirees	2	(12)	3	(7)
	House keeping	3	(20)	6	(15)
	Total	16	(100)	41	(100)
Monthly income (€)	0-586	1	(6)	14	(34)
	587-880	4	(25)		-
	881-1,170	6	(38)	12	(29)
	1,170-1,467	3	(19)	6	(15)
	1,468-1,762	2	(12)	3	(7)
	>1,762		-	6	(15)
	Total	16	(100)	41	(100)

The data analysis revealed that 32% (57 persons) of the sample were practising farming as a primary (7%) (13 persons) or secondary occupation (25%) (44 persons). Fifty three percent (30 persons) of the responders practising conventional or organic farming responded that they knew what organic farming was and 53% (16 persons) of them

practised organic farming as a primary (2 persons) or secondary occupation (14 persons). The educational level of the farmers practising organic farming was mostly high school (44%). The majority of the farmers practising organic farming (63%) had a monthly family income of € 587-1,170. All of them considered organic products as healthier than conventional ones. Farmers responded that usually consumed the organic products that they produced by themselves and did not buy other organic products mostly for economical reasons (25%). Most of the organic farmers (56%) claimed that they could distinguish organic products from conventional ones and their main sources of information about organic farming were scientists or conferences (31%).
Finally, the cross tabulation of the data showed that the majority of consumers who had educational level elementary school or below did not know about organic foods (55%), while the majority of consumers who had educational level middle school or higher knew about organic foods (63%). Also, the majority of consumers who were aware about the effects of agro-chemicals in the environment were not aware about organic farming (69%), while the majority of consumers who were aware about the effects of agro-chemicals in the environment were aware also about organic farming (89%).

Discussion - Conclusions

The results of this study showed that only few consumers in the region of Magnesia bought organic foods. One reason was the lack of sufficient information about the beneficial effects of organic food consumption, and a second reason was the unavailability of organic foods in market places since the channels of distribution were not adequate. The diet of most of the responders was similar to the Mediterranean diet. The organic products mostly consumed were olive oil, fruits and vegetables. The reason that organic olive oil was the product with the highest consumption among organic products was probably due to the fact that there was local production of organic olive oil in the region examined. The reason for the high consumption of fruits and vegetables was due to their production by the consumers in their back yard. On the other hand, organic legume consumption was very low because they were imported from abroad and were not readily available at the market. The same was observed for organic starchy foods.
The main reason that responders preferred organic foods was that they considered these products as healthy and did not care about the taste and look of organic foods. These results were similar to the findings of other studies where responders believed that organic foods were better than conventional foods (Wilkins et all, 1994).
Generally, the results of this study showed that consumers felt insecure about food quality and wished to improve their diet. Even though organic food consumption could be the answer to a healthy diet, it is not an option due to insufficient information and unavailability of organic products at the market places.
As far as the relationship between sustainable livelihoods of rural areas and organic farming is concerned, organic farming is a desirable policy objective for rural development. As observed in the present study the farmers who were practising organic farming as a primary or a secondary occupation had a higher income than those practising conventional farming. Therefore, organic farming can be a profitable occupational alternative to improve the livelihood security and to raise the living standards of farmers in areas with favourable weather conditions where extensive farming is not possible, as is the case in Greece.

Appendix : Questionnaire

Demographic characteristics:
- Sex
- Age
- Family status
- Number of children
- Number of persons leaving in the same house

Educational characteristics

Occupational characteristics

Family income

Characteristics of food consumption
- Dietary habits
- Dietary decisions
- Places of food consumption
- Factors affecting food choices
- Degree of satisfaction from diet
- Willingness to change dietary habits

Characteristics of organic food consumption
- Awareness about organic foods
- Consumption patterns of organic foods
- Reasons for consuming organic foods
- Shopping places for organic foods
- Information sources about organic foods

Characteristics of food producers
- Varieties of food products
- Type of production (organic-conventional)
- Satisfaction with productivity levels
- Frequency of consultations with production specialists
- Use of chemicals in production
- Knowledge of organic production

Knowledge on the importance of organic production for the ecosystem

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