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Examination of Consumer's Consumption Patterns of Organic Food Products

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Abstract:

This study aims to determine Turkish consumers' organic food buying behavior and their knowledge level on organic food. It also focuses on the effect of gender on organic food consumption and consumers' knowledge of organic food. The study carried out with 500 consumer living in Çankaya district of the city of Ankara. According to the result of the study, it is found out that, more than half of the consumers bought organic food. Organic food consumers are among the people who are at around 18-49, married without children, graduated from high school, a public employee, The most important factor that makes people buy organic food is "health and substantiality", the second is "being produced in natural way" and the third one is "being certificated. The consumers mostly consumed organic fruit and vegetables. One third of the consumers stated that they could pay 50 % more for organic food. Findings related to the analyses of demographic variables revealed that there was only statistically significant differences among different gender in case of buying infant products.

Keywords: Organic food, consumption, consumer behavior

1. Introduction

Today, the increase of population, environmental pollution, insensible consumption of natural resources and therefore the need for protection of natural balance have brought the initiation of practicing some alternative production methods to forward by developed countries. Organic farming, as a reflection of these alternative production methods to agricultural field, has emerged as "prevention of damage to ecological system and creation of a sustainable eco-balance oriented, environment and human friendly production systems" for the purpose of healthy and quality goods production and consumption (Demir & Gül, 2004; Akın et al., 2010). The increase in awareness to activities towards protection of environment and demand towards healthy food products of consumers with the increasing consumption awareness hastened the organic farming activities and development of organic goods market (Demiryürek, 2004).

As with the whole world, consumption of organic food products is also becoming widespread and the share of organic food products in agricultural production fields is increasing in our country. Because the first practices of organic farming in our country have occurred through foreign companies, the organic food products range are determined according to demands of these companies. However, the interest shown by the consumers in Turkey to healthy and quality food products has enabled the forming of organic food products oriented domestic market (Sarıkaya, 2007). For the growth of this market and increase of organic food product's production and consumption, it is important to determine the attitudes and opinions of consumers in Turkey towards organic food products, factors causing consumption or non-consumption of organic food products and knowledge level of consumers on organic food products. The purpose of this study is to reveal the perceptions of consumers on organic food products, determination of organic food products buying behavior and identification of opinions on organic food products.

2. Literature

It is seen that the concept of organic farming is expressed with the concepts of "ecological farming" and "biological farming" (Demiryürek, 2011). Organic farming is a sustainable production system like alternative farming, bio-dynamic farming and reproductive farming. The use of synthetic content fertilizer, pesticides and growth regulators are prohibited in this system. (Demiryürek, 2011) The real purpose of this production system is the production of all kinds of food products and nutrients and accommodation and clothing products used by humans in a way that is sustainable and not damaging or least damaging to human health, while doing this, improving not the production quantity but the product quality (Demir & Gül, 2004; Sarıkaya, 2007).

Organic farming is increasingly drawing interest today and therefore organic food products market shows a consistent growing trend in the global scale (Karabaş & Gürler; 2012). The idea of organic farming, first suggested by the English researcher Albert Howard in

1910, has become an officially practiced and fast-spread production system from 1985 (Kacur, 2009). Factors such as increase in concerns about environment and health and improvement of socio-economic conditions were effective on the increase of the interest in organic farming (Demiryürek, 2011).

Today, organic farming is practiced in 160 countries and there are about 37,2 millions of hectares organic farming areas. The leading countries where organic farming is commonly practices are developed countries such as USA, European Union countries and Japan (Akin et al., 2010). As for our country, close to 250 products are produced organically (Demiryürek, 2011; Akin et al., 2010). According to 2011 data of TÜGEM, the organic farming areas in Turkey are 383,782 hectares and the number of organic producers are 43,000 (TÜGEM, 2011). As for the results of the study made by Sayın and Mencet in 2007, organic food products market in Turkey constitutes a market for 3-5 millions of dollars and the majority of the domestic consumption is provided by the domestic production (Sayın & Mencet, 2007).

Despite the increase in the number of consumers becoming aware in health and environment issues and the growth of organic food products market in parallel to this, it is seen that the organic food products market is relatively small when compared to traditional agricultural practices (Çelik, 2013). Especially due to organic farming products being more expensive compared to traditional farming products, educated and socio-economically higher level consumers prefer consuming organic products (Sarıkaya, 2007; Sayın & Mencet, 2007). Also according to the results of the study made by Sayın and Mencet in 2007 for the purpose of determining the structure of organic food products market in Turkey, organic products are sold with prices 30-40% higher than traditional products and the consumers in Turkey show price sensitivity. Another result of the same study is that the certified organic product awareness being not common with consumers in Turkey.

The most effective factor in growing of the organic food products market is doubtless the demands of consumers towards this market (Kılıç ve diğ., 2014). Many studies were made in the literature for the purpose of examining the demands of consumers towards organic food products and their perceptions of organic food products (Sarıkaya, 2007; Kacur, 2009; Akin et al., 2010; Tetik, 2010; Çelik, 2013).

Fotopoulos and Krystallis, in the study they made in 2002, have examined the organic food product buying behaviors of Greek consumers. As a result of the study, they divided the consumers into three groups as “*aware and buying*,” “*not aware*” and “*aware but not buying*” according to their attitudes towards organic products.

Sarıkaya, in the study made for the purpose of measuring the attitudes of consumers in Ankara and İstanbul towards organic food consumption (2007), has found that environmental awareness is among the leading reasons directing consumers to buying organic food products, there is a lack of trust against organic food products and contrary to common belief, consumers consider the high prices of organic food products as reasonable.

In the studies made on the reasons why consumers prefer organic food products, the necessity for the protection of humans, animals and environment, health and curiosity confront us as the most important factors affecting the consumption of organic food products (Chinnici et al., 2002; Lockie et al., 2002; Makatouni, 2002; Magnusson et al., 2003; McIver, 2004; Hughner et al., 2007; Zepeda & Deal, 2009; Hasaңebi, 2010). Food safety issue forms the basis of the concerns on health (Hughner et al., 2007; Quah & Tan, 2010).

The most important factors affecting the decision of consumers to buy organic food products are taste being good (Hasaңebi, 2010), produced organically (Bryne et al., 1992; Davies et al., 1995; Magnusson et al., 2003), not containing chemical substances, being a life style indicator (Schifferstein & Ophius, 1998), freshness (Jolly, 1991), reminding the fresh taste of the past (Chinnici et al., 2002), perceived as quality (Lockie et al., 2002, Gök, 2008), positive attitude towards organic products and organic product awareness (Li et al., 2007), having a sick family member (Quah & Tan, 2010), organic farming preserving the soil, not containing genetically modified organisms and contributing to local economy (Hughner et al., 2007; Zepeda & Deal, 2009). The studies made revealed that having a sick family member, pregnancy and having a baby or a child at home are among the factors affecting the consumption of organic food products (Gök, 2008; Gotschi et al., 2010; Pino et al., 2012). Hill and Lynchehaun (2002), suggested that organic food consumption is considered a trend by a group due to being high priced, especially preferred by a certain community and given wide publicity in media.

As for the reasons of not buying organic food products, being expensive, limited access, unsatisfactory quality, lack of trust, lack of information and experience, incorrect understanding of production processes, established consumption habits and appearance of organic food products can be listed. (Fotopoulos & Krystallis, 2002; Lockie et al., 2002; Li ve diğ., 2007; Sarıkaya, 2007; Zepeda & Deal, 2009; Hasaңebi, 2010; Kılıç et al., 2014). Confusion of organic food products with the products referred with natural and village product or trying to be presented to consumer deliberately, shakes the confidence of consumers to organic food products (Araslı & Esen, 2008).

Demographical properties also affect the organic food product buying behaviors of consumers. Especially gender, age, income, education level and having children are seen to be affecting consumption of organic food products in the studies made (Davies et al., 1995; Magnusson vd., 2003; Akin et al., 2010). In the study made by Akin et al., (2010), examination of socio-demographical properties of the consumers of Niğde province and their attitudes towards organic food products and difference between individual values was aimed. According to study results, those under the age of 40, with income level above 1000 TL, with one or two children and especially the women of this group were found to be more sensitive about organic food products compared to other groups with socio-demographical properties. It was seen that individuals with positive image towards organic food products are environmentally-conscious, be at peace with themselves, having values of wanting to be in harmony with nature. Also, the results were reached in the study that these individuals had moral values, charitable, responsible and wanting a world filled with beauties.

The studies made revealed that women were more sensitive and eager about organic food products consumption (Bryne et al., 1992; Davis et al., 1995). Young consumers show a positive attitude towards organic food products, however older consumers buy more organic food products (Magnusson et al., 2003). This can be explained by organic food products being more expensive.

In the study made by Karabaş and Gürlü in 2012, it was reported that consumers mostly buy organic food products from supermarkets. As for the study made by İnci et al. in 2014, majority of the consumers reported they buy the organic food products from villages and pay more attention to “*cleanliness and hygiene*” than “*price*”.

In the study made by Mutlu (2007), comparison of attitudes and behaviors of consumers in Turkey and Germany was aimed. It was determined that organic food products experience of consumers in Germany was more and they buy organic food products more frequently than those in Turkey. Consumers in both countries were determined to have high education level and in middle income group, preferring supermarkets to buy organic food products. Also, it was revealed that the consumers in Turkey didn't have adequate information about certification and label recognition.

This study was planned for the purpose of determining the organic food product buying behaviors of consumers living in Turkey, identifying the knowledge levels about the properties of organic food products and confirming the effect of gender on consumption of organic food products with organic food product properties. Therefore it may be said that it is a descriptive study. It was aimed for this study to help studies to be made in the future and marketing strategies to be established by food producers.

3. Method

3.1. Population and Sample

The population of the study is formed by Kırkkonaklar, Gaziosmanpaşa and Kavaklıdere neighborhoods from Çankaya district of Ankara. The study was made with 500 consumers, selected from consumers living in the neighborhoods specified by random sampling method. Participation to study is based on voluntariness. The consumers participating to study were firstly given information on the subject and purpose of the study.

Of the consumers participating to study 49,2% (249) were female, 50,2% (251) were male. 76,0% (380) were of ages between 18-49, 24,0% (120) were of age above 50. When the education levels of the participants were examined, it is seen that 47,0% (235) have completed undergraduate and graduate education, 53,0% (265) had high school or a lower education level. 61,4% (307) of the participants were married; 35,2% (176) were single and 3,4% (17) were widowed or divorced. 56,4% (282) works in a regular job, 35,0% (175) not working at any job, 8,6% (43) work seasonally, part-time, when necessary, at home, etc.. 45,6% of the participants reported the number of individuals living in their home as 4 or more; 26,6% as 3; 20,4% as 2 and 7,4% as 1. It was identified that 38,4% (194) of the participants didn't have any children, 18,2% (91) had one, 23,2% (116) had two, 19,8% (99) had three or more. When the participants were examined according to their income status, 1,4% had no income, 16,2% had income between 1000 -1999 TL, 28,0% between 2000 – 2999 TL, 23,6% between 3000 – 3999 TL and 30,8% 4000 TL or above. 47,0% (235) of the consumers participating in the study considered their income to be adequate and 48,2% (24) perceive their income as inadequate.

3.2. Data Collection and Analysis

The data of the study were collected as a result of face to face interviews made with the participants between 1-30 September 2014, through the survey form developed in the light of theoretical information obtained as a result of extensive subject related literature review made by the researchers. For obtaining correct and sound responses to questions found in the survey form, care was taken to ensure the participants were at least 18 years of age.

Survey form consists of two sections covering the questions on demographical properties and organic food product buying behaviors of the consumers. In the demographical properties section, there are questions on the gender, age, education levels, marital status, employment status, monthly income and income perceptions. As for the organic food product buying behaviors section, it contains questions about their buying organic food products status, opinions on necessary positive properties of organic food products, purchased organic food product groups, how long they have been buying organic food products and where they buy these products. To determine whether the survey is of quality to measure the properties required by the study, the opinions of two field specialists and one measurement and evaluation (test development) specialists were taken. It was seen that the specialists were usually compatible about the positive opinions on the questions and were in agreement about the survey being appropriate. The specialists have provided a few suggestions on the development of the survey and these suggestions were applied by the researchers. The data obtained as a result of the study were analysed by SPSS 21 Statistics program. The data were tried to be interpreted by using analyses such as frequency distribution and Chi-square.

4. Findings

4.1. Organic Food Product Buying Status of Consumers during Shopping

62,6% of the consumers buy organic food products and 37,4% of them, meanwhile, don't buy. The ratio of those buying organic food products are considerably higher than those who don't. Due to other questions within scope of the study being towards consumption of organic food products, 187 people not buying organic food products were taken out and the analyses were made on 313 people.

	Number	%
Buying organic food products	313	62,6
Not buying organic food products	187	37,4
Total	500	100

Table 1: Distribution of Organic Food Product Buying Status of Consumers during Shopping

4.2. Opinions on Necessary Properties of Organic Food Products

The positive properties considered to be had by the organic food products were given and participants were asked their opinions about whether the organic food products have these properties or not. The opinions of the participants were gathered in three groups as Don't Agree, Undecided and Agree. Obtained results were given in Table 2.

97,1% of the consumers expressed that they agree on "healthy", 91,0% "produced naturally", 84,3% "does not contain harmful chemicals and fertilizers", 80,0% "environmentally and animal friendly production", 81,7% "does not contain genetically modified organisms" and 90,1% "must have certification" statements. It is seen that majority of the consumers agree on the positive opinions about organic food products. However, 12,1% of the consumers expressed that they are undecided on "environmentally and animal friendly production", 10,9% "does not contain genetically modified organisms" statements. Consumers lacking of information on GMO products and environmentally and animal friendly production processes may be the cause of this status.

Properties		Don't Agree	Undecided	Agree	Total
Healthy.	Number	7	2	304	313
	%	2,24	0,64	97,12	100
Produced naturally.	Number	6	22	285	313
	%	1,92	7,03	91,05	100
Does not contain harmful chemicals and fertilizers.	Number	19	30	264	313
	%	6,07	9,58	84,35	100
Environmentally and animal friendly production.	Number	23	38	252	313
	%	7,35	12,14	80,51	100
Does not contain genetically modified organism.	Number	23	34	256	313
	%	7,35	10,86	81,79	100
All organic products must be certified.	Number	10	21	282	313
	%	3,19	6,71	90,10	100

Table 2: Distribution of Opinions on Necessary Properties of Organic Food Products (n=313)

The relationship between the opinions of necessary properties of organic food products and genders of the consumers are examined by Chi-square analysis. The results of Chi-square were given in Table 3.

Properties	Gender	Don't Agree	Undecided	Agree	Total	X	Sd	p
Healthy	Female	3	1	165	169	0,37	2	0,83
	Male	4	1	139	144			
Produced naturally	Female	3	7	134	169	1,93	2	0,38
	Male	4	1	139	144			
Does not contain harmful chemicals and fertilizers	Female	7	19	143	169	3,31	2	0,19
	Male	12	11	121	144			
Environmentally and animal friendly production	Female	9	24	136	169	3,33	2	0,19
	Male	14	14	116	144			
Does not contain genetically modified organisms	Female	10	23	136	169	3,65	2	0,16
	Male	13	11	120	144			
All organic products must be certified.	Female	4	14	151	169	2,17	2	0,34
	Male	6	7	131	144			

Table 3: Distribution of Opinions on Necessary Properties of Organic Food Products by Gender (n=313)

When Table 3 is examined, in terms of participation ratio to all of the necessary properties of organic food products, no meaningful difference between female and male consumers ($p > 0,05$). According to this result, it can be said that the participation ratio of females and males on the opinions about necessary properties of organic food products are very close to each other.

When the participation ratio of consumers to opinions about necessary properties of organic food products is examined according to education levels, no meaningful difference was found between the consumers of different education levels ($p > 0,05$).

4.3 Frequency of Buying Organic Food Products

To determine the frequency of buying various organic food products, a Likert scale with 5 grades was used. The answers were collected as "never", "seldom", "sometimes", "often" and "always". Obtained results were given in Table 4.

When Table 4 was examined, the ratio of consumers stating they buy fresh fruits and vegetables as always and often. (Fresh vegetables; Always: 39,3%, often; 47,2%, Fresh fruits; Always: 39,3%, often; 46,3%). Dairy products (37,1%) and beverages (30,1%) are also among the often bought organic food products by consumers. Organic food products stated as sometimes bought by the consumers are grains (35,1%), legumes (31,2%), pastries (30,3%), sweets (29,9%), dried fruits and nuts (29,7%) and oil (25,2%). The organic food product stated as never bought by the consumers is baby food products with 57,8%.

Food Groups		Never	Seldom	Sometimes	Often	Always	Total
Fresh vegetables	Number	2	6	34	148	123	313
	%	0,64	1,92	10,86	47,28	39,30	100
Fresh fruits	Number	1	6	38	145	123	313
	%	0,32	1,92	12,14	46,33	39,30	100
Meat Products	Number	12	31	97	97	76	313
	%	3,83	9,90	30,99	30,99	24,28	100
Dairy Products	Number	10	14	66	116	107	313
	%	3,19	4,47	21,09	37,06	34,19	100
Grains	Number	19	49	110	77	58	313
	%	6,07	15,65	35,14	24,60	18,53	100
Pastries	Number	26	44	95	81	67	313
	%	8,31	14,06	30,35	25,88	21,41	100
Legumes	Number	31	48	100	80	54	313
	%	9,90	15,34	31,95	25,56	17,25	100
Baby Food Products	Number	181	39	26	39	28	313
	%	57,83	12,46	8,31	12,46	8,95	100
Dried Fruits and Nuts	Number	52	51	93	77	40	313
	%	16,61	16,29	29,71	24,60	12,78	100
Beverages	Number	31	40	80	97	65	313
	%	9,90	12,78	25,56	30,99	20,77	100
Oil	Number	21	32	79	85	96	313
	%	6,71	10,22	25,24	27,16	30,67	100
Sweets	Number	29	48	93	68	73	311
	%	9,32	15,43	29,90	21,86	23,47	100
Spices and Medicinal Plants	Number	30	35	59	94	95	313
	%	9,58	11,18	18,85	30,03	30,35	100

Table 4: Distribution of Consumers by Frequency of Buying Organic Food Products (n= 313)

For the determination of difference between the organic food product buying frequency of consumers according to gender, chi-square analysis was made. Obtained results were given in Table 5.

No meaningful difference was found between the organic food product buying frequency of females and males, except baby food products group ($p > 0,05$). It was confirmed that female participants buy baby food products more frequently than male participants. ($p < 0,05$) This may be explained by the social gender role placed on women.

Food Groups	Gender	Never	Seldom	Sometimes	Often	Always	Total	X	Sd	p
Fresh vegetables	Female	0	4	22	73	70	169	6,03	4	0,2
	Male	2	2	12	75	53	144			
Fresh fruits	Female	0	4	23	72	70	169	3,73	4	0,44
	Male	1	2	15	73	53	144			
Meat Products	Female	4	17	58	49	41	169	3,86	4	0,43
	Male	8	14	39	48	35	144			
Dairy Products	Female	4	8	35	59	63	169	2,36	4	0,67
	Male	6	6	31	57	44	144			
Grains	Female	9	27	58	39	36	169	2,3	4	0,68
	Male	10	22	52	38	22	144			
Pastries	Female	12	26	49	40	42	169	4,06	4	0,4
	Male	14	18	46	41	25	144			
Legumes	Female	18	22	60	37	32	169	5,48	4	0,24
	Male	13	26	40	43	22	144			
Baby Products	Female	89	17	18	24	21	169	11,69*	4	0,02
	Male	92	22	8	15	7	144			
Dried Fruits and Nuts	Female	22	31	47	42	27	169	7,2	4	0,13
	Male	30	20	46	35	13	144			
Beverages	Female	14	20	47	52	36	169	2,02	4	0,73
	Male	17	20	33	45	29	144			
Oil	Female	9	18	41	49	52	169	1,71	4	0,79
	Male	12	14	38	36	44	144			
Sweets	Female	12	23	50	44	40	169	5,73	4	0,22
	Male	17	25	43	24	33	142			
Spices and Medicinal Plants	Female	16	17	28	55	53	169	2,33	4	0,68
	Male	14	18	31	39	42	144			

Table 5: Distribution of Organic Food Products Buying Frequency by Gender

* $p < 0,05$

The relationship between the organic food product buying frequency and education level of consumers and no meaningful difference except dairy products group was found ($p > 0,05$). As for the dairy products group, it was found that at least university graduate consumers buy organic dairy products more frequently and at most primary and high school graduate consumers buy organic dairy products less. ($p < 0,05$). University graduates buying organic dairy products gives the impression of this group being more informed and conscious about organic food products.

4.4. Duration of Buying Organic Food Products

It is seen that more than half of the consumers have been buying organic dairy products for more than 5 years. About 29,0% of the consumers have stated that they were buying organic products for 3-5 years. The ratio of participants buying organic products for the last year was 7,0%. When this is examined by gender, no statistically meaningful difference was found between the male and female consumers. ($p > 0,05$).

Buying period	Number	%
Last 1 year	22	7,03
Last 2 years	30	9,58
Last 3 years	46	14,70
Last 5 years	46	14,70
More than 5 years	169	53,99
Total	313	100

Table 6: Distribution of Consumers by Duration of Buying Organic Food Products

4.5 Place of Buying Organic Food Products

33,7% of the consumers buy the organic food products from markets, 30,6% from bazaars, 11,2% from farms or gardens, 8,6% from specialist stores and greengrocers and 7,0% from organic food stores. Internet was reported as the least buying place for organic food products with 3,5%. When the place of buying organic food products is examined by gender, the difference between female and male consumers were not found statistically meaningful. ($p > 0,05$).

Buying place	Number	%
Markets	106	33,87
Organic food stores	22	7,03
Bazaar	96	30,67
Organic food market	16	5,11
Specialist store, greengrocer, etc.	27	8,63
Farm garden	35	11,18
Internet	11	3,51
Total	313	100

Table 7: Distribution of Consumers by Place of Buying Organic Food Products

4.6 Price Differences That Can Be Paid for Organic Food Products

Consumers were asked about the amount of price difference that they can pay for organic food products compared to non-organic food products and 34,5% have stated they can pay 50,0% at most, 31,3% have stated 25% at most. While the ratio of consumers saying "I can pay 75% at most" is 17,2%, those saying "I won't pay a difference, I buy the cheapest one" is 16,9%. No statistically meaningful difference was identified between the price difference that can be paid by female and male consumers for organic food products. ($p > 0,05$)

Price Difference	Number	%
I won't pay a price difference, I buy the cheapest one	53	16,93
25% at most	98	31,31
50% at most	108	34,50
75% at most	54	17,25
Total	313	100

Table 8: Distribution of Consumers by Price Difference They Can Pay For Organic Food Products

5. Discussion and Conclusion

This study was planned and carried out for the purpose of determining the organic food product buying behaviors of consumers living in Turkey, identifying the opinions on properties of organic food products and confirming the effect of gender on organic food product consuming behavior.

According to the results of the study, 62,6% of the consumers buy organic food products and 37,4% of them, meanwhile, don't buy. More than 80% of the consumers buying organic food products think they are healthy, produced naturally, without harming environment and animals and do not contain harmful chemicals. Wilkins and Hillers (1994) have also reported in their studies that consumers buy organic food products because they want to avoid chemicals used in non-organic food production. In the study made by Wier and Calverley (2002), it was identified that environmental and ethical reasons were effective on consumers buying organic food products and they primarily buy organic food products due to health reasons. In a study made in Samsun province to confirm the opinions of families on safety of organic products, it was determined that 71,9% of the consumers have serious concerns on non-organic products being harmful to health (Karabaş, 2011). "Health" is an important factor for the consumers to steer to organic food products. Also according to the consumers within scope of this study, the most important positive necessary property that should be found in organic food products is being health. The product being health has become a quality benchmark for many consumers in today's market.

Organic food products are seen as environmentally friendly as well as healthy. And this steers the environment friendly consumers to buying organic food products. Being produced by methods harmless to environment is one of the positive properties considered necessary for the organic food products within scope of this study.

One of the properties of organic food products considered necessary by consumers is not containing genetically modified organisms, namely being safe. Aygen, in the study on measuring attitude and behaviors of consumers on organic food products, made in 2012 in İstanbul, have confirmed that consumers prefer organic food products by 86,0% because they are "safe". The results of the study of Aygen are in parallel to the results of this study. As for the results of this study, the consumers think organic food products do not contain genetically modified organisms, i.e. safe, with a ratio of 81,8%. Organic food products are preferred more due to being "safe and healthy" in the consumer market where GMO products and additives are increasingly questioned.

No meaningful difference was found between the females and males on their opinions about necessary properties of organic food products. ($p > 0,05$). Consumers with different education levels also think similarly about the necessary properties of organic food products.

The organic food product group most bought by the consumers are fresh vegetables and fruits, while the least bought is baby food products. According to the results of the study made by Çelik in 2013 about the organic food product buying habits of consumers, the most bought organic food products by consumers are tomatoes, spinach and carrots. This may be explained by affordable prices of organic vegetables and fruits. Consumers are easily able to buy these products. The results of the study also shows that consumers want to consume vegetables-fruits most. Therefore, demands of domestic market should be considered when production planning is made. The reason for baby food products being the least bought product group by the consumers is baby food products are usually considered untrustworthy and production of baby food products at home by women.

Female consumers buy more baby food products compared to male consumers ($p < 0.05$). Baby food products are the least bought product group among the organic food product groups and this product group is bought mostly by female consumers. Women are usually defined with status of being a mother and spouse by their social gender roles placed on them in the societies. Thus, the care and raising of children are primarily seen as the duty of women. Therefore, females buying more baby food products compared to males is an expected result. When the organic food product groups bought by consumers are examined by their education levels, only the buying ratio of university graduate consumers in the dairy products group is found to be increased. According to the results of the study made by Tirkeş (2008) and Hasaңebi (2010), no meaningful relationship was found between the gender, age and education level of consumers and organic food product buying behaviors. Bellows et al., have examined the studies on consumption of organic food products in different countries made in 2010 and identified that females with high education levels are generally consumers of organic food products.

More than half of the consumers are buying organic food products for more than 5 years. 33,7% of them state that they are buying organic food products from the markets. Also, in the study made by Mutlu (2007), it was identified that consumers prefer supermarkets to buy organic food products. The reason for the consumers to prefer supermarkets to buy organic food products may be the ease of access to products. Due to consumers mostly shopping from markets, especially chain markets including organic food products in their shelves is important in terms of popularizing the consumption of organic food products.

Internet was reported as the least buying place for organic food products with 3,5%. Though, in the study made by Yeşilođlu in 2013, 52,3% of the consumers stated they shop for organic food products usually over the internet. This difference may be caused by the sample study was made.

The ratio of consumers saying they would pay 50% more at most for organic food products are 34,5%. Also in the study made by Yeşilođlu in 2013, 53,8% of the consumers stated they are willing to pay more if there is an organic alternative to food products. A general opinion in the society about organic food products being more beneficial and healthy and consumers with this opinion are willing to pay more for this kind of products (Bamberg, 2002). As for the study made by Aygen in 2012, consumers have stated that they would prefer organic food products if they were cheaper. In a study made by Pezikođlu (2004) in Ankara, it was revealed that consumers living in the city center are willing to pay 50% and 100% more for organic products, 24,2% of these stated that they would accept the price difference for tomatoes, 16,0% for cucumbers, 12,0% for chicken meat and 12,0% for eggs. The consumer being willing to pay more differs by product type. Aksoy and Altındışlı (1999) report that despite some consumers being willing to pay more for organic food products, organic food products sold in Turkey being expensive is affecting the development of organic food products market negatively. Although the consumers think the products they consume may be harmful to health, economic factors are limiting the consumption of organic food products .

Production and consumption of organic food products both strengthen the local economy, ensure protection of natural environment and beneficial to human health. It is seen that the consumption of organic food products in Turkey is less than developed countries. Among the most important reasons for this, organic farming not popularized, prices of organic food products being well above the prices of normal farming products and low variety of organic food products are the leading reasons. (Tetik, 2012). Thus, the likelihood of consumers consuming organic food products is low. Consumers' lack of information about organic food products is one of the important reasons for the no development of organic food products market. Another reason for this non-development of this market is consumers not easily accessing to organic food products. If the consumers are enabled to access organic food products, the likelihood of consuming these products will also be increased. The suggestions that may be listed according to these problems mention are as follows:

- Chain supermarkets including fully organic food products for easier access of consumers to organic food products may be a solution for the problems in terms of producer-consumer and marketing.
- Information and awareness level of consumers on organic food products must be increased. Mass media are an important tool for transferring these information to consumers. By using these tools, organic food products must be promoted, consumers must be informed about the differences of organic food products from other products, organic production techniques, benefits of organic products, where and how to buy them. Also, relevant information on control, supervision and certification of these products must be given to consumers.
- Organic food products not having much variety is a factor hindering the consumers from making consumption of organic food products a life style. Therefore, enough variety of products for organic nutrition image must be offered to consumers.
- The reasons of organic food prices being higher than other products must also be explained to the consumer.

- Opening markets where organic food products producers and consumers can meet is extremely important in terms of increasing the reliability of these products from the viewpoint of consumers and popularizing the consumption of organic food products.
- Improvement of brand recognition and especially organic food products such as vegetables-fruits released to market as branded products will positively affect the perceptions of consumers about the quality and reliability of the product.
- Producers of organic food products must increase the product variety by focusing on foods consumable in main and sub meals, as to fulfill the daily nutritional requirements of the consumers, to target the consumers with high healthy nutrition awareness, try to increase the points of sales where they can reach the consumers through sales at the school canteens and cafeterias.

As a result of this study, the positive opinions on organic food products and desires on buying are standing out. However, whether organic food products buying behavior is a regular or one-time purchase and what kind of life style this behavior will become must be examined and understood. To understand the buying behaviors of consumers buying organic food products, deeper studies also including the analysis of organic products buying experiences besides demographical works are required.

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