Trends in the Development of Organic Farming in Poland and Latvia Compared to the EU

*Adam Pawlewicz¹, Katarzyna Brodzińska², Andra Zvirbule³, Dina Popluga⁴

^{1,2}Department of Agrotechnology, Agricultural Production Management and Agribusiness,
University of Warmia and Mazury in Olsztyn, Poland

^{3,4}Faculty of Economics and Social Development,
Latvia University of Life Sciences and Technologies, Jelgava, Latvia

ORCID ID: Adam Pawlewicz <https://orcid.org/0000-0002-7381-0536>

Katarzyna Brodzińska <https://orcid.org/0000-0003-1329-2391>

Andra Zvirbule <https://orcid.org/0000-0001-7206-7608>

Dina Popluga <https://orcid.org/0000-0002-8182-8218>

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Abstract. The development of organic farming is determined by many factors. On the one hand, it is an increase in demand for food produced in this production system, on the other it is a subsidy system for organic farming under the CAP. The purpose of the article is a comparative analysis of the direction of changes in the development of organic farming in Poland and Latvia compared to the EU in the years 2000–2017. Information was analysed on the organic farming i.e. the area of organic crops, the number of certified farms and organic retail sales, based on FIBL data from the years 2000–2017. An analysis of the trend of changes in organic farming in Poland and Latvia indicates that the development of organic farming in both countries has clearly accelerated after their accession to the EU and after covering organic farming by the CAP support system. However, the case of Poland is definitely different from the trend of changes in organic farming in Latvia and in the EU, where both the number of organic farms and their area increased, with the simultaneous development of the organic food market. There are many indications that mistakes were made in the organic farming subsidy system.

Key words: organic farming, Poland, Latvia, EU, trend, development.

Introduction

The implementation of the concept of sustainable development requires a new approach to production, trade and the consumption process (Brzezina *et al.*, 2017), and the growing interest in the development of organic farming throughout the world proves that this concept is being implemented. The area of organic farming as well as the consumption of food produced in the organic farming system increases (Bryla, 2016; McKay, 2016; Rana & Paul, 2017). The organic

food market has been one of the most dynamically developing food markets in the world for almost two decades (Fedchyshyn, Ignatenko, & Bondar, 2019). The global market for organic agricultural products in 2001–2016 increased from USD 21 billion to USD 89.7 billion, i.e. more than four times. At the same time, the global area of organic farming has more than tripled. With the rate of growth in the value of organic food sales being faster than the increase in the area of organic crops, this bodes well for the prospects for

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* Corresponding Author's email:
adampawl@uwm.edu.pl

the development of organic farming. This is especially true for Europe, because there are as many as eight European countries, including six EU countries in the top ten countries with the highest consumption of organic products per capita in the world (Brodzinska, 2018).

In the article, the authors attempt to assess the trends in the development of organic farming in two countries that joined the EU in 2004, namely Poland and Latvia. These are the countries of Central and Eastern Europe with the largest area of organic agricultural land. The purpose of the article is a comparative analysis of the direction of changes in the development of organic farming in Poland and Latvia in comparison to the EU in the years 2000-2017. To achieve this goal, the authors analysed historical data of the discussed production system in these countries and the general trends of changes in organic farming in the EU. Information was analysed on the organic farming i.e. the area of organic crops, the number of certified farms and organic retail sales, based on The Statistics.FiBL.org data included the available data from the years 2000–2017, in horizontal. In order to determine the anticipated changes, authors applied deductive reasoning method based on mathematical analysis of historical data, literature on the subject, and source documents. The author used historical data for the presentation of the trend in development using linear regression method by estimating the numerical value of the dependent variable y (response variable – numerical values of an investigated phenomenon, e.g. the number of farms, the area of organic agricultural land) based on the values of independent variables x (prediction of the dependent variable based on the independent value, e.g. a year).

Results and Discussion

Organic farming in the EU has been rapidly growing in recent years. In 2000, the number of organic farms was over 135 thousand, and a year later it increased to 148 thousand (by approx. 9%). In the following years, i.e. 2002-2004, a decrease in the number of organic farms of approx. 1% per year was recorded, but since 2005 the number of organic farms in the EU began to increase systematically. This was due to both the accession of new Member States to the EU, including Poland and Latvia, as well as the increased interest from farmers in this production system in the so-called old EU member states. Naturally, financial support for organic farming under the CAP has increased farmers' interest in this production system, especially in countries which joined the EU in 2004. In fact, in the years 2005-2017, the increase in the number of organic farms in the EU amounted to over 10 thousand farms per year (2014

was the only year when there was a slight decrease compared to the previous year). In 2017, there were over 305 thousand organic farms in the EU (Figure 1). With the growing number of organic farms, their share in the total number of farms in the EU has increased. In 2005, the value of this indicator was 1.1%, and in 2017 it reached almost 3%. In Poland, the overall statistical trend is growing as well and in the analysed period it stood at over 1.6 thousand farms annually because it was determined by the years of dynamic growth (2004-2012). The highest number of organic farms in Poland was recorded in 2012 – 25 944, which constituted approx. 1.8% of the total number of farms. The main factor behind the increase in the number of organic farms at that time was the high level of subsidization of this production system (Brodzinska, 2015), which unfortunately did not translate measurably into an increase in the domestic supply of organic food (Pawlewicz, 2020). In the case of Poland, the real possibilities of increasing the number of organic farms linked to the market have been largely exceeded, which is why since 2012 both the number and area of organic agricultural land has fallen. In 2017, the number of organic farms was only about 20 thousand (about 1.4% of all farms) (Figure 1). The most important reason for this decline were changes in the organic farming subsidy system under the CAP (lowering support rates, raising requirements for funding). These changes had an impact on the withdrawal from this production system of owners of subsistence farms who did not sell agricultural produce, but only benefited financially from agricultural subsidies. In the system of supporting organic farming, the key issue is the correct valuation of pro-environmental services under agricultural subsidies. Overvaluation of services in this area, together with easy to meet additional requirements, causes a high supply, which took place in 2005-2012. In turn, lowering the amount of support (e.g. for walnuts) and raising additional requirements (e.g. making financial support for forage area dependent on the stocking density) has an impact on farmers' decisions to abandon farming in the organic system. Therefore, despite the synthetic trend of the growing number of organic farms in Poland, further slowdown can be expected, although the dynamics of the decline will be much lower. This is a paradox in a situation where the demand for organic food is growing, consumer spending for this purpose is increasing, and the number of businesses operating in distribution and processing is increasing.

Also, in Latvia in the period before integration with the EU, the number of organic farms increased relatively slowly. It started to increase dynamically only after Latvia's accession to the EU, although

Source: authors' construction based on FiBL Statistics - European and global organic farming statistics (FiBL. 2019).

Figure 1. The trend of a change in the number of organic farms in the years 2000–2017.

already in the years 2003–2004 the number of organic farms in this country increased by almost 90% from 550 in 2003 to 1 043 in 2004. Importantly, already in 2004, organic farms accounted for almost 2% of the total number of farms in this country. By the end of 2017, this number had quadrupled, reaching nearly 4.5 thousand farms, which accounts for over 6% of the total number of farms (Figure 1). However, it should be emphasized that also in this country, in the years 2009–2013, there was a slight decrease in the number of organic farms compared to the years 2006–2008, but at the same time an increase in the production area was noted. This was related to the withdrawal of very small farms from the organic production system, which were no longer supported by EU funds and as a consequence their owners often did not apply for certificates (Latvia's organic sector ..., 2014).

The dynamics of the increase in the number of organic farms in Latvia was not as impressive as in the case of Poland, however, the synthetic trend indicator shows an increase in the number of farms on an annual basis by approx. 230 with an average annual change of almost 36% (Figure 1). Such high growth was also caused by the implementation of payments and the control system compliant with EU regulations and the introduction of an action plan which stimulated farmers' interest in the transition to the organic system

(Melece, Praulins, & Popluga, 2009; Tambovceva, 2016). It is also important that people's awareness of organics is higher than in Lithuania and Poland and at the same time wages and household expenses increase (Latvia's organic sector ..., 2014). These factors certainly affect the increase in real demand.

In the analysed period in the EU, along with the increase in the number of organic farms, the area of organic agricultural land increased as well at a rate of almost 500 thousand ha per year. In 2000, the area was over 4.3 million ha. The observed annual increase of 6.5% meant that in 2017 the area of organic agricultural land increased to almost 13 million ha (Figure 2). The share of organic agricultural land in the total UAA (Utilised agricultural area) in the EU increased from 2.3% in 2000 to 7.2% in 2017. The countries with the largest areas of organic land were Spain (one-sixth of Europe's organic farmland), Italy, France, Germany. It is worth adding that among European countries, non-EU countries – Russia, Ukraine and Turkey - also achieve significant positions. In turn, among the EU countries from Central and Eastern Europe, Poland and Latvia have the largest area (Willer, Schaack, & Lernoud, 2019).

In Poland, the area of arable land in the organic production system in 2000–2013 increased more than 30 times, from 22 thousand ha in 2000 (0.12% of the

Source: authors' construction based on FiBL Statistics – European and global organic farming statistics (FiBL. 2019).

Figure 2. The trend of the area of organic agricultural land in the years 2000–2017.

total arable land) to nearly 670 thousand ha in 2013 (4.7%). However, a year later this trend reversed. In 2014, a decrease of almost 2% can be observed compared to the previous year. This trend continued until 2017, when the area of organic farms amounted to less than 494 thousand ha (share in the total area of agricultural land at 3.7%) (Figure 2). Compared to 2013, it was a decrease of 174 thousand ha, i.e. by about 26%.

In Latvia, in turn, the production area of organic farms until 2017 shows a growing trend of over 15 thousand ha per year. In 2000, organic agricultural land accounted for less than 4.4 thousand ha (share in the total area of agricultural land - 0.18%). A slight decrease can only be observed in 2009, when the area decreased compared to the previous year by only 0.9%, and then increased to the level of almost 167 thousand ha (share at the level of over 9%). In turn, in 2017, the area of ecological agricultural land reached almost 270 thousand ha, which represents nearly 15% of the arable land in this country. It is worth noting that even in the years 2009-2013, when the number of farms decreased, the area of organic arable land increased (Figure 2). This situation is different than in Poland, where in the analysed period there was a decrease in both the number and the area of organic agricultural land. An analysis of changes in the number and the area of organic agricultural land in

2000-2017 indicates that in Poland there were factors that caused a different course of trends than in the EU and Latvia.

The transformation processes in the area structure of organic farms in the EU are relatively slow. Although the trend direction is growing, the annual mean increase in the average area of an organic farm is only 0.32 ha. In 2000, the average area of an organic farm was over 32 ha. By 2004, its rapid increase to over 42 ha can be observed. However, after the enlargement of the EU with new Member States in 2004, the value of this indicator decreased. The accession of new countries to the EU, and thus the increase in the number of small organic farms meant that the average area of an organic farm in the EU in 2006 decreased to almost 38 ha. An increase can be observed since 2007, but without such high dynamics as before, although in 2017 the value of the indicator increased to its level from 2004 - almost 42 ha (Figure 3).

However, in Poland, in the years 2000-2003 there was a very dynamic increase in the average area of an organic farm. At the beginning of this period, the average area of an organic farm was 15.5 ha, and in 2003 its value doubled - 27.1 ha. However, after joining the EU in 2004, the upward trend was halted, and even a drop in the average organic farm area was noted to 22 ha. Although in the entire analysed period 2000-2017 a lower value was recorded only in 2008 -

21.1 ha and 2009 - 21.5 ha. Therefore, the trend is not growing (it is worth adding that the regression analysis is not statistically significant), and the value of the average area of an organic farm after Poland's accession to the EU fluctuates around 25 ha (Figure 3). In general, the trend of changes in the average area of organic farms in Poland is similar to the trend of changes observed in the EU.

However, the situation in Latvia is different. In the years 2000–2005 one can notice a dynamic decline in the average area of an organic farm in this country from over 56 ha to 36.3 ha, and a slight increase in 2005–2009. However, after this period there was a very dynamic increase in the average area of organic farms from approx. 46 ha in 2010 to almost 65 ha in 2017. This indicator is over 2.5 times higher than in Poland and 1.5 times higher than in the EU. It is worth noting that the period of 2009–2013 strongly influenced the direction of changes of this indicator. This was due to the fact that the number of organic farms in Latvia decreased and the area increased, which resulted in an increase in the average area of organic farms. The synthetic trend is an increase of over 1.1 ha in the area of one farm per year (Figure 3).

A very important factor in the development of organic farms is the demand for products produced in this system. In the case of the organic food

market development, real demand is determined by household expenditure on this purpose. They depend mainly on the level of income and prices, education and ecological awareness of consumers, as well as marketing strategies of producers. The level of expenditure is also influenced by organic crop area total fully converted and under conversion to organic farming, population and final consumption expenditure of households (Pawlewicz, 2019).

The value of the global organic market in 2000–2017 increased by over 500% to the level of EUR 92 billion. The largest market for organic products is the US, value of which was estimated at over EUR 43 billion in 2017. The EU came second - over EUR 34 billion, with Germany and France being the leaders. The value of the organic food market in the EU is constantly growing (Lernoud & Willer, 2019). The trend described on the basis of the regression equation indicates an average, annual increase of this indicator at the level of almost EUR 1.5 billion per year ($r^2 = 0.96$, $p < 0.05$) (Figure 4).

A similar phenomenon can be observed in Poland, although this process is characterized by heterogeneity. Until 2000, the value of the organic food market was small and in 2004 reached over EUR 1.5 million. However, a year later it increased 16-fold to a level of EUR 25 million, and in 2005 to EUR

Source: authors' construction based on FiBL Statistics - European and global organic farming statistics (FiBL, 2019).

Figure 3. The trend of the average area of an organic farm in the years 2000–2017.

Source: authors' construction based on *Organic operators by status of the registration process (from 2012 onwards) (org_cotyp)*, FiBL Statistics – European and global organic farming statistics (FiBL. 2019).

Figure 4. The trend of the organic retail sales in the years 2000–2017.

50 million. Over the next four years, statistics show stabilization on this market at EUR 50 million. In 2010, another surge of 100% to EUR 100 million can be observed, and a year later to EUR 120 million. Such a level, according to statistical data, persisted until 2014. Despite the aforementioned changes in organic farming regulations in 2014 and the related decline in both the number and area of organic agricultural land, in subsequent years the value of the organic food market in Poland continued to increase dynamically to reach the level of EUR 235 million in 2017 (Figure 4). However, it should be emphasized that imports have a large market share (Szymona, 2013). Regression analysis indicates that the average annual growth of this indicator is almost 15 million per year, which proves that this market is growing by around 10-20% per year.

In Latvia, on the other hand, until 2016, the value of sales on the organic food market was just EUR 4 million. It wasn't until 2017 when statistical data showed a very large increase, almost 13 times, to the level of EUR 50 million (Figure 4). The question that arises is whether this is the real state – interest in organic food and its consumption suddenly increased? Unfortunately, the direction of the changes is not confirmed by synthetic forecasts because regression analysis showed no statistical significance.

Organic food expenditure is the highest in highly developed countries, which is primarily related to the level of income of the inhabitants. In highly developed countries, consumers are able to pay a high price for organic products, spending for this purpose is over EUR 200 a year per capita. The highest annual consumption per capita was recorded in Switzerland in 2017 (EUR 288), followed by Denmark (EUR 278), Sweden (EUR 237), Luxembourg (EUR 203), Austria (EUR 196), Liechtenstein (EUR 171). In turn, the lowest expenditure on organic food per capita in the EU is in the countries of Central and Eastern Europe, which explains a lot when it comes to domestic markets of organic products in Poland (EUR 6.15) and Latvia (EUR 6.15) (Willer, Schaack, & Lernoud, 2019).

Conclusions, Proposals, Recommendations

Organic farming faces a number of challenges, especially since on 30 May 2018, the European Parliament and the Council adopted new European Union (EU) regulations on organic production and labelling of organic products. The new EU regulation on organic production will apply from 1 January 2021. That is why today organic farming plays a leading role in making European agriculture more sustainable, and in the next CAP programming period

the organic farming support system will certainly continue. However, it is worth taking steps to improve the efficiency of financial resources allocated for this purpose.

The basis for directing agricultural policy and implementing financial assistance for the development of organic farming is change of the priorities of the CAP in the direction of counteracting the negative effects of climate change, the need to take measures to protect the environment and ensure food security and food safety. In connection with the above, organic farming seems to be a prospective direction for the development of agricultural production. An analysis of the trend of changes in organic farming in Poland and Latvia indicates that the development of organic farming in both countries has clearly accelerated after their accession to the EU and after covering organic farming by the CAP support system. However, the case of Poland is definitely different from the trend of changes in organic farming in Latvia and in the EU, where both the number of organic farms and their area increased, with the simultaneous development of the organic food market. There are many indications that mistakes were made in the organic farming subsidy system in Poland, which meant that the subsidizing method did not permanently strengthen organic farms. Instead, it encouraged the owners of subsistence and semi-subsistence farms to this production system. In the event of changes in the farm subsidization system, these farmers simply withdrew from organic farming. In the case of changes in the subsidy system, these farms simply withdrew from organic farming. Farmers who have been operating on this market for years remain in the organic farming system. However, effective bottom-up activities (at the level of individual countries) as well as at EU level should be sought, which are aimed at increasing the competitiveness of organic farms and promoting this production system, e.g. vertical and horizontal integration.

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