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# Organic Food Attributes Determing Consumer Choices

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***Abstract**:*

*The aim of the research was to identify the factors influencing consumption of organic food. In our research an attempt was made to find a method for identifying organic food and assessing the features ascribed to it by consumers. These features were then analyzed in terms of their technical and market attributes.*

*The paper presents results of research conducted in 2005, 2010 and 2013 on the organic food market with special emphasis placed on pricing, distribution systems and consumers in the north-eastern Poland. Respondents' answers indicate their increasing interest, knowledge and commitment to the environment.*

*They also indicate that the most important technological attribute of organic food is its way of production, which ensures that the food is healthy, contains no chemical additives and has good, natural taste. Market attributes include the food's high nutritious value and naturalness, the producer's logo and price.*

*Consumers buying organic food believe that the production and processing of food does not destroy the natural environment. Emphasizing the health and taste attributes of organic food is not enough, however, and it has to coincide with the consumer's behavior and pro-environmental bias, which become explicit in his choice of food.*

***Keywords:** Organic food, consumer behaviors, the attributes of organic food.*

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## 1. Introduction

The dynamically growing organic food market needs to implement such marketing tools that take into consideration the specific characteristics of this market. In order to create a competitive advantage of the product offer, the concept of ecological attributes of the food is introduced (product features which fulfill consumers' needs). The organic food has features which can be divided into individual attributes – personal (private) and social attributes – environmental (public). The group of individual features perceived by consumers of organic food consists of such characteristics as taste, health value, freshness (Misra, Huang and Otto, 1991) or utility value of these products (Zanoli and Naspetti, 2002). The features of the product described as individual attributes (private) are valued because of different, sometimes egoistic, reasons imposed by the consumers' and their families' needs (Grzybowska-Brzezińska, 2008).

The social attributes of organic food include aspects of the environmental protection or respecting the well-being of animals in organic farming, both of which are considered non-utilitarian characteristics, and the fact that they are perceived by consumers' results from their altruism determining their behavior (Łuczka-Bakuła, 2007). This means that organic food is seen in a wider context of the natural environment, its state and its relation to agricultural production methods and health (Newerli-Guz and Śmiechowska, 2004) which may result from consumers' environmental awareness, more aggressive promotion of health, social marketing of companies, consumers' and producers' civic virtue. All these aspects add to the image of organic food and, indirectly, their consumers and producers.

Another take on the characteristics of the process of selecting food products by the target market involves a phenomenon in which the shaping of consumer preferences is influenced by the food product attributes, grouped in three categories (Wierenga, 1983) and defined as sensory, instrumental or symbolic, which may be located in particular layers of a product (outside and inside). The first defined group of sensory attributes involves the physical features such as taste, smell, color and appearance (Wierenga, 1983; Peattie, 1995; Grzybowska-Brzezińska, 2013a). Functional (also instrumental) attributes are features which fulfill consumers' physiological needs, such as supply energy, help build and maintain in good condition cells and body organs. The composition, presence of certain nutrients (carbohydrates, proteins, vitamins), type of ingredients, presence or absence of preservatives or additives are all part of this group of attributes. The features of a product related to its utilitarian value, like the size of packaging, easy preparation, preservation method may also be classified as functional attributes (Grzybowska-Brzezińska, 2013a; Wierenga, 1983). Consumption of certain products can also be related to prestige (buying certain products that are concordant with the self image of a consumer) or it can help convey a message about a consumer to other members in their community (consumption for show). Symbolic functions of a product are specific and will depend on social culture, subculture or social class, so the process of building

attributes of prestige is related to the position of the brand of the product, the position of the manufacturer and the communication method between the company and the selected segment of consumers. The price of the product and the place of purchase contribute to engineering the expressive value of a product (Wierenga, 1983; Lin, 2002; Miyazaki, Grewal and Goodstein, 2005).

Even though attributes connected with organic food may be difficult for consumers to verify organoleptically or visually, most of them buy organic food products because they understand that these products have exceptional (and sometimes better) attributes compared to their conventionally produced counterparts (Vindigni, Janssen and Jager, 2002). Research on the subject often concentrates on the question whether organic food products are better than their conventionally produced alternatives, and if so, how. The results vary greatly. Some ask if there is a difference of perception of such types of food between the consumers (demand) and the producers (supply).

The research which concentrates on the question of supply usually emphasizes efficiency, price suggested by the producer and profitability, while research concentrating on the question of demand, emphasize the differences in biophysical and chemical features, consumer preferences and retail prices. The comparison of the organic and conventionally produced food in terms of technological attributes (Beharrell and MacFie, 1991; Goldman and Clancy, 1991) shows that appearance is frequently less important for consumers with high preference for organic or natural food products. Flavor, freshness and product durability are other qualities taken into account while food shopping (Jolly and Norris, 1991; Sparling, Wilken and McKenzie, 1992; Estes, Herrera and Bender, 1994) and they are also highly appreciated by consumers (Grzybowska-Brzezińska, 2011; 2013b).

The research results in terms of nutritional value of organic products differ to a great extent and there is no unequivocal opinion amongst authors, although consumers indicate that they appreciate organic food for its higher nutritious value in comparison with the conventionally produced food products (Bourn and Prescott 2002). It was noted that organic products contain less nitrates, more dry weight and minerals compared to conventionally produced alternatives (Wolfson and Shearer, 1981; Hansen, 1981; Muller and Hippe, 1987; Pimpini, Giardini, Borin and Gianquinto, 1992; Letourneau and Dan, 1996). Some papers show higher vitamin C content in organic food and some in conventionally produced food, but these contradictory results were partly ascribed to such factors as the level of ripeness when harvested or the storage conditions (Bourn and Prescott, 2002). Consumer behavioral conditioning related to the organic food market should also be seen through the filter of their awareness and knowledge about organic food. The market behavior of a socially-aware customer involves conscious choices which require some knowledge about rival products. Awareness and knowledge have a direct and indirect influence on the attitudes towards consumer goods and readiness to pay a certain price for them.

Organic products are among those which evoke much trust in consumers, especially when it comes to the production technologies (as opposed to manufacturers who know that their products are organic). Buying and using such products (even more than once) consumers are unable to verify whether the way in which they were produced was ecological or not. The verification and identification of the organic food production technology is only possible after receiving reliable information, for example the logo of the producer or certifying authorities, or the composition of the product. Thus, the social awareness and knowledge of organic food characteristics, brand trust and the trust in the place of manufacture have a key significance in consumer decisions (Grzybowska-Brzezińska and Rudzewicz, 2015). The aim of our research is to identify organic food qualities in the context of market and technological attributes and define the determiners shaping market behaviour of organic food consumers in the particular parts of the carried-out research.

## 2. Materials and Methods

The subject of interest is that organic food understood as food with a Polish or European organic food and organic farming certificates. The research was conducted in selected cities of north-east Poland in 2005, 2010 and 2013, each time in the spring, March through April. We used a structured direct survey method based on a drawn-up questionnaire. To prepare the research tools we used nominal, ordinal and Likert scales. For data collection the PAPI (Paper and Pencil Interview) method was used, in which poll steers interview respondents and noted their answers on printed-out questionnaires. The sampling was intentional and it took into account the representativeness of respondents' indicated age groups, education and number in the particular years of study. In 2005 the number of analyzed questionnaires was 825, in 2010, 971 questionnaires and in 2013, 1205, where 65% of respondents were from the Warmian-Mazurian region.

In each of those three periods 1500 respondents were interviewed but the analysis was based on questionnaires verified positively in terms of the extent of the organic food awareness and the completeness of the filled in questionnaires. In all the consecutive periods of research the number of respondents as well as regular organic food consumers was higher than in the preceding one. The respondents between 21 and 50 years of age and with secondary or higher education formed the biggest groups amongst interviewees. The respondents were mostly city dwellers and members of one- or two- children families.

## 3. Experiment Results and Discussion

### *3.1 Perception of technological and market attributes of organic food in consumers' choices*

Studies concerning consumers' awareness and knowledge of the features of organic food show that although there is awareness all over the world on the regulations of organic food, consumers (sometimes in the same country) differ in their

interpretation of the term „organic." Many consumers of organic food recognize such products through the labels or logos (Øystein, Persillet and Sylvander, 2001; Chang and Kinnucan, 1991; Mathios, 1998; Wessells, Johnston and Donath, 1999).

Sensory attributes and food safety definitely influences the choices of organic food consumers (Bourn and Prescott, 2002), and also attractive appearance and convenient both use and purchase were further important determinants of target markets' behaviour for naturally made products. The authors classified attributes of organic food according to technological and market qualities. The categorization of technological attributes took into account sensory qualities of the products, processing technology, agrotechnology, application of additives to production and processing, packaging and composition. For market attributes the following were considered: purchase location and accessibility, price level, exhibition in shop, brand trust, environmentally friendly and both promotion and advertising (Grzybowska-Brzezińska, 2013a).

Taking into account the acceptance of certain qualities of organic food, particular attributes were evaluated. Respondents rated (from 1 – completely unimportant to 5 – very important) individual qualities considered to be technological and market attributes. Table 1 presents the rating structure in which 5 is very important for each quality in the individual years of the study. Organic food is valued for its lack of preservatives, minimal processing, natural taste and appearance, produced without artificial fertilizers or plant protection products and, in case of animals, being fed natural feed. Concerning such market attributes as shorter shelf-life, an aspect of environmentally friendly production, respondents judged that the production of organic food does not harm the environment and is available in supermarkets and hypermarkets.

One of the main technological attributes according to the respondents is the fact that the food does not contain any preservatives. In 2013 up to 73% of respondents chose this attribute as the most important one, whereas in 2005 the number was 52%. A smaller number of respondents, 30% in 2013, believed that organic food is not or little processed is a very important attribute, however in 2005 up to 50% of respondents chose this attribute as the most important and crucial in the decision of purchase. The natural taste is an appreciated and important attribute in all the periods of research, and in 2013 around 70% of respondents pointed to this attribute as determining their purchase and consumption.

They also liked the natural appearance of organic food; however this attribute was not as important in the previous years of research. Consumer awareness and sensitivity towards the feeding method of animals and its influence on the attributes of food grew in the consecutive periods of research, and 60% of respondents in 2013 believe that this attribute is of great importance when deciding to buy organic food.

***Table 1.*** *Market and technological attributes of organic food as perceived by respondents (%)*

| Attributes | 2005 | 2010 | 2013 |
|---|---|---|---|
| | answers (%) | | |
| Technological | | | |
| products with no preservatives | 52 | 66 | 73 |
| low level of processing | 48 | 37 | 30 |
| natural taste | 56 | 53 | 67 |
| natural appearance | 15 | 17 | 45 |
| manufactured with no fertilizers | 49 | 46 | 56 |
| no plant protection products (pesticides) | 56 | 41 | 68 |
| animals fed with natural feeds (no hormone or antibiotic additives) | 39 | 32 | 57 |
| Market | | | |
| shorter durability | 45 | 25 | 19 |
| manufactured in clean environment | 41 | 43 | 29 |
| health benefits | 75 | 78 | 79 |
| manufacturer does not pollute environment | 22 | 34 | 45 |
| available in supermarkets and hypermarkets | 15 | 25 | 45 |
| wide assortment | 8 | 11 | 25 |
| high price | 69 | 56 | 67 |
| packaging contains the organic food producer's logo | 58 | 67 | 78 |
| easy to prepare | 23 | 34 | 56 |

***Source:*** *Own research.*

Having analyzed the market attributes it becomes apparent that the health benefits resulting from consuming organic food is of essential importance for 80% of the respondents. Also, a large group of respondents noticed that the identification system of organic food is essential, just as the high price, to which point 60% of respondents in all the periods of research. Of lesser importance in consumers' choices is shorter durability of organic food and the fact that it was produced in a clean environment. The significance of the wide assortment, the ease with which organic food may be prepared and consumed is a growing need amongst the respondents.

The analysis of the motivation for choosing organic food and its consumption shows that the respondents are convinced about the higher quality of organic food when compared to conventionally produced food and thus more determined to buy it, which is reflected in the collected data: about 95% of the respondents in 2013, 80% in 2010 and 69% in 2005 (Table 2). Consumers look for food products whose production technology is similar to organic farming, and free of or with very limited use of pesticides or other chemicals, therefore safer and more efficient in protecting

their and their families' health. These motives are a very important factor while deciding about organic food for about 90% of respondents in 2013.

***Table 2.*** *Types of motivation when buying organic food in the opinion of the respondents interviewed in 2005, 2010, 2013 (%)*

| Types of motivation | 2005 | 2010 | 2013 |
|---|---|---|---|
| The belief that organic food is of higher quality when compared to conventional food | 69 | 82 | 95 |
| Concern for own and family's health | 76 | 80 | 89 |
| Concern for the natural environment | 19 | 33 | 36 |
| Taste quality | 62 | 67 | 65 |
| Promoting Polish organic farming | 11 | 22 | 28 |
| Recommended by friends | 19 | 36 | 37 |
| Concern for the well-being of animals | 3 | 3 | 5 |
| Fashion | 2 | 6 | 16 |

***Source:*** *Own research.*

Another interesting aspect of the analysis is the presence of social motivation when buying organic food. In 2010, 22% consumers bought organic food to support Polish organic farming, and 28% in 2013. It is a form of concern for the natural environment for 33% of respondents in 2010 and 36% in 2013, whereas only 10% of respondents were interested in this aspect in 2005 (Grzybowska-Brzezińska, 2011, 2012).

While identifying consumers' expectations in terms of organic food, the respondents were asked about the main characteristics of products which influenced their decisions. In this case they assessed the significance of three kinds of attributes: sensory (color, smell), functional (composition, shelf life, production and processing methods) and prestige (producer's logo, country/region of origin, place of purchase and price). The respondents indicated the three most important attributes of organic food and those which determine their choice (Table 3 and 4).

***Table 3.*** *Sensory, functional and prestige attributes of organic food in the opinion of respondents (%)*

| Criteria of choice | 2005 | 2010 | 2013 |
|---|---|---|---|
| Sensory attributes | | | |
| Appearance (colour, texture) | 78 | 53 | 62 |
| Smell | 46 | 35 | 45 |
| Functional attributes | | | |
| Composition | 34 | 49 | 67 |
| Expiry date (shelf-life) | 24 | 47 | 52 |
| Methods of production and processing | 89 | 78 | 69 |
| Prestige attributes | | | |
| Manufacturer's logo | 34 | 47 | 58 |
| Country/region of origin | 56 | 44 | 49 |

| | | | |
|---|---|---|---|
| Place of purchase | 7 | 9 | 45 |
| Price | 89 | 78 | 56 |

***Source:*** *Own research.*

It can be noticed that the main attributes taken into account when buying organic food are first of all the functional ones, which can be identified by the composition attribute (67%) and production and processing methods (69%). In case of sensory attributes the most important one for 62% in 2013 is the appearance indicating traditional production technologies. As for the prestige attributes, the producer's logo and price were the decisive aspects in 2013. Comparing the three periods of research, the place of purchase became significantly important in 2013, while only 7% considered it important in 2005.

Linear regression analysis, in which the impact of the characteristics of organic food on the probability of purchase was modeled, indicates that the values of the directional coefficients are positive for sensory attributes in each of the studied periods. High relative validity was observed in the case of the appearance in each of the studied periods and in the case of smell its highest relative importance was observed in the declarations of consumers in 2013.

Linear regression analysis in which the impact of the functional attributes variables on the likelihood of purchase of organic food was modeled, indicates that in the case of the composition and the production and processing methods, the directional coefficients values are positive in all years of the research, and negative in the case of the expiration date for consumption.

The composition and production and processing methods are significant for the decisions of organic food selection in each period and their relative importance is at approximately 30% for the composition and about 40% for the production and processing methods. The linear regression analysis for prestigious attributes, in which the impact of the manufacturer's logo, the country/region of origin, the place of sale and the price on the likelihood of purchase were modeled, indicates that the directional coefficients values are positive in the case of the manufacturer's logo and the region of production, and the place of sale and price indices took negative values. Directional coefficients for technological and market attributes are statistically significant ($\alpha \leq 0.1$).

***Table 4.*** *Parameters of linear multiple regression models between the characteristics of organic food and the probability of selection of these products in different periods of research*

| Selection criteria determining the purchase | 2005 | | 2010 | | 2013 | |
|---|---|---|---|---|---|---|
| | relative importance (%) | coefficient | relative importance (%) | coefficient | relative importance (%) | coefficient |
| Sensory attributes – technological | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Appearance (color, texture) | 67.3 | 2.843** | 65.5 | 0.531** | 59.5 | 0.724*** |
| Smell | 32.7 | 0.532** | 34.5 | 0.313** | 40.5 | 0.256** |
| | $R^2 = 0.6578$ | | $R^2 = 0.7458$ | | $R^2 = 0.7545$ | |
| Functional attributes – technological | | | | | | |
| Composition | 29.5 | 0.678** | 29.5 | 0.756** | 36.2 | 1.956** |
| Expiration date for consumption | 21.0 | -0.632 | 23.6 | -1.765* | 29.9 | -0.786*** |
| Production and processing methods | 49.5 | 2.567* | 46.9 | 2.453** | 33.9 | 1.456*** |
| | $R^2 = 0.6321$ | | $R^2 = 0.7523$ | | $R^2 = 0.6826$ | |
| Prestigious attributes – market | | | | | | |
| Manufacturer's logo | 29.2 | 0.302** | 24.3 | 0.456** | 30.9 | 0.564** |
| Country/region of origin | 16.3 | 0.187*** | 21.7 | 0.356* | 25.9 | 0.321** |
| Place of sale | 15 | -0.125* | 11.7 | -0.231* | 17.3 | -0.167** |
| Price | 39.5 | -0.445** | 42.3 | -0.657* | 25.9 | -0.234** |
| | $R^2 = 0.5327$ | | $R^2 = 0.656$ | | $R^2 = 0.5932$ | |

***Notes:*** **, **, *** – statistical significance of $\alpha \leq 0.1$, $\alpha \leq 0.05$, $\alpha \leq 0.01$ respectively.*

Also, the respondents' trust in manufacturers and sellers influences their choices when it comes to buying organic food, which is a natural phenomenon in such routine activities like food shopping. The pattern is shortened and the attribute assessment of the alternative products is limited.

The composition or other technological attributes can only be assessed based on both reliable information placed on the packaging and the trustfulness of the manufacturer. Therefore, while creating identification markers for organic food, it is essential for the highly trusted brands to be well- positioned so that the trust may be maintained and further developed in the target segments of market.

### *3.2 Market criteria of organic food consumer choices*

The market criteria for choosing organic food were price, distribution channels, communication media, brand perception and information sources (Grzywińska-Rąpca, 2015). This article presents the motivation behind accepting higher prices for organic food and the significance of the place of purchase.

The analysis of the significance of price acceptance while buying organic food products was verified by the proposed statements about prices and their acceptance by respondents. Table 5 shows the distribution of the respondents' answers in terms of their attitude towards the higher price of organic food products.

***Table 5.*** *The assessment of the importance of price of the organic products in the opinion of respondents (%)*

| Opinions about the price | 2005 | 2010 | 2013 |
|---|---|---|---|
| I accept the higher price of an organic product because a part of its price is donated towards the environment protection | 13 | 27 | 29 |
| I accept the higher price of an organic product because I know it has been manufactured in a non-polluting way | 17 | 14 | 5 |
| I accept the higher price of an organic product because it results from the higher production costs | 14 | 15 | 23 |
| I accept the higher price of an organic product because a part of the profit goes towards pro-ecological investments | 5 | 9 | 11 |
| I accept the higher price of an organic product because I know the product is healthy: its taste is good and natural, it is more nutritious (contains more protein, vitamins and mineral salts) | 51 | 35 | 32 |

***Source:*** *Own research.*

The most important motive for accepting the higher price of organic food were, according to the respondents, the health benefits, i.e. good, natural taste, nutrition value (more protein, vitamins and mineral salts). These attributes were the most important argument for accepting the price in all three periods of research, but the level of acceptance decreased in the subsequent periods of research (51% in 2005 and only 32% in 2013).

Another important element in accepting the higher price is the respondents' conviction that a part of the price they pay goes towards environmental protection or the belief that the extensive production technologies in organic farming are less efficient and the higher price is a form of compensation for the producers. These environmental factors are noticed by a bigger number of consumers in the successive years of research and may implicate higher awareness on the part of the consumers and intensive activity on the mart of territorial marketing promoting local products and their manufacturers. Wier and Calverley (2002) point out that for the consumers taking part in research the most affordable prices are higher by 10-20%, which can change alongside their income, education and place of residence.

The distribution policy in green marketing should correspond with the demands related to the product characteristics, and an important aspect is shortening the way, limiting the number of intermediaries, shortening the storage period and the suitable supply rotation. To determine the significance of proper distribution channels for organic food, the respondents were asked about the place in which they buy such food (Table 6). The results from the three periods of research show that organic food is more and more frequently bought in supermarkets and hypermarkets or discount stores, where the assortment is wider. The popularity of those places is growing higher in the consecutive periods of research, form 9% in 2005 to 42% in 2013. Important places for acquiring organic food are healthy/organic food stores and they

remain the main place of purchase regardless of the period of research. The analysis also shows the growing popularity of online stores, where up to 24% of the respondents declares to have bought their organic food in 2013.

***Table 6.*** *Place of purchase of organic food in the respondents' opinions ( %)*

| Place of purchase | 2005 | 2010 | 2013 |
|---|---|---|---|
| I purchase it online | 6 | 11 | 24 |
| Special organic food shops | 61 | 56 | 54 |
| Fresh produce markets | 25 | 26 | 32 |
| Directly from a farmer | 18 | 23 | 24 |
| A farmer delivers it to my home | 16 | 5 | 8 |
| In supermarkets and hypermarkets, from stands or departments marked as 'organic food' | 9 | 18 | 42 |

***Source:*** *Own research.*

The other important place for buying organic food are fresh produce markets and over 20% of the respondents buy such food straight from farmers. The results of the research conducted by Łuczka-Bakuła, published in 2007, show that online stores were the least attractive place to buy organic food whereas healthy food stores were the most popular. The development of the organic food market may be enhanced through overcoming the barriers limiting consumption of such food, among which the most often named are the limited number of places of purchase, high prices or the guarantee of high quality products (Newerli–Guz and Śmiechowska, 2004; Łuczka-Bakuła, 2007; Grzybowska-Brzezińska, 2012, 2013b). The results of the recent research suggest that the number of barriers is diminishing and the market attributes referring to the availability, convenience and utility of organic food products as well as the attractiveness of its assortment are elements which increase the popularity and consumption of such products.

Increasing interest in regional politics and programs promoting regional brands may be determining in both: the development of consumption and – resulting form it – production of organic food. Another really essential aspect in developing the organic food market is the concentration of producers, creating local brands and a network of fixed places where organic and natural products manufactured in particular regions of Poland would be constantly available. The increasing awareness of the local brands or local foods and places where they can be bought will lead to growing demand and regularity in its consumption.

## 4. Conclusions

The organic product market in Poland is unstable and constantly developing, where there is much potential for wide and wise implementation of many different marketing tools. The most important aspect is, however, the segmentation of consumers and differentiation of marketing methods suited to their needs and knowledge, and especially to their varied levels of ecological awareness.

Recognizing consumer behaviors, motivation leading to purchase and preferred forms of sale become of utmost importance in this respect.

The conducted research show that according to the respondents, the main factor in shaping the quality of organic food is its high nutritious value and, in consequence, the health benefits resulting from consumption. The majority of the interviewees identify food obtained from organic farming with food produced without any chemical additives and manufactured in clean or very little polluted natural environment. Consumers appreciate the fact that organic food products contain fewer preservatives than the conventional ones and are characterized by a good, natural taste and natural appearance. When buying organic food, the respondents act on the conviction that such products are safe and their production process does not destroy the natural environment.

Two elements have to be taken into account in creating an offer of the assortment of organic food: assortment range and shaping consumer quality. Technological attributes of organic food are mainly organoleptic and sensory properties, such as appearance or smell. Functional attributes are mainly methods of production and processing as well as the composition of food.

Market attributes, which include the prestige attributes, are the producer's logo, price, place of purchase and the range of the assortment, health benefits, the level of food processing or the comfort of its utility. In classification of attributes, the most important are the technological ones referring to different aspects of production, as well as its natural smell, taste and appearance. Market attributes that have to be created for this category of food are a wide assortment of products, easier availability and more effective verification of information about the product's composition.

The biggest groups among consumers declaring eco-consumption are those who do it mainly because of the related health benefits and social aspects such as the fact that organic food consumption may contribute to reducing the pollution of the natural environment. Additionally, buying organic products supports local and regional producers. By choosing the organic food products the consumers may consciously realize a more ecological attitude towards the increasing problems of contamination of the environment as well as food. In advocating organic food, an environmentally-aware consumer achieves his goals and strengthens a producer's position at the same time. Thus, choosing ecological products shapes the pro-ecological attitude in consumers. Emphasizing the health and taste attributes of organic food is not enough; it has to coincide with the consumer's behavior and his pro-environmental bias, which become explicit in his choice of food.

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