

**CONSUMER ATTITUDES AND QUALITIES  
DETERMINING CONSUMER SATISFACTION  
IN THE ORGANIC FOODS MARKET**

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**Key words:** organic foods, consumer attitudes, quality features.

**Abstract**

The objective of the studies was to investigate and determine the attitudes towards organic foods and the types and significance of the desired factors determining the satisfaction of customers who purchased organic foods products. The study was conducted as a diagnostic survey with an original questionnaire. The questions included issues on attitudes towards organic foods and the features of organic products that determined the choices of eco-consumers, frequencies and types of selected organic foods. The factors that significantly influenced the choices of organic foods were age ( $p < 0.05$ ) and place of living ( $p < 0.01$ ). The consumers of organic foods presented positive attitudes with a tendency towards neutral attitudes. The most important qualities of food that determined the satisfaction of consumers was a short shelf-life, health properties, the belief in a low content of pollutants in the organic foods and taste. The factors that were least significant for the respondents included promotional qualities.

**POSTAWY I CECHY JAKOŚCIOWE WARUNKUJĄCE SATYSFAKCJĘ KONSUMENTÓW  
NA RYNKU ŻYWNOSCI EKOLOGICZNEJ**

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**Słowa kluczowe:** żywność ekologiczna, postawy konsumenckie, cechy jakościowe.

### Abstrakt

Celem badań było określenie postaw wobec żywności ekologicznej oraz rodzaju i ważkości czynników determinujących satysfakcję nabywców ekologicznych produktów żywnościowych. Badanie przeprowadzono metodą sondażu diagnostycznego z wykorzystaniem autorskiego kwestionariusza ankiety. Badaniami objęto grupę celową liczącą 150 respondentów o zróżnicowanej płci, wieku, wykształceniu i miejscu zamieszkania. Pytania obejmowały kwestie dotyczące postaw i zachowań konsumentów wobec żywności ekologicznej. Zdecydowana większość badanych reprezentowała pozytywną postawę wobec żywności ekologicznej z tendencją do postawy neutralnej. Najbardziej oczekiwanymi cechami żywności ekologicznej w grupie regularnych jej nabywców były: krótki termin przydatności do spożycia, walory smakowe, działanie o charakterze prozdrowotnym oraz przekonanie respondentów o niższej zawartości zanieczyszczeń. Cechy o charakterze promocyjnym, tj. reklama i wygląd opakowania nie znalazły uznania wśród badanych. Do czynników, które znacząco wpłynęły na wybór żywności ekologicznej, należały wiek ( $p < 0,05$ ) oraz miejsce zamieszkania ( $p < 0,01$ ).

## Introduction

In recent years, organic foods has risen in popularity in Poland and around the world (WÓJCIK 2012, *Rolnictwo ekologiczne...* 2015, *The world of organic...* 2012). It is estimated that, today, ecological agriculture is found in 162 countries. At the end of 2011, 37.2 million hectares of arable lands were of an ecological nature (WILLER et al. 2013). Since the eighties, interest in the production of organic foods increased significantly in the European Union (EU) and became one of its priorities. Within the borders of the EU, about 11 million hectares are designated for organic agriculture (WILLER et al. 2013, SMOLUK-SIKORSKA 2010). In Poland, the market of organic foods products is still in the development phase. A special interest in ecological production accompanied the access of Poland to the EU and the introduction of premiums. Polish organic agriculture has specific natural features and great development potential, which has translated into growth dynamics (MICKIEWICZ, ZUZEK 2012, ZRALEK 2010, NOWOGRÓDZKA 2012). In 2003–2011, the area of organic arable lands in Poland increased 10 times and today it constitutes 3.2% of the total agricultural lands (*Rolnictwo ekologiczne...* 2015). The concept of organic foods production was created due to aggressive intervention into natural ecosystems and hazards in the natural environment which resulted from the intensification of agricultural procedures, wide-spread use of plant protection chemicals as well as growth hormones and antibiotics. (LAIRON 2010). Moreover, for many consumers, the aspects of care for the natural environment, protection of natural resources and a high standard of animal welfare are also important (LAIRON 2010, MICKIEWICZ, ZUZEK 2012). The motives accompanying the consumption of organic foods may have both a rational and emotional nature. The spread and popularization of organic agriculture does not seem to be a temporary fashion, but it may express a conscious approach of the

consumer towards buying food products of the highest quality (WÓJCIK 2012). A high level of quality constitutes is one of the key categories that guarantee the safety of consumers and determines the position, attractiveness and competitiveness of a given product on the market. The concept of food production in this system also has its sceptics as well as a considerable group of enthusiasts. The objective of the studies was to investigate and determine the attitudes towards organic foods and the types and significance of the desired factors determining the satisfaction of customers who purchased organic foods.

## **Materials and Methods**

The study was conducted as a diagnostic survey with an original questionnaire. It was composed of two parts: a general section for all respondents ( $n = 150$ ) and detailed section for the respondents who declared purchasing organic foods products at least occasionally ( $n = 96$ ). The selection of the examined population was intentional and included 150 persons who were visiting alternative medicine offices. The questionnaire contained exclusively multiple or single choice questions that were limited to a maximum of three answer choices. Multiple-choice questions were used only to determine the point of purchase and the assortment of organic foods products. The questions included issues on attitudes towards organic foods and the features of organic products that determined the choices of eco-consumers, frequencies and types of selected organic foods. In order to determine the attitudes of consumers towards organic foods, the quantification of the answers was performed by assigning the numerical values from 1 (Definitely, I do not agree) to 5 (I do agree) to the specific levels. Next, the numerical intervals were determined and they described the specific attitudes: negative  $< 1 \div 2.33$ ); neutral  $- < 2.33 \div 3.67$ ); and positive  $- < 3.67 \div 5.0$ >. By identifying the significance of factors determining the choice of organic foods, each answer was attributed with the point values from 1 (it is not at all important) to 5 (it is very important) and, subsequently, the arithmetical mean was calculated. The social and demographical profile of the investigated population is presented in Table 1. The statistical analysis of empirical material was conducted with a  $\chi^2$  test ( $p < 0.05$ ).

## **Results and Discussion**

The consumer's satisfaction, understood as meeting his requirements, is an important factor that determines the development and achievement of a strong position for each player on the market. Due to the relatively low popularity

Table 1

## Social and demographical profile of the respondents

| Variable         | Percentage of respondents<br>( <i>n</i> = 150) | Percentage<br>of eco-consumers<br>( <i>n</i> = 96) | <i>p</i> * |
|------------------|--|--|------------|
| General          | 100  | 64.0   |            |
| Sex              |  |  |            |
| Women            | 75.3   | 65.5   | ns         |
| Men              | 24.7   | 59.5   |            |
| Age (year)       |  |  |            |
| 21÷30            | 27.3   | 48.8   | **         |
| 31÷40            | 30.0   | 77.8   |            |
| 41÷50            | 24.0   | 66.7   |            |
| 51÷60            | 18.7   | 60.7   |            |
| Education        |  |  |            |
| Vocational       | 11.3   | 52.9   | ns         |
| Secondary        | 38.7   | 63.8   |            |
| University       | 50.0   | 66.7   |            |
| Place of living  |  |  |            |
| Village          | 15.33  | 73.9   | ***        |
| City < 100 thou. | 31.33  | 87.2   |            |
| City > 100 thou. | 53.33  | 47.5   |            |

\* Significance: \*\* –  $p \leq 0.05$ ; \*\*\* –  $p \leq 0.01$ ; ns – not significant

of consumption of organic foods, the selection of the investigated group was based on a belief that the group of people visiting alternative medicine offices would be really interested in this type of food products. Of the whole investigated population, 64% of the respondents declared a frequent or occasional consumption of organic foods (Table 1).

The factors that significantly influenced the choices of organic foods were age ( $p < 0.05$ ) and place of living ( $p < 0.01$ ). Within the group of organic foods consumers, women (65.5%), persons aged 31–40 (77.8%), respondents with higher education (66.7%) and people living in the cities < 100 thousand citizens were predominant. The analysis of the results demonstrated that an inaccurate description of the “organic foods” category was one of the key issues. The organic foods requires meeting the institutionalized and legalized production methods that are a prerequisite for the certification procedure based on the national and EU regulations (MICKIEWICZ 2012, *Ustawa z 25 czerwca 2009... Dz.U. z 2009 r., nr 116, poz. 975, Rozporządzenie Rady... Dz.U. nr 189, z 20 lipca 2007 r.*). Although nearly all respondents (98%) declared knowing this food category. Within this group, 63.5% of persons pointed to the requirement for certification of organic production procedures. The other respondents did not think of the need for certification and pointed to the non-certified food from farms or self-produced food. ZRAŁEK (2010) has also indicated a compar-

Table 2  
The average values describing the attitudes of respondents towards organic foods

| Variable         | The average values for statements |      |      |      |      |                   |      |                   |                   |                   | $\bar{x}$ |
|------------------|-----------------------------------|------|------|------|------|-------------------|------|-------------------|-------------------|-------------------|-----------|
|                  | Statement*                        |      |      |      |      |                   |      |                   |                   |                   |           |
|                  | 1                                 | 2    | 3    | 4    | 5    | 6                 | 7    | 8                 | 9                 | 10                |           |
| General          | 4.41                              | 4.33 | 3.99 | 3.92 | 3.93 | 3.90              | 3.88 | 3.16 <sup>n</sup> | 2.98 <sup>n</sup> | 3.51 <sup>n</sup> | 3.80      |
| Sex              |                                   |      |      |      |      |                   |      |                   |                   |                   |           |
| Women            | 4.44                              | 4.35 | 3.95 | 3.90 | 3.90 | 3.94              | 3.88 | 3.29 <sup>n</sup> | 3.04 <sup>n</sup> | 3.59 <sup>n</sup> | 3.83      |
| Men              | 4.30                              | 4.27 | 4.11 | 3.97 | 4.00 | 3.78              | 3.89 | 2.76 <sup>n</sup> | 2.81 <sup>n</sup> | 3.24 <sup>n</sup> | 3.71      |
| Age (year)       |                                   |      |      |      |      |                   |      |                   |                   |                   |           |
| 21÷30            | 4.37                              | 4.32 | 3.83 | 3.61 | 3.76 | 3.63 <sup>n</sup> | 3.76 | 3.05 <sup>n</sup> | 3.27 <sup>n</sup> | 3.56 <sup>n</sup> | 3.72      |
| 31÷40            | 4.60                              | 4.62 | 4.04 | 4.22 | 3.87 | 4.02              | 3.87 | 2.84 <sup>n</sup> | 2.76 <sup>n</sup> | 3.24 <sup>n</sup> | 3.81      |
| 41÷50            | 4.25                              | 4.31 | 3.97 | 3.89 | 4.06 | 4.08              | 3.72 | 3.89              | 3.53 <sup>n</sup> | 3.53 <sup>n</sup> | 3.92      |
| 51÷60            | 4.36                              | 3.93 | 4.14 | 3.93 | 4.11 | 3.86              | 4.29 | 2.89 <sup>n</sup> | <b>2.21</b>       | 3.82 <sup>n</sup> | 3.75      |
| Education        |                                   |      |      |      |      |                   |      |                   |                   |                   |           |
| Vocational       | 4.35                              | 4.29 | 4.06 | 3.71 | 4.47 | 3.76              | 3.94 | 3.06 <sup>n</sup> | 2.53 <sup>n</sup> | 3.76              | 3.79      |
| Secondary        | 4.17                              | 4.21 | 3.67 | 3.91 | 3.90 | 3.88              | 3.76 | 3.34 <sup>n</sup> | 2.67 <sup>n</sup> | 3.57 <sup>n</sup> | 3.71      |
| University       | 4.60                              | 4.44 | 4.23 | 3.97 | 3.83 | 3.95              | 3.96 | 3.04 <sup>n</sup> | 3.32 <sup>n</sup> | 3.40 <sup>n</sup> | 3.87      |
| Place of living  |                                   |      |      |      |      |                   |      |                   |                   |                   |           |
| Village          | 4.30                              | 4.48 | 3.83 | 4.17 | 3.87 | 3.96              | 3.57 | 3.09 <sup>n</sup> | <b>2.17</b>       | 3.70              | 3.71      |
| City < 100 thou. | 4.45                              | 4.42 | 4.09 | 4.15 | 4.11 | 3.96              | 3.83 | 2.96 <sup>n</sup> | 2.81 <sup>n</sup> | 3.87              | 3.87      |
| City > 100 thou. | 4.41                              | 4.24 | 3.98 | 3.71 | 3.85 | 3.85              | 4.00 | 3.30 <sup>n</sup> | 3.31 <sup>n</sup> | 3.24 <sup>n</sup> | 3.79      |

Explanations: attitude regular type – positive; superscript <sup>n</sup> – neutral; bold type – negative

\* 1 – I have a positive attitude towards organic foods; 2 – There are considerable benefits from introducing organic foods to the diet; 3 – There is a high risk to health associated with its consumption; 4 – In the future, I will continue to consume organic foods; 5 – Organic foods has worse taste, smell and look; 6 – Organic foods is of higher quality than traditional food; 7 – Organic foods is trendy; 8 – Organic foods is less durable; 9 – Organic foods is healthier than traditional food; 10 – Organic foods is the food of the future.

able problem of inaccurate perception and definition of organic foods by consumers. The results may indicate that the level of education of consumers in these subject areas is relatively low which, in turn. The lack of knowledge and erroneous beliefs may translate into specific attitudes and behaviours of consumers in relation to a given product. The lack of knowledge of the respondents may be explained by a still minor popularity of the products from this food segment in Poland. Some other reports have also indicated an issue of the lack of knowledge of organic foods and conditions of ecological production and a specific information gap (ŻAKOWSKA-BIEMANS 2011a, WITEK 2011).

The consumer's attitude towards an organic foods, is one of the factors that may be very important in determining the consumer's behaviours. However, it should be considered that the relation between the attitude and behaviour may not be straightforward. Although a positive or negative attitude does not necessarily translate into specific behaviours, it may be predisposing. The incongruity between consumer attitudes and behaviours has been widely

discussed (JEŻEWSKA-ZYCHOWICZ, PILSKA 2007). Table 2 shows the average numerical values describing the attitudes of respondents towards organic foods. The presented study demonstrated that the examined population of respondents had a positive attitude towards organic foods. Considering the average value for a specific division criterion for the investigated group and all 10 statements, the obtained values were within the range of 3.71 and 3.92. Distribution of these values corresponded to positive attitudes with a tendency towards neutral attitudes. The differences in the average values as a function of the assumed division criterion for the examined population were minor and statistically insignificant. Such small diversification of the declared attitudes may be explained by the relative homogeneity of the beliefs within the examined population determined by a specific attitude towards a healthy lifestyle. A positive attitude to organic foods was shown mainly by women ( $\bar{x} = 3.83$ ), persons aged 41÷50 ( $\bar{x} = 3.92$ ), persons with higher education ( $\bar{x} = 3.87$ ) and residents of the cities with less 100 thousand inhabitants ( $\bar{x} = 3.87$ ).

A thorough analysis of the attitudes that included the individual statements demonstrated that the respondents generally had positive attitudes (statements 1–7) for which  $\bar{x}$  ranged from 3.88 to 4.41 and neutral attitudes (statements 8–9) for which  $\bar{x} = 2.98\div 3.51$ . The proportion of negative attitudes was marginal and related only to statement 9 (assessment of health qualities in organic foods). This attitude was represented by persons from the oldest age group and the inhabitants of rural areas. Apart from these two groups, the values describing the attitudes of other respondents towards the same statement were, also low. It is difficult to explain this distribution of values since, in the common opinion of the respondents, that the organic foods is of high quality and is associated with healthy food. Furthermore, care for health is one of the most important motives behind buying organic foods by Poles (ZRALEK 2010, ŻAKOWSKA-BIEMANS 2011b, CICHOCKA, GRABIŃSKA 2009). Presented distributions of the values characterizing the attitudes of the respondents do not correspond to their declarations related to the importance of the factors determining the choices of organic foods.

Analysis of the data on the consumption of organic foods products by a Polish consumer, showed that it is minor. Despite the observed development of the organic foods market, considered that eco-consumption is still perceived as a niche item. The demonstrated positive attitude of the respondents towards organic foods was reflected in nutritional behaviours. The examined population was characterized by a relatively high frequency of consumption of the products from this group (Table 3).

Table 3

## Frequency of consumption of organic foods

| Variable         | Frequency                       |                       |                       |                        |      | p* |
|------------------|---------------------------------|-----------------------|-----------------------|------------------------|------|----|
|                  | daily                           | 4+6 times<br>per week | 1+3 times<br>per week | few times<br>per month | less |    |
|                  | percentage of organic consumers |                       |                       |                        |      |    |
| General          | 9.4                             | 7.3                   | 31.3                  | 41.6                   | 10.4 |    |
| Sex              |                                 |                       |                       |                        |      | ns |
| Women            | 10.8                            | 35.1                  | 32.4                  | 9.5                    | 12.2 |    |
| Men              | 0                               | 0                     | 27.3                  | 63.6                   | 9.1  |    |
| Age (year)       |                                 |                       |                       |                        |      | ** |
| 21+30            | 10.0                            | 5.0                   | 30.0                  | 45.0                   | 10.0 |    |
| 31+40            | 5.7                             | 0                     | 40.0                  | 45.7                   | 8.6  |    |
| 41+50            | 8.3                             | 4.2                   | 33.3                  | 37.5                   | 16.7 |    |
| 51+60            | 17.6                            | 29.4                  | 11.8                  | 35.3                   | 5.9  |    |
| Education        |                                 |                       |                       |                        |      | ** |
| Vocational       | 0                               | 0                     | 44.4                  | 22.2                   | 33.4 |    |
| Secondary        | 13.5                            | 16.2                  | 21.6                  | 40.5                   | 8.2  |    |
| University       | 8.0                             | 2.0                   | 36.0                  | 46.0                   | 8.0  |    |
| Place of living  |                                 |                       |                       |                        |      | ns |
| Village          | 18.8                            | 0                     | 31.2                  | 43.7                   | 6.3  |    |
| City < 100 thou. | 12.2                            | 9.8                   | 24.4                  | 43.8                   | 9.8  |    |
| City > 100 thou. | 2.6                             | 7.9                   | 39.5                  | 36.8                   | 13.2 |    |

\* Significance: \*\* –  $p \leq 0.05$ ; ns – not significant

The highest number of respondents (41.7%) declared consuming organic foods a few times per month. The men were predominant in this group (63.6%) while the women constituted 9.5%. Approximately 31% of the respondents consumed organic foods from 1 to 3 times per week (32.4% of women and 27.3% of men). The consumers that ate organic products on a daily basis constituted 9.4%, while 7.3% of the examined population consumed these products 4 to 5 times per week. In both cases, these were women who constituted 10.8% and 35.1%, respectively, of the investigated female population. According to criterion of age, it was found that it had a significant impact ( $p < 0.05$ ) on the frequency of organic foods consumption. Despite the differences, the respondents of each age range consumed products from this food category mainly a few times per month. The highest frequency of consumption was recorded among the oldest consumers followed by the youngest respondents. The level of education also impacted significantly ( $p < 0.05$ ) the frequency of organic foods consumption. Respondents with vocational secondary education consumed organic foods the least rarely while those with secondary education did so the most frequently. The frequency of consumption was relatively low in the group of respondents with university education. The distribution of the results did not provide a complete confirmation of the data, indicating a high interest in

the organic foods characteristics in the group of young and well-educated consumers (WITEK 2011). It may be explained by the power of motivation in the older consumers who, in the face of health complaints, decided to turn towards a healthy lifestyle. The place of living did not influence any significant impact on the frequency of organic foods consumption. A large proportion of organic foods in the daily diet of village residents resulted from a higher availability of this food category and a wrong understanding of the “organic foods” category. Self-produced and uncertified food was also perceived as organic foods. The residents of towns with less than 100 thousand inhabitants more frequently included organic products in their diet in comparison with the group of inhabitants of bigger cities. This does not confirm the assumption that the strongest pro-ecological attitudes are shown by the residents of large urban agglomerations (ZRALEK 2010).

Access to a wide range of organic foods products may present a real problem for the Polish consumer. The most common bottleneck of the Polish organic foods market is its low availability which mainly results from a limited number of production sites and selling points. Moreover, the problem lies in a poorly developed and inefficiently organized channel network and infrastructural back support (ŻAKOWSKA-BIEMANS 2011ab, ZUBA 2001). The presented studies show that, for the majority of the respondents, the main place where organic foods was purchased are specialized shops (64%) and supermarkets (49%). Only in the group of rural inhabitants, was organic foods bought directly from its producers (55%). Internet-based shops were indicated by only 4 persons. The studies by STEFAŃSKA (2010) have demonstrated that 40% of consumers buy organic foods in specialized shops and the same percentage in supermarkets and 12% – on markets. The rest consumers buying directly on eco-farms and agritourist farms. Specialist shops are thought to have the highest efficiency of eco-product distribution. This mainly results from their trade offer and knowledge of their staff (ZUBA 2001, ŻAKOWSKA-BIEMANS 2008). An increase in the share of supermarkets in the global selling of organic foods is seen as a potential direction of changes, leading to the creation of supermarkets that would exclusively offer eco-products (WITEK 2011, ŻAKOWSKA-BIEMANS 2008). It is becoming more common that organic foods can be purchased via the Internet (ŁUKASIŃSKI 2008).

Among the most frequently bought products, the following were predominant: eggs (61.5%), fruit and vegetables (55.2%), bakery products (31.3%), herbs (25.0%), and cereal products (24.0%). Milk, meat and meat products as well as fermented products were less popular (< 20%).

In the age of the market-driven economy, quality has become the basic category that determines the degree of product competitiveness. The perception of organic foods quality parameters by its consumers mainly focuses on

Table 4  
The significance of the organic food features desired by the consumer in relation to sex, age, education and place of living

| Variable         | The average values for quality features |      |      |      |      |      |      |      |      |      |      |      |      |
|------------------|---|------|------|------|------|------|------|------|------|------|------|------|------|
|                  | quality features of organic foods       |      |      |      |      |      |      |      |      |      |      |      |      |
|                  | 1                                       | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   |
| General          | 4.51                                    | 4.32 | 4.30 | 4.28 | 3.99 | 3.94 | 3.82 | 3.81 | 3.64 | 3.56 | 2.93 | 2.46 | 2.43 |
| Sex              |   |      |      |      |      |      |      |      |      |      |      |      |      |
| Women            | 4.64                                    | 4.27 | 4.27 | 4.34 | 3.99 | 4.09 | 3.78 | 3.81 | 3.73 | 3.58 | 2.95 | 2.47 | 2.58 |
| Men              | 4.09                                    | 4.32 | 4.41 | 4.27 | 4.0  | 3.41 | 3.95 | 3.82 | 3.32 | 3.50 | 2.86 | 2.41 | 1.91 |
| <i>p</i>         | **                                      | ns   | ns   | ns   | ns   | **   | ns   | ns   | ns   | ns   | ns   | ns   | *    |
| Age (year)       |   |      |      |      |      |      |      |      |      |      |      |      |      |
| 21÷30            | 4.25                                    | 4.05 | 4.15 | 4.20 | 3.95 | 3.70 | 4.0  | 3.5  | 3.70 | 2.95 | 2.65 | 2.45 | 1.80 |
| 31÷40            | 4.51                                    | 4.74 | 4.46 | 4.71 | 4.26 | 3.66 | 3.60 | 4.0  | 3.80 | 3.71 | 3.09 | 2.34 | 2.49 |
| 41÷50            | 4.83                                    | 3.88 | 4.33 | 4.13 | 3.83 | 4.29 | 3.63 | 3.92 | 2.92 | 3.71 | 2.67 | 2.58 | 2.50 |
| 51÷60            | 4.35                                    | 4.18 | 4.12 | 3.94 | 3.71 | 4.29 | 4.35 | 3.65 | 4.24 | 3.76 | 3.29 | 2.53 | 2.94 |
| <i>p</i>         | *                                       | **   | ns   | **   | ns   | ns   | ns   | ns   | *    | ns   | *    | ns   | **   |
| Education        |   |      |      |      |      |      |      |      |      |      |      |      |      |
| Vocational       | 4.78                                    | 3.11 | 4.67 | 3.78 | 4.0  | 3.89 | 4.33 | 4.0  | 3.67 | 4.0  | 3.33 | 2.56 | 2.78 |
| Secondary        | 4.46                                    | 4.32 | 4.22 | 4.08 | 3.92 | 4.3  | 3.78 | 3.89 | 3.54 | 3.65 | 3.03 | 2.81 | 2.81 |
| University       | 4.5                                     | 4.46 | 4.30 | 4.60 | 4.04 | 3.68 | 3.76 | 3.72 | 3.70 | 3.42 | 2.78 | 2.18 | 2.08 |
| <i>p</i>         | Ns                                      | **   | ns   | **   | ns   | **   | ns   | ns   | ns   | ns   | ns   | *    | **   |
| Place of living  |   |      |      |      |      |      |      |      |      |      |      |      |      |
| Village          | 4.88                                    | 4.24 | 4.65 | 4.18 | 4.47 | 4.18 | 3.82 | 4.35 | 3.82 | 4.29 | 2.94 | 3.18 | 2.76 |
| City < 100 thou. | 4.51                                    | 4.51 | 4.22 | 4.44 | 3.63 | 3.80 | 3.93 | 3.56 | 3.73 | 3.54 | 2.85 | 2.15 | 2.39 |
| City > 100 thou. | 4.34                                    | 4.05 | 4.24 | 4.26 | 4.16 | 3.97 | 3.71 | 3.84 | 3.45 | 3.26 | 3.0  | 2.47 | 2.32 |
| <i>p</i>         | **                                      | ns   | *    | **   | *    | ns   | ns   | **   | ns   | **   | ns   | *    | ns   |

1 – short shelf-life; 2 – health properties; 3 – belief in a lower level of pollutants; 4 – taste; 5 – product composition; 6 – product origin; 7 – price; 8 – ecological method of production; 9 – certification; 10 – belief in the superiority of ecological products over traditional food; 11 – appearance of a product; 12 – promotional actions and advertising; 13 – appealing package  
Significance: \* –  $p < 0.05$ ; \*\* –  $p < 0.01$ ; ns – not significant

the group of products that are certified and compliant with specifications. Among the most frequently expected qualities of organic foods, the following are listed: health properties, taste, safety determined by a lower level of pollutants and shelf-life (ZRALEK 2010, ŁUKASIŃSKI 2008, CICHOCKA, GRABIŃSKI 2009). Consumers believe that promotional factors such as advertising, an appealing package, price and brand play a considerable role in creating the image of a product and, consequently, contribute to the customer's satisfaction. ZRALEK (2010) demonstrated that the selection of organic foods by the Poles is determined by numerous factors and the strength of each is evaluated differently. Moreover, depending on the changes to the economic, social or environmental surroundings, some individualized fluctuations of the expectation catalogue may occur.

The current studies analysed the significance of the selected factors that mainly contribute to the positive perception of organic foods and determine the choices of this group of products. Based on the collected material it was found that the most desired descriptors of organic foods in the group of real and occasional buyers were: short shelf-life ( $\bar{x} = 4.51$ ), health properties ( $\bar{x} = 4.32$ ) and the belief in a lower level of pollutants ( $\bar{x} = 4.30$ ) and taste ( $\bar{x} = 4.28$ ). The least important factors, according to the respondents, were: general appearance of a product ( $\bar{x} = 2.93$ ), promotional actions and advertising ( $\bar{x} = 2.46$ ) and an appealing package ( $\bar{x} = 4.30$ ) – Table 4. A relatively short shelf-life was perceived by the consumers as a lack of preservatives. Shelf-life may also be used as a criterion for differentiation between organic and non-organic foods (ZRALEK 2010). Health qualities were the second factor. In the majority of publications these properties are one of the most important factors characterizing this group of products and are one of the key motives that drive eco-consumers (ZRALEK 2010, CICHOCKA, GRABIŃSKI 2009).

The current study found a lack of correlation between the strength of the selected determinant, i.e. health qualities of organic foods, and the declared attitude (neutral and negative) towards its health attributes. The next factor to which the respondents paid special attention was a common belief in a lower level of pollutants and harmful substances in organic foods. This factor is responsible for the safety of food and constitutes a key component of its quality. Similar to health properties, the safety of organic foods is one of the most frequently selected features which drives the choices of organic foods products made by consumers. The importance of this aspect is unquestionable and has been widely discussed (ZUBA 2001, GERTIG 2010). Taste was another important determinant. In the case of taste qualities, the subjectivity of an assessment must be assumed depending on the individual sensory sensitivity of a consumer. In addition, it is thought that a given method of organic foods production may not influence its taste or it may be very individualized and ambiguous (ZRALEK 2010). Price was another important factor. In the investigated group of respondents, the price was not enumerated as the most important factor driving the choice of organic foods ( $\bar{x} 3.82$ ). It is thus supposed that some of the respondents are willing to pay higher prices for such products. The level of organic foods pricing is always higher than the prices of products manufactured with conventional methods. These differences are usually around 20–30% (NOWOGRÓDZKA 2012) and result from higher production costs, poorly-developed organic foods processing, high distribution costs, a large share of imported products on the market and a level of profit margins. For many eco-consumers (app. 50%), the high pricing of organic foods constitutes a real barrier to purchasing. There is, however, a group of consumers who are willing to pay higher prices for organic foods. Within this group, a belief in the

higher quality of purchased organic products creates a situation in which price is not a major factor (NOWOGRÓDZKA 2012, ŻAKOWSKA-BIEMANS 2011a, CICHOCKA, GRABIŃSKI 2009). This attitude depends on the level of income of a potential consumer. In Poland, a willingness to pay a higher price for an organic foods, in comparison with a conventional product, is declared by over a half of the respondents, although the majority of them accept a price increase of up to 10%. Both in Poland and around the world, the acceptance threshold for a price increase ranges from 10 to 20% (WITEK 2011).

The inaccurate definition of “organic foods” was reflected in the attitude of the respondents towards organic foods certificates. Although it is obligatory for organic foods to have certificates, it does not necessarily translate into the consumer’s trust in the ecological origin of food (ŻAKOWSKA-BIEMANS 2011a). It is supposed that minor significance of the certificate ( $\bar{x} = 3.64$ ) for consumers could result from a wrong perception of organic foods or a lack of trust in the certified organic foods. The promotional features, i.e. advertising and an appealing package, were not acknowledged by the respondents ( $\bar{x} = 2.46$  and  $\bar{x} = 2.43$ , respectively). In the examined group of respondents, an appealing nature of food packages was not a desired parameter. It may result from a potential conflict between the ecological motivation and aesthetical motives of the consumer. For the investigated group, the content of the package was more important than its attractiveness. In the context of this data, it is worth mentioning that there are some marketing actions that consist in introducing simple and plain packages that should affect the emotional needs of the eco-consumer. Table 4 presents the significance of the organic food features desired by the consumer in relation to sex, age, education and place of living. It demonstrates that, in the majority of cases, the statements made by the women and the men did not differ and, therefore, most of the factors had a similar importance for both sexes. The statistical differences were only shown for the following factors: short shelf-life ( $p < 0.01$ ), product origin ( $p < 0.01$ ) and package attractiveness ( $p < 0.05$ ). The women paid more attention to these factors. According to criterion of age, it was found that it had a significant impact ( $p < 0.01$ ) on the following factors: health properties, taste, appealing package and ( $p < 0.05$ ) short shelf-life, certification and appearance of a product. The level of education influenced the differences in the perception of significance of the desired organic foods qualities. Significant statistical differences ( $p \leq 0.01$ ) were recorded for health properties, taste, product origin, appealing package appearance and ( $p \leq 0.05$ ) were recorded for promotional actions and advertising. In the majority of cases, the place of living significantly influenced the differences in the perception of significance of the desired organic foods qualities.

## Conclusions

The consumers of organic foods presented positive attitudes with a tendency towards neutral attitudes. The positive attitudes translated into the frequency of organic foods consumption. The highest number of respondents declared consuming organic foods a few times per month. The main purchase locations were, respectively: specialized shops, supermarkets and discount shops and organic foods producers. The most important characteristics and qualities of food that, to the highest degree, determined the satisfaction of consumers was a relatively short shelf-life, health properties, the belief in a low content of pollutants in the food manufactured with ecological methods and taste qualities. These parameters indicate the special significance of the attributes which determine the safety of the customer and meeting his/her desired taste sensations. The second and less important group of factors included the composition and origin of a product, price, organic production methods, certification and a belief in the superiority of organic foods over the products manufactured with traditional methods. The factors that were least significant for the respondents included promotional qualities, such as the appearance of a product, promotional campaigns and advertising and having an appealing package.

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