

Organic food in the aspect of food safety in Poland and in the European Union

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Abstract: The conducted research shows the idea of organic food in the area of food safety system in the European Union. Authors focus on the reasons why customers decide to buy and consume organic food. The aim of this study is to present the reasons of purchasing organic food and its definition for a customer. The work presents the main threats that are connected with the production of organic food in the area of sustainable agriculture. Moreover the paper shows the current situation regarding organic food and farming in Poland and in the European Union.

Keywords: organic food, food safety, food safety system, sustainable agriculture

1. Introduction

Proper nutrition is one of the fundamental aspects of human life. The awareness of how significant is to consume healthy, safe and tasty food is the key issue in human health and well-being. Therefore more and more consumers worldwide are searching for food products that are healthy, seasonal and eco-friendly. The research presents the threats that are connected with the production of organic food in the area of organic farming and the reasons why customer decide to buy and consume organic food. The aim of this study is to present the reasons of purchasing organic food and definition of “organic food” for a customer.

The article also shows the current situation regarding organic food and farming in Poland and in the European Union (EU).

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2. Organic food and farming

The characteristics of food products (Kowalska, 2010: 27) that influence consumers' decisions are divided into; external (for example production characteristics, exclusive, presentation, acquisition cost, accessibility, environmental aspects) and internal (durability, reliability, functionality, sensory characteristics, safety, health aspects). The term "organic food" combines environmental aspects, safety and health aspects. Food called "organic" is processed by organic farming without any pesticides, farmers use organic fertilizer (compost, manure) instead of chemicals (Nierzwicki, 2010: 57). Animals are fed with homemade feed from own farm with no antibiotics and hormones added. Moreover there is a high level of animal welfare standards and biodiversity in organic farming as well as, preservation of natural resources (European Commission, 2011: 163, Council Regulation (EC) 834/2007, Commission Regulation (EC) 889/2008). The principles of organic production are regulated by EU law in the Council Regulation (EC) 834/2007 and in the Commission Regulation (EC) 889/2008 (European Commission, 2011: 67). Based on EU legal requirements "organic food" should be processed mainly from organic agricultural ingredients, any non-organic substances must be authorised by EU organic farming legislation. This type of food should be processed without any flavourings, colorants and genetically modified organisms (GMO) (European Commission, 2011: 67). According to EU legislation the organic farming "is a system of farm management and food production that combines best environmental practices, a high level of biodiversity, the preservation of natural resources, the application of high animal welfare standards, and a production method in line with the preference of certain consumers for products produced using natural substances and processes" (European Commission, 2011: 163). Using the organic practices the primary production goods are produced such as vegetables, fruit, seeds, spices, then rearing livestock (milk and eggs production) that leads to organic products produced using simple technological processes. Processed organic food has only organic ingredients, unless they are inaccessible. During the production all nutrition additives, non-organic substances that have sensory and technological function are limited and reduced. They are only used under certain legal conditions, authorised by EU organic farming legislation, when there is an essential technological need in a process and for special nutrition reasons. Food should be processed with the application of biological, mechanical and physical methods.

3. Food safety in the European Union

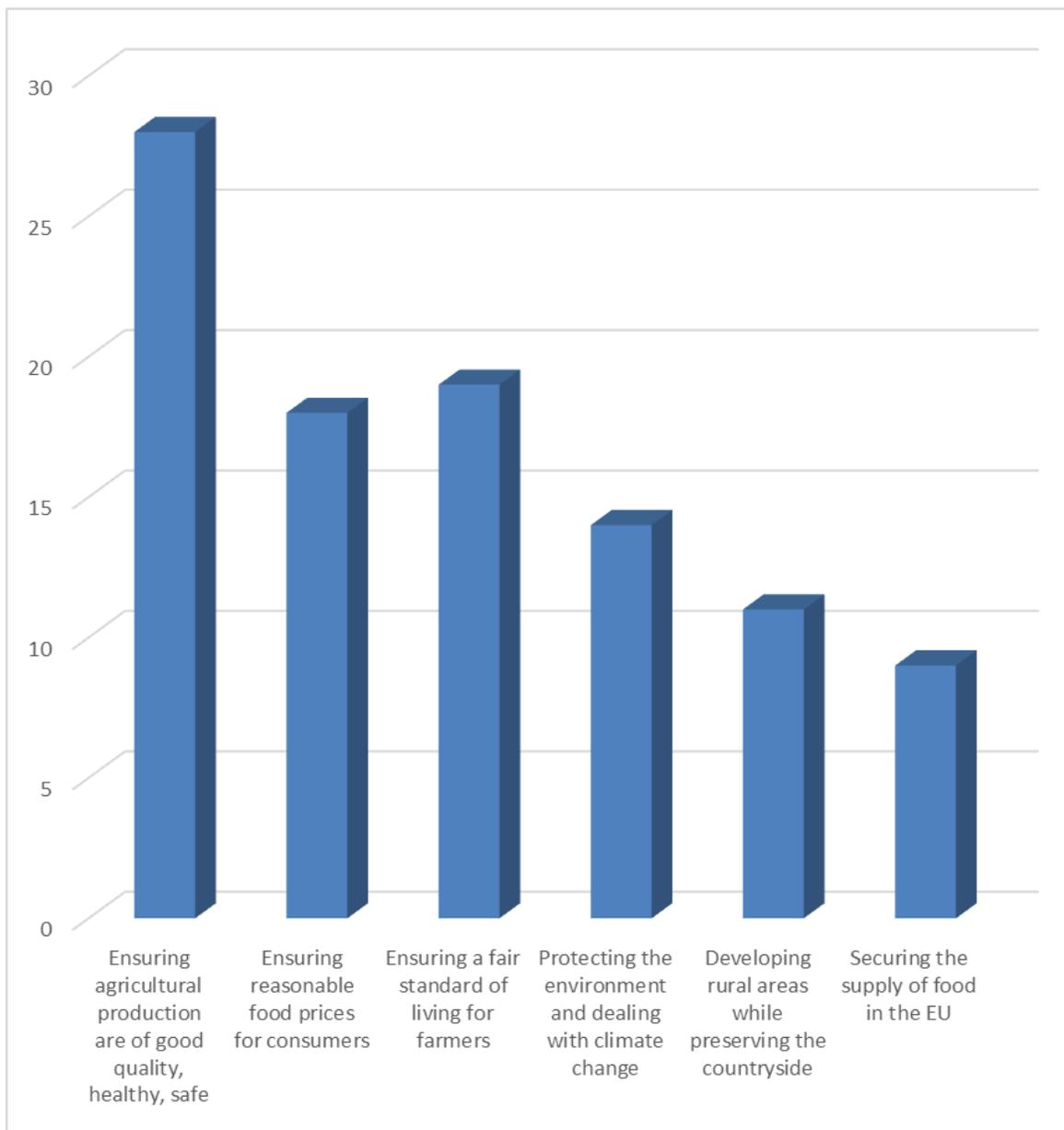
The EU law regulations consist the guideline for the system of organic food production and food management by organic farmers and food processing companies, as well as, legal requirements for labelling of organic food products (Council Regulation (EC) 834/2007, Commission Regulation (EC) 889/2008, European Commission, 2011: 67).

One of the superior goals for EU economy is the food safety assurance and adequate, accepted level of food hygiene (European Commission, 2011: 12,14,15). The food producer, wholesaler and retailer are responsible for those aspects.

According to EU regulations the primary production is falling under the regulations in the field of hygiene (Regulation (EC) No 882/2004, European Commission, 2011: 14). The EU public opinion indicate good quality, safety and health of agriculture production as first priority for EU agricultural policy as well as, ensuring a fair standard of living for farmers and reasonable food prices for consumers (see figure 1). About 28 % of the respondents mark good quality, safety and health of products as a first EU agriculture priority in their minds. That shows the importance of food safety in the EU population. Moreover respondents in the EU (51%) are willing to receive more information regarding quality and safety of food products (European Commission, 2011: 151) that underlines how important this area is.

Around 70 % of the respondents worry about pesticides residues in crops, antibiotics and hormones in meat and pollutants. As indicated in table 1 those are main concerns pointed in the most European countries (Belgium, Germany, Greece, Italy, Luxembourg, Hungary, Slovenia, Bulgaria, France, Austria, Cyprus, Netherlands).

Figure 1. First priorities for EU agricultural policy according to EU public opinion (XI-XII 2009, %)



Source: (European Commission, 2011: 150).

Between 66 and 68 % of the population is concerned about quality and freshness of food that is indicated in Lithuania, Denmark, Estonia, Ireland, Spain, Latvia, Malta and Portugal. Respondents in Poland as well as, in Romania where people worry about additives in food and drinks whereas in the UK, Finland and Sweden, about the welfare of farmed animals (see table 1).

Table 1. Main concerns regarding for problems and risks related with food (VI 2010) in EU Member states

EU Member state	Main concern
Belgium, Germany, Greece, Italy, Luxembourg, Hungary, Slovenia	Pesticides residues
Bulgaria,	Pesticides residues and food poisoning from bacteria
France	Pesticides residues and pollutants like mercury
Lithuania	Pesticides residues and quality and freshness of food
Austria	Pesticides residues and GMOs
Czech Republic, Slovakia	Food poisoning from bacteria
Denmark, Estonia, Ireland, Spain, Latvia, Malta, Portugal	Quality and freshness of food
Cyprus, Netherlands	Antibiotics residues in meat
Poland, Romania	Additives in food and drinks
Finland, United Kingdom, Sweden	The welfare of farmed animals

Source: (European Commission, 2011: 153).

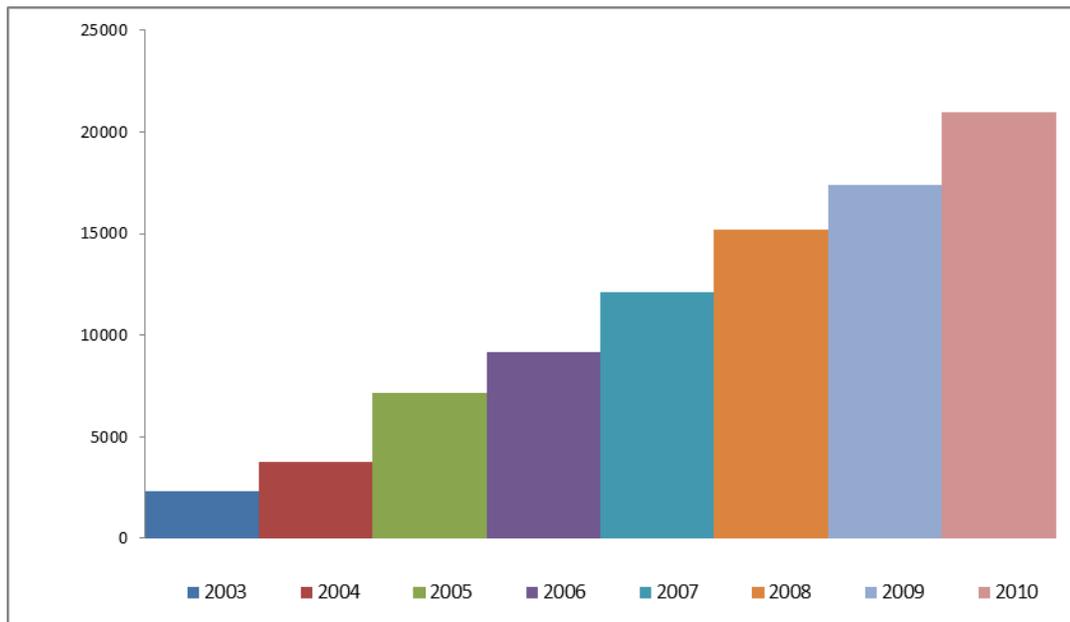
The studies emphasize the high importance of food safety in EU population and the need of good quality, healthy food products with no additives, chemicals and pesticides added. In addition, they show that consumers in the EU are paying attention to issues related to food and are aware of what they buy and consume.

4. Organic farming in Poland

By the end of the year 2009 there have been 17100 organic farms in Poland whereas the general agriculture area for organic farming was 367000 hectares. The organic farming has a high development intensification in Poland (see figure 2,3,4).

The highest organic crop area among EU countries is in Spain - 1603 (1000 hectares), Italy -1107 (1000 hectares) and in Germany – 947 (1000 hectares) while the highest number of organic farms is in Italy (43000) (European Commission, 2011: 31, IJHARS, 2010: annex B).

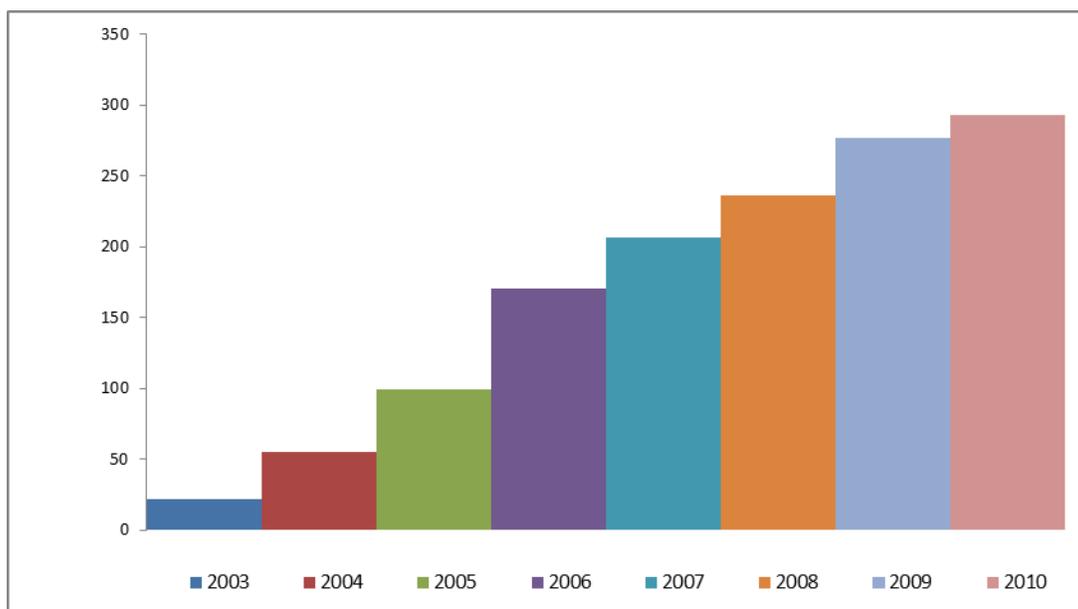
Figure 2. The number of farms in organic farming system in Poland in 2003-2010



Source: (Ministerstwo Rolnictwa i Rozwoju Wsi, 2012).

There has been very intensive development of primary production as well as, its processing that results in organic food according to EU regulations (Council Regulation (EC) 834/2007, Commission Regulation (EC) 889/2008).

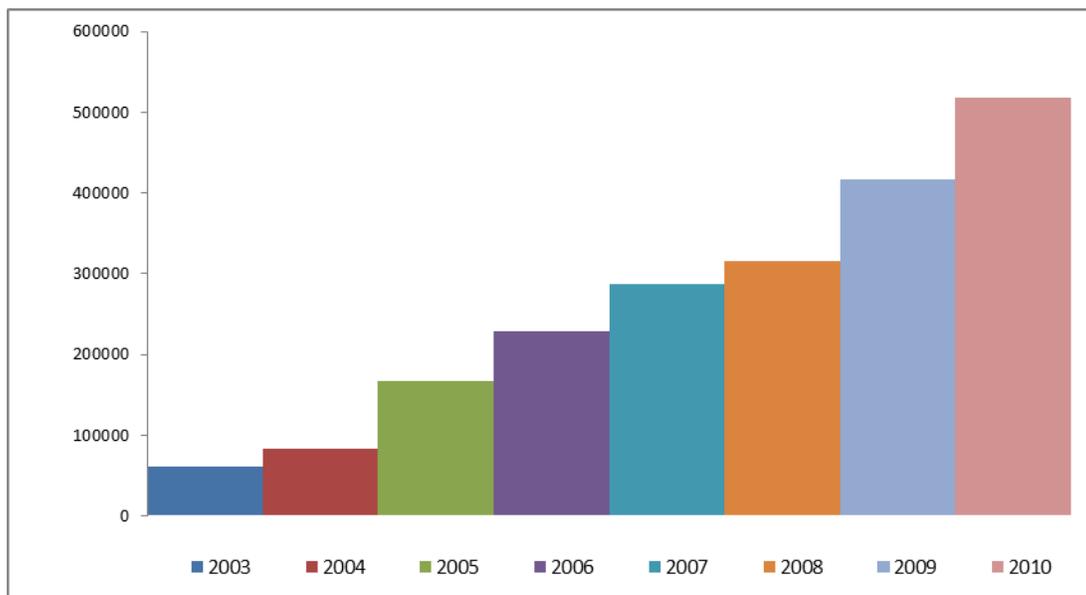
Figure 3. The number of food processing plants in organic farming system in Poland in 2003-2010



Source: (Ministerstwo Rolnictwa i Rozwoju Wsi, 2012).

The number of enterprisers in Poland processing food from organic farmers was 24416 in 2011, while in 2010 was 20956 that indicates the increase by 20% from the year 2009 (IJHARS, 2010). The highest number of organic food processing plants in 2009 and 2010 were processing fruit and vegetables, other food products and grain mill products (see table 2).

Figure 4. The number of organic crop area according to organic farming regulation in Poland in 2003-2010



Source: (Ministerstwo Rolnictwa i Rozwoju Wsi, 2012).

The highest percentage increase is recorded in the production of other food products while smaller increase of 0,3% - in milk processing and cheese manufacturing. There were no changes in animal feed processing. All other lines of production recorded a decline (IJHARS, 2010:21).

Table 2. The percentage share of production lines in organic food processing in 2009 and 2010 in Poland

Production line	2009	2010
Fruit and vegetables	33,0	32,4
Meat production	6,6	5,1
Coffee and tea	6,9	6,0
Grain mill products	21,9	19,4
Animal feed processing	0,7	0,7
Milk production and cheese manufacturing	2,4	2,7
Animal and vegetable oil and fats processing	2,4	1,3
Sugar production	1,7	0,3
Other food products	24,3	32,1

Source: (IJHARS, 2010: 21).

Fruit and vegetable processing reached the level of 85451,6 metric tons in 2009 and 37809,1 metric tons in 2010, whereas coffee and tea processing; 943,9 in 2009 and 1239,4 metric tons in 2010 and milk production (cow milk) were 362269,5 and 376304 hectoliters (IJHARS, 2010: annex no 6).

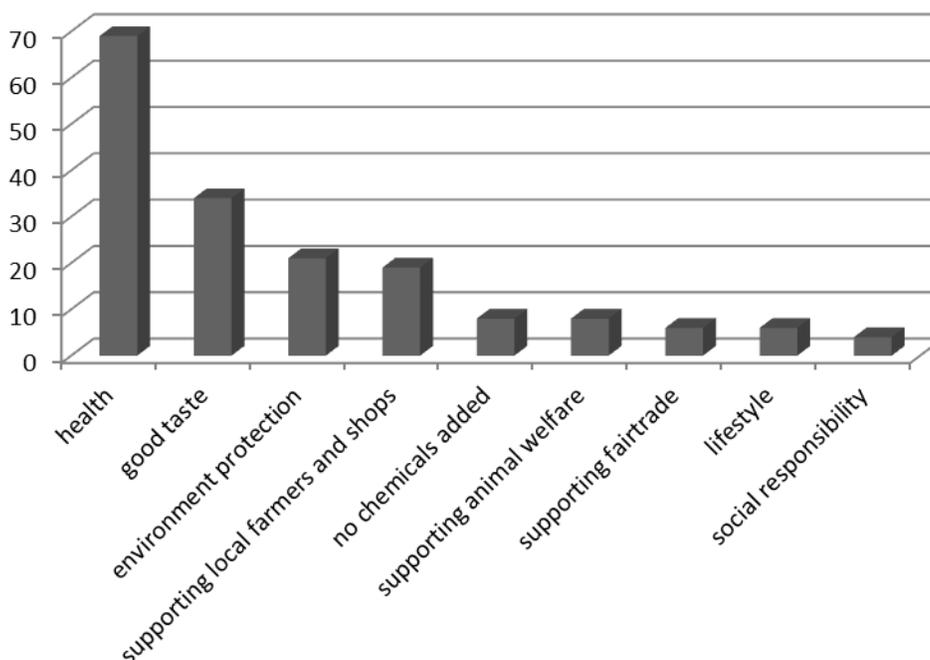
The presented data show the increase of organic crop area in Poland between the years 2003 - 2010 and in the number of companies involved in the processing of organic food (2009-2011). The data analysis presents growing interest in organic food production among farmers and food processing companies. This leads to the conclusion about growing interest in organic food market in Poland and good perspective for its development in the future.

5. Consumer and organic products

Environmentally conscious consumer knows the attributes of organic food. Based on the research taken among a group of students in Germany in 2011 the (46 people; 31 men, 15 women; age 15-47 years old) organic food means: “food produced without any fertilizer or chemicals “ (58%), “natural, seasonal food” (15%), “eco-friendly food” (17%), “do not know the definition” (10%). The main reasons why respondents decided to buy organic food was for “health reasons” (69%), “good taste” (34%), “protection of the environment” (21%) and “support for local farmers and shops” (19%) (see figure 5). As the study shows “organic food” is understood as a eco-friendly food, with no chemicals added, coming from local farmers. However still few people were not able to give the definition of “organic food”.

As mentioned before organic food should be safe, because products are made by biological processes and with mechanical production methods using inner system natural resources. Those methods exclude GMO. Based on analyzed literature there are some evidences for higher health, nutritious and sensory quality of selected organic products over conventional products (Rembiałowska, 2000: 13-19, 66-94).

Figure 5. The reasons of buying organic food (Germany, 2011)



Source: Author's own elaboration.

Organic milk contains 60% more omega-3 fatty acids than conventional. Grain fertilized with manure are less likely to be infected by pathogenic fungi such as powdery mildew than with mineral fertilizer. The analyzed studies show that the food quality increases when the animals have higher level of welfare (Agencja Rynku Rolnego, 2007: 24-25). Moreover it has been proven that organic rearing livestock produces meat with a better nutritional value than made in mass production (Rembiałowska, Badowski, 2010: 16).

Organic food is not common on consumer's market. It has to be exposed in the right way so the consumer is aware about its value. At the moment there are no nationwide promotion programs supporting organic farming and products in Poland. Although in action plan for agriculture and organic food for 2011-2014 there is Task 1 – Market development, promotion, information, concerning promotion campaigns for organic products and environmental awareness of children and youth in Poland. The conclusion is that there should be initiatives creating the eco-awareness of the consumers in the field of nutrition as well as, initiatives that provide the easy access to organic products in shops. Although more and more organic food stands are seen in supermarkets, less are seen in other smaller retailers. There are not many small retailers

specialized in selling only organic products. The direct retail of organic products takes place usually on the local and commodity markets in Poland.

There have been some local initiatives in Poland - campaigns and fairs, promoting organic farming and food. “The week of Organic Food” is an example for such an initiative that took place between November and December 2011 under the patronage of Polish Ministry of Agriculture and Rural Development. The main catchword was that buying organic food means saving nature and protects health (Ministerstwo Rolnictwa i Rozwoju Wsi, 2012). The researched literature shows the significant role of the impact of the direct contact with organic food on consumers’ decisions (Mackiewicz-Walczak, 2012). The respondents declared that they started buying organic food when there has been some shops supplied with it in the area, or when they have been working with organic food in a shop, wholesaler or in food processing business.

The package and correct labelling is a very important element of product’s promotion. Specific conditions for eco-labelling are included in Council Regulation (EC) 834/2007 of 28 June 2007. There should be the EU organic logo (see drawing 1) in a visible spot on the closed consumer package, code number of a control body that allowed to sell the product.

Drawing 1. EU organic farming logo.



Source: (European Commission, 2012).

In this way the consumer will not have any doubts regarding the origin of a product (Łukasiński, 2008: 146) that is, based on the research made by Commercial Inspection in Poland,

the most problematic aspect (Wojewódzki Inspektorat Inspekcji Handlowej w Gorzowie Wlkp., 2012). The research indicated that among 60 batches of organic products, 39 were questioned (65%), the EU logo dimensions were wrong, the product description was wrongly located and there were no information about certification unit.

Organic products, because of the specification of production, are more expensive than conventional ones so in Poland 75% of population does not accept higher prices of organic products (Cichocka, Grabiński, 2009: 107). The research also shows that population's incomes influence the shape and size of the market of organic food (Szymańska, 2012). Although the positive correlation is seen between the amount of income of households in Poland and organic food expenses. It also appears that families with children more likely allocate their budget funds on organic food. Moreover according to analysed literature people are able to spend on organic food 10% more money than on conventional (Cichocka, Grabiński, 2009: 107).

6. Summary

The average consumer in Poland speaks with a very positive attitude towards organic food (Kowalska, 2010: 59) and describes them as “natural”, “healthy” and “safe”, without chemical pollution and additives used in food processing (Cichocka, 2004: 55-63). The reasons why consumers buy organic food are: health, less polluted environment now and in the future (clean environment for future generations) (Cichocka, Grabiński, 2009: 107) and under the study made by Commercial Inspection in Poland the results were proven. The laboratory tests that were taken in Poland have shown that all recently researched food products were compatible with the EU legal requirements (Wojewódzki Inspektorat Inspekcji Handlowej w Gorzowie Wlkp.: 2012) that is a positive sign in creating the trust for organic products on Polish market. Consumer in Poland most often buys fruit and vegetables (Cichocka, 2004: 55-63), traditional cured meat products, bakery products, natural cheese, liquid honey, jam and unpasteurized beer (Newerli-Guz, Śmiechowska, 2004: 222-223). Health issues, good taste of food and local place of origin are very important for consumers in Germany, as those are also the reasons why people decide to buy organic products in this country. European Union has implemented the law that is regulating the organic production to provide better consumer's safety. The research presented the importance of

food safety for EU population and the need for information regarding quality and safety of food products.

To increase the demand for organic food the variety of products should be provided and constantly enlarged. The weight of quality and ecological performance is on the same level for present consumer but the standards of quality, food safety and control are getting more important. In order to provide for consumer better opportunity to choose from the variety of organic products, the promotion and information activities, as well as influence on shaping desirable consumption models, are necessary (Łukasik, 2010: 7).

As the study presents the consumer in the EU is very concerned with food safety and its good quality, and cares for tasty, valuable and healthy food. Healthy food means that there are no additives, chemicals and pesticides added. While the organic food for the consumer is understood as produced without any fertilizer or chemicals, being natural, seasonal and eco-friendly, still there are respondents that do not know its definition. Moreover as the study shows it comes from local farmers and combines environmental, safety and health aspects. The reasons of buying organic food are concerned with health, good taste, the protection of the environment and support for local farmers and shops. However, the price of organic food products is higher than the conventional one so this is a serious barrier for less wealthy consumers on the EU market. This is still one of the main barriers in development of organic food market in Poland.

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Żywność ekologiczna w aspekcie bezpieczeństwa żywności w Polsce i Unii Europejskiej

Streszczenie

W niniejszej pracy autorzy skupili się na badaniach ukazujących pojęcie żywności ekologicznej w obszarze bezpieczeństwa żywności w Unii Europejskiej. Istotną część artykułu stanowią rozważania ukazujące przyczyny zakupu i konsumpcji żywności ekologicznej, co stanowi ważny aspekt pracy badawczej. Jej celem jest określenie dlaczego konsumenci decydują się na zakup i spożywanie żywności ekologicznej oraz jaka jest definicja żywności ekologicznej. W pracy ukazane również zostały główne zagrożenia związane z produkcją żywności ekologicznej oraz aktualna problematyka w obszarze rolnictwa ekologicznego w Polsce i Unii Europejskiej.

Słowa kluczowe: żywność ekologiczna, bezpieczeństwo żywności, rolnictwo ekologiczne