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## THE DEVELOPMENT OF ORGANIC FARMING IN THE WORLD

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**Rezumat.** Articolul își propune să prezinte dimensiunea agriculturii ecologice și a pieței produselor alimentare ecologice în fiecare regiune a lumii în baza datelor statistice disponibile. Cea mai mare suprafață de teren agricol cultivat folosind metode organice se află în Australia, Europa și America de Sud, în timp ce cele mai mari piețe de produse alimentare ecologice sunt situate în țările bogate din America de Nord, în special în Statele Unite ale Americii, precum și în țările din Europa de Vest. Fructele și legumele sunt produsele organice care se vând cel mai bine și care domină piața produselor alimentare ecologice.

**Cuvinte-cheie:** Agricultură ecologică; Piața produselor alimentare ecologice; Țări ale lumii.

**Abstract.** The article aims to present the size of organic farming and organic food market in each region of the world based on available statistics. The largest area of agricultural land farmed using organic methods is located in Australia, Europe and South America, while the biggest organic food markets are located in the rich countries of North America, mainly in the United States, and in the Western European countries. Fruits and vegetables are the organic products that are the most eagerly bought and dominate the organic food market.

**Key words:** Organic farming; Organic food market; World organic agriculture.

### INTRODUCTION

Organic farming is almost a hundred years old but the interest in its development began relatively recently, i.e. in the 1980s and namely in the highly developed countries of Western Europe and North America (Tyburski, J., Żakowska-Biemans, S. 2007). The main reason lies in the public awareness of side effects regarding the high-level use of industrial means of agricultural production (fertilizers and pesticides) on the quality of food (Juczka-Bakuja, W. 2007) and environment.

Organic farming aims to produce high quality food guaranteed by the process of certification and control (Kowalska, A. 2010) while ensuring the nurture and protection of natural resources. Organic farming meets the needs of the food market, especially in highly developed countries, where people pay more attention to the quality of food and to how it is produced. Organic methods of agricultural production also ensure the maintenance of lean soil and water, contribute to the improvement of soil fertility and enrich the variety of plant and animal life in the natural environment (Runowski, H. 2012).

Organic food production is developing both in highly developed countries and in developing countries, as these countries see opportunities to export this kind of production, especially to developed countries, and at the same time they make use of local labour force increasing the incomes and developing poor farms (Willer, H., Yussefi, M. 2007).

### MATERIAL AND METHODS

The aim of the article is to present the size of organic farming and organic food market in each regions of the world based on available statistics with regard to organic farming and organic food market in the world. Source of data for analyses were yearbooks: *The World of Organic Agriculture – Statistics and Emerging Trends*, which are published by the Research Institute of Organic Agriculture (FiBL) in Frick (Switzerland) and International Federation of Organic Agriculture Movements (IFOAM) in Bonn (Germany). The yearbook *The World of Organic Agriculture - Statistics and Emerging Trends*, has been published annually since 2000. The article presents the analysis of data obtained for 2012 and published in 2014. Some of the analyzed data are compared to earlier periods.

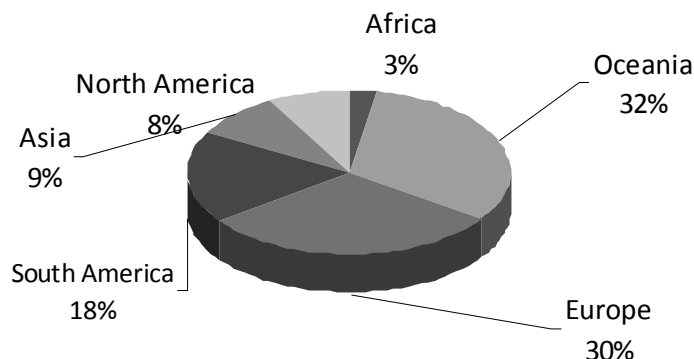
### RESULTS AND DISCUSSIONS

#### 1. Organic farming size

Over the past several years, a dynamic development of organic farming has been observed. In 2012, about 37.5 million hectares of agricultural land have been used for organic farming while in the late 90's there were only 11 million hectares (*The World...*, 2000-2014). The interest in developing agricultural

products with the use of organic methods is quite great in Europe and recently also in Asia and Africa.

World's regions with the largest areas of agricultural land farmed using organic methods are located in Oceania (12.2 m ha in 2012), Europe (11.2 m ha) and South America (6.8 m ha). In 2012, the area of organic cultivation in Oceania constituted 32% of the world's area of agricultural land used for organic production, in Europe – 30% and in South America – 18% (Fig. 1).



**Figure 1.** The structure of world's area of agricultural land used for organic production in 2012

Source: Elaborated by the author based on (*The World...*, 2014)

In Oceania, out of the region that covers Australia, New Zealand and the islands of the Pacific Ocean, the largest area of agricultural land farmed using organic methods is mainly located in Australia (12.0 m ha in 2012). Climatic conditions specific for this country caused that most of the land (more than 90%) is used as pastures for the needs of organic animal production, especially cattle and sheep. Moreover, an important direction in organic farming in this region is the production of fruits and vegetables, including tropical fruits, vanilla and coconuts, most of which is exported to the European countries, United States, Canada and Japan.

The second largest area of agricultural land farmed using organic methods is situated in Europe, including the European Union countries, the surface of which, in 2012, was estimated to cover 10 m ha. The largest areas of organic farming are located in Spain, Italy, Germany and France. The share of organic farming surface in the total area of agricultural land in Europe was 2.3% in 2012 (in the EU countries 5.6%), but the proportion was the biggest in Austria (19.7%), Sweden (15.6%), Estonia (15.3%) and Switzerland (12.0%). It is necessary to emphasize that organic farming in Europe is developing fast, but there are considerable differences regarding the level and dynamics of development of this type of agricultural production.

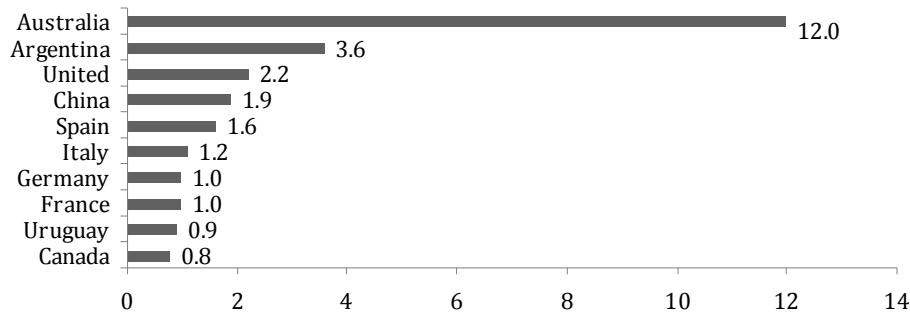
The third largest area of agricultural land used for organic farming is situated in South America, where its share in the total area of agricultural land on the continent is relatively small – only 1%. The largest areas used for organic farming are situated in Argentina (in 2012 – 3.6 m ha), Uruguay (0.9 m ha) and Brazil (0.7 m ha). The size of organic farms on the continent is quite varied: there are farms of a few hectares in Mexico as well as farms of a few thousand hectares each in Venezuela, Chile, Argentina and Uruguay. Most of the organic production from this geographical region, including grains and meat from Argentina, coffee beans, cocoa and bananas from the center of the continent and cane sugar from Paraguay, is exported. It is sold on the European, Japanese, American and Canadian markets.

In 2012, the total area of agricultural land used for organic farming in North America was estimated to cover 3.0 m ha, including 2.2 m ha in the United States and 0.8 m ha in Canada. The share of this region in the total area of agricultural land farmed using organic methods in the world is not important (8%), however, its share in the organic food market is very big because the sales of organic products in this region constitute half of the total value of organic products sales (50% of the global market).

It must be emphasized that organic farming is developing very fast in Asia too (3.2 m ha in 2012), especially in such countries as China (1.9 m ha) and India (0.5 m ha), and the production is mainly sold abroad. These countries belong to the biggest producers of organic tropical fruits in the world. Organic farming is also developing in Africa (1.1 m ha), especially in Uganda, Tunisia, Ethiopia, Tanzania and Egypt. Organic farming in African countries is mainly focused on the export of products to Europe. The most

important products grown in that region are coffee beans, cocoa, sesame and olives, nuts and tropical fruits.

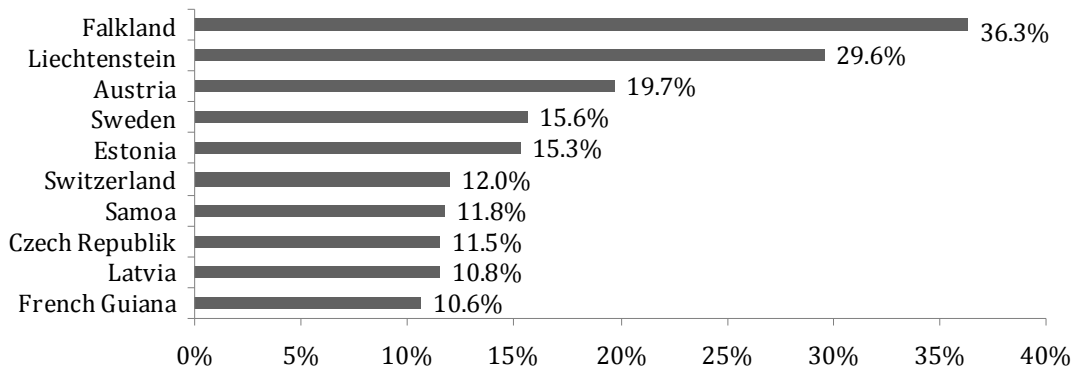
The countries with the largest areas of agricultural land farmed using organic methods (Fig. 2), i.e. with the world's largest organic farming share, in 2012, were the following: Australia (12.0 m ha), Argentina (3.6 m ha), the United States (2.2 m ha), China (1.9 m ha), Spain (1.6 m ha), Italy (1.2 m ha), Germany and France (1.0 m ha each), Uruguay (0.9 m ha) and Canada (0.8 m ha).



**Figure 2.** Countries with the largest area of agricultural land used for organic farming in 2012 (million hectares)

Source: as in Figure 1

The countries with the largest area of organic farmland in the total area of agricultural land, i.e. with the biggest share of organic use of agricultural land resources, are the following: Falkland Islands (36.3%), Lichtenstein (29.6%), Austria (19.7%), Sweden (15.6%) and Estonia (15.3%). Also Switzerland, Samoa, the Czech Republic and Latvia belong to the countries that exceed the 10% share of organic use of agricultural land resources (Fig. 3).



**Figure 3.** Countries with the biggest share of organic farmland area in their total area of agricultural land in 2012

Source: as in Figure 1

In 2012, about 1.9 million farms all over the world get involved in organic production. The biggest number of organic farms was recorded in India (over 0.5 million farms), Uganda (0.2 m) and in Mexico (0.2 m). At the same time, in Europe, the biggest number of organic farms was recorded in Turkey (0.06 m), Italy (0.04 m), Spain and Poland (0.03 m). In addition, a considerable number of organic farms can be found in Austria, France, Germany and Greece (over 0.02 million farms).

In Poland, the number of organic farms and their agricultural land area was growing fast, especially after Poland's accession to the European Union and the introduction of European Union Common Agricultural Policy mechanisms, including organic farming development subsidies. In 2013, in comparison with 2004, the number of organic farms increased seven times, and their agricultural land area increased eight times (Tab. 1).

Undoubtedly, organic production subsidies contributed to the development of organic farming in Poland, but this wasn't the only reason, since the introduction of organic production methods does not mean for many small-size farms achieving worse economic results. In the case of smaller organic farms, in comparison with the conventional ones, a bigger share of agricultural land cultivation belongs to

the laborious growing of vegetables, fruits or potatoes for culinary purposes, i.e. the products for which farmers can get relatively higher prices than for conventional products, which leads to better economic results for these farms (Komorowska, D. 2013). Thus, the introduction of organic production methods in agriculture represents a good prospect for the development of some farms, especially for the small sized ones. Also we can mention other reasons such as: big workforce resources that cannot find employment outside agriculture, traditional production technologies that could help to change a traditional farm into an organic one and, on the part of the market, the increasing demand for this kind of products.

**Table 1.** *The number of organic farms and their agricultural land area in Poland in the period 2004-2013*

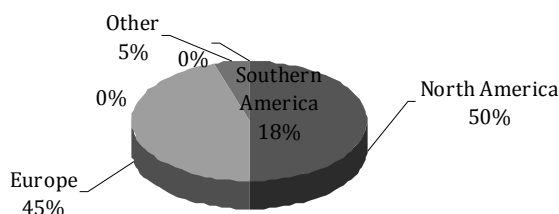
Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Number of farms	3 760	7182	9 194	12 121	15 208	17 423	20 956	23 449	25 944	26 598
Agricultural land area (thousands ha)	82.7	16.3	228.0	287.5	3 14.8	416.3	518.5	605.5	661.7	669.9

Source: Główny Inspektorat Jakości Handlowej Artykułów Rolno-Spożywczych (Agricultural and Food Quality Chief Inspectorate) in Poland

## 2. Organic food market

The world's organic food market is developing dynamically. Although its share in the whole food market is not big, it is gradually increasing year by year. In 2012, the world's organic food market was estimated to 63.8 billion US dollars (about 50 billion euros). In comparison with the late 90's, the turnover on this market increased four times (*The World...*, 2000-2014). The countries where people buy most organic products are the developed countries such as the United States, Canada, Japan and Western European countries. Organic food is achieving a growing consumers' recognition and is bought especially by older and younger people who care about a healthy lifestyle. Organic products are sold in specialized shops as well as in supermarkets, which increases their availability and demand for them.

The regions with the biggest share in the world's organic food market are Northern America (50%) and Europe (45%). Other regions, despite their large agricultural land area farmed using organic methods, have a small share in the organic food market (5% in total) and they sell their production abroad, mainly to rich countries of North America, Western Europe and Japan (Fig. 4).

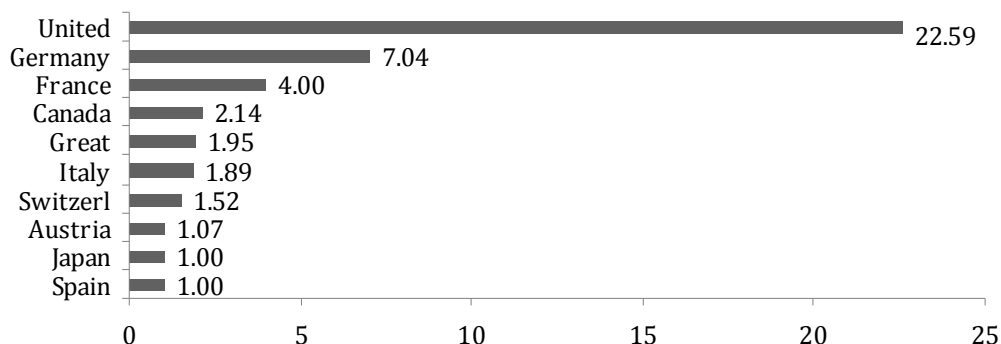


**Figure 4.** *Structure of the world's organic food market in 2012*

Source: as in Figure 1

The country with the biggest domestic organic food market in the world is the United States. Its value in 2012 was estimated to 22.6 billion, i.e. almost a half of the world's market turnover (45%). The second biggest organic food market is Germany, where the turnover in 2012 was estimated to EURO 7.0 billion, i.e. 14% of the world's market. The third biggest market is France, where its value was estimated to 4.0 billion, i.e. 8% of the whole world's market (Fig. 5). Other countries with a considerable organic food market are Canada, Great Britain, Italy, Switzerland, Austria, Japan and Spain.

The organic products that consumers most eagerly buy are fruits and vegetables. They absolutely have a bigger share in the organic products market than they have in the conventional one. In the United States, half of the turnover on the organic products market belongs to fruits and vegetables. In Europe, depending on the country, the share of fruits and vegetables in the organic food market is from 20% to 30%. Fruits and vegetables have the biggest share in the organic products market in Italy,

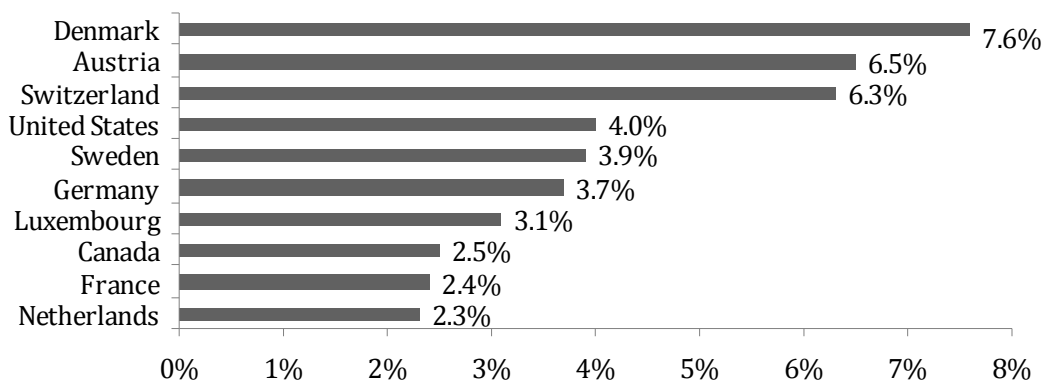


**Figure 5.** Countries with the biggest domestic organic food market in the world in 2012 (billion euros)

Source: as in Figure 1

Ireland, Norway, Sweden and Germany. Animal products, especially milk and dairy products, but also eggs, have a bigger share in the organic food market in Europe than in the USA. Moreover, meat and meat products have a considerable share in the European market, especially in Belgium, the Netherlands, Finland and France (about 10%).

The countries with the biggest organic food market share in the domestic food market are Denmark (7.6% in 2012), Austria (6.5%), Switzerland (6.3%), the United States (4.0%), Sweden (3.9%) and Germany (3.7%). There is a quite big share of organic products in the food market in Luxemburg, Canada, France and the Netherlands (Fig. 6).



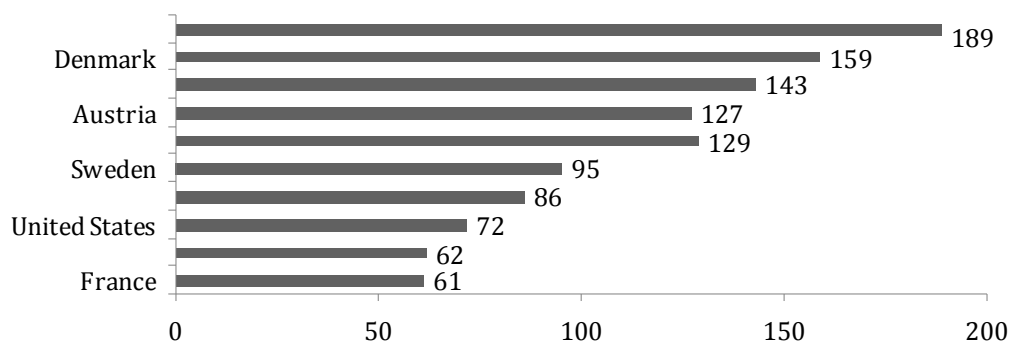
**Figure 6.** Countries with the biggest organic food share in the domestic food market in 2012

Source: as in Figure 1

The largest percentage of consumer expenditure on organic food products per capita was recorded in the rich countries of Western Europe, Sweden, the United States and Canada (Fig. 7), i.e. the countries, where organic food market has the biggest share in the domestic food market.

## CONCLUSIONS

Organic farming is developing in the majority of countries on all the continents. The largest area of agricultural land farmed using organic methods is located in Australia, Europe and South America. On the other hand, the biggest organic food markets are situated in the rich countries of North America, first of all the United States (in 2012, it constituted 45% of the whole organic food market) and in Europe (45% of this market), especially the rich countries of Western Europe. The most dynamic development of organic food production was recorded in the European countries and recently, also in Asia, especially China and India, and African countries. The products that are most eagerly bought



**Figure 7.** *Countries with the highest rate of consumer expenditure on organic food products in 2012 (euros per capita)*

Source: as in Figure 1

and dominate the organic food market are fresh fruits and vegetables. They absolutely have a bigger share in the organic products market than in the conventional one.

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