

LEGAL AND ECONOMIC ASPECTS OF THE DEVELOPMENT OF ORGANIC FARMING IN POLAND IN 2004-2016

Justyna Pijanowska¹, Janusz Żmija²

University of Agriculture^{1,2}

Institute of Economics and Business Management

Al. Mickiewicza 21, 31-120 Krakow

Krakow, Poland

e-mail^{1,2}: j.pijanowska@ur.krakow.pl, rrzmija@cyf-kr.edu.pl

Abstract

This study is dedicated to considerations on organic farming as well as the analysis of Polish legislation and the state and trends of organic farming development in Poland in 2004-2016.

Organic farming is part of the idea of sustainable agriculture, where agricultural production takes into account the need to care for the natural environment (species health, care for the condition of waters and soils), as well as the needs of the people who run it (agricultural, i.e. economic and social).

An analysis of the development trends of organic farming in Poland allowed to conclude that the number of agricultural producers and the area of ecological arable land increased within the indicated period of time, although the highest number was noted in 2013. However, in the indicated period, the number of entities dealing in the processing of organic farming products grew steadily.

Given the regional disparities in the state of development of organic farming in Poland, it can be concluded that organic production does not yet dominate in those regions where small agricultural holdings are in great number, although in 2016 the highest number of entities included in the so-called organic agricultural holdings happen to be among such agricultural holdings.

Keywords: *organic farms, sustainable agriculture*

JEL classification: *Q01, Q12, Q13, K23, K32*

1 Introduction

Agriculture is one of the oldest human activities that people have been developing since they began to lead a sedentary lifestyle. At the same time, it is a very important branch of the economy, which, like other departments, has been subject to changes throughout history. The literature claims that after the mechanization, industrialization and automation, the time has come for the digitization of agriculture. The latter is also referred to as agriculture 4.0, that is agriculture using the world of new technologies such as: the Internet, mobile applications supporting farm management or drones. In reference to this, it should be mentioned that the subject literature also uses such terms as: industrial, post-industrial, conservative, self-supplying, family, sustainable and precise agriculture (Czyżewski & Kryszak, 2017). Under each of these concepts is a different way followed by people running agricultural holdings.

At present, a farmer is a person who combines knowledge about agricultural production, in particular cultivation, raising and breeding, with the knowledge in other fields, including the economy, accounting, banking, law or logistics. From the point of view of sustainable agriculture, it is important, for example, to constantly raise the knowledge of farmers in the field of environmental protection and the threats to the environment that agricultural production may cause.

A view prevails in the literature that sustainable agriculture is one that meets certain minimum values in three spheres: environmental (also called ecological), economic and social (Zegar, 2005). However, the subject of the discussion are not the mentioned spheres but the indicators that allow the farm to be included in the group of entities operating under sustainable agriculture. There is a lack of unanimity among the persons or institutions participating in this discussion on the aforementioned indicators. Using the value catalog proposed in the literature in relation to the environmental sphere, it can be assumed that it is a catalog of good agricultural practices, and therefore those that favor the environment, ideally allowing to preserve its wealth, or at least not harming it. (Tyburski, Szejewski & Glińska-Lewczuk, 2013) Regarding the economic sphere, it can be assumed that, on the one hand, the most important value is the income generated by a given entity dealing in agricultural production, and on the other hand the share of this production in the total agricultural production of the country. Among the features characterizing the social sphere, the literature mentions maintaining or increasing the economic viability of rural areas and using the economic potential (e.g. work) of the people living there.

Organic farming was the focus of this study. After finding arguments supporting the thesis that organic farming implements the idea of sustainable agriculture,

the authors will try to answer the question whether there are legal rules relating to organic farming, in particular those whose fulfillment allows the conversion of agricultural holdings from conventional to organic farming and operating as part of the processing of organic products. At the end, the authors will analyze the development trends of organic farming in Poland. The studied period falls on the years after the accession of Poland to the European Union and may be an interesting platform for comparative research.

2 Data and Methods

The research material relating to the part of this publication regarding Polish law are literature on the subject and the texts of legal acts of the European Union and Polish legislation dedicated to organic farming. This material has been analyzed using various rules and methods of statutory interpretation and evaluated. The research material relating to the economic part of this publication is secondary data and exactly published results of research carried out by entities dealing in organic production from 2004-2016 presented by Agricultural and Food Quality Inspection and literature on the subject. The collected data has been analyzed and presented in a descriptive, tabular and graphic form.

3 Results

3.1 Organic farming versus sustainable agriculture

On the basis of the general considerations included above regarding sustainable agriculture, the question should be asked whether organic farming is a part of the idea of sustainable agriculture.

The authors analyzing the impact of agriculture on the natural environment state that the relationship between agriculture and the natural environment is related to agricultural policy (in the case of the European continent in particular with the agricultural policy of the European Union) and the daily practice of people running agricultural holdings (Lockeretz, 2007). Funds for pro-environmental activities can only be covered by agricultural holdings defined by them as medium and large. The small and the largest agricultural holdings have problems in this matter, that is supporting the pro-environmental activities. The reasons for this situation are described in the literature as not entirely clear (Wrzaszcz, 2013). As indicated by the aforementioned authors, it is undoubtedly necessary to take two circumstances into account in this situation. A higher income can be achieved from better quality goods obtained thanks to pro-environmental

activities or from funds from the European Union, i.e. obtained from area payments invested in environmentally friendly activities.

The literature also claims that on ecological agricultural holdings, agricultural practices, which can be described as favorable to the environment are used on a daily basis. At the same time, one can find statements of the authors who put this claim in doubt. The reason for the inability to provide a clearly positive answer to this question is the fact that the relationship between the agricultural practice and its impact on the environment has not been unequivocally examined (Czyżewski & Kryszak, 2017). It has not been explicitly investigated, because it is impossible due to too many indicators to be taken into account in order to fully assess this relationship. After analyzing the external effects of agricultural production it can be concluded that the greatest pollution is caused by methane (related to animal production), nitrous oxide, ammonia and carbon dioxide emissions. Research shows that organic agricultural holdings emit less carbon dioxide per hectare. However, the emission of this gas per unit of agricultural production is comparable to the emission recorded in traditional agriculture (Stolze, Piorr, Häring & Dabbert, 2000). The results of other studies indicate that while the emission of nitric oxide in such farms is lower, the opposite is the case for methane (Troccoli, Maddaluno, Mucci, Russo & Rinaldi, 2015), which is produced more in organic agricultural holdings, which is probably associated with animal production.

Although the analysis of the subject literature does not allow to clearly state that organic farming definitely improves the condition of the natural environment, it also does not allow to formulate a statement that it harms or definitely harms it, and this leads to a conclusion that at this point they can be classified as sustainable agriculture.

Another problem that should be analyzed is the profitability of organic farming. This remains in connection with phenomena belonging to the social sphere. Polish consumers are becoming more and more aware of the features of healthy and good-quality food. Ecological products are gaining popularity year by year (Matysik-Pejas, Szafranska & Horska, 2017). They can be purchased at stationary and online stores as well as directly at agricultural producers. In view of the fact that consumer awareness is increasing, it should be assumed that the market for organic products will not diminish but will grow (Wasilik, 2014). Hence, it can be assumed that the income of the producers of organic goods, including processors, will not decrease and with high supply it will grow. The possibility of achieving regular income by persons conducting agricultural activity is another aspect of sustainable agriculture. It guarantees the implementation of the basic needs of people engaged in this type of manufacturing activity in agriculture, and further financial security and confidence. The acquired funds, in turn, allow various

social needs to be met or can be used to expand production and ultimately promote the very idea of organic farming.

3.2 Organic farming in the Polish legal system

Review of the literature

The idea of organic farming in Poland originated in the 1930s. In the period after the Second World War, this model of agriculture was not popular. Instead of “how it was produced”, the “how much” was of more importance. The state was betting on the quantity rather than on the quality of the food produced. The interest in organic farming came with the political transformation in the 1990s. At that time, various circumstances were observed that could have contributed to the development of organic farming in Poland. One of them is the large labor force, while the others are the level of development of the economic sector, in which the level of fertilizer use was lower than in Western Europe, or the widespread belief in the beneficial effects of organic farming on the environment (Kowalska, 2010).

In the literature on the subject, it is recognized that one of the milestones in the development of organic farming in Poland was the creation of the EKOLAND Association. The statutory tasks of this entity included the promotion of organic farming. The next ground-breaking moments are the two regulations of the Minister of Agriculture and Food Economy from 1998 and 1999 respectively regarding subsidies for agriculture in relation to the costs of control of organic agricultural holdings and subject subsidies including subsidies to organic farming areas. It should be assumed that they appeared in the Polish legal system due to the European Agreement concluded in 1991 by Poland, that is the association agreement with the European Communities. At the end of the 1990s, 555 agricultural holdings used a certificate confirming their ecological character. And it has remained so to this day. Only the possession of a certificate entitles one to use the name of an organic producer and to put the appropriate logo on the products.

The first Act on organic farming originated in 2001 (Dz.U. 2001 nr 38 poz. 452) and its creation is connected with Poland's preparations for accession to the European Union, which took place on May 1, 2004. Prior to the accession, Poland undertook to adapt its domestic law to the European Union law. Due to the fact that agriculture (therefore also organic farming) is one of the pillars of the common European market, it remains in the direct interest of the European legislator (Willer & Lernoud, 2017). Therefore, the Act of 2001 took into account Council Regulation (EEC) No 2092/91 on organic farming and the labeling of its products and foodstuffs. The regulation became part of Polish law on May 1, 2004. From then, Polish farmers may apply for subsidies to the area of organic farming as part of the Rural Development Programme (RDP) as well as to include a Community

mark on their products confirming that a given product is an ecological product. On the other hand, Polish organic goods may have been exported to other Member States of the Community without any problems since May 1, 2004 due to the fact that the European Commission recognized Polish certificates of organic farming (Kowalska, 2010). Statistical data, which will be presented later in this study, covers the period from 2004 to 2016. The most intensive development of organic farming in Poland is noted for the years 2007-2013. In 2007, Council Regulation (EC) No 834/2007 came into force in the law of organic production and labeling of organic products. It replaced the abovementioned Council Regulation (EEC) No 2092/91. Regulation 834/2007 was in turn amended, among others by Council Regulation (EC) No 967/2008. Commission Regulation (EC) No 889/2008, which lays down detailed rules for the implementation of Council Regulation (EC) No 834/2007 and has been amended by two Commission Regulations (EC) No 1254/2008 and 710/2009, together with our national Action Plan for ecological food and organic farming for the years 2007-2013 contributed to its significant development. As it will be presented below, it was in these years that organic farming developed most intensively and its best results were achieved exactly in 2013. Commission Regulation (EC) No 1235/2008 is devoted to the issue of importing organic products from third countries, which constitutes detailed rules for the implementation of Regulation 834/2007. In the meantime, in 2009, the Polish legislator passed a new Act on organic farming (Dz.U. 2009 nr 116 poz. 975). This act is supplemented by numerous executive acts. With reference to the EU perspective of financing agriculture covering the years 2014-2020, it is worth mentioning the Regulation of the European Parliament and the Council (EU) No 1307/2013 regarding direct payments to farmers on the basis of support schemes under the Common Agricultural Policy (CAP), which provides for the institution of greening. This is one of the objectives of the CAP, for which one can obtain funds under direct payments. The aforementioned regulation also provides for payment for agricultural practices beneficial for the climate and the environment (i.e. diversification of crops, maintenance of an existing permanent grassland and maintenance of an ecological area on farmland) or equivalent practices (Leśkiewicz, 2015). In turn, Regulation (EU) No 1305/2013 of the European Parliament and of the Council concerning support for rural development by the European Agricultural Fund for Rural Development (EAFRD) refers, among others, to quality systems through the regulation of farm certification as well as payments to maintain organic farming and conversion to organic farming.

Results

The above mentioned calculation shows how many legal acts should be taken into account in order to build a legal norm aimed at regulating a specific issue within the framework of organic farming. For ease, it should be assumed that the reading of the regulations should start from the sources of EU law, and the national provisions should be applied secondly (Rolnictwo ekologiczne, 2009). The key document is Council Regulation (EC) 834/2007. Its explication is provided in the Commission Regulation (EC) 889/2008, and the details regarding Poland as for today are defined within the Act on Organic Agriculture and RDP 2014-2020 (RDP, 2014). The law defines the objectives, principles and rules of organic production in a very general way. The objectives, principles and rules apply to plant and animal production, care for soil, fertilizers and plant protection products. The principles of organic farming include production conducive to the sustainable exploitation of resources, total abandonment of genetically modified organisms, use of measures other than external resources and non-use of means derived from chemical synthesis.

Entities interested in conducting manufacturing activities as part of raising, breeding and organic farming are required to obtain a special certificate. It is awarded by the certification bodies over which the supervision is carried out by the Agricultural and Food Quality Inspection (www.ijhar-s.gov.pl). Thanks to this practice, we have accurate data on the number of entities that can be identified as organic producers. Starting a business may refer both to entities that have not yet conducted production activity in agriculture, as well as those that carried out the activity, but the production took place with the use of products not allowed in organic production and are ready to abandon their use and submit to the control system as well as those that only partially deal with organic production. The resetting step is called the conversion step. Special case are the situations where the law permits the so-called derogations from the organic production rules. Most often they relate to the stage of conversion of production from conventional to organic, and may be caused by climate, geographical location or due to structural issues (Rolnictwo ekologiczne, 2009). However, the opinion of the certification body is indispensable in this case.

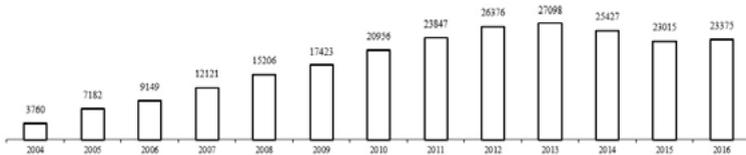
3.3 Organic farming in the Poland – an economic view

The basis for the following part of a paper is statistic data presented by Agricultural and Food Quality Inspection.

As shown in the statistics below (Figures 1, 2 and 3), organic farming in Poland grew stronger from the beginning of the process of political transformation, with the most dynamic development stage falling in the years 2004-2013. In 2013, the number of organic producers was the highest in history, with the agricultural

producers being understood as two groups of producers, namely organic agricultural producers (Figure 2) and organic entities involved in the preparation (Figure 3), i.e. organic product processors, organic food importers, beekeepers and fishermen engaged in aquaculture.

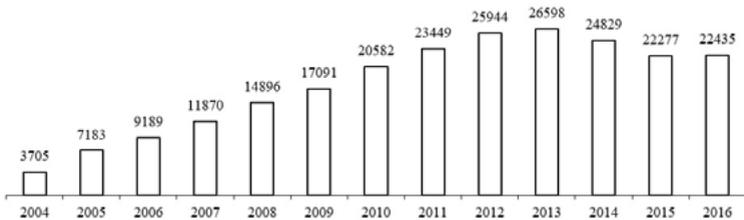
Figure 1 Number of organic producers in Poland in 2004-2016



Source: www.ijhar-s.gov.pl.

The constant increase in the number of organic agricultural producers was observed in 2004-2013. The year 2014 was the first year in which the number of organic agricultural holdings was lower than in the previous year. Detailed data (not included in this study) allows us to state that in the indicated period some producers withdrew from such production, with the largest extent being in the Małopolskie (456 entities), Podkarpackie (269 entities) and Świętokrzyskie (212) provinces. It is interesting insofar as in these voivodeships (territorial division units of Poland) predominate the so-called small agricultural holdings, i.e. agricultural holdings with a small area of up to 5 ha, for which conversion from conventional to organic production is often treated in the literature and by agricultural advisors as an opportunity to preserve production, or relatively to develop the business, as well as to increase profitability.

Figure 2 Number of organic farmers in Poland in 2004-2016

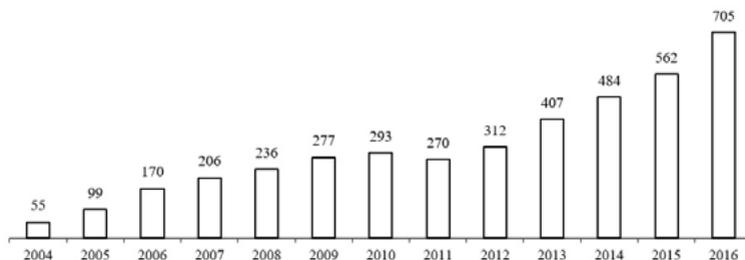


Source: www.ijhar-s.gov.pl.

As mentioned above, the group referred to as organic entities involved in the preparation is in a decided minority and, what is more, it constitutes

a heterogeneous group, as it brings together entities operating in various fields. What is interesting is that since 2004 this group is constantly growing. A particularly high increase in the number of entities involved in the preparation has been recorded since 2013.

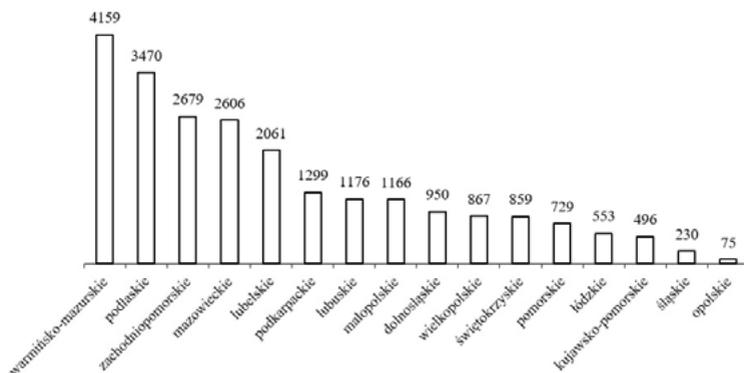
Figure 3 **Number of organic processors in Poland in 2004-2016**



Source: www.ijhar-s.gov.pl.

The next issue that should be analyzed is the number of agricultural producers in individual voivodships. Poland is divided into 16 provinces. The provinces with fragmented agriculture are: Małopolskie, Podkarpackie, Świętokrzyskie and Śląskie. As shown in Figure 4, organic producers dominate in provinces in which the agriculture is not fragmented.

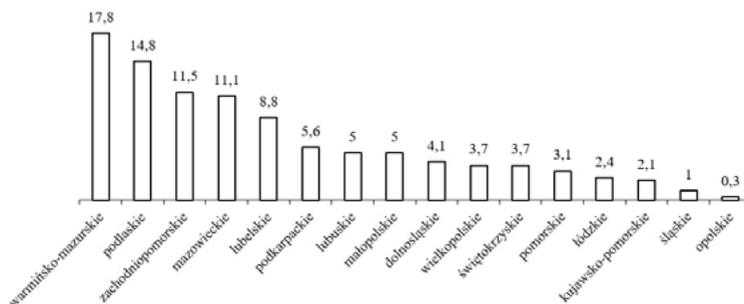
Figure 4 **The number of organic producers by voivodships in Poland in 2016**



Source: www.ijhars.gov.pl.

Analyzing the share of organic producers from individual provinces in their total number in 2016 (Figure 5), it can be stated that half of the organic producers, or exactly 55%, are producers from provinces where medium and large agricultural holdings dominate. In the provinces where the small agricultural holdings dominate, the production is run by 16.6% of the total organic producers.

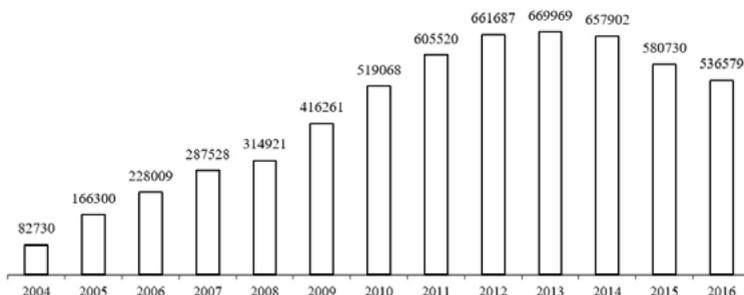
Figure 5 **The share of organic producers in relation to total number of organic producers in Poland in 2016 [%]**



Source: www.ijhar-s.gov.pl.

The data collected in the years 2004-2016 allows us to observe the changes in the area designated for organic production (Figure 6). An interesting relationship can be noticed here, namely a decrease in the area covering organic production. Since 2014, year to year, the area dedicated to organic production has diminished. And although the number of organic producers is increasing, this is not accompanied by an increase in the area of ecological arable land. The first conclusion is that it is probably related to the increase in the number of entities involved in the preparation. Another reason may be that although the number of agricultural holdings conducting organic production is increasing, they are so small that the sum of their area does not result in an increase in the total area of agricultural land allocated for organic production.

Figure 6 Agricultural area under organic farming in Poland in 2004-2016 [ha]



Source: www.ijhar-s.gov.pl.

The relationship described above can be analyzed based on the data presented below (Table 1).

Table 1 Structure of the area under organic farming in 2015-2016

Area	2015 number	2015 share [%]	2016 number	2016 share [%]
> 5 ha	3176	14,3	4535	20,3
5-10 ha	5024	22,5	4570	20,4
10-20 ha	6350	28,5	5917	26,5
20-50 ha	4736	21,3	4653	20,8
50-100 ha	2016	9,0	1878	8,4
< 100 ha	975	4,4	816	3,6
Total	22277	100,0	22369	100,0

Source: www.ijhar-s.gov.pl.

While in 2015, the agricultural holdings with an area of 10-20 ha were in the lead among organic agricultural holdings, in turn in 2016, it was the agricultural holdings with an area of up to 5 ha that became the leaders. This indicates some transformations, maybe a change in the thinking of operators of small agricultural holdings. The data may also indicate that it is profitable for people running small agricultural holdings to join the group of organic producers. However, the correctness of these conclusions will be confirmed or not in the future when the statistical data for 2017 is made available.

As shown by the presented statistical data, the breakthrough year was 2014, when both the number of organic producers and the area of agricultural area under organic farming began to decline. In connection with this tendency, it is

worth considering its causes. In particular, it is worth to analyze whether this dependence is not related to the fact that in 2014 a new multiannual financial framework for agriculture began. The analysis of the Polish RDP for the years 2014-2020 (RDP, 2014) shows that the agri-environmental schemes are different than in Polish RDP for the years 2007-2013 (although it should be noted that a precise analysis of differences of this two RDPs in this paper is not possible). For example the access to agri-environmental schemes is related to the obligation to have animals. Organic farmers who do not have animals (who cultivate fodder plants or orchards) have given up organic farming instead of changing their production profile. This allows to presume that an important reason why some farmers have resign from organic farming after 2013 was Polish RDP 2014-2020.

4 Conclusion

The above considerations lead to the conclusion that organic farming, taking into account its impact on the natural environment, the social and economic spheres of their operators, is part of the idea of sustainable agriculture.

The above review of the legislation allows us to state that the European legislator is interested in organic farming. The proof are the legal acts that are created, changed and updated, as well as the priorities of the Common Agricultural Policy. The legislator not only notices that organic farming has a positive impact on the environment and for this reason they promote it, but they also are aware of what problems organic producers may face and the importance of such mechanisms as quality systems and their control, or the financial support aimed at conducting information and promotion activities that allow consumer acquisition.

The data presented above allows us to state clearly that significant changes in the state of organic farming occurred with the accession of Poland to the European Union and access to agri-environment payments. Organic farming is undoubtedly gaining popularity among both the producers and the consumers of organic products.

References

1. CZYŻEWSKI, B., KRYSZAK, Ł. (2017). Wpływ typów rolnictwa na emisję gazów cieplarnianych. *Więś i Rolnictwo*, 1(174)/2017, p. 99-122. doi: 10.7366/wir012017/05
2. MATYSIK-PEJAS, R., SZAFRANSKA, M., HORSKA, E. (2017). Factors affecting consumer buying process of organic food in Krakow urban area.

- Proceedings of the International Scientific Conference: Economic Science for Rural Development. 45. p. 314-321.
3. KOWALSKA, A. (2010). Czynniki wpływające na rozwój rolnictwa ekologicznego w Polsce i innych krajach europejskich. *Annales Universitatis Mariae Curie-Skłodowska Lublin Polonia*, Vol. XLIV, Sectio H, nr 1, p. 47-63.
 4. LEŚKIEWICZ, K. (2014). Nowe spojrzenie na rolnictwo ekologiczne – aspekty prawne. *Przegląd prawa rolnego*, nr 2(15) - 2014, p. 121-133. doi: 10.14746/ppr.2014.15.2.7.
 5. LOCKERETZ, W. (Ed.) (2007). *Organic farming. An International History*. www.cabi.org <http://base.dnsgb.com.ua/files/book/Agriculture/Organic-Agriculture/Organic-Farming-An-International-History.pdf>
 6. Ministerstwo Rolnictwa i Rozwoju Wsi (2009). *Rolnictwo ekologiczne. Podstawy prawne*. Warszawa.
 7. Główny Inspektorat Jakości Handlowej Artykułów Rolno-Spożywczych / Agricultural and Food Quality Inspection (2017). *Raport o stanie rolnictwa ekologicznego w Polsce w latach 2015-2016 / The report on organic farming in Poland w latach 2015-2016*. Warszawa. <http://www.ijhar-s.gov.pl/pliki/A-pliki-z-glovnegokatalogu/ethernet/2017/pazdziernik/BRE/Raport%20o%20stanie%20rolnictwa%20ekologicznego%20w%20Polsce%20w%20latach%202015-2016.pdf>.
 8. RDP 2014-2020 = *Program Rozwoju Obszarów Wiejskich na lata 2014-2020* <http://www.minrol.gov.pl/Wsparcie-rolnictwa/Program-Rozwoju-Obszarow-Wiejskich-2014-2020> .
 9. STOLZE, M., PIORR, A., HÄRING, A., DABBERT, S. (2000). *The Environmental Impacts of Organic Farming in Europe. Organic Farming in Europe: Economics and Policy*; 6. Stuttgart-Hohenheim.
 10. TROCCOLI, A., MADDALUNO, C., MUCCI, M., RUSSO, M., RINALDI M. (2015). It is appropriate to support the farmers for adopting conservation agriculture? Economic and environmental impact assessment. *Italian Journal of Agronomy*, 10(4), p. 169-177.
 11. TYBURSKI, J., SZWEJKOWSKI, Z., GLIŃSKA-LEWCZUK, K. (Eds.) (2013). *Rolnictwo ekologiczne jako metoda ochrony środowiska*. Uniwersytet Warmińsko-Mazurski w Olsztynie. Olsztyn.
 12. WASILIK, K. (2014). Rolnictwo ekologiczne i rynek eko-produktów w Polsce na tle innych krajów europejskich. *Handel Wewnętrzny*, 3(350), p. 157-168.
 13. WILLER, H., MEREDITH, S., BARABANOVA, J., MOESKOPS, B., STOLZE, M. (2017). Organic Farming in Europe. In H. Willer, & J. Lernoud (Eds.) (2017). *The World of Organic Agriculture. Statistics & Emerging Trends 2017* (p. 197-243). Research Institute of Organic Agriculture FiBL. IFOAM – Or-

ganics International. <https://shop.fibl.org/CHen/mwdownloads/download/link/id/785/?ref=1>

14. WRZASZCZ, W. (2013). Zrównoważenie indywidualnych gospodarstw rolnych w Polsce objętych FADN. *Zagadnienia Ekonomiki Rolnej*, 334(1), p. 73-90.
15. ZEGAR, J. St. (Ed.) (2005). *Koncepcja badań nad rolnictwem społecznie zrównoważonym. Ekonomiczne i społeczne uwarunkowania rozwoju polskiej gospodarki żywnościowej po wstąpieniu Polski do Unii Europejskiej*. Instytut Ekonomiki Rolnictwa i Gospodarki Żywnościowej - Państwowy Instytut Badawczy. Warszawa.