Emirates Journal of Food and Agriculture. 2015. 27(5): 416-422
doi: 10.9755/ejfa.2015.04.034
http://www.ejfa.me/

REGULAR ARTICLE

Consumer motivation for organic food consumption

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ABSTRACT

This paper presents the results from a Turkish survey study on perceptions, knowledge and behaviors of consumers towards organic foods. In order to provide information related to consumer motivation in purchasing organic products, 600 respondents were interviewed using face-to-face approach by adopting a survey. The results of these interviews are obtained, and also social and demographical attributes of the respondents were reported. Since organic products are perceived as difficult to find and expensive; most of the respondents judge them negatively. Data obtained from the survey showed that differences exist between groups of consumers with respect to their experience in consuming organic products and the extent of available information on these food products.

Keywords: Organic foods; Consumption habits; Consumer behavior

INTRODUCTION

Interest in organic foods is steadily increasing throughout the world because of concerns about intensive agricultural practices and their potential effect on human health and environment (Roitner-Schobesberger et al., 2008). Today organic foods are approximately produced on 41.9 million hectares worldwide (Anon, 2012). This represents only 0.9% of the total arable land in the world. When the organic agriculture areas are taken into account, it became evident that Australia is the leading country in this regard (12.2 million hectare). In Europe, organic agricultural facilities are performed on a total of 21.5 million hectare field (Anon, 2012). Austria has 18.5% of these fields. By 2009, there are 160 countries present which are producing organic foods and there are 1.8 million producers worldwide dealing with organic food production. 74 countries established their legal regulations related to organic food, agriculture and farming by the end of 2009. In Turkey, Ministry of Food, Agriculture and Livestock is responsible for the regulations of organic agriculture and farming. Sub divisions are General Directorate of Crop Production and National Steering Committee for Organic Agriculture. Department of Good Agricultural Practices and Organic Farming is established under these sub divisions and this unit is responsible for the facilities of Committee of Good Agricultural Practices and Committee of Organic Farming. In June 2005, "Principles of Organic Agriculture and Communication related to the Application" was prepared and published by government. By the end of 2010 there are 23575 producers in Turkey whose were supported financially by the government and in 2010 regulations related to organic food production have been harmonized by using the European Union legislations. There are 225 different types of organic foods present in Turkish markets by the end of 2011. This amount was 179 in 2003. According to GTKB (2011), there are 25 organic food bazaars in different cities in Turkey but in Manisa where this survey was made, an organic bazaar is not present.

Gracia and Magistris (2008) declared that "the future of organic agriculture will depend, to a large extent, on consumer demand" (Aygen, 2012). So it is vital to determine the knowledge, thought and habits of consumers through organic foods. Since organic food production and organic foods are gaining popularity in recent years, in this study it was aimed to address the knowledge of consumers about organic foods and reasons consumers have to purchase or not to purchase organic foods in Manisa, Turkey.

MATERIALS AND METHODS

Organic food consumption habits of consumers and changes in their food consumption habits were determined

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Received: 08 October 2014; **Revised:** 20 October 2014; **Accepted:** 29 November 2014; **Published Online:** 10 April 2015

by using a face-to-face conversation questionnaire. A total of 600 randomly selected consumers were interviewed face-to-face. The entire survey took 10-15 min to complete. Field study took place among November and December, 2011. Questionnaire was designed to obtain information on demographics of respondents, organic food perceptions, and awareness and knowledge of organic foods. Several questions were modified by using the questionnaire method of Mutlu (2007). By adopting this questionnaire, it was aimed to get the answers of the below questions (Aygen, 2012);

Frequency of organic food purchases of consumers
Main reasons for purchasing organic foods in Turkish markets
Conditions under which consumers intend to buy more organic foods
Main reasons of Turkish consumers for not purchasing organic foods
Recognition of the logo of organic foods marketed in Turkey
Consumers' choice of market to purchase their organic foods
Recognition of organic foods among Turkish consumers (organic meat products, dairy products, cereal products, fruits and vegetables and etc.)
Popular myths related to organic foods among Turkish consumers
Main barriers in front of the organic food market

The questionnaire was pilot tested on 5 comparable consumers for clarity and validity and necessary adjustments were done. Data obtained from the analysis were evaluated by using SAS programme (Bruhn and Schutz, 1999; SAS, 2001). The effect of the variables age, gender, marital status, educational level, occupational status, size of household and monthly income on the responds were evaluated. Data collected from the survey are also given as a separate table (Table 1).

RESULTS AND DISCUSSION

Demographical characteristics of respondents

Demographical attributes of respondents in the survey were given as Table 2. As seen, 35% of the respondents were between 15 and 25 years of age; 38% of them were between 25 and 45 years of age; whereas 27% of them were between 45 and 65. A slightly less than half (%46) of the respondents were females; while a little over half (52%) were married. Majority of the respondents (35% and 354%) were graduated from high school and elementary school respectively; whereas 31% of them were graduated from college or university. Ratio of the retired respondents was 12%, whereas this value is 18% for the unemployed respondents As regarding the income of the respondents, the majority (66%) have a budget that does not exceed 500 TL (approximately 210 Euro), a rather smaller percentage (21%) receive an income ranging from 500-1000 TL (210-420 Euro) and only 3% that go beyond 3000 TL (1260 Euro) on an annual basis. Since 34% of the respondents were students (college or university) average income of the majority (38%) of respondents was found so low (lower than 210 Euro).

Answers of the respondents

As seen from the first question (Q1), consumers were asked about their responsibility of household grocery shopping. 28% of the consumers declared that they made grocery shopping of their home. On the other hand, 24% of the consumers revealed that a person other than him/her was responsible for grocery shopping for the needs of

Table 1: Variables in the questionnaire used for the survey

Question	Variable	Question type	Level of measurement
D1	Age	Classification	Ordinal
D2	Gender	Classification	Nominal
D3	Marrital status	Classification	Nominal
D4	Education level	Classification	Ordinal
D5	Occupational status	Classification	Nominal
D6	Size of household	Classification	Nominal
D7	Monthly income	Classification	Ordinal
Q1	Person responsible for the shopping	Behavioral	Nominal
Q2	Knowledge	Attitudinal	Nominal
Q3	Familiarity to organic foods	Behavioral	Ordinal
Q4	Buying frequency of organic foods	Behavioral	Ordinal
Q5	First purchase of organic foods	Behavioral	Ordinal
Q6	Place of organic food shopping	Behavioral	Nominal
Q7	Choice of organic food products	Behavioral	Nominal
Q8	Reasons for buying organic foods	Attitudinal	Likert-scale, 8 statements with a 5-point scale
Q9	Label knowledge	Attitudinal	Nominal
Q10	Reasons for supporting the organic food production	Attitudinal	Nominal
Q11	Main barriers infront of organic food production	Attitudinal	Nominal
Q12	Main risks related to non-organic products	Attitudinal	Nominal
Q13	Image of organic foods	Attitudinal	Nominal
Q14	Image of organic foods	Attitudinal	Nominal
Q15	Image of organic foods	Attitudinal	Likert-scale, 3-point scale
Q16	Conditions to buy more	Attitudinal	Nominal

Table 2: Demographical characteristics of consumers

	Respondents	Turkish population
Age	15-25: 35% 25-45: 38% 45-65: 27%	15-25: 17% 25-45: 25% 45-65: 20% Average age: 29.7
Gender	Female: 46% Male: 54%	Female: 50% Male: 50%
Marital status	Married: 52% Single: 48%	Married: 64% Single: 36%
Education status	Elementary: 34% High school: 35% College & University: 31%	
Occupational status	Unemployed: 18% Employed: 34% Others*: 48% *Student: 34% *Retired: 12% *Part-time: 2%	Unemployed: 6% Employed: 42% Others: 52%
Size of household	1: 3% 2: 23% 3: 23% 4: 33% >4: 18%	
Monthly income*	<500 TL**: 38% 500-1000 TL: 21% 1000-1500 TL: 12% 1500-2000 TL: 14% 2000-3000 TL: 11% >3000 TL: 4%	

*National average gross income per person is US$10,444 in Turkey in 2012 (Anon., 2013). **TL: Turkish Lira, 1 Euro=2.3 TL 1 USD=1.8 TL

household. 48% of the consumers revealed that they were going shopping with a partner together. According to Mutlu (2007) 42% of the consumers were in the charge of shopping whereas 45% of the consumers were shopping together with a partner from their house.

When the answers of the second and third questions (Q2 and Q3) is taken into account, it is seen that most of the consumers (92%) living in Manisa are aware of and familiar with organic foods and they know what an organic food means. Only 8% of the respondents revealed that they never heard about organic foods and had no idea on this subject. 72% of the respondents declared that they consumed an organic food before; on the other hand 28% of the respondents never consumed an organic food in their diet before. As results of the statistical analyses, it was determined that, monthly income had an important effect on the awareness of the consumers with organic foods ($P<0.05$).

Organic food purchase and consumption frequencies of Turkish consumers are revealed in question 4 (Q4). 10% of the respondents have indicated that they never purchased organic foods; this percentage was 18 for “1-2 times a week”, 8 for “3-4 times a week”. Highest percentage (40%) was achieved for “1-2 times a month”. Same percentage (12%) was achieved for both choices “3-4 times a month” and “less than 1 time a month”. As seen from the results of the 5th question, 28% of the respondents have indicated that they purchased their first organic food 1-3 years ago, whereas 20% of them declared that they have been consuming organic foods for 5 years. According the report

Q1: Who goes shopping in your house?	
I go	28%
Other than me	24%
We go together	48%

Q2: What is “organic food”? Have you ever heard about it?	
Yes, I know	92%
No, I have no idea	8%

Q3: Have you ever consumed an organic food?	
Yes	72%
No	28%

Q4: Frequency of organic food purchases	
Never	10%
1-2 times a week	18%
3-4 times a week	8%
1-2 times a month	40%
3-4 times a month	12%
Less than 1 times a month	12%

Q5: When did you purchase your first organic food?	
More than 5 years ago	20%
3-5 years ago	8%
1-3 years ago	28%
1 year ago	12%
6 months ago	12%
1-3 months ago	8%
In the last month	12%

Q6: Where do you prefer to purchase your organic foods?	
Supermarkets	24%
Organic food markets	28%
Bazaars	40%
Organic farms	8%

Q7: Which organic foods have you ever consumed in Turkish markets?	
Organic fruits and vegetables	18%
Organic dried fruits and vegetables	11%
Organic cereal products	6%
Organic spices	4%
Organic milk and dairy products	21%
Organic fats and oils	3%
Organic egg, meat and meat products	11%
Organic drinks, fruit juices and refreshments	5%
Organic infant-baby foods	2%
Organic honey and jam	19%

Q8: Reasons for purchasing organic foods

	Certainly agree (%)	Agree (%)	Disagree (%)	Certainly disagree (%)	No idea (%)
At least they are certificated foods	44	21	2	12	21
Safer (they do not contain GDO or other risks)	78	6	0	4	12
Less environmental pollution	57	24	7	4	8
Free of synthetic additives and chemical residues	51	29	4	4	12
Fresher and natural	61	16	8	2	13
Higher nutritional value					
Healthier	59	32	1	0	8
Have higher nutritional value	67	20	2	3	8

Q9: Which one should be present on the packages of the organic foods marketed in Turkey?

A) 9%

This is the legal logo of Ministry of Food, Agriculture and Livestock representing the organic farming and foods and it should be present on the packages of organic foods. This is the official logo used for organic labelling

B) 22%

This is the imaginery logo which was prepared by Mutlu (2007) and modified by the author

C) 35%

This is the logo of foundation for combating erosion and afforestation. This foundation is very popular in Turkey and its logo is well known

D) 34% I have no idea

Q10: Production of organic foods and food markets should be supported. Because;

Healthier than non-organic foods	11%
Safer than non-organic foods	6%
Eco-friendly	5%
More delicious than non-organic foods	13%
Better quality	5%
Small-capacity producers should be supported	27%
Sustainability of organic food market is important	19%
Conservation of natural resources	7%
Supporting the positive image of the Turkish food industry	4%
It is only a popular trend	3%

Q11: Main barriers in front of the organic food market

High prices	26%
Less income of Turkish consumers	12%
They are not widely available in the markets	20%
Their tastes are not that delicious when compared to products that are not organic	2%
I do not have time for looking for organic food markets/It takes a long time to find organic products	3%
I am not sure if they offer something different than products that are not organic, and they are not reliable	12%
There is not enough organic product variety (most of them are seasonal or traditional/regional)	16%
Their appearance is less appealing when compared to products that are not organic	5%
There is not enough information in media related to these products	4%

Q12: Main risks related to non-organic (conventional) foods

Pesticides, fertilizers and their residues	21%
Genetically modified organisms	34%
Irradiation	11%
Artificial colorants, and other additives	12%
Hormones and antibiotics especially in meat products	22%

Q13: Organic foods are known as healthy foods. Because

Contains less amount of chemical residue when compared to non-organic foods	19%
Contains higher amounts of vitamins and minerals when compared to non-organic foods	15%
They are safer than non-organic foods	34%
They are healthier than non-organic foods	32%

Q14: Organic foods are known to be

More delicious than non-organic foods	47%
More attractive than non-organic foods	26%
Having a shorter shelf life than non-organic foods	27%

of the Klukovski and Agoli (2010), 25.78% of Greek consumers purchase organic foods weekly, whereas 22.6% of them purchase these foods bi-weekly. When compared to Turkish consumers, Greeks are more familiar with organic food consumption. Monthly income and occupational status are the important factors that were affecting the awareness of the consumers with organic foods ($P<0.05$).

Q15: Do you believe that foods having "organic food" logo on them in Turkish markets are really organic?

Yes, I believe so	34%
No, I don't think so	33%
I have no idea	33%

Q16: I would like to consume more organic foods, if….

There were more product variety	57%
I could find them readily in markets	43%

Public bazaars are very famous in Turkish social culture. Turkish consumers generally purchase their grocery shopping from these bazaars established in different districts on different days of the week in the town. Results of the sixth question show clearly that organic foods are generally purchased from these bazaars by the majority of the respondents (40%), whereas 24% of the consumers declared that they purchase their organic foods from organic food markets.

In order to learn the organic foods that respondents have ever heard about and consumed, seventh question (Q7) was asked to consumers. Results show us that 21% of the consumers recognized organic milk and dairy products, whereas 19% of them heard about organic honey and jam before. Organic spices were recognized by only 3% of the consumers. Only 2% of the respondents recognized infant-baby foods. It is known that baby foods are very specific group which are demanded for a certain period by the consumers having babies. Similarly, As a result of a study performed in Greece, it was determined Greek consumers mostly recognized fruits and vegetables as organic foods too (Klukovski and Agoli, 2010). According to Sarıkaya (2007), the highly recognized organic foods were fruits and vegetables among Turkish consumers (61.2%)

Reasons for purchasing and consuming organic foods were also investigated by this questionnaire. One of the main criteria included in the questionnaire was food safety. Consumers concern on artificial additives, GDOs, food contaminants, toxins and pesticides were asked to respondents and I wanted to learn if these factors negatively affected the purchasing habits and behaviors of the Turkish consumers. The most important reason for purchasing organic foods seems to be health and higher nutritional value (91% and 87% agreement rate). 84% of the respondents agree that organic foods are not genetically modified products and because of that they are known as safe foods. 21% of the consumers have no idea if organic products are certified or not. Most of the respondents (80%) agree that organic foods are free of synthetic additives and chemical residues like pesticides. As a result of a survey made in Spain, it was determined that the main reason leading consumers to consume organic foods was the fact that organic foods had been cultivated without synthetic pesticides (39%). And also 34% of the Spanish consumers agreed that no preservatives and artificial additives had been used in these products (Briz and Ward, 2009). According to Riotner-Schobesberger et al. (2008), approximately 70% of the consumers were very much and often concerning about the pesticides possibly found in fruits and vegetables. Similar findings and comments were released by several authors (Chryssohoidis and Krystallis, 2005; Shephard et al., 2005; Hjelmar, 2011). Magnusson et al., (2002) and Hursti and Magnusson (2003) indicated that consumers were quite negative to genetically modified foods and it has been seen that the majority of consumers categorized genetically modified foods as "bad" and organic foods as "good". Sarıkaya (2007) reported that one of the leading factors affecting the choice of the consumer in terms of organic foods was that those products were recognized as safer and more hygienic. In the same study it was determined that pesticides and artificial additives were the highly recognized barriers concerning the consumers.

Next step of the questionnaire was the measurement of organic label and logo knowledge of the respondents. Three different logos were given in the questionnaire; one of official logo of Ministry of Food, Agriculture and Livestock representing the organic farming and foods and it should be present on the packages of organic foods, one imaginary logo which was prepared by Mutlu (2007) and modified by author, and one logo from a foundation for combating erosion and forestations (TEMA). 34% of the respondents declared that they had no idea, whereas 35% of the consumers recognized the logo of TEMA as official logo of organic foods. Fake logo was recognized by the 22% of the consumers. Only 9% of the consumers recognized the right logo. This result explains that Turkish consumers do not really know and informed about true organic labeling. According to Mutlu (2007), 64% of the consumers living in Turkey recognized the right logo for organic labeling, but it is seen that in this research data was collected through an internet survey. As a result of a report, it was determined that Danish organic food logo was known by almost all of the respondents (98%) and also 90% of the consumers were confident that labeled products are actually organic (DMFCF, 2009). Szente (2005) and Szente (2008) reported that 56.2% of Hungarian consumers could not recognize the symbol present on packages of organic foods. It was determined that there was a negative correlation among the knowledge about the true organic labelling and the education level of the respondents (r=-0.65).

I asked consumers why organic food production should be supported (Q10). 27% of them indicated that small capacity organic food producers should be financially supported by government. On the other hand 19% of the respondents agreed that sustainability of organic food market was important, so producers and sector should be financially supported. 13% of the consumers found organic foods more delicious than non-organic foods, whereas only 4% of the respondents agreed that organic food sector was important in terms of positive image of Turkish food industry in foreign markets. By conducting this questionnaire I also wanted to determine the myth "organic food consumption is simply a trend" was true or not? Only 3% of the consumers revealed that organic food consumption was only a popular trend, so supporting this sector was not of great importance to food industry. On the other hand, 42.4% of the consumers living in Bangkok revealed that organic foods are just a marketing gag (Roitner-Schobesberger et al., 2008).

My another thought was related to food quality. It was thought also that organic food might be recognized by the consumers as a high quality food and perceiving organic foods as higher quality foods would be positively affecting the purchasing behaviors of the consumers. But, only 5% of the consumers believed that production of organic foods should be supported since they are higher quality foods when compared to non-organic foods.

Before adopting this survey, it was thought that one of the main concerns and barriers in front of the organic food consumption might be the high prices. In Q11 this myth was asked to consumers in order to learn it was true or false. According to respondents organic foods are more expensive than conventional foods. 12% of the respondents declared that main barrier was less income of Turkish consumers, whereas 20% of the consumers declared that organic foods were not widely available in the markets. According to ICROFS (2008), personal income is one of the most important factors for organic food consumers since organic foods are generally more expensive when compared to non-organic foods. Consumers in affluent countries with a relatively less income differences are more likely to buy organic foods than the consumers living in other countries. On the other hand, Lockie et al. (2004) reported that income had even less overall impact on organic consumption rates. Szente et al. (2006) declared that the major counter-argument against buying organic foods was high price (33.4%).

Before adopting this study, it was thought health issues and concerns related to health will be a major factor affecting the organic food purchase behaviors of the consumers. Main risks related to non-organic (conventional) foods were asked to consumers. Main risks were genetically modified organisms (GDO) (34%). Secondary risks were hormones and antibiotics especially found in meat products (22%), these were followed by pesticides, fertilizers and their residues in foods (21%). 12% of the respondents declared that artificial colorants and other food additives were one of the most important risks related to non-organic foods, whereas irradiation followed these (11%). It is interesting that 46.4% of the consumers living in Bangkok declared that they were not concerned about the use of GMO in food products (Roitner-Schobesberger et al., 2008).

Most of the consumers (68%) agreed that organic foods were safer or healthier than non-organic foods. 19% of the consumers declared that organic foods were containing less amount of chemical residue when compared to non-organic foods, whereas according to 15% of the respondents, organic foods were containing higher amounts of vitamins and minerals than non-organic foods (Q13). As results of question 14 (Q14), organic foods were found more delicious than non-organic ones (47%), whereas 27% of the respondents agreed that they were having a shorter shelf-life than other foods. 26% of the consumers revealed that organic foods were more attractive.

In question 15, it was asked to consumers that foods having organic food logo on them were really organic and this logo was trustable or not. Ratios of the answers were almost same. 34% of the consumers agreed that logo was trustable, whereas 33% of the consumers revealed that they did not trust the logo on these products. On the other hand 33% of the respondents expressed no idea on this question. Roitner-Schobesberger et al. (2008) reported that 64.9 percent of the consumers living in Bangkok agreed that they could trust a product carrying an organic label on it.

In question 16, 2 conditions under which individuals would be willing to purchase more organic foods were asked to respondents. 57% of the consumers declared that if there were more organic food product variety, they would be willing to purchase them more. 43% of them agreed that if they could find organic foods readily in markets they would be willing to purchase more.

There is rather limited literature regarding the investigation of behaviors and attitudes of Turkish consumers. So, it is thought that results of this survey will be of great importance. As it is explained in the text, it was aimed to determine the effects of factors health, food quality, price, trust and food safety which play important roles towards organic food consumption and choice. According to findings obtained from the survey, price, food quality and food safety are the criteria having great impact on consumer attitudes towards organic food consumption in Turkish markets. It can also be reported that prices of organic foods were found high when compared to non-organic foods and price has to be seen as a barrier in front of organic food industry.

It was observed that consumers were driven to consume organic foods because they perceive increased quality in organic foods and consumers thought that main risks in non-organic foods were pesticides, fertilizers and their residues (21%) and genetically modified organisms (34%) which are related to food safety. We can conclude that consumers main concerns were related to food safety in terms of non-organic foods. This concern has to be driven consumers to purchase organic foods (78%).

Most of the consumers do not know the legal logo which should be placed on packages of organic foods. Since only 9% of the consumers could recognize the logo of organic foods, in my opinion media should be used more effectively by government in order to give more information about organic foods and organic food sector.

Author contributions

Both the authors contributed equally in the article. B. E. and P. G. E. designed the survey and applied the questionnaire and B. E. wrote the article.

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