

## **ECONOMIC DETERMINANTS IN THE SUPPORT OF ORGANIC ORCHARDS LAID DOWN IN THE RURAL DEVELOPMENT PROGRAMME 2014–2020**

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### **INTRODUCTION**

In the European Union's (EU) new financial framework for 2014–2020, pro-environment measures for reducing the impact of agriculture on the environment were given far greater priority than they had been previously. The most obvious example of how is the process known as greening, which consists in making the large part of payments to farmers under the system of direct payments contingent upon compliance with three basic requirements: appropriate crop diversification, maintaining proper pro-environmental land area and prohibiting the conversion of permanent grassland.

Organic farming has likewise gained in importance, a fact reflected by its being classified as a separate activity (from the Agri-environment programme) under the Rural Development Programme (RDP 2014–2020). This type of farming is the opposite of conventional agriculture – the priority is to protect the environment and provide products free of chemical residues. There's a total ban on the use of substances of industrial origin (fertilisers, pesticides and the like), which, while lowering production efficiency and significantly increasing costs [Runowski 2009], remains safer for the environment. Without the appropriate subsidies, however, organic farming simply cannot compete with conventional production.

In some EU countries organic farms incur losses in production that are compensated by a system of subsidies [Kuś 2012]. This is because the market for organic products has only begun to develop, and there is a lack of established sales channels. Therefore, the majority of those producing organics receive prices that are only marginally higher than those growers of conventional products command [Tyburski and Żakowska-Biemans 2007]. The rules for granting aid and the extent of subsidies for organic production are therefore very important as to a large extent they determine the rationale for organic production.

## GOALS, SOURCE MATERIAL AND METHODOLOGY

The aim of the article is to describe measures supporting organic orchards as laid down in the RPD 2014–2020 and how that support has changed compared to the RDP 2007–2013. The research task was to present the economic situation of organic orchards relative to other farms engaged in the production of organics and to identify the results of changes in the system of supporting organic orchards.

Data on individual farms were used for the calculations. They were acquired by the Institute of Agricultural and Food Economics-National Research Institute in the framework of FADN (Farm Accountancy Data Network) for the year 2011 from 12,000 farms. The observation of commercial farms falls within FADN's purview. When the minimum economic size is exceeded, drawing a farm within FADN's field of observation, was established from the 2010 financial year on the basis of the analysis of the sum Standard Production (SO) from GUS (Poland's Central Statistical Office) data in particular classes of economic size. In practice, the calculation is done using the cumulative sum of the SO final classes, starting from the highest, to achieve approx. 90% of the population SO test. The lower limit of the range in which this occurs is the minimum threshold of economic size [FADN 2013]. The calculation was done according to the income statement in the FADN's current system.

In the sample, there are 270 individual farms certified compliant with the rules governing organic production. These farms were not chosen deliberately and are not representative in statistical terms of commercial organic farms found in the Polish FADN's field of observation. However, this is one of the largest sources of data on organic farms, and allows conclusions to be drawn about their economic situation.

The article also draws on data from Poland's Agency for the Restructuring and Modernisation of Agriculture (ARMA) and the Supreme Audit Office in Poland (SAO) from 2011 and 2015 on the use of public money for fruit orchards and berry farming within the framework of the agri-environmental programme.

## LEGAL DETERMINANTS

Organic farming in Poland currently functions on the basis of both community and national legal acts. The most important include Council Regulation (EC) 834 of 28 June 2007 on the issue of organic production and the marking of organic products (Official Journal of the EU of 20.07.2007, 189/1) and the Act of 25 June 2009 on organic farming (Journal of Laws 2009 No 116, pos. 975). Under these laws, every farmer undertaking organic farming must apply with the relevant certifying body, which conducts annual inspections of the entire production process. Once farmers have met all the requirements, they receive a certificate and can sell product bearing the EU's organic foods label. Subsidies for farmers engaging in organic farming is a separate issue. The amount and rules of such subsidies were defined in the Rural Development Programme 2007–2013 and published by the Minister of Agriculture on the basis of their regulations.

## THE GUIDELINES FOR SUPPORTING ORGANIC PRODUCTION UNDER THE RDP 2007–2013

If a farmer starting up organic production has managed a surface area of at least 1 ha of agricultural land, he or she could receive additional support for initiating the Agri-environmental Programme – Package 2 (organic farming). The additional support is contingent upon a 5-year agri-environment obligation being taken. The essential element of that requirement was the agri-environmental measures, which defined all the requirements and recommendations the farmer must meet. Beyond that, farmers had to commit to using the principles of good farming practices across the entirety of the farm. The payment request itself was submitted on the same form as the application for area payments. Table 1 lists the amount of payments in the framework of Package 2 (organic farming) in 2012.

TABLE 1. Amount of payments for organic farming in the RDP 2007–2013 (PLN/ha)

Specification	Period of conversion		
	years 1–2	years 3–5	post-conversion
Agricultural cultivation	840	790	790
Permanent grasslands	330	260	260
Cultivating vegetables	1 550	1 300	1 300
Cultivating fruits and berries	1 800	1 540	1 540
Cultivating other fruits and berries	800	650	650

Source: the author's own elaboration on the basis of the Regulation of the Minister of Agriculture and Rural Development of 26 February 2009 on detailed conditions and procedures for granting financial assistance under the Agri-environmental Programme of the Rural Development Programme 2007–2013.

For orchard cultivation, there is a three-year conversion period during which, despite meeting the requirements of organic farming, the grower cannot sell products as organic, but is entitled to increased support for production. In the framework of orchard cultivation, the group other fruit and vegetable cultivation was highlighted. These include low cost crops chokeberry, for example which qualified for lower subsidies than other fruit crops.

## THE CURRENT ECONOMIC SITUATION OF FRUIT FARMS RELATIVE TO OTHER ORGANIC FARMS

At the end of the RDP 2007–2013 support period, the economic and organisational situation of organic farms broke down as follows (on the basis of FADN data).

The average size of permanent crop-classified fruit farms was 18 ha. Conventional farms surveyed by the FADN were similarly small, where fruit farms, with the exception of gardens, have the lowest average surface.

Despite their small acreage, however, organic fruit farms have the highest economic value. This is because the majority of farms involved in this type of farming operate at a high level of production, which translates into substantial income. Subsidies for the

production of organics, as a part of agri-environment subsidies, do not differ in terms of amount of subsidies in other types of farms (Table 2). This will be of particular importance for issues discussed further on in this article.

TABLE 2. Economic-organisational data on organic farms

Specification	Field crops	Permanent crops	Dairy cows	Grazing animals	Mixed
Economic size (PLN)	26 825.80	32 375.00	22 895.40	24 655.60	17 068.50
Surface area of agricultural land (ha)	43.4	18	20	39.9	19.1
Total production (PLN)	76 573	159 479	77 855	47 713	58 055
Total costs (PLN)	85 524	54 264	65 415	61 048	55 772
Subsidies for operations (PLN)	79 136	38 229	39 161	70 937	35 185
Agri-environmental subsidies (in the framework of operational subsidies) (PLN)	30 259	20 709	13 758	24 024	12 758
Income from family farms (PLN)	66 247	147 612	50 549	54 729	36 376

Source: the author's own research based on FADN standard results obtained in 2013 by ecological farms participating in the Polish FADN. Part I. Performance Standards, Warsaw, 2015.

Figure 1 shows the share of environmental payments in farm incomes in 2011 and 2013. Between 2011 and 2013 the share of environmental payments in the income of permanent crop-classified farms fell from 32 to 14%. The share grew in all other farm types with the exception of dairy farms. This means that orchard production became less dependent on environmental payments during this period.

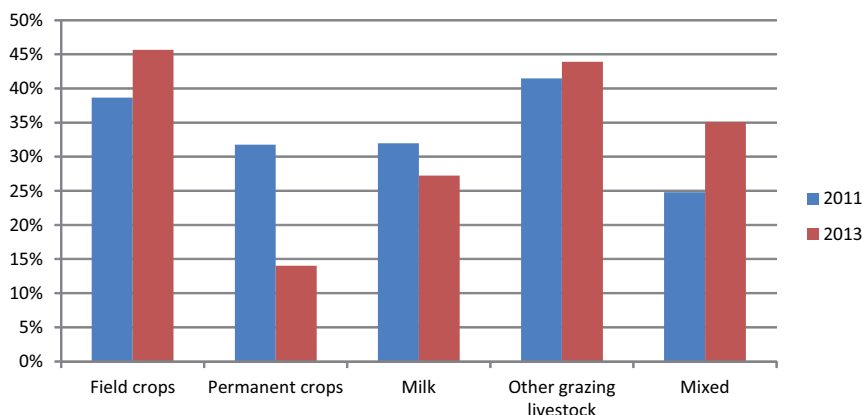


FIG. 1. The share of subsidies for organic production in organic farm revenues

Source: the author's own research on the basis of FADN data, Standard results 2011 from the organic farms participating in the Polish FADN. Part I. Standard Results, Warsaw, 2013 and Standard Results 2013 gained from the organic farms participating in the Polish FADN. Part I. Standard Results, Warsaw, 2015.

It should be emphasised that the system for supporting organic production (and particularly fruit farms) during the RDP 2007–2013 stirred a good deal of controversy, as reflected in a report on the inspections conducted by Poland's Supreme Audit Office [SAO 2010]. In it, SAO reported a large number of irregularities in the system for supporting the cultivation of organic fruit, including:

- a lack of legal requirements on the minimum crew (employees), seedling quality and agrotechnical operations to be carried out;
- high payments (1,800 PLN/ha) for nuts and the lack of the above requirements led to a situation where almost 60% of subsidies for organic orchard production was awarded for walnut crop.

Aware of these problems in 2008 and 2009, The Ministry of Agriculture and Rural Development in Poland (MARD) changed the Agri-environment programme, laying down the minimum agricultural treatments, minimal crews, lowering payments for walnuts and cutting off subsidies for new non-fruit nut farms.

The Agri-environment reforms were not revolutionary changes – they had to take place within the framework of the RDP 2007–2013. However, RDP 2014–2020 brought the opportunity to properly regulate organic orchard production.

## **A DISCUSSION OF THE CHANGES TO SUPPORT FOR ORGANIC PRODUCTION UNDER RDP 2014–2020**

From the programme's very start, the RDP 2014–2020 measures on organic orchards caused a great deal of controversy among growers, food-processing companies and decision-makers alike. The biggest concerns related to the system of annual reductions of subsidies, according to which orchard keepers are entitled to 100% only for an area of 10 ha and 50% for 10 to 20 ha. No subsidies are currently available for anything above 20 ha. In addition, the payment is intended "exclusively for areas on which there are cultivated species of fruit trees during fruiting periods/or fruiting shrubs as laid down in the regulation". In justifying these measures, MARD reported:

- the rapid increase in the area of ecological fruit cultivation (including apple trees) was not translating into production of certified fruit. This is what led the European Commission to initiate its audit;
- support of the agri-environmental programme in accordance with the principle of additionality cannot be the sole reason for the decision to start organic production;
- major abuses on the part of beneficiaries – growers combatting misuse of ecological payments. Reducing environmental payments to 10 ha of orchards was intended to limit the setting up of large-scale cultivation only in order to obtain grants [Ministry of Agriculture and Rural Development 2013a].

Unfortunately, these arguments are confirmed by the results of SAO's most recent control [SAO 2015]. The inspector called out particularly the very low yields being produced by organic fruit farming. In 2005, the yield was 15.5 t/ha, but the figure came in as low as 0.7 t/ha in 2013. Inspections carried out among organic growers explained the reasons for the dramatic decline. Of the 20 farms visited, with a combined area of 600 ha, only 11 received marketable yield, and only 6 farms sold part of their crops as

actually organic. SAO estimated that fruit was sold as organic by only 3–5% of the areas inspected. Most growers (13) declared that when the RDP 2007–2013 came to a close, organics would be liquidated. This was because a large part of the controlled cultivation was established in areas that were thoroughly unsuitable for this purpose (the soil was too dry or wet), and the minimum agricultural measures had not been taken (fencing, protection against animals, elimination of weeds). Examples of such crops are depicted in Figures 2 and 3.



FIG. 2. 30-year-old multi-strain apple orchard, weeds preventing movement, protective cuts not made for a long time

Source: SAO, Information on the results of controls “the use of public means for the cultivation of fruits and berries under the agri-environmental programme”.



FIG. 3. The cultivation of apple trees, wetlands, on neighbouring meadows. No fence. Trees destroyed by animals

Source: SAO, Information on the results of controls “the use of public means for the cultivation of fruits and berries under the agri-environmental programme”.

Farming of this type arouses justified suspicion that it has been undertaken solely to obtain subsidies, and after the 5-year agri-environmental commitments their continuation will not make economic sense. Of course, not all of the organic fruit farms inspected failed. Some were in good shape, and their owners expressed their intention to maintain production even in the absence of subsidies. Nonetheless, state authorities bear partial responsibility for the problems that remain. By changing the regulations governing organic orchards, MARD has itself failed to lay a solid foundation for the production, particularly in light of the fact that investments (planting the trees) will not bear fruit literally and figuratively for a few years or even decades.

The results of SAO's inspections showed that numerous changes must be made to the system of support for organic fruit farming. Proceeding to establish rules and payment rates for organic farming in the RDP 2007–2014 was calculated based on the balance of lost income and additional costs incurred. Calculations are done for the country divided into four regions, though the payment rates were standardised for Poland as a whole (Table 3).

TABLE 3. Payments for organic farming in the RDP 2014–2020 (PLN/ha)

Specification	During the conversion period	After conversion
Agricultural cultivation	966	792
Permanent grassland	428	428
Vegetable cultivation	1 557	1 310
Basic fruit cultivation	1 882	1 501
Extensive fruit cultivation	790	660
The cultivation of fodder on arable land	787	559

Source: the author's own elaboration on the basis of Regulation of the Minister of Agriculture and Rural Development of 13 March 2015 on detailed conditions and procedures for granting financial assistance under the "organic farming" measure of the Rural Development Programme 2014–2020.

Experience gained from the RDP 2007–2013 also had an effect on the rates, related to the number of applications for specific activities, and defining the "attractiveness" of individual payments [RDP 2014–2020]. As part of the payment for orchards, two types of rates — for basic orchard crops and extensive ones were distinguished.

## CURRENT RDP 2014–2020 DETERMINANTS

In the final version of the RDP 2014–2020, there remained the matter of reducing subsidies. "Economies of scale", reflected in the calculations of the Polish FADN, was the justification offered for the reduction. They show that the additional costs arising from compliance with environmental requirements are negatively correlated with the surface area of agricultural land. Large farms are relatively easier to adapt to these requirements, and can also obtain better prices for their products, a fact confirmed elsewhere [Gołasa 2015]. Large farms can offer sizable, homogenous batches, which is extremely important given the often large distances separating these growers from processing plants and the



need to test raw materials for the presence of residues. The cost of such a study can run up to 1,000 PLN (250 EUR). With the low volume of supply, organic processors face a dilemma: risk and take the raw material without examining whether the farmer has actually not used chemicals, or refuse to purchase the product. Unfortunately, experienced processors indicate that particularly small farmers fail to respect the environmental requirements, which can lead to the presence of residual chemicals in the finished product. The economies of scale are also reflected in fixed costs incurred on the farm, in the share of preparatory and auxiliary work during the agrotechnical operations, amortisation of newly purchased machines, and the ability to profitably hire specialised machinery. All of this justifies the degression of subsidies for organics to the following levels:

- surface areas not exceeding 50 ha are 100% subsidised;
- each additional hectare between 50 and 100 ha is 75% subsidised;
- each additional hectare over 100 ha is 60% subsidised.

Of note here is that additional degressivity for fruit cultivation has been abandoned (subsidies only to 20 ha). The opinions and conclusions of organisations of organic producers played an important role in the decision to do so, as they voiced a number of arguments against this solution. It seems that, at the Ministry of Agriculture, it was principally believed that organic agriculture (especially organic fruit farming) is done on small farms, with all work carried out manually by the farmer. This is patently false. Due to the completely different technology it involves, organic arboriculture requires extensive knowledge on the part of the grower, investment in specialised machinery, storage, and assistance from expert consulting services. True organic orchards employ all of these production factors and cover large areas. Only such holdings leave the realm of small, self-subsistence farms and manage actual commodity production, a fact FADN data on economies of scale confirms.

Additional degressivity of subsidies was waived; however, the final version of the RDP 2014–2020 included provisions on the obligation to cultivate species of fruit trees during the fruiting and/or fruiting shrubs. This means that newly planted crops that are not yet producing fruit are not eligible for support. These are sensible measures, as they limit the support of non-yielding production. The situation is somewhat different with the obligation to maintain farms with fruit trees for two years after the commitment had ended. In the first draft, that period was meant to run to five years, which would seem to go too far in limiting production. The new RDP also abandons another approach used in the RDP 2007–2013 linking agri-environmental-climate subsidies to organic farming subsidies, which organic farmers often took advantage of. While it is theoretically possible that commitments could be implemented under the agri-environmental climate measures and organic farming operations in a single farm, they must be implemented in different areas. This follows directly from EU Regulation 1305/2013.

## CONCLUSIONS

The issue of subsidies for organic orchards in recent years has aroused great controversy and problems. On the one hand, support for organic production, which is safer for the environment and yields chemical residue-free product, is greatly needed. However,



there have been numerous examples of the use of subsidies contrary to their purpose, as inspections done by the SAO show. The solution to this problem must be very carefully balanced to eliminate the irregularities without wiping out the organic farming industry. Solutions implemented in the latest RDP seem to be a step in the right direction. The reduced subsidies, and the requirement that trees and shrubs be cultivated while they are fruiting, will help ensure the measures benefit real fruit farmers. As the FADN data show, organic orchards receive the lowest share of environmental payments in the income of all types of farms. In monetary terms, this means that organic fruit farming can yield significant revenues without the support of EU funds. The changes introduced will help plug the holes in the payment system, but ARMA and other inspection bodies have a huge role to play here. Without the education of farmers and spot inspections, even the best-designed legal standards will not be efficacious.

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**Summary.** The aim of the article is to describe measures aimed at supporting organic orchards in the the RDP 2014–2020 and how that support differs from that offered by the RDP 2007–2013. Drawing on FADN data, the article presents the current economic situation fruit farms face and discusses the importance of subsidies for organic production for those farms’ incomes. The second part of the article examines the reasons the system of support for organic fruit farms was reformed and looks at the most important changes to the economic and legal determinants in the RDP 2014–2020 as they apply to the production of organic fruit farms. I assert that most of the new changes are justified and will allow real organic fruit farms to develop while also doing away with the planting of crops by farmers seeking merely to collect the subsidies for them.

**Słowa kluczowe:** Common Agricultural Policy, organic farming, orchard production

**JEL:** Q12, Q18

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