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ANALYSIS OF KNOWLEDGE AND CONSUMER PREFERENCES IN THE FIELD OF ORGANIC FOOD

ANALIZA WIEDZY I PREFERENCJI KONSUMENCKICH W ZAKRESIE ŻYWNOŚCI EKOLOGICZNEJ

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Summary: The development of organic foods market has been growing significantly in recent years. Polish organic foods market is quickly developing and it is considered as one of the most rapidly growing sections of the food market. The aim of the study was to analyse and assess knowledge and behaviour of chosen group (18-45 age) consumers on the organic foods market. According to the quantitative studies/survey, considerable part of the respondents (79.6%) declare trust into the organic food products. Based on the research results it can be concluded that the major part of the respondents have sufficient knowledge to purchase and consume organic food in a conscious and rational way. However, they declared a will to expand their knowledge in the ecological food field (78.6%). The respondents (81.9%) declared reading product labels and paying attention to the ingredients of the products (43.7%) and less interest to the origin of them (26.2%). For 37.9% of the respondents the most important advantages of the organic food products were beneficial effects on human health and lack of harmful additives. They pointed also at other motives of buying organic food products like taking care of own health, environment aspect and much better quality of such food.

Keywords: eco food, organic food, organic food market, consumer knowledge, consumer behaviour.

Streszczenie: Współcześnie na rynku produktów spożywczych obserwuje się coraz większe zainteresowanie żywnością ekologiczną. Trend ten zauważalny jest także w Polsce. Celem pracy była analiza i ocena wiedzy oraz zachowania wybranej grupy (18-45 lat), konsumentów na rynku żywności organicznej. Z przeprowadzonych badań ilościowych/ankieta wynika, że zdecydowana większość respondentów (79.6%) deklaruje zaufanie do żywności organicznej. Na podstawie otrzymanych wyników można stwierdzić, że znaczna część ankietowanych posiada dostateczną wiedzę, aby nabywać i konsumować ekologiczne produkty żywnościowe na wystarczająco świadomym i racjonalnym poziomie. Deklarowali także wolę rozszerzenia swojej wiedzy o żywności ekologicznej (78,6% respondentów opowiedziało zdecydowanie „tak”, 45,6% odpowiedziało „raczej tak”). Ankietowani (81,9%) zadeklarowali, że czytają

informacje zawarte na etykietach i zwracają uwagę na skład produktu w (43,7%) oraz w mniejszym stopniu na pochodzenie produktu (26,2%). Dla 37,9% ankietowanych najważniejszą zaletą żywności ekologicznej jest jej korzystny wpływ na zdrowie i brak szkodliwych substancji dodatkowych w składzie. Dodatkowo, ankietowani wskazali, że motywem zakupu żywności ekologicznej jest dbanie o zdrowie, o środowisko oraz przekonanie o lepszej jakości tej żywności.

Słowa kluczowe: żywność ekologiczna, żywność organiczna, rynek żywności ekologicznej, wiedza konsumentów, zachowania konsumentów.

1. Introduction

Agricultural production has been associated with a man for centuries, since the man began settlement lifestyle. The transition of human into agriculture was probably the first time in South-West Asia about 10,000 BC, where agriculture around 9,000 BC spread to the Indus valley, now Pakistan, and 8,500 years BC to Greece and around 7,000 BC on the Lower Nile. The initial development of agriculture in Central and Eastern Europe 8,000 BC was accompanied by the migration of people from the South-West Asia. About 5,000 BC, the change applied to the whole Europe and some other regions in the East and South-East Asian continent [Higman 2012].

The man from the beginning of the history of agriculture strove to achieve the biggest and the best crops in terms of their quality. At the turn of the century they were taught to use various types of natural remedies – pesticides (a combination of Latin words *pestis* – pest and *cedeo* – destroy), so that they could improve agricultural production.

Food we eat every day is an essential element of ensuring our health and long life. Not without reason, the age-old adage says that we are what we eat. Nowadays, more and more emphasis is put on consumer awareness regarding the “healthy eating” and attempts to eliminate abnormal eating habits among successive generations. This is caused by the achievements of numerous studies on the types of food available on the market and their impact on the functioning of human body. Scientific research shows clearly that the highly processed products are of negligible importance for our body (lack of nutrients, vitamins, minerals) or in some cases are negative (food contributes to diseases). A wide range of goods offered on the market resulted in that consumers no longer control what they consume and in what quantities, which in turn led to the spread of civilization diseases such as obesity, cardiovascular diseases, cancer and infertility (the latter especially in the case of food contaminated with numerous chemicals) [Brzeziński, Seńczuk (eds.) 2002].

Consumer awareness, which is growing and the growing spectrum of recipients – customers who want to control what they eat, develop the brand of organic food and organic production. This trend is also visible in Poland. Consumers are increasingly willing to change their habits and dietary preferences into more

beneficial for health, aiming to achieve a better well-being, longer life without civilization diseases [Mróz, Sadowska 2015].

Environmental awareness of people continues to grow together with the demand for organic food products. The views of consumers have a huge impact on their decisions concerning the acquisition of food [Huber et al. 2011; Jeżewska-Zychowicz 2014; Ślawska (ed.) 2002a]. These decisions are related to the perception of food products from the perspective of the benefits and risks associated with the particular product and also with its quality and price. The study related to the nutrition of experimental animals and the small number of studies conducted on the groups of humans confirmed the beneficial effects of consuming organic food on organisms. It is recognized that this is due to a higher mineral content, vitamins and secondary metabolites, as well as the exclusion of use of harmful additives, substance and pesticides in eco food.

Therefore, the buyers began to focus on natural and adequately checked products. Constantly increasing demand for organic products is one of the elements of serious changes which are being implemented in the contemporary model of consumption. Behavior of buyers is determined by a variety of factors, starting with their level of knowledge and ecological awareness, through the level of income or place of residence and ending on the susceptibility to marketing tricks. It is estimated that Polish organic market of eco food has a large potential [Kuc, Malinowska 2011; Witek 2015].

The aim of this study was to analyze and assess the consumers behavior on the market of organic products, and to evaluate the knowledge of the selected group of Poles on the subject of organic food.

2. Organic food, its control and certification

Food, which we have the most contact with is named the conventional food. The production of conventional food products allows to use both chemical additives, enhancers, preservatives and various genetic modifications (in the case of the US and some EU countries), and conventional farming is based on the use of plant protection products. Furthermore, current food can be transported over longer distances and longer stocked and stored after purchase, and their visual qualities and taste are improving. Sometimes the price of those benefits is limited to obesity, impaired health shapes and their malaise.

The main objective of conventional production is making it the most efficient which in turn results in the increased amount of resources directed to the profits of farmers, processors of food industry, in particular multinationals. Unfortunately, the achievement of the highest scale of profits has become the major determinant of directing the breeding and processing of food without the need of human, as a means of ensuring its proper functioning [Bator 2013].

Conventional food is produced on a mass scale. Industrial production of food makes the food lose a lot of valuable nutrients such as enzymes, trace elements and vitamins necessary for the proper functioning of human organism [Grimm 2015].

Organic farming, also called agricultural or biological, began to develop in the twentieth century. In Poland, the first organic farm was established in 1930. The popularity and a significant increase in the amount of land that was used in Europe under organic farming was observed in 1993. It was then equal to 0.7 million hectares, and increased with each passing year. In 2013 it was already 11.5 million hectares, of which 10.2 million hectares belonged to the EU countries. In the years 2004-2013 a threefold increase was recorded in the land area of organic agriculture in the countries that joined the EU after 2004, which resulted from a significant increase in the demand for organic foods [Komorowska 2016]. In the case of Poland a significant increase in the number of organic farms has been observed after the accession in 2004 to the European Union. Currently, statistics show the dynamic development of organic farming in Poland, but it still is not at the forefront of European countries [Rolnictwo w 2015, 2016]. In 2010, the cultivation of Polish organic agriculture amounted to about 3% of all shapes of developed agriculture [Staniak 2014].

Organic farming is an inseparable component of sustainable development, and one of its main objectives is to produce high-quality food and at the same time to maintain the balance of biological environment [Gertig 2010; Wrzosek, Gworek, Maciaszek 2009].

Organic food, also called organic or eco-food, unlike conventional foods, has to be renewable with the principles of the rule of Regulation (EC) No 834/2007 [Rozporządzenie Rady (WE) nr 834/2007...], and subject to certification and constant control. Eco-food has to consist of minimum of 95% ingredients from organic farming, cannot include artificial colors, fragrances, flavor enhancers, preservatives and other additives in its composition. It is produced by natural methods in a safe environment, without the use of artificial fertilizers, pesticides, chemicals and genetic modification. It is obtained from organic farms, which care about security and diversity of nature [Nestorowicz, Pilarczyk 2010].

Regulation No 834/2007 obliges all countries belonging to the UE to conduct the control system of the appropriate organizational structures, their mutual relations, and control procedures. To determine these structures there are regulators and certification units [Łuczka-Bakuła 2007]. Certified organic food can be given only by an authorized certification unit. It shows the fact that the relevant production is constantly monitored, and the production of products meets the requirements of the Regulations (EC) 834/2007 [Nestorowicz, Pilarczyk 2010; Ministerstwo Rolnictwa i Rozwoju Wsi... 2016; Rozporządzenie Rady (WE) nr 834/2007...].

Control of organic food, the way of its production, and the regulations are contained in the Act on organic farming. Full-sized inspection of processing plants and organic farms is carried out by an external, accredited certification unit at least once a year. Producers and processing plants are controlled not only in all the

components of the farm, such as pastures, meadows, fields, various machinery and tools, but also in the entire production records, which includes among others the farm book, the balance sets or the evidence necessary for the production. The certification body issues a certificate of compliance on the base protocol of the inspection. This certificate entitles the marketing of organic products. It is recognized in all countries of the European Union and its expiry date is one year. After this time the farm shall be subject to further inspection and the period of validity of the certificate may be extended for another year.

In Poland there are currently ten authorized certification units. Each of them meets the requirements of Art. 27 paragraph 5 and 6 of Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labeling of organic products and repealing Regulation (EEC) No 2092/91 [Ministerstwo Rolnictwa i Rozwoju Wsi... 2016; Rozporządzenie Rady (WE) nr 834/2007...].

From 1 July 2010 throughout the European Union has been applied the new organic farming logo. It has been recognized as one of the required markings to be included on the packaging of articles referring to the ecological methods for their production [Łuczka-Bakuła 2007]. Taking into consideration the experience of honoring the application of the Regulation No 2092/91 it was recognized that the voluntary use of the logo of ecological farming no longer met the expectations of consumers and entities of a given sector. In addition, with respect to the given logo, “Union CE logo for organic farming” was considered as a proper term [Rozporządzenie Rady (WE) nr 834/2007...].

On the label of ecological product of food, EU logo for organic farming should be displayed, and the following information ought to be placed:

- the name of the product, together with a reference of eco-agriculture,
- the name and address of a person placing a product on the market,
- the identification number of the inspecting entity making the control of the subject doing the last step for preparing the product on the market (labelling), located in the same field of vision as the logo,
- the origin of the raw materials of the product, in the form of: “EU Agriculture”, “agriculture outside EU”, or both annotations placed in the same field of vision as the logo (allowed to replace or supplement the designation “EU” or “non-EU” by the name of a country, if all the raw materials from which the product has been produced come from that country) [Ministerstwo Rolnictwa i Rozwoju Wsi... 2016; Rozporządzenie Komisji (UE) nr 271/2010...].

All markings used on the packaging have to be legible, visible and indelible [Rozporządzenie Komisji (UE) nr 271/2010...].

Figure 1a and Figure 1b show how to use the EU organic farming logo for organic food products.

As mentioned earlier, the EU organic farming logo on the product guarantees quality validated by certified qualification and means that at the least 95% of its ingredients of agricultural origin are components of ecological roots. The remaining

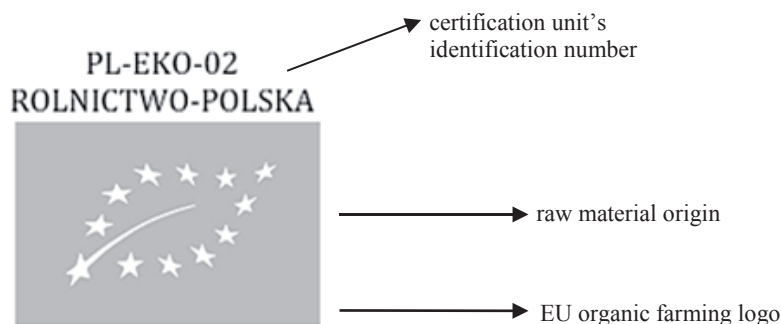


Fig. 1a. The EU organic farming logo for organic food products

Rys. 1a. Logo rolnictwa ekologicznego Unii Europejskiej dla produktów żywności ekologicznej

Source: own elaboration based on [Rozporządzenie Komisji (UE) nr 271/2010..., p. 16].

Źródło: opracowanie własne na podstawie [Rozporządzenie Komisji (UE) nr 271/2010..., s. 16].



Fig. 1b. Labelling of organic farming products (herbal tea as an example)

Rys. 1b. Oznakowanie produktów rolnictwa ekologicznego (na przykładzie herbaty zielonej)

Source/Źródło: <http://www.l-argo.ru/en/about/projects/fatea.php>.

5% of the ingredients can be found in eco-product if they are on the list in Annex IX (down Regulation 889/2008). In the estimation water and salt are not taken into account, and therefore a product containing in its composition, for example, 3% of the ecological ingredients may be considered as organic, provided that it does not contain any other agricultural ingredients. (According to the above for example cider may be recognized as an organic product, with a content of 3% organic apple juice) [Departament Inspekcji Handlowej UOKiK 2014].

Purchasing organic food validated by the certified unit, we are aware that not only the final product was subjected to careful control but also the process of its creation, processing, storage, labelling, and activities such as import, subcontracts or resale. Organic farming logo and labelling system for organic products ensure that products are manufactured according to the above EU regulation on organic farming, or having to deal with the products imported in accordance with the same or identical restrictive regulations [Golinowska 2013].

3. Material and methods

Research results were based on the original survey questionnaire and conducted to define the knowledge, preferences and behaviour of Polish consumers on the organic food market. The surveys were conducted in 2016 in two different ways: via the Internet in an electronic way and using a traditional paper version.

The questionnaire survey was divided into two main parts. The first part consisted of five closed questions which were obligatory and referred to the characteristic of the respondents. The second part of the survey consisted of 21 obligatory closed questions and one open question which was not mandatory. Questions included in the second part of the survey referred to the respondents' level of ecological knowledge and also their preferences and behaviour on the organic food market.

The electronic version of the survey was published in various interest groups created on different community portals and distributed via social network communication applications as well. Traditional paper version of the survey was distributed in the author's former workplace. The study was attended by 103 people at different age, including 64 women (62.1% of respondents) and 39 men (37.9% of respondents). The survey was completed via Internet by 88 respondents and in paper version by 15 people.

Most surveyed people were in the age range of 25-34 years (22.3% of women and 15.5% of men). Moreover the study was attended mostly by people with secondary (29 women – 28.2%, 10 men – 9.7%) and university education (25 women – 24.3%, 23 men – 22.3%). The research group was selected in a random way.

Detailed data referring to the age and sex of the surveyed people was presented in the Table 1.

In the survey dominated inhabitants from towns (54 women – 52.4% and 33 men – 32.0%) and only 16 respondents were from villages (10 women – 9.7% and 6 men

Table 1. Respondents' characteristic

Tabela 1. Charakterystyka respondentów

Age range/ <i>Wiek</i>	Sex/Płeć				Total amount of respondents=103/ <i>Calkowita liczba respondentów=103</i>	
	women/ <i>kobiety</i>		men/ <i>mężczyźni</i>		volume/ <i>liczba</i>	%
	volume/ <i>liczba</i>	%	volume/ <i>liczba</i>	%		
18-24	14	13.6	12	11.7	26	25.2
25-34	23	22.3	16	15.5	39	37.9
35-45	17	16.5	9	8.7	26	25.2
46-60	4	3.9	1	1.0	5	4.9
>60	6	5.8	1	1.0	7	6.8
Sum	64	62.1	39	37.9	103	100

Source: own elaboration based on the conducted research.

Źródło: opracowanie własne na podstawie przeprowadzonych badań.

–5.8%). Moreover, the majority of respondents estimated their material status as good (37 women – 35.9% and 22 men – 21.4%) or average (27 women – 26.2% and 17 men – 16.5%). Nobody pointed that their material status was bad.

4. Results and discussion

The list the questions asked to the surveyed people was presented in Table 2.

Table 2. The list of questions the surveyed people were asked

Tabela 2. Lista pytań zadanych respondentom

Questions related with: /Pytania powiązane z:	
respondents' level of knowledge referred to the organic foods/ <i>poziomem wiedzy respondentów związaną z żywnością ekologiczną</i>	respondents' preferences and behaviour on the organic food market/ <i>preferencjami respondentów oraz ich zachowaniem na rynku żywności ekologicznej</i>
Do you have trust in organic food products?/ <i>Czy ufasz produktom ekologicznym?</i>	How often do you consume ecological food products?/ <i>Jak często konsumujesz ekologiczne produkty żywnościowe?</i>
How do you assess your own awareness of organic food products? / <i>Jak oceniasz swoją świadomość na temat żywności ekologicznej?</i>	Where do you buy organic food products?/ <i>Gdzie kupujesz ekologiczne produkty żywnościowe?</i>
How do you understand the “ecological food” definition?/ <i>Jak rozumiesz definicję “żywność ekologiczna”?</i>	What do you pay attention to when buying organic food?/ <i>Na co zwracasz uwagę, kupując żywność organiczną?</i>
Is it mandatory to label ecological food products with the EU organic farming logo?/ <i>Czy znakowanie produktów ekologicznych europejskim logo produktów ekologicznych jest obowiązkowe?</i>	Do you read product labels?/ <i>Czy czytasz etykiety produktów?</i>
Is it permissible to put more than one ecological symbol on the label of the organic food product? <i>Czy jest dopuszczalne stosowanie więcej niż jednego oznaczenia ekologicznego na produktach organicznych?</i>	Choose the most important advantage and disadvantage of the organic food/ <i>Wybierz najważniejsze wady i zalety żywności ekologicznej</i>
Does the European Union allow using any additives in the organic food?/ <i>Czy UE dopuszcza stosowanie jakichkolwiek dodatków spożywczych w żywności ekologicznej?</i>	Choose most frequently purchased organic food products (multiple choice)/ <i>Wybierz najczęściej kupowane przez siebie organiczne produkty żywnościowe (wybór wielokrotny)</i>
Choose all elements of a valid labeling of the organic food product/ <i>Wybierz wszystkie element składające się na oznakowanie ekologicznego produktu żywnościowego</i>	Choose most relevant motives of buying organic food products/ <i>Wybierz najbardziej istotne motywy zakupu żywności ekologicznej</i>
What is your main source of knowledge affiliated with organic foods?/ <i>Jakie jest twoje główne źródło wiedzy w odniesieniu do produktów organicznych?</i>	Are you able to pay more money for organic food due to its beneficial effect on health?/ <i>Czy jesteś w stanie zapłacić więcej pieniędzy za żywność organiczną w związku z jej dobroczynnym wpływem na zdrowie?</i>
Would you like to expand your knowledge in the ecological food field?/ <i>Czy chciałbyś poszerzyć swoją wiedzę w zakresie żywności ekologicznej?</i>	Are you able to consume more (ecological) food than usual due to its beneficial effect on health?/ <i>Czy jesteś w stanie konsumować większe ilości żywności ekologicznej w związku z jej dobroczynnym wpływem na zdrowie?</i>

Source: own elaboration based on the conducted research.

Źródło: opracowanie własne na podstawie przeprowadzonych badań.

4.1. Ecological knowledge of respondents

The appropriate level of knowledge in organic food is a key element when it comes to purchasing it. Being not aware of features of ecological food and the ways of marking organic food products can lead to buying “pseudo-organic” food, which may create a mistaken opinion on the whole organic farming.

At the beginning of the questionnaire survey the respondents were asked about their trust in the ecological food products. The answers are presented in Figure 2. In order to estimate surveyed people’s awareness about ecological food products they were also asked to subjectively assess their own organic consciousness. Then, for the comparison of respondents’ subjective assessment with their actual knowledge, they were asked some detailed questions related with the discussed topic.

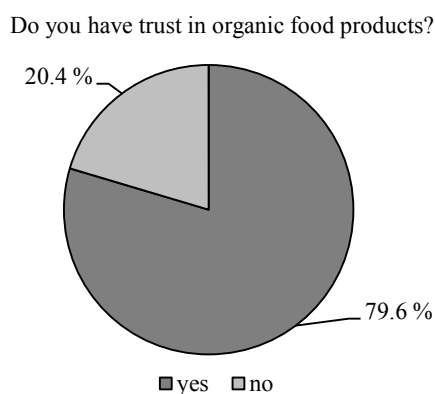


Fig. 2. Respondents’ confidence to the organic food products

Rys. 2. Zaufanie respondentów w stosunku do produktów żywności organicznej

Source: own elaboration based on the conducted research.

Źródło: opracowanie własne na podstawie przeprowadzonych badań.

As indicated in Figure 2, the great majority of polled people (79.6% respondents, including 56 women and 26 men) had confidence to the organic foods. Only 20.4% of respondents (including 8 women and 13 men) declared the lack of trust in ecological food products (Fig. 2).

Figure 3 shows the subjective assessment of the respondents concerning their awareness about ecological food.

According to Figure 3, only 13.6% of respondents assessed their awareness of ecological food as high, 33% as proper, 34% as average and 18.4% as low. Merely 1% of respondents assessed their awareness in this topic as none.

Nevertheless, it needs to be admitted that responses for detailed questions related with the organic food knowledge have proved that ecological awareness of the respondents can be regarded as sufficient. Based on the mentioned responses it can

How do you assess your own awareness of organic food products?

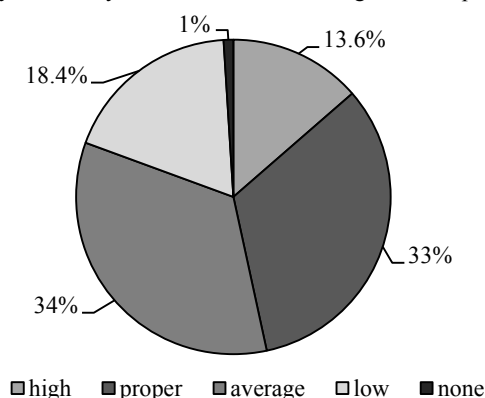


Fig. 3. The assessment of respondents awareness about organic food products

Rys. 3. Ocena świadomości respondentów wobec produktów żywności organicznej

Source: own elaboration based on the conducted research.

Źródło: opracowanie własne na podstawie przeprowadzonych badań.

be concluded that the surveyed people assessed their organic food awareness quite correctly.

Table 3 presents the ways of defining “ecological food” term by the surveyed people.

Table 3. The ways of defining “ecological food” term by respondents

Tabela 3. Sposoby definiowania terminu “żywność ekologiczna” przez respondentów

Optional answers/Opcjonalne odpowiedzi	Frequency/Ilość	
	number of choices/ liczba wyborów	%
Food produced without any additional substances/Żywność produkowana bez użycia żadnych substancji dodatkowych	40	12.9
Food produced under strict control/Żywność produkowana pod ścisłą kontrolą)	68	22
Food characterized by a high content of nutrients/Żywność charakteryzująca się wysoką zawartością składników odżywczych	46	14.9
Food made of at least 95% ingredients produced in accordance with the organic farming rules/Żywność składająca się z minimum 95% składników wyprodukowanych zgodnie z rolnictwem ekologicznym	62	20.1
Food made of 100% ingredients produced in accordance with the organic farming rules/Żywność składająca się ze 100% składników wyprodukowanych zgodnie z rolnictwem ekologicznym	26	8.4
Food characterized by a unique flavor/Żywność charakteryzująca się wyjątkowym smakiem	67	21.7

Source: own elaboration based on the conducted research.

Źródło: opracowanie własne na podstawie przeprowadzonych badań.

From the data presented in Table 3 results that 21.3% of the chosen answers were wrong (12.9% for “food produced without any additional substances” and 8.4% for “food made of 100% ingredients produced in accordance with the organic farming rules”). 78.7% of the chosen definitions were correct. It has to be noticed that respondents could choose multiple answers.

The questionnaire also included a group of questions aimed at verifying respondents' level of knowledge referred to the labelling of organic food products and their characteristics (Table 4).

Table 4. Questions verifying respondents' level of knowledge referred to the organic food labels and given answers

Tabela 4. Pytania sprawdzające poziom wiedzy respondentów powiązanej ze znakowaniem żywności ekologicznej oraz ich odpowiedzi

Questions/ <i>Pytania</i>	Answers / <i>Odpowiedzi</i> (%)		
	Yes/ <i>Tak</i>	No/ <i>Nie</i>	I don't know/ <i>Nie wiem</i>
Is it mandatory to label ecological food products with the EU organic farming logo?/ <i>Czy znakowanie produktów ekologicznych europejskim logo produktów ekologicznych jest obowiązkowe?</i>	73.8	6.8	19.4
Is it permissible to put more than one ecological symbol on the label of the organic food product?/ <i>Czy jest dopuszczalne stosowanie więcej niż jednego oznaczenia ekologicznego na produktach organicznych?</i>	67	10.7	22.3
Does the European Union allow using any additives in the organic food?/ <i>Czy UE dopuszcza stosowanie jakichkolwiek dodatków spożywczych w żywności ekologicznej?</i>	43.7	31.1	25.2

Source: own elaboration based on the conducted research.

Źródło: opracowanie własne na podstawie przeprowadzonych badań.

Considerable part of the respondents (73.8%) was aware that marking organic food products was obligatory. 19.4% of the surveyed people answered “I don't know” and only 6.8% of them ticked the wrong answer (“no”). 67% of the respondents was conscious that it was permissible to put more than one ecological symbol on the label of the organic food product. A question regarding using additional substances in organic food production turned out to be the most difficult for the respondents. Fewer than a half of them (43.7%) answered this question correctly (“yes”). 31.1% of the respondents marked a wrong answer and 25.2% of them answered “I don't know” (Table 4).

Another difficult question concerned the elements of a valid marking appearing on the organic food products packaging. Only 58.3% of the respondents answered this question correctly (“the EU organic farming logo, identification number of the authorized certifying entity and the information on the raw materials origin”), while 27.2% of them marked an incorrect answer. Table 5 presents detailed data referring to the mentioned question.

Table 5. Respondents' answers to the question concerning the valid labeling of the ecological food products

Tabela 5. Odpowiedzi respondentów na pytania związane z obowiązującymi elementami znakowania żywności ekologicznej

Valid labeling of the organic food product should consist of: <i>Obowiązujące znakowanie żywności ekologicznej powinno składać się z:</i>	Answers/ Odpowiedzi (%)
The EU organic farming logo/ <i> europejskiego logo żywności organicznej</i>	4.9
The EU organic farming logo and the identification number of the authorized certifying entity / <i> europejskiego logo żywności organicznej oraz numeru identyfikacyjnego autoryzowanej jednostki certyfikującej</i>	22.3
The EU organic farming logo, identification number of the authorized certifying entity and the information on the raw materials origin/ <i> europejskiego logo żywności organicznej, numeru identyfikacyjnego autoryzowanej jednostki certyfikującej oraz informacji na temat pochodzenia surowców</i>	53.8
I don't know/ <i>nie wiem</i>	14.6

Source: own elaboration based on the conducted research.

Źródło: opracowanie własne na podstawie przeprowadzonych badań.

The respondents were also asked to indicate the main source of their knowledge affiliated with organic foods. Almost a half of surveyed people (41.7%) pointed the Internet as the main source. Figure 4 shows the detailed percentages for the answers to this question.

What is your main source of the knowledge affiliated with organic foods?

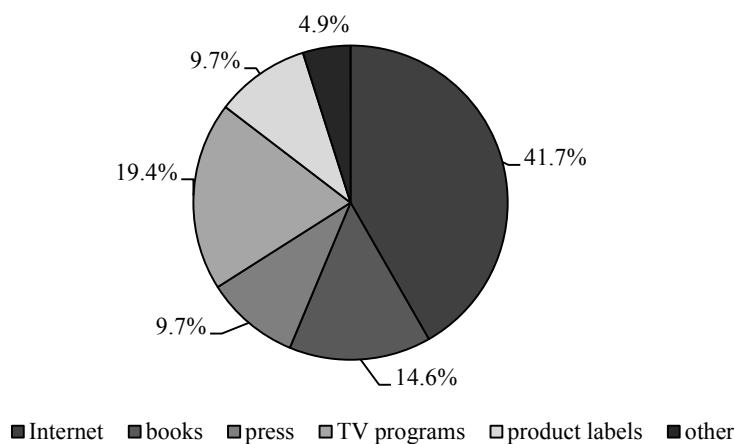


Fig. 4. Respondents' main source of knowledge affiliated with the organic food

Rys. 4. Główne źródło wiedzy respondentów związane z żywnością organiczną

Source: own elaboration based on the conducted research.

Źródło: opracowanie własne na podstawie przeprowadzonych badań.

A considerable part of respondents declared a will to expand their knowledge in the ecological food field (33% of respondents – “definitely yes”, 45.6% of respondents – “rather yes”). 10.7% of the surveyed people answered that it was “hard to say”. Merely 9.8% of the respondents answered negatively.

4.2. Preferences and behaviour of people on the organic food market

A questionnaire survey included a group of questions in order to analyse a behaviour of consumers on the organic food market. This part of questions was mainly related to the frequency of organic food consumption, as well as places and motives of purchasing ecological food products and concerned their advantages and disadvantages. The surveyed people were also asked about their food preferences.

Figure 5 presents the frequency of organic food consumption among the respondents. The greater part of them consumes organic food at least once a week (20.4% of women and 12.6% of men) or at least once a month (19.4% of women and 10.7% of men). 10.7% of women and 9.7% of men, who participated in the studies, declared consuming ecological food products less than once a month.

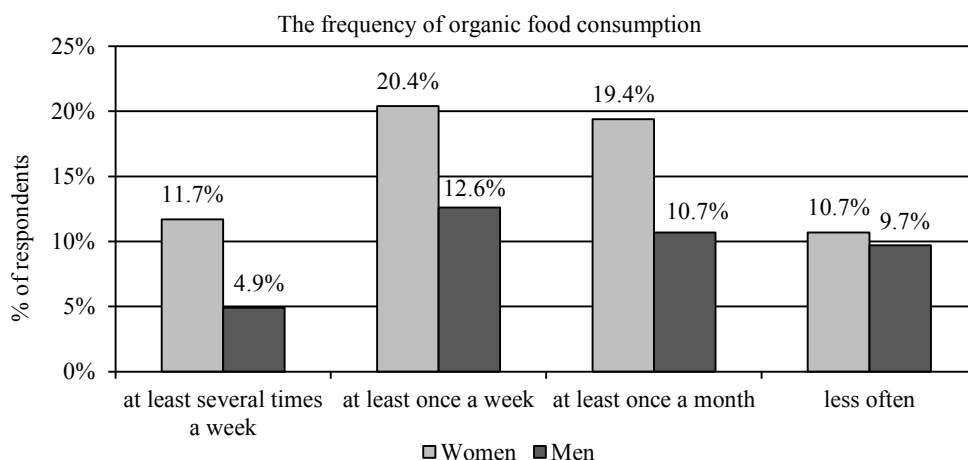


Fig. 5. The frequency of consumption of the organic food among the respondents

Rys. 5. Częstotliwość konsumpcji żywności organicznej wśród respondentów

Source: own elaboration based on the conducted research.

Źródło: opracowanie własne na podstawie przeprowadzonych badań.

With the analysis of changes of organic products on the Polish market in the long term, it should be noted that the share of regular consumers is still small, but growing [Witek 2015]. The research of consumers in the EU showed that 54% of consumers bought organic products occasionally, and 26% of them regularly [Eurobarometer 2013].

Based on the own research, organic food is purchased most often in supermarkets (23.3% of respondents) or specialist stores (30.1% of respondents). Fewer consumers buy ecological food products via the Internet or in the markets (33% of respondents). Merely 13.6% of respondents purchase organic food straight from the organic farms. On most markets, the organic sector is part of the total trade, as the organic goods are sold to consumers via the main market and store networks and specialized stores, like organic or natural stores, weekly markets or farm shops. There are very few data about the organic market in Europe [Orboi et al. 2012].

When it comes to buying organic food most of the respondents (43.7%) were paying attention to the ingredients of products. Fewer of the surveyed people (26.2%) were interested in product origin. 16.5 % of respondents paid attention to the product appearance, 7.8% thought that expiration date was the most important thing, 4.9% of them thought the same about the packaging and only 1% put the brand in the first place. Referring to the location of food production, 71.8% of surveyed people preferred Polish products. The place of production was negligible for 26.2% of the respondents. 1.9% of the surveyed people chose food products which had been produced abroad.

As many as 81.9% of the respondents declared reading product labels. Most respondents (37.9%) deem that the most important advantages of the organic food products are: beneficial effect on human health and lack of harmful additives. 41.7% of the surveyed people think that the prices of ecological food are too high (Table 6).

Table 6. Advantages and disadvantages of organic food products according to the respondents

Tabela 6. Wady i zalety ekologicznych produktów żywnościowych według respondentów

Advantages of the organic food products/ <i>Zalety ekologicznych produktów żywnościowych</i>	Percentage of respondents/ <i>Procent ankietowanych</i>	Disadvantages of the organic food products/ <i>Wady żywności ekologicznej</i>	Percentage of respondents/ <i>Procent ankietowanych</i>
Beneficial effect on human health and lack of harmful additives / <i>Dobroczynny wpływ na zdrowie i brak szkodliwych dodatków</i>	37.9	Too high prices/ <i>Zbyt wysokie ceny</i>	41.7
They taste better than conventional food products/ <i>Lepszy smak w porównaniu do żywności konwencjonalnej</i>	27.2	Too low variety of products/ <i>Za niska różnorodność produktów</i>	20.4
No negative impact on the environment/ <i>Brak negatywnego wpływu na środowisko</i>	14.6	They are hard to reach/ <i>Trudna dostępność</i>	11.7
They are reliable due to the constant production control/ <i>Są wiarygodne w związku z ciągłą kontrolą produkcji</i>	8.7	They taste worse than conventional food products/ <i>Smakują gorzej w porównaniu z żywnością konwencjonalną</i>	5.8
They are low processed/ <i>Są nisko przetworzone</i>	11.7	Short shelf life/ <i>Krótki termin przydatności do spożycia</i>	20.4

Source: own elaboration based on the conducted research.

Źródło: opracowanie własne na podstawie przeprowadzonych badań.

According to the studies the most frequently purchased organic food products include eggs (purchased by 60.2% of the respondents), vegetables and fruits (purchased by 56.3% of the respondents), milk and dairy products (purchased by 35.9% of the respondents). Merely 9.7% of the respondents were purchasing sweets most often. These figures do not add up to 100% since respondents could choose multiple answers.

It needs to be mentioned that among the surveyed people there were three most popular motives of buying organic food products: taking care of own health (chosen by 65% of the respondents), taking care of the environment (59.2%) and much better quality of food (50.5%). These figures do not add up to 100% since respondents could choose multiple answers.

As many as 77.2% of the respondents declared to pay more money for the organic food due to its beneficial effect on health, and 35.1% of them declared to consume more of the organic food from the same reason.

5. Conclusions

According to the conducted studies, considerable part of the respondents declared trust into the organic food products (79.6%). They claimed that their knowledge to purchase and consume organic food in a conscious and rational way was sufficient (80.6%). Most of them were able to define ecological food in a correct way. They were aware that marking organic food products was obligatory and that it was possible to put more than one sign on the organic product label. Moreover, the greater part of them was willing to expand their knowledge in the organic food field (78.6%).

Polish market for ecological food products shows considerable growth opportunities and the organic food demand is constantly increasing. This trend was proven in survey results: 33% and 30.1% of the respondents consumed ecological food minimum one time a week or month, respectively; 71.8% of the interviewees preferred to buy organic products from Poland; 81.9% of the respondents declared that before making purchase decisions they had read information on products labels; and having in mind beneficial influence of such food for health and supporting the protection of the environment, they decided to choose organic products in spite of their higher prices.

Growing interest in organic products should follow simultaneous organizing awareness-raising campaigns to promote such food and to show benefits from its consumption.

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