

THE IMPORTANCE OF ORGANIC FARMING IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT OF RURAL AREAS IN POLAND

Agnieszka Biernat-Jarka[✉], Paulina Trębska

Warsaw University of Life Sciences – SGGW

ABSTRACT

Organic farming is one of the basic elements of constant and sustainable development of rural areas. It is the highest form of protection of the natural environment in the field of agriculture. The aim of the article is to present the development of organic farming in Poland, which became particularly important after joining the European Union. Poland strives to increase this type of production, the more so because it has considerable predispositions and favourable conditions. Organic farming in Poland shows quite large regional variations, resulting largely from natural conditions. The largest number of organic farms in 2016 occurred in the Warmińsko-Mazurskie and Podlaskie Voivodeships, and the smallest in the Opolskie and Śląskie Voivodeships. The analysis uses data from the Central Statistical Office (GUS) and the Main Inspectorate of Agricultural and Food Quality (GIJHARS).

Key words: organic farming, sustainable development, organic production

INTRODUCTION

The main principle of sustainable development is to maintain the balance between social, economic and ecological systems, which is why it is particularly important in the case of agriculture: activity that is directly related to the natural environment [Kłós 2010]. Therefore, the concept of “constant and sustainable development” was also transferred to agriculture, where it resulted in the creation of the concept of “constant and sustainable agriculture”, which assumes [Juszkiewicz 2006]:

- responsibility for management – ethical and elastic attitude to nature;
- limiting the production volume by considering the capacity of ecosystems, as well as combining plant and animal production;
- work oriented entirely on agriculture, not only on the production and social benefits of agriculture and rural areas;

- economical handling of natural resources;
- limiting the use of measures increasing productivity;
- prices of agricultural products taking into account economic and ecological aspects;
- preservation of all soil functions as the basis for the functioning of agriculture.

The idea of sustainable development, both in the theoretical and practical dimension, is most fully implemented by the organic farming system. Organic farms are an integral part of constant and sustainable agriculture. Agricultural products from organic production are safe food, and at the same time this form of production is environment-friendly. Therefore, organic farming is a basic condition for sustainable development of rural areas. It satisfies the needs of farmers, nature and society at the same time. It also provides healthy food and does not cause environmental degradation. It provides fertile soil and allows us to preserve the richness of nature. Due to the close con-

[✉] agnieszka_biernat_jarka@sggw.pl

nection between the development of agriculture and rural development, one cannot speak about sustainable development of these areas without sustainable agriculture [Żmija 2014].

In the opinion of Runowski [2002], sustainable development of agriculture should be equated with sustainable development of rural areas, as agriculture is its primary function and the main holder of the natural environment. Organic farming and farmers' participation in the organic farming package is the highest form of protection of the natural environment in the field of agriculture.

In the concept of sustainable development of rural areas, Woś and Zegar [2002] and Siekierski [2003] distinguish four directions:

- protection of rural areas, including protection of the rural landscape, biodiversity and preventing erosion;
- protection of water, soil and air against agricultural pollution;
- careful developing of biotechnology and genetic engineering;
- constant and sustainable development of agriculture.

Sustainable agriculture aims to use land resources in such a way, so to not destroy natural sources and allows to meet the basic needs of next generations of producers and consumers [Urban 2003].

In the second half of the 20th century, organic farming was a dynamically developing field of agriculture, both in Europe and around the world. In 1999–2015, there was a fivefold increase in the area used by organic farming on a global scale [IRWiR PAN 2017]. Poland also strives to increase this type of production, the more so because it has considerable predispositions and favourable conditions.

MATERIAL AND METHODS

The aim of the paper is to assess the development of organic farming in Poland in the context of sustainable development of rural areas. The article discusses the situation of Polish organic farming in 2004–2016 in terms of the number of ecological farms, ecological arable land etc. The data from the Central Statistical Office (GUS) and the Main Inspectorate of Agricul-

tural and Food Quality (GIJHARS) was used for the analysis. The data was presented in diagrams and tables.

ORGANIC FARMING AS A BASIC CONDITION FOR SUSTAINABLE DEVELOPMENT OF RURAL AREAS

The idea of sustainable agriculture resulted from the concern for production potential, expressed, among others, in reduction of agricultural intensification, the use of industrial inputs and taking into account the specificity of local rural communities. In addition to the trend of ecological agriculture (sustainable), the socio-economic and ecological trend has developed, the main idea of which is to strive for a stable and economically profitable production in a way that does not threaten the natural environment [Paszkowski 2001].

Agriculture, through strong links with the environment and based on specific entities such as family farms, plays an important role in creating sustainable development in rural areas in the European Union, especially due to the role it plays in the management of natural resources and due to its features, which do not allow treating agricultural activity as an industrial or service activity [Golinowska 2013].

Organic farming (in other words: biological or biodynamic) is defined as a management system with sustainable crop and animal production [Szarek and Nowogródzka 2015]. Organic production should combine environment-friendly farming practices, support a high degree of biodiversity, use natural processes and ensure proper animal welfare. The basic principle is the rejection of agricultural, veterinary and food chemicals in the food production process [Barłowska et al. 2017].

The dual nature of the organic farming system is very often emphasised. First of all, it is a system that positively influences the natural environment, which also contributes to achieving broadly understood agricultural and environmental benefits. On the other hand, organic farming is a response to the changing structure of market demand. Consumers lean towards organic products, want to buy them and usually pay a higher price than for products that have not been produced by such methods [Niedek and Hoffmann-Niedek 2014].

Organic farming is currently the subject of interest of many disciplines, not only natural and economic, but also technical and social ones.

The overriding objective of organic farming is striving to increase the fertility and biological activity of soil by bringing in organic fertilization, the use of crop rotation and proper cultivation of land limiting the mineralization of organic matter. The goal of organic farming is the production of high quality food beneficial for human health in accordance with the laws of nature, while using natural plant protection against diseases and pests [Železik 2009].

Organic farming brings diverse benefits that are part of the concept of sustainable development: economic and social, environmental, health, ethical and aesthetical. In organic farming, the permissible concentrations of harmful substances in soil, water and

air are not exceeded, which is beneficial for the environment. Other benefits of this type of agriculture are described in Figure 1.

THE DEVELOPMENT OF ORGANIC FARMING IN POLAND

In Europe, organic farming has been developing since the 1970s. We observe a continuous increase in interest in organic farming in almost all EU Member States. The increase in the area of ecologically used arable lands between 2006 and 2015 in the European Union countries amounted to as much as 65% [IRWiR PAN 2017].

In 2015, in the European Union, activities in the field of organic farming were conducted by over 271.5 thousand farms. This number was the highest for Italy

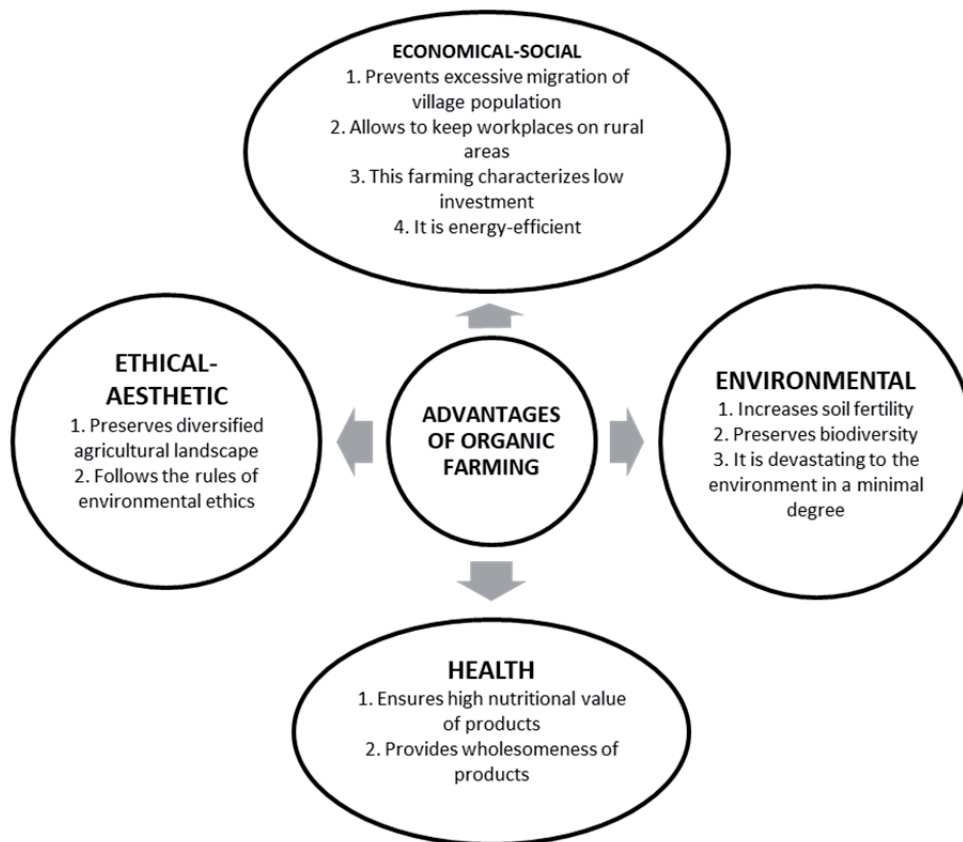


Fig. 1. Advantages of organic farming

Source: Łuczka-Bakuła [2007].

(52.6 thousand). Over 30 thousand ecological farms were registered in Spain (34.6 thousand), France (28.8 thousand), Germany (25.0 thousand), Austria (23.0 thousand) and Poland (22.2 thousand) – Figure 2.

The years 2004–2006 was the time when organic farming in Poland began to develop dynamically in line with the rules in force in the European Union. At the time, the largest number of farms were in transition to organic production. Undoubtedly, this was related to the introduction of subsidies for organic farming under agri-environmental programs in the Rural Development Programme.

Organic farming in Poland has a chance to become a significant element of the development of Polish agriculture towards its sustainable development. Poland strives to increase this type of production, the more so because it has considerable predispositions and favourable conditions. The traditional character of the Polish countryside (Polish agriculture) – predominance of family farms with small and medium size, their considerable fragmentation, appropriate soil and climate conditions, large manpower resources and low labour costs, and – above all – low level of chemical consumption – favour its expansion. It is especially

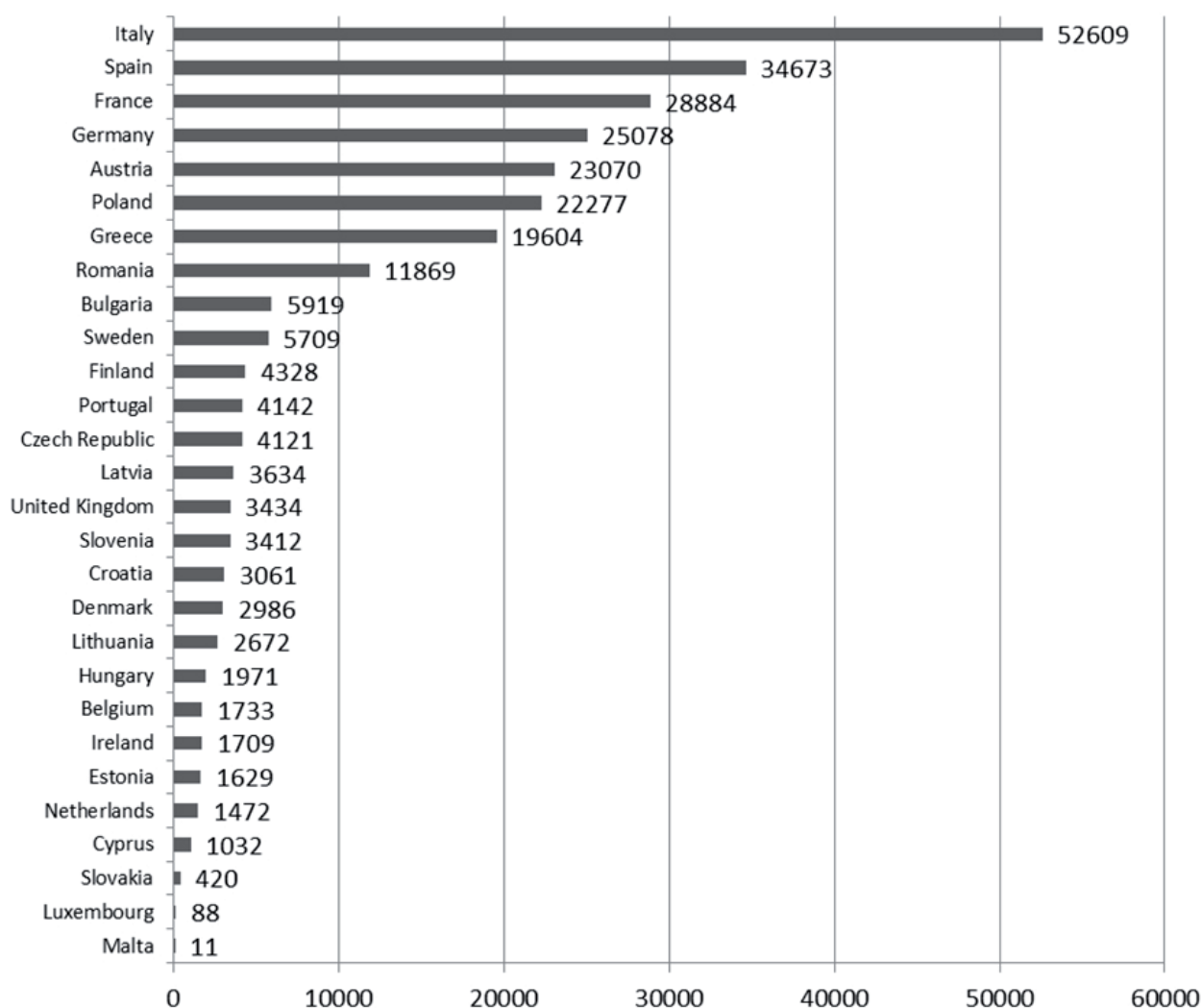


Fig. 2. Number of organic farmers in the European Union in 2015

Source: Developed based on data from the Main Inspectorate of Agricultural and Food Quality (GIJHARS).

true for regions with proper natural conditions and a low degree of industrialization, and thus a small pollution of the natural environment. The most important factors for the development of organic farming in Poland include [Komorowska 2006]:

- growing awareness of the negative effects of intensification of agriculture on the quality of life and state of the environment;
- growing share of consumers with developed ecological preferences;
- creation of a distribution and promotion system for organic products on the markets of EU member countries;
- implementation of agri-environmental programmes;
- combining organic production with the development of agritourism.

In Poland, specific requirements in the field of organic farming are regulated by the Act of 2004 on

organic farming, while the EU legal act, also applicable to Polish farmers, is Council Regulation (EEC) 2092/91 on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs.

The years 2004–2006 was the time when organic farming in Poland began to develop dynamically in line with the rules in force in the European Union. An indicator of the dynamic development of this sector after joining the European Union is the increase in the number of organic agricultural producers, including organic processing plants and organic agricultural holdings¹. The increase in the number of organic producers in Poland in 2004–2016 is shown in Figure 3. The year 2014 was the first year of decline in the number of organic producers in Poland (by 6.7%). In 2016, as of 31 December, there were 22,435 organic agricultural producers operating in organic farming. This resulted mainly from

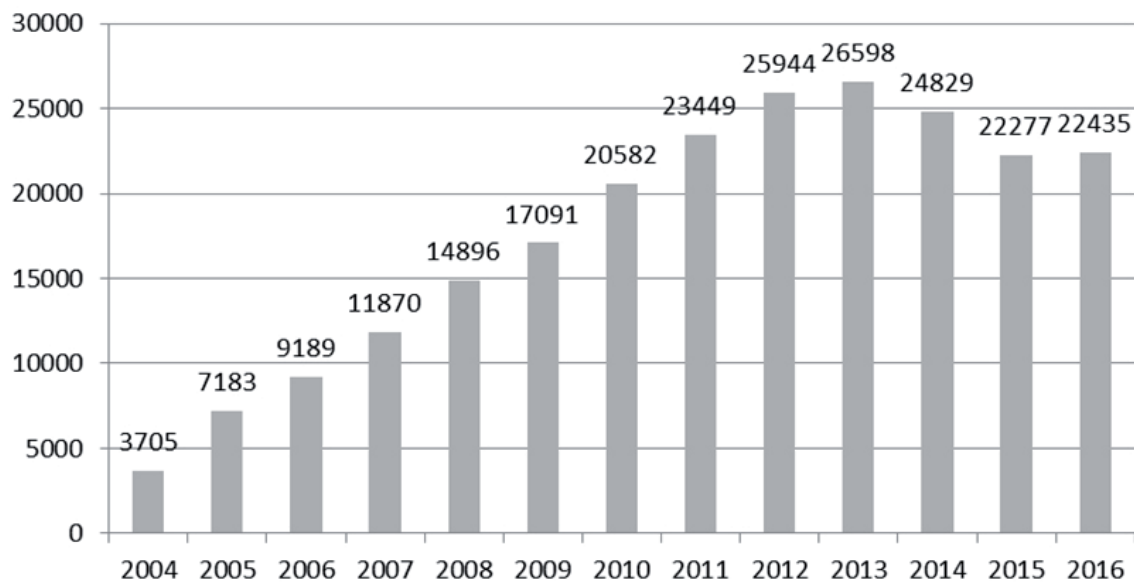


Fig. 3. Number of organic farmers in Poland in 2004–2016

Source: Developed based on data from the Main Inspectorate of Agricultural and Food Quality (GIJHARS).

¹ According to Art. 2 (2) of the Act of 2004 on organic farming, ecological producers include: organic agricultural producers, producers involved in the preparation, importers of organic products from third countries, producers conducting activities in the field of placing organic products on the market, producers conducting aquaculture activities, producers conducting harvesting activities from the natural state, organic beekeepers and suppliers of organic seed and vegetative propagating material. This paper shows data on organic agricultural producers.

the decline in the area of ecological land in Poland (Fig. 4).

According to GUS [2017a, b] data, in 2015 the area of agricultural land where organic production was conducted accounted for approximately 4.0% of all agricultural land in Poland (0.5 point less than in 2014), and in 2016 this share was around 3.7% (0.8 points less than in 2014).

In 2015, the total area of ecological arable land in Poland was 580,730 ha. In 2016, the total area of arable land on which organic production was conducted decreased by 7.6% compared to 2015 and amounted to 536,579 ha. Starting from 2014, the area of ecological arable land has been gradually decreasing. In comparison to 2013, in which the largest area taken up by organic farming was recorded (669,969 ha), in 2016 it was 19.9% lower.

A strong decline in the area of ecological land probably resulted from two reasons. First, the end of five-year obligations of large-area farms and discontinuation of the organic production method. Secondly, the introduction of degressive payment rates along with the increase in the area, which was also the reason for the resignation of farmers running large-area farms [IRWiR PAN 2017].

Since the beginning of the development of organic farming there was a significant territorial differentiation, this is directly related to the agrarian structure of Polish agriculture [Roman and Stefańczyk 2017]. The largest number of organic farms in 2016 occurred in the Warmińsko-Mazurskie, Podlaskie, Zachodniopomorskie and Mazowieckie Voivodeships. The share of the number of ecological farms in these voivodeships accounted for over 56% of the total number of producers in Poland in 2016. The smallest number of farms is observed in Opolskie and Śląskie Voivodeships (Fig. 5). Large regional diversity results to a large extent from the natural conditions characterising individual voivodeships of the country.

Analysing the structure of organic agricultural crops in 2009–2016, the share of meadows and pastures as well as horticultural and berry crops in the area of organic arable land decreases, from 46.1 and 16.1% in 2009 to 25.6 and 6.6% respectively in 2016. On the other hand, the share of vegetables and leguminous plants on dry seeds increases in the general structure of organic agricultural crops in Poland. The increase in consumption of organic food confirms changes in the structure of organic farming (greater interest in organic vegeta-

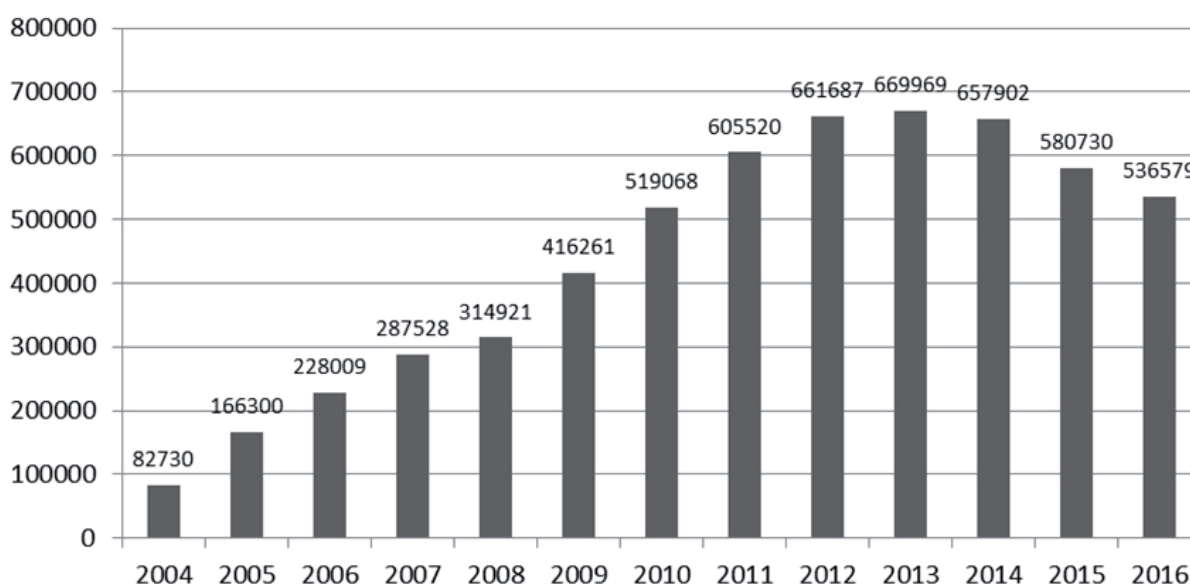


Fig. 4. Agricultural area under organic farming in Poland in 2004–2016 (ha)

Source: Developed based on data from the Main Inspectorate of Agricultural and Food Quality (GIJHARS).

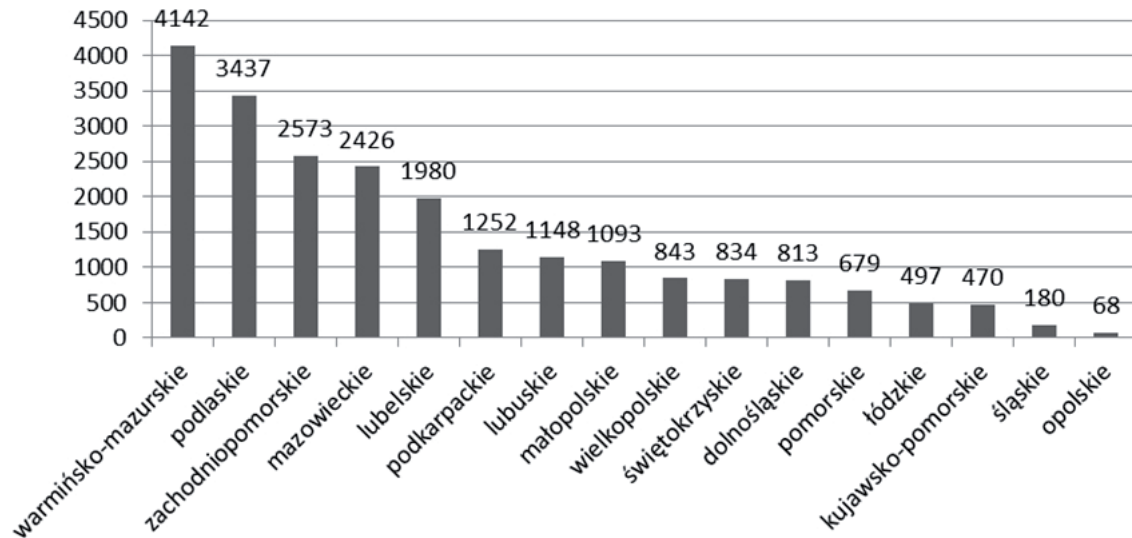


Fig. 5. The number of organic farmers in Poland by voivodeships (as of 31.12.2016)

Source: Developed based on data from the Main Inspectorate of Agricultural and Food Quality (GIJHARS).

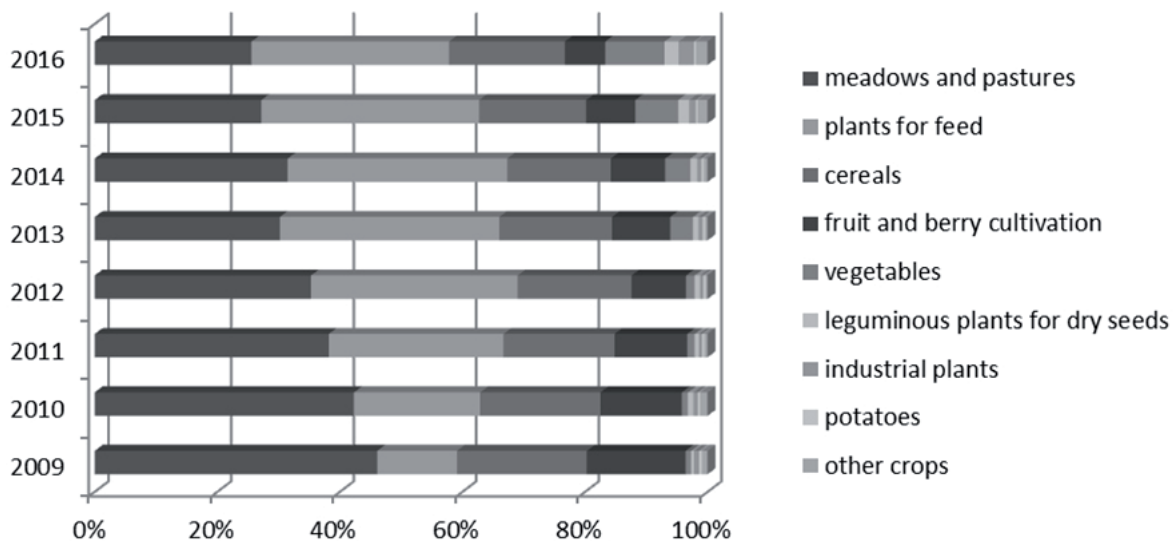


Fig. 6. The structure of the area under organic farming in 2016

Source: Developed based on data from the Main Inspectorate of Agricultural and Food Quality (GIJHARS).

bles and fruits). It gives the possibility of expansion of Polish organic agri-food products on the market.

In 2016, the largest area of ecological arable land was occupied by: plants for fodder (32.2%), meadows and pastures (25.6%), cereal crops (18.9% of ecological arable land) (Fig. 6). The share of these three cul-

tivation categories represented 76.7% of the ecological agricultural land. The share of vegetables (9.7%), legumes for dry seeds (2.3%), industrial plants (2.5%), fruit and berry crops (6.6%) and potatoes (0.3%) was a small percentage in the total area of ecological arable lands.

CONCLUSIONS

The guiding principle of sustainable development – maintaining the balance between social, economic and natural systems – is of particular importance in agriculture, or activities directly related to nature. In the conditions of sustainable development, organic farming is the most optimal farming system and, combined with other areas of the economy, should be treated as a basis for the development of sustainable rural areas, both on the regional and national levels.

Organic farming is becoming more and more popular. This is due to new trends among consumers who perceive organic products as tastier and healthier than those from conventional agriculture, while others appreciate them because of good practices towards the natural environment or workforce employed in such farms.

A particularly dynamic growth in the number of organic farms occurred after Poland's accession to the European Union, at which time it gained the greatest importance. The ecological surface of agricultural land in Poland increased significantly in 2004–2016, over three times, along with the number of farms – from 3,705 in 2004 to 22,435 in 2016 – it is an increase of over six times. Between 2014 and 2015, there was a downward trend in the number of entities participating in this system due to the end of five-year commitments of large-area farms and the simultaneous discontinuation of the organic production method.

REFERENCES

- Barłowska, J., Wolanciuk, A., Idec, J. (2017). Rolnictwo ekologiczne w Polsce na tle Unii Europejskiej i świata [Organic farming in Poland on the background of the European Union and the world]. *Przegląd Hodowlany*, 2.
- Golinowska, M. (2013). *Rozwój Rolnictwa Ekologicznego* [Development of the organic agriculture]. Wydawnictwo Uniwersytetu Przyrodniczego we Wrocławiu, Wrocław.
- GUS (2017a). *Statistical Yearbook of Agriculture 2016*. Zakład Wydawnictw Statystycznych, Warszawa.
- GUS (2017b). *Land use and sown area in 2016*. Zakład Wydawnictw Statystycznych, Warszawa.
- IRWiR PAN (2017). *Uwarunkowania ekonomiczne i społeczne rozwoju rolnictwa ekologicznego w Polsce* [Economic and social determinants of the development of organic farming in Poland]. Warszawa.
- Juszkiewicz, W. (2006). *Znaczenie rolnictwa ekologicznego w kontekście idei zrównoważonego rozwoju* [The importance of organic farming in the context of the idea of sustainable development]. [In:] *Zrównoważony rozwój w teorii i praktyce* [Sustainable development in theory and practice]. Wydawnictwo Naukowe we Wrocławiu, Wrocław, 3–6.
- Kłós, L. (2010). *Rozwój rolnictwa ekologicznego w Polsce po wstąpieniu do Unii Europejskiej* [The development of organic farming in Poland after joining the European Union]. [In:] B. Kryk, M. Malicki (Eds.), *Rolnictwo w kontekście zrównoważonego rozwoju obszarów wiejskich* [Agriculture in the context of sustainable development of rural areas]. Wydawnictwo Economicus, Szczecin, 48.
- Komorowska, D. (2006). *Perspektywy rozwoju rolnictwa ekologicznego w Polsce* [Prospects for development of organic farming in Poland]. Wydawnictwo SGGW, Warszawa, 46–47.
- Łuczka-Bakuła, W. (2007). *Rynek żywności ekologicznej – wyznaczniki i uwarunkowania rozwoju* [Organic food market – determinants and conditions of development]. PWE, Warszawa.
- Niedek, M., Hoffmann-Niedek, A. (2014). *Produkcja ekologiczna a zrównoważona w świetle odpowiedzialności biznesu* [Organic production and sustainable production in the light of the business responsibility]. *Optimum. Economic Study*, 4 (70), 52.
- Paszkowski, S. (2001). *Ewolucja idei rolnictwa zrównoważonego i rozwoju terenów wiejskich*. [Evolution of the idea of sustainable agriculture and development of rural areas]. *Więś i Rolnictwo*, 1, 52.
- GIJHARS (2009). *Farming in Poland. Report for 2007–2008*. Warszawa.
- GIJHARS (2011). *Report on the state of organic farming in Poland in 2009–2010*. Warszawa.
- GIJHARS (2013). *Report on the state of organic farming in Poland in 2011–2012*. Warszawa.
- GIJHARS (2015). *Report on the state of organic farming in Poland in 2013–2014*. Warszawa.
- GIJHARS (2017). *Report on the state of organic farming in Poland in 2015–2016*. Warszawa.
- Roman, M., Stefańczyk, J. (2017). *Przestrzenne zróżnicowanie rozwoju gospodarstw ekologicznych, w tym agroturystycznych w Polsce* [Spatial diversity of development of organic farms, including agro-tourism in Poland]. *Zagadnienia Doradztwa Rolniczego*, 2 (88), 87–103.

- Council Regulation (EEC) No 2092/91 of 24 June 1991 on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs. OJ L 198 from 22.07.1991.
- Runowski, H. (2002). Rozwój zrównoważony rolnictwa i gospodarstw rodzinnych [Sustainable development of agriculture and family farms]. [In:] *Wieś i Rolnictwo* [Rural areas and agriculture, development prospects]. IERiGŻ, IRWiR PAN, Warszawa, 139–141.
- Siekierski, J. (2003). Zrównoważony rozwój rolnictwa i wsi w świetle Narodowego Planu Rozwoju i Traktatu Akcesyjnego do Unii Europejskiej [Sustainable development of agriculture and villages in the light of the National Development Plan and the Treaty of Accession to the European Union]. *Acta Agraria et Silvestria Series Agronomia Sekcja Ekonomia*, 40, 5–13.
- Szarek, S., Nowogródzka, T. (2015). Regionalne różnicowanie rozwoju rolnictwa ekologicznego w Polsce [Regional diversification of the development of organic farming in Poland.]. *Journal of Agricultural Rural Development*, 1 (35), 125–135.
- Urban, S. (2003). Rola ziemi w rolnictwie zrównoważonym a aktualne jej zasoby w Polsce [The role of land in sustainable agriculture and its current resources in Poland]. *Acta Agraria et Silvestria Series Agraria Sekcja Ekonomia*, 40, 25–36.
- Ustawa z 20 kwietnia 2004 r. o rolnictwie ekologicznym [The Act of 20 April 2004 on organic agriculture]. *Dz.U.* 2004 nr 93, poz. 898.
- Woś, A., Zegar, S. (2002). Rolnictwo społecznie zrównoważone [Socially sustainable agriculture]. IRWiR PAN, Warszawa.
- Żelezik, M. (2009). Dlaczego rolnictwo ekologiczne? [Why do we need organic farming?]. *Rocznik Świętokrzyski Seria B Nauki Przyrodnicze*, 30, 155–166.
- Żmija, D. (2014). Zrównoważony rozwój rolnictwa i obszarów wiejskich w Polsce [Sustainable development of agriculture and rural areas in Poland]. *Economics, Uniwersytet Ekonomiczny w Katowicach*, 166, 149–158.

ZNACZENIE ROLNICTWA EKOLOGICZNEGO W KONTEKŚCIE ZRÓWNOWAŻONEGO ROZWOJU OBSZARÓW WIEJSKICH W POLSCE

STRESZCZENIE

Rolnictwo ekologiczne jest jednym z podstawowych elementów trwałego i zrównoważonego rozwoju obszarów wiejskich. Stanowi ono najbardziej zaawansowaną formę ochrony środowiska przyrodniczego w obszarze rolnictwa. Celem artykułu jest przedstawienie rozwoju rolnictwa ekologicznego w Polsce, które nabrało szczególnego znaczenia po wstąpieniu naszego kraju do Unii Europejskiej. Polska dąży do zwiększenia tego kierunku produkcji, tym bardziej że ma ku temu znaczne predyspozycje i dogodne warunki. Rolnictwo ekologiczne w Polsce wykazuje dość duże zróżnicowanie regionalne, wynikające w znacznej mierze z warunkowań przyrodniczych. Największa liczba gospodarstw ekologicznych w 2016 roku występowała w województwach warmińsko-mazurskim i podlaskim, a najmniejsza w opolskim i śląskim. W analizie wykorzystano dane Głównego Urzędu Statystycznego oraz Głównego Inspektoratu Jakości Handlowej Artykułów Rolno-Spożywczych.

Słowa kluczowe: rolnictwo ekologiczne, rozwój zrównoważony, produkcja ekologiczna