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FINANCIAL SUPPORT FOR THE IMPLEMENTATION OF OPERATIONAL PROGRAMS OF FRUIT AND VEGETABLE PRODUCERS ORGANIZATIONS IN POLAND

Key words: fruit and vegetable market, market organization, producers' organizations,
financial support, operational programs

ABSTRACT. The aim of this study is to indicate the tasks carried out by Polish organizations of fruit and vegetables producers as part of the operational programs and the amount of financial support resulting from the European Union (EU) agricultural policy. The goal was achieved based on a library query and data from the European Commission, Eurostat, the Ministry of Agriculture and Rural Development and data obtained from the Agency for Restructuring and Modernization of Agriculture. As a result of the research, it was observed that in the EU countries the level of integration of fruit and vegetable producers is diversified (in Poland the degree of market organization is decreasing). There was a disproportionate absorption of funds (relatively very low in Poland), which constitute co-financing of operational programs of fruit and vegetable producers' organizations in individual countries. It was emphasized that activities most often carried out as part of operational programs, were the ones related to production volume planning and product quality improvement. The level of support for withdrawing products from the market is worrying, as it may indicate an overproduction of fruit and vegetables.

INTRODUCTION

In the process of economic transformation, trade and processing enterprises got modernized and adapted to new market conditions faster than agricultural producers. Moreover, the recipients were very often supported by know-how and capital from foreign investors. Polish agricultural producers and gardeners, only after Poland's accession to the European Union and with the support of the Common Agricultural Policy mechanisms, initiated the integration processes by creating producers' groups and organizations. Unfortunately, these processes were not as dynamic and effective as those on the demand

side, which led to a specific asymmetry in the market. Therefore, for many years, scientists such as Maryla Bieniek-Majka and Anna Matuszczak [2017], Andrzej Czyżewski and Marta Guth [2016], Łukasz Kopiński and Eugenia Czernyszewicz [2014], Wioleta Sobczak, Liliana Jabłońska and Dawid Olewnicki [2013], Dominika Milczarek-Andrzejewska [2012], Krystyna Krzyżanowska [2011] have been indicating the importance of integration processes on the supply side, that is among agricultural producers and gardeners.

The commencement of the companies/farms integration process is preceded by the development of a strategy for combining several enterprises into one. The integration strategy is a set of decisions that determine the functional and managerial types of interactions with other companies. As a result of the integration process, new organizational structures are created with a unified business strategy, production and financial models, common market and product portfolios. The purpose of the integration is, among others, the rational management of resources, both already existing and future ones, that can be properly deployed. The definition of the integration strategy cited by Ihor V. Andriichuk and T.M. Kukhar [2020] presents it as a system of long-term goals of an enterprise development, achieved by combining resources, following best practices, and what is related to it, creating new business opportunities.

The integration strategy is developed in several stages (Figure 1). The first stage focuses on the key elements from the external and internal environment of companies that are considering joining their forces. In particular, the analysis covers statistical data on the macro-environment as well as reporting data of organizations concerning the production volumes and commercial activity. On that basis, forecasts are made for the newly established, merged companies. The next step is to define the mission and main goals of integrated producers. Then, a strategic analysis should be conducted, aimed at determining various alternative directions of the company's development, based on its environment research results. After that, various scenarios are simulated and assessed, and basing on that assessment, the most effective plan for the integration of enterprises is selected.

There are two types of integration observed in the market: horizontal and vertical. Horizontal integration is based on combining the same phases of activity within one organization. Vertical integration, on the other hand, is based on the combination of technologically different phases of production and economic activity within the same organization.

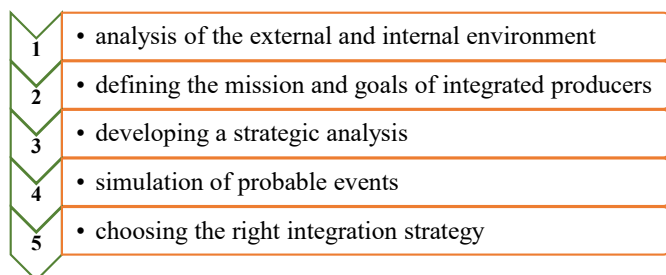


Figure 1. Stages of forming an integration strategy

Source: own study based [Andriichuk, Kukhar 2020]

In the fruit and vegetable market, we can observe mostly processes of horizontal integration, supported by mechanisms within the Common Agricultural Policy framework. In the EU, support programs for fruit and vegetable producers date back to the 1970s. Then, after the 1996 reform, integrated gardeners could benefit from subsidies [Council Regulation (EC) No 2200/96], the purpose of which was to adopt a technology ensuring environmentally friendly production quality standards or control of deliveries. Another reform in 2007 [Council Regulation (EC) No 1182/2007] re-strengthened producers' organizations and their importance in the fruit and vegetable sector. This reform left its mark on the Polish fruit and vegetable market, as it contributed to the rapid interest in the creation of producers' groups and organizations by gardeners. In 2013 [Regulation (EU) No 1308/2013], producers' organizations were established as a market organization tool.

In Poland a producers' organization is established under the Act of 19 December 2003 [Journal of Laws of the Republic of Poland of 02.04.2021, item 618] on the initiative of fruit and vegetable producers who aim at achieving one or more of the following objectives:

- ensure production planning and adapt it to demand, especially in terms of quality and quantity,
- concentrate deliveries and place on the market the goods produced by its members, including direct sales,
- optimize production costs and profits from investments aimed at maintaining standards of environmental protection and stabilizing producer prices.

The core of producers' organizations activities includes concentration of deliveries and sale of fruit and vegetables, for which the organization has been acknowledged. An association of farmers (fruit and vegetable producers) may be considered a producers' organization if it meets certain criteria, including, among others, being a legal entity formed by at least 5 producers/farmers, each of which produces at least one of the products listed in the product groups for which the entity is applying for acknowledgement. The organization is set up on the initiative of fruit and vegetable producers who carry out one of the following activities: joint processing; joint distribution, including joint selling platforms or joint transport; joint packaging, labeling or promotion; joint organization of quality control; joint use of equipment or storage sites; joint management of production waste; joint procurement of means of production.

In addition, members of the organization: must not belong to any other acknowledged producer organization, established for the same product group for which the organization is seeking acknowledgement; they should reach the total value of manufactured and sold products of at least PLN 500 thousand (in the selected 12-month period, starting no earlier than January 1st of the third year preceding the year of submitting the application for acknowledgement of the fruit and vegetable producers' organization, and ending no later than on December 31st of the year preceding the year in which the application for acknowledgement of a fruit and vegetables producers' organization is submitted);

more than half of the revenue from the sale of the products belonging to the group of products for which the entity applies for acknowledgement, will come from the sale of goods produced by producers affiliated to this entity and the sale of goods produced by producers who are members of another organization, in the case of sales made through the organization; each member should demonstrate historical production (they did not come into possession of agricultural land/production facilities immediately before the establishment of the associating entity).

No member, shareholder or stockholder, nor any other person, may own more than 49% of the shares or stocks of the producers' organization, or more than 20% of votes during shareholders' meeting or general meeting.

An interesting concept is the possibility to join a producers' organization by a legal entity or a natural person who is not a producer of fruit or vegetables. It is possible if a legal entity or a natural person who is not a producer of fruit or vegetables has technical means enabling, in particular, the storage, warehousing, sorting or packing of fruit and vegetables, has professional qualifications enabling the management of producers' organization activities. However, such individuals cannot be considered when applying discretionary criteria, nor can they benefit directly from EU-funded actions.

Acknowledged fruit and vegetables producers' organizations must have staff, infrastructure and equipment necessary to meet the acknowledgement requirements and ensure basic operations, in particular with regards to:

- acquiring knowledge about the production carried out by its members,
- technical means necessary for harvesting, sorting, storing, packing and selling of fruit and vegetables, produced by its members, according to the needs depending on the type of production,
- commercial management (deliveries and sales) and financial management (organization's budget management)
- centralized accounting and invoicing system,
- enabling its members to obtain technical support in the use of environmentally beneficial farming methods.

Fruit and vegetables producers' organizations/associations of fruit and vegetables producers' organizations may be acknowledged for one or more of the following product groups:

1. Vegetables such as tomatoes, onions, shallots, garlic, leeks and other bulb vegetables, cabbages, cauliflowers, kohlrabi, kale and similar edible cabbages, lettuce (*Lactuca sativa*) and chicory (*Cichorium* spp.), carrots, turnips, salad beetroot, salsify, celeriac, radishes and similar edible roots, cucumbers and gherkins, legumes, shelled or unshelled vegetables, asparagus, aubergines (eggplants), celery other than celeriac, sweet peppers, spinach, New Zealand spinach and garden spinach, zucchini, leaf vegetables other than lettuce (*Lactuca sativa*) and chicory (*Cichorium* spp.), beetroot (or broad-tailed Swiss chard) and Spanish artichoke, dill.

2. Fruit such as: shelled hazelnuts (*Corylus* spp.), shelled walnuts, apples, pears and quinces, apricots, cherries, peaches (including nectarines), plums and sloes, strawberries and wild strawberries, raspberries, blackberries, mulberries and raspberry-blackberry hybrids, black, red and white currants, gooseberries, fruits of the *Vaccinium macrocarpon* and *Vaccinium corymbosum* species, chokeberry.
3. Culinary herbs such as: basil, lemon balm, mint, marjoram / wild marjoram (*Origanum vulgare*), rosemary, sage, thyme.
4. Mushrooms such as: mushrooms of the genus *Agaricus*, oyster mushrooms, shii take, moon and other cultivated mushrooms [ARiMR 2021b].

Farmers and producers' organizations in different EU countries can group together to form international producers' organizations. In such cases, the organization is recognized by the EU country where its headquarters are located. The headquarters must be located in the EU country in which significant number of members or member organizations, or a significant amount of marketable production is located [EC 2021b].

RESEARCH MATERIAL AND METHODS

Based on the a library query and data obtained from the reports of the European Commission and secondary data from Eurostat, the Ministry of Agriculture and Rural Development, the Agency for Restructuring and Modernization of Agriculture, the study presented the organization of the Polish fruit and vegetable market in 2004-2021 as well as the size and directions of support for fruit and vegetable producers' organizations as part of the operational programs in 2013-2019. The share in the total amount of funds absorbed for the implementation of operational programs of producer organizations from individual countries was calculated on the basis of aggregated data for 2010-2019.

RESULTS

FRUIT AND VEGETABLE MARKET ORGANIZATION

Organizing the fruit and vegetable market by combining the potentials of individual producers, is to increase their competitiveness, achieve the synergy and scale effect. The result of the increase in market power is the access to new market segments thanks to more effective marketing activities and the possibility of offering homogeneous, large batches of goods of high (certified) quality. Regulation (EU) 1308/2013 indicates the role which producers' organizations and their associations can play in the concentration of supply, thus contributing to strengthening the position of producers in the food chain by improving the effectiveness of marketing activities, planning and adjusting production volumes to

demand, optimizing production costs, stabilizing prices, providing technical support and promoting best practices. Unfortunately, this regulation also changed the rules of financial support for the emerging producer groups, Anna Matuszczak and Maryla Bieniek-Majka [2018] notice the correlation between financial support programs and the intensity of the integration processes development on the market [Matuszczak, Bieniek-Majka 2018]. The process of integration on the fruit and vegetable market in Poland developed dynamically in 2007-2013, and then it slowed down (Figure 2).

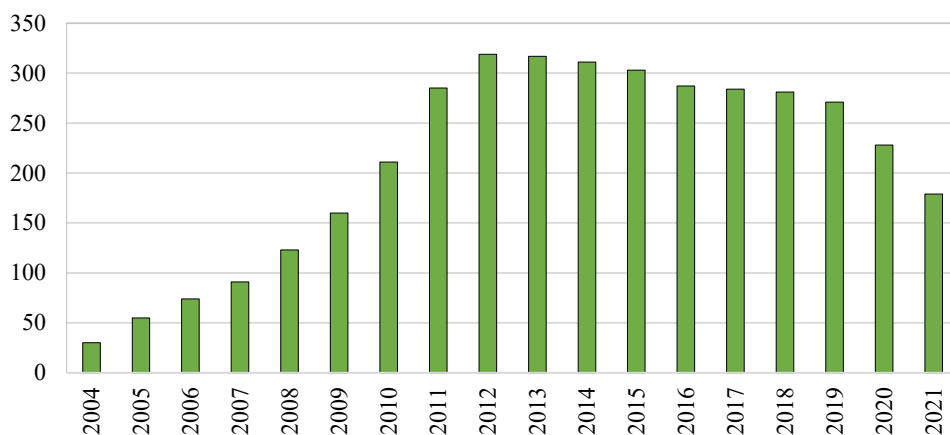


Figure 2. Number of groups and organizations of fruit and vegetables producers in Poland in 2004-2021

Source: own study based on data provided by Agency for Restructuring and Modernisation of Agriculture and Ministry of Agriculture and Rural Development

Drastic limitation of support for emerging producer groups resulted in the lack of interest in establishing new ones. The number of both producers' organizations and their members has been shrinking. As an example, in March 2019, there were 263 producer organizations registered, and as of February 28th, 2022, only 176 [ARiMR 2021a]. This is a disturbing phenomenon, because organizing the market contributes to its more efficient functioning [Zuba-Ciszewska 2020], and the value of sales of fruit and vegetables placed in the market by producer groups and organizations (Figure 3) is decreasing.

From the perspective of the entire EU, we can see that on the fruit and vegetable market, the value of products sold by producers' organizations is constantly growing (Figure 4), however, according to Angelo Zago [2018], the degree of organization of fruit and vegetable producers in the EU varies. Starting from the Netherlands and Ireland, where more than 90% of production is sold through producers' organizations, through France, Italy and Spain (c. 50%), to Poland, Finland and Portugal (c. 20% and less).

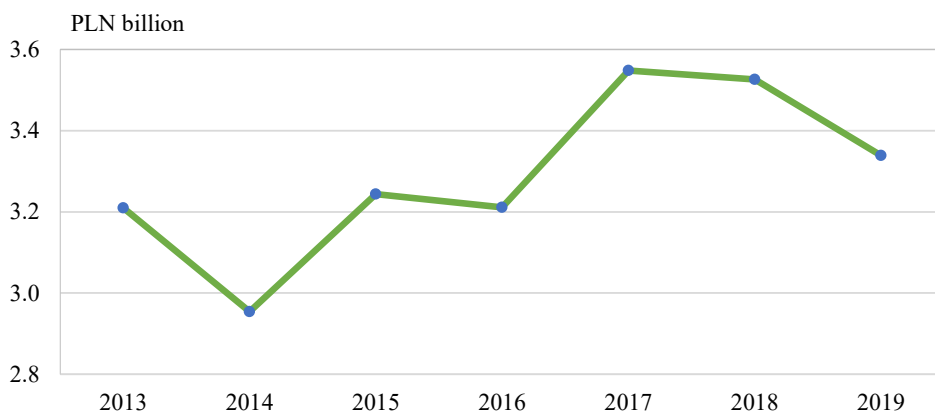


Figure 3. The value of sales of fruit and vegetables by groups and organizations of fruit and vegetable producers in Poland in 2013-2019

Source: own study based on data provided by Agency for Restructuring and Modernisation of Agriculture

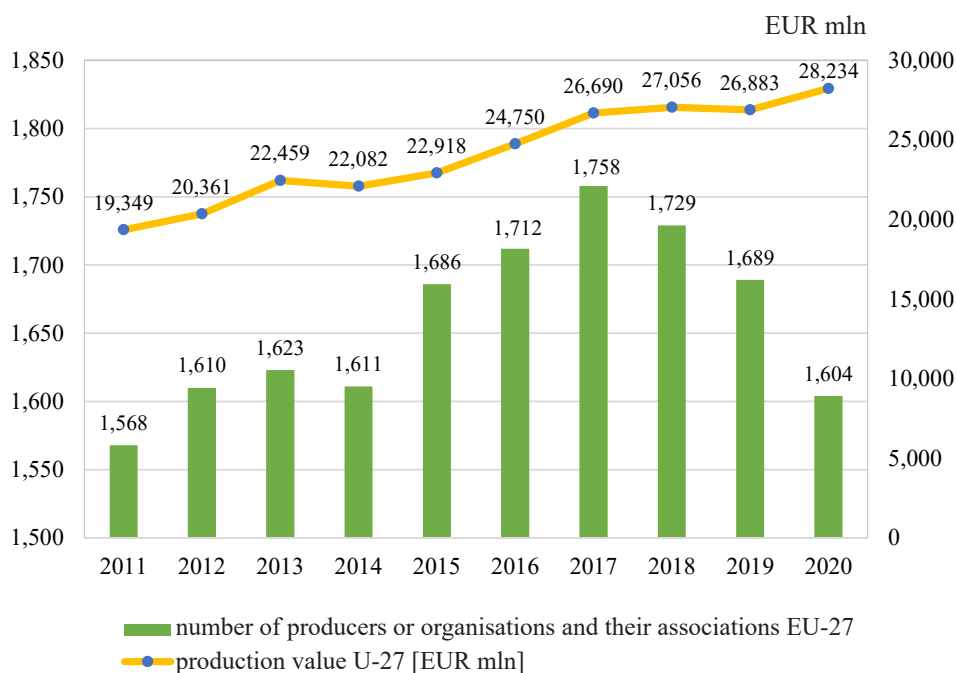


Figure 4. The number of producer organizations and the value of the production sold by producer organizations in the EU in 2011-2020

Source: own study based on [EC 2022]

According to Annual Reports 2020 [EC 2022] data, in the EU-27 countries, in 2020, there were 1,604 fruit and vegetable producers' organizations, which introduced goods to the market with a total value of EUR 28.23 million. Most of the organizations were located in Spain, Italy, France and Poland, i.e. leading countries in the production of fruit and vegetables in Europe (Figure 5).

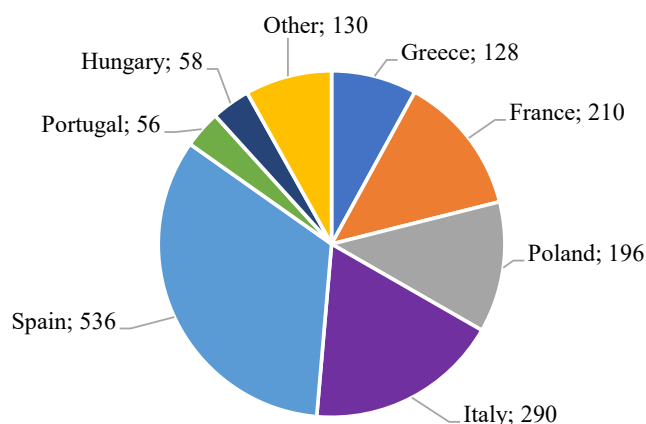


Figure 5. Number of fruit and vegetable producers' organizations in the EU in 2020

Source: own study based on [EC 2022]

The share of producers who are members of acknowledged producers' organizations from leading production areas is significantly higher than the corresponding national averages. For example, the national average for the fruit and vegetables sector in France is 50%, while Brittany has 90% of tomato producers and 75% of apple producers in the south-west of France. In Poland, the national average is around 20%, while 40% of apple producers from the Grójecko-Warecki region and Sandomierz belong to producers' organizations [DG AGRI 2019].

Therefore, the conclusion can be drawn that the concentration of supply through producer organizations is higher in the main production areas than elsewhere. Angelo Zago [2018] raised an interesting question on causality – does higher production lead to better organization of the industry or is it better industry organization that leads to increased production? In his opinion, if we are dealing with the former, we can expect conflicts between the goal of organizing the market and the aims of sustainable rural development.

According to the information provided by the Polish government agency, the organization of the fruit and vegetable market in Poland, calculated as the share of the organizations production value in relation to the total value of production of fruit, vegetables, mushrooms and herbs sold in Poland in 2019, exceeds the threshold of 20%

[ARiMR 2020], however, this is still too low compared to other countries. Worrying in this regard is the fact that the number of existing organizations is decreasing, which does not bode well for the future.

It is recognized that one of the reasons for the aversion to organizing Polish gardeners, is the attitude and bad historical experiences related to cooperation [Bieniek-Majka, Matuszczak 2017], which is not the characteristics of only Polish farmers, but also other nationalities from the Central and Eastern Europe [Lazikova 2020, Avsec 2020]. The reasons can also be seen in the difficulties in obtaining financial support, because, as Aneta Suchoń [2015] notes, recognized organizations have serious problems with obtaining funds from the operational program, therefore, he believes that it is justified to simplify the procedures, which would improve the program availability for these entities.

CO-FINANCING FOR THE IMPLEMENTATION OF OPERATIONAL PROGRAMS

The EU fruit and vegetable market management system promotes product quality by supporting operational programs that include investments in research and development aimed at improving production planning, measures to increase the commercial value of products, and more environmentally friendly cultivation and production techniques.

The support is intended for acknowledged organizations of fruit and vegetables producers and their associations, and it is granted in the form of endowment intended for the implementation of projects entered by the organizations into their approved operational programs (in Poland they need to be approved by the Agency for Restructuring and Modernization of Agriculture). National authorities are required to develop national strategies for sustainable operational programs, identifying activities eligible for endowment. An acknowledged producers' organization may set up an operational fund to finance its operational program. The fund is subsidized by contributions from members (or by the organization itself) and by EU financial support. EU financial assistance is limited to 50% of the total operational fund and may be increased to 60% in specific cases. Producers' organizations shall submit to national authorities annual reports on the implementation of their operational programs. These reports need to be submitted while applying for endowment. The European Commission monitors and evaluates both the programs and the national strategy using a common set of performance indicators.

In 2018, financial support for the implementation of operational programs objectives of fruit and vegetable producers' organizations in the EU amounted to over EUR 1.74 billion [EC 2021c]. According to the European Commission Report for 2018, the main goals set by producers' organizations were, first of all, better adjustment of the product offer, product quality improvement and compensation for withdrawing products from the market (Figure 6).

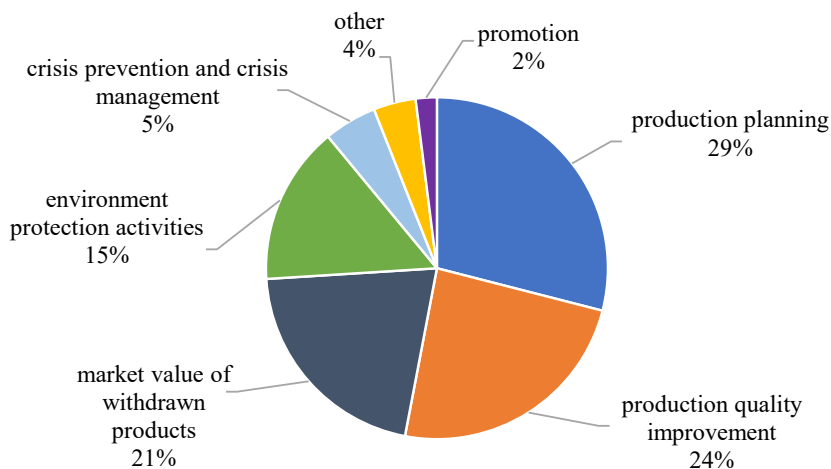


Figure 6. Main objectives of the operational programs of fruit and vegetable producer organizations in the EU in 2018

Source: own study based on [EC 2018]

Despite the fact that activities to protect the environment and counteract crises are less popular, EUR 233.43 million were allocated to their support (EUR 163.69 million for environmental protection and EUR 69.74 million for crisis prevention). In case of environmental protection, 58% of the amount was allocated to integrated production, 21% to ensuring biodiversity, and 12% to soil protection (Figure 7).

The EU budget for crisis prevention and management was smaller, and the goals, to which producers allocated these funds, were more varied. Its largest part were the expenses related to covering the costs of the free distribution of products withdrawn from the market (42%) (Figure 8).

In case of withdrawing products from the market, without putting them up for sale, funds are made available on very strict terms. If a country decides to allow product withdrawals, it must set the maximum amounts of such support. For each product, the quantity withdrawn from the market must not exceed 5% of the volume of the production sold¹ by the PO (excluding quantities intended for free distribution). National authorities determine the use of withdrawn products, but free distribution must be one of the options. The products can be used in the processing industry, as long as it does not distort competition in the respective sectors (within or outside of the European Union).

¹ The volume of marketed production should be calculated as the average of the three previous years or, if this information is not available (e.g. in the case of newly approved producer organizations), on the basis of the volume of marketed production that has been approved for the producer organization concerned.

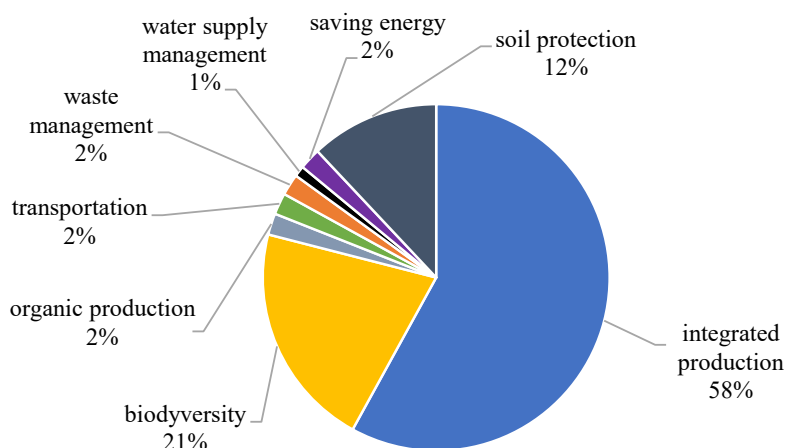


Figure 7. Structure of funds spent on the implementation of environmental protection objectives as part of the operational programs of fruit and vegetable producers organizations in the EU in 2018

Source: own study based on [EC 2018]

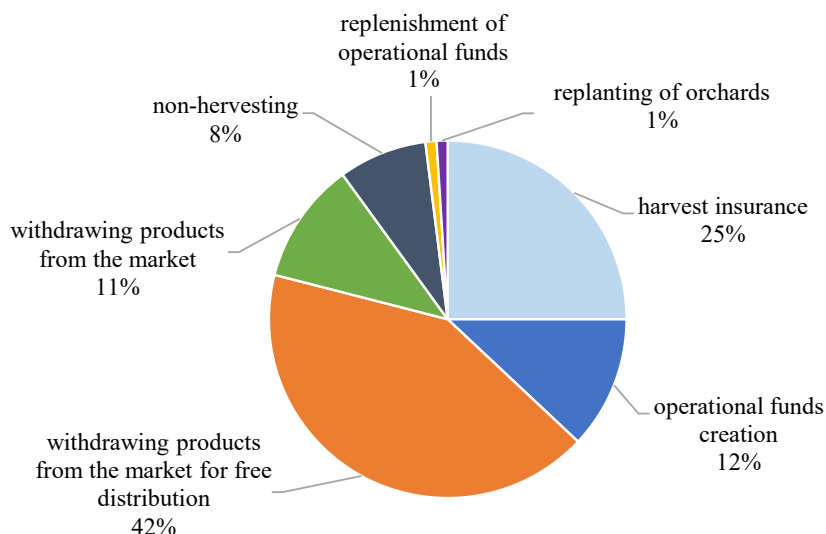


Figure 8. Structure of funds spent on the implementation of the objectives related to the prevention of crises and crisis management as part of the implementation of operational programs of fruit and vegetable producer organizations in the EU in 2018

Source: own study based on [EC 2018]

Another 25% of the budget was spent on yields insurance, which helps organizations to secure members' income and cover market losses caused by natural disasters, climatic events, diseases or pest infestations. In Poland, funds for the implementation of operational programs were primarily intended for three main goals: compensation for product withdrawals from the market (c. 40%), production planning (29%) and support for environmental protection (over 21%). The resources allocated to the implementation of other objectives constituted a marginal share.

Producers' organizations of fruit and vegetables, associations of producers' organizations, transnational producers' organizations or transnational associations of producers' organizations are entitled to create operational programs financed from the so-called operational fund. The fund is created by these entities with contributions from their members and EU financial support. This aid is granted if organizations or their associations submit an appropriate operational program or a partial operational program, manage it and implement it in accordance with the conditions set by the European Commission, in the form of delegated acts, as per the Art. 37, and executive acts, as per the Art. 38 of Regulation 1308/2013 [Lipińska 2017]. Moreover, operational programs must comply with national regulations. In Poland it is the National Strategy for sustainable operational programs of fruit and vegetable producers' organizations and associations of fruit and vegetable producers' organizations in Poland for 2018-2022, approved by the Minister of Agriculture and Rural Development.

An operational program is a special type of a business plan which is implemented in the annual period from January 1st to December 31st of a given calendar year and must contain at least two of the goals listed in the Strategy. These are, as mentioned earlier, production planning, improvement or maintenance of product quality, marketing (product promotion) improvement, research and experimental production, training and activities promoting access to advisory services, crisis preventing measures and management in critical situations, environmental protection activities.

Operational fund resources may be used for the implementation of approved activities listed in the operational program, financing crisis prevention and crisis management measures (up to one third of the total amount of the operational fund) and for covering program and operational fund management costs (2% of expenditure incurred from the operational fund). Financial aid is granted by the Agency for Restructuring and Modernization of Agriculture and cannot exceed 50% of the expenditure incurred from the operational fund on activities approved in the operational program, including expenditure on crisis prevention and management, except where fruit and vegetables are distributed free of charge. Granted support can cover up to 100% of the expenditure incurred in relation to the non-sale of fruit and vegetables, where fruit and vegetables are distributed free of charge. Up to 50% of program and operational fund management costs can be covered by the financial support. However, the amount of the support must not exceed 4.1% of the total value of products

sold by the producers' organizations in the reference period or 4.6% on condition that the 0.5% excess is spent on crisis prevention and management. Financial support is paid out upon a request either in quarterly installments or once a year [ARiMR 2021c].

EU countries are obliged to provide the European Commission with annual statistics regarding fruit and vegetables producers' organizations, associations of producers' organizations, transnational producers' organizations and international associations of producers' organizations. Annual reports contain information about the number of organizations, their production volume and expenditure under EU co-financed operational programs [EC 2021a]. Based on the data provided by the Agency for Restructuring and Modernization of Agriculture, formulated on the grounds of annual reports submitted by producers' organizations and the descriptive part of annual reports submitted to the European Commission by governmental agencies, pursuant to Art. 54 (a) b of the Commission Delegated Regulation (EU) 2017/891, we can observe that the expenditure on the implementation of the objectives listed in the operational programs of Polish integrated gardeners in 2013-2019 was systematically increasing (on average about 32% per year) (Figure 9).

Expenses covered the implementation of activities aimed at achieving the following goals: production planning, improvement or maintenance of product quality, improvement of turnover/marketing, training and activities aimed at supporting access to consulting services, crisis prevention and crisis management measures, scientific research and experimental production, environmental protection. Detailed data on the allocation of funds for the implementation of those goals are presented in Table 1.

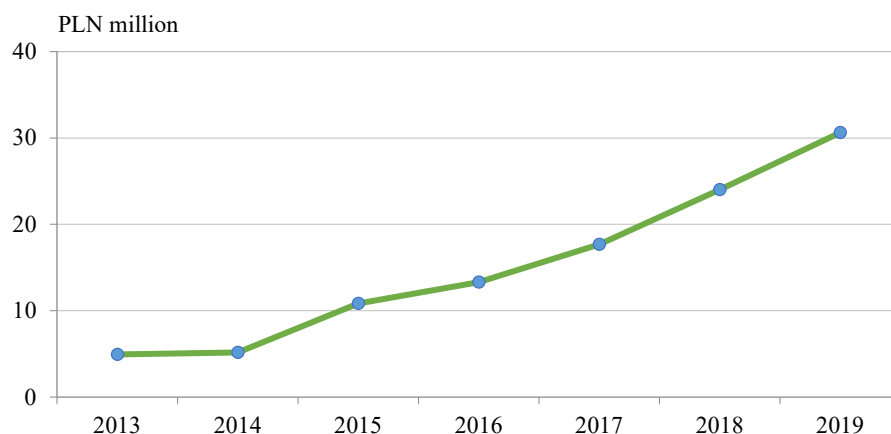


Figure 9. Expenditure level incurred by producer organizations on individual goals and measures/activities

Source: own study based on data provided by Agency for Restructuring and Modernisation of Agriculture – ARMA

Table 1. Amount of expenditure incurred by fruit and vegetable producer organizations for the implementation of particular goals

| Specification | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|--|----------|----------|----------|----------|----------|----------|----------|
| Production planning [PLN thousand] | | | | | | | |
| The use of fruit and vegetable production technology that effectively prevents undesirable drops in yields | 186 | 42,334 | 582.23 | 462.22 | 747.86 | 838.18 | 958.13 |
| Adjusting the commercial offer of the producer organization or association of producer organizations to the demand | 1,542.96 | 1,102.65 | 2,494.62 | 2,436.19 | 3,001.67 | 5,788.07 | 6,064.54 |
| The use of fruit and vegetable production technology enabling extension of fruit and vegetables supply period | 21.77 | 84.45 | 240.00 | - | 2,021.00 | 1,793.13 | 3,090.18 |
| Using ICT systems to control the fruit and vegetable production process | 117.66 | 131.02 | 689.39 | 1,188.88 | 279.50 | 145.90 | 1,294.00 |
| The use of systems enabling sharing information on planning and organizing production of fruit and vegetables | - | 149.79 | - | - | 243.40 | 168.39 | - |
| Improving or maintaining product quality [PLN thousand] | | | | | | | |
| The use of fruit and vegetable production technologies preventing the loss of quality in the production process | 450.62 | 162.15 | 295.82 | 175.00 | 271.35 | 1,432.41 | 778.29 |
| Applying fruit and vegetable quality improvement systems, fruit and vegetable quality control and product traceability systems in the fruit and vegetable sector | 434.43 | 225.50 | 480.94 | 716.27 | 852.73 | 675.91 | 1,001.44 |
| The use of modern storage or transport technologies preventing the loss of quality of stored and transported products in the fruit and vegetable sector | 261.57 | 444.00 | 833.16 | 799.53 | 1,445.14 | 2,544.38 | 1,470.00 |

Table. 1. Cont.

| Specification | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|----------|----------|----------|----------|----------|----------|----------|
| The use of technologies increasing the commercial value of fruit and vegetables by refining them | - | - | 1,515.97 | 968.91 | 2,814.31 | 1,609.67 | 2,495.83 |
| The use of modern logistic and organizational solutions allowing producer organizations or associations of producer organizations to improve delivery processes | 745.12 | 1,138.08 | 1,971.70 | 3,725.78 | 3,907.36 | 6,033.48 | 5,936.62 |
| Environmental protection [PLN thousand] | | | | | | | |
| Systems reducing the emission of greenhouse gases and atmosphere pollutants | - | - | 75.10 | 9.80 | 19.60 | 903.80 | 298.00 |
| Investments in new technologies ensuring lower consumption or better use of energy | 398.00 | 1,166.28 | 1,198.08 | 1,165.57 | 1,886.39 | 2,651.01 | 3,018.01 |
| Development of renewable energy systems | - | - | - | - | - | - | 3,041.53 |
| Applying systems reducing water consumption | - | - | 73.55 | 137.55 | 217.38 | 16.82 | 120.03 |
| Replacing old, traditional sprayers or their parts with new, more environmentally friendly ones | 1,360.33 | 1,090.95 | 1,992.10 | 3,013.83 | 3,862.43 | 2,798.08 | 2,097.22 |
| Introducing natural methods of plant pollination | - | - | 47.57 | 112.63 | 164.33 | 160.77 | 213.80 |
| Horizontal action: participation in trainings or the use of consulting services in the field of environmental protection | 12.44 | 13.32 | 17.60 | 24.97 | 27.31 | 33.27 | 25.57 |

Source: own study based on data provided by Agency for Restructuring and Modernisation of Agriculture

Based on the presented data, we can observe that new technology is the most capital consuming. Expenditure on the use of ICT systems, controlling the fruit and vegetable production process, increased almost tenfold in the analyzed period. The use of technologies enabling the extension of the period of offering fruit and vegetables to the market consumed approximately PLN 3 million in 2019. Expenditure on adapting the commercial offer to market demand in 2013-2019 systematically increased and reached the level of approximately PLN 6 million in 2019 and was almost four times higher than in 2013. In 2019, preventing undesirable yields drops reached the amount of approximately PLN 1 million. Expenditure allocated to this objective by producers' organizations in Poland in 2013-2019 systematically increased and in 2019 it was over four times higher than in 2013.

Another goal pursued by producers' organizations was to improve the quality of the offered products. Logistics solutions enabling the improvement of deliveries turned out to be the most capital consuming. In 2019 almost PLN 6 million was allocated to this objective and it was an amount almost seven times higher than in 2013. Technology aimed at refining fruit and vegetables or preventing the loss of quality in the process of production, storage and transport was also a significant cost driver.

Expenses related to environmental protection are worth noticing too. Again, we can observe that the largest amounts were spent on applying new technological solutions. And so, in 2019 the amount of over PLN 2 million was allocated to replacing the old, traditional sprayers or their parts with new, more environmentally friendly ones, but the attempts to reduce energy consumption should be highlighted as well. Expenditure on modernization of installations enabling better energy utilization in the analyzed period increased almost tenfold. In 2019, expenditure on developing renewable energy systems was also observed.

Looking at the amount of expenditure on the implementation of operational programs from the national perspective is relatively satisfactory – more than sixfold increase in 2019 compared to 2013. However, it should be noted that even though the amount of funds absorbed in 2018 by Polish gardeners accounted for 116% of the average value from 2013-2017 [EC 2018], the volume of absorption of funds is still negligible compared to other countries. The numbers presented in the European Commission report [EC 2021c] (Figure 10) implicate the difficulties in obtaining financial support by Polish integrated gardeners for the implementation of operational programs.

Taking into account the fact that the number of Polish fruit and vegetable producers organizations accounted for about 12% of all organizations in the EU, it is disturbing to notice that in 2010-2019 about 0.22% of funds were directed to Poland, whereas to other countries, leading in the production of fruit and vegetables, many times more, and so Spanish producers consumed almost 29% of funds, Italian over 28%, and French over 13%.

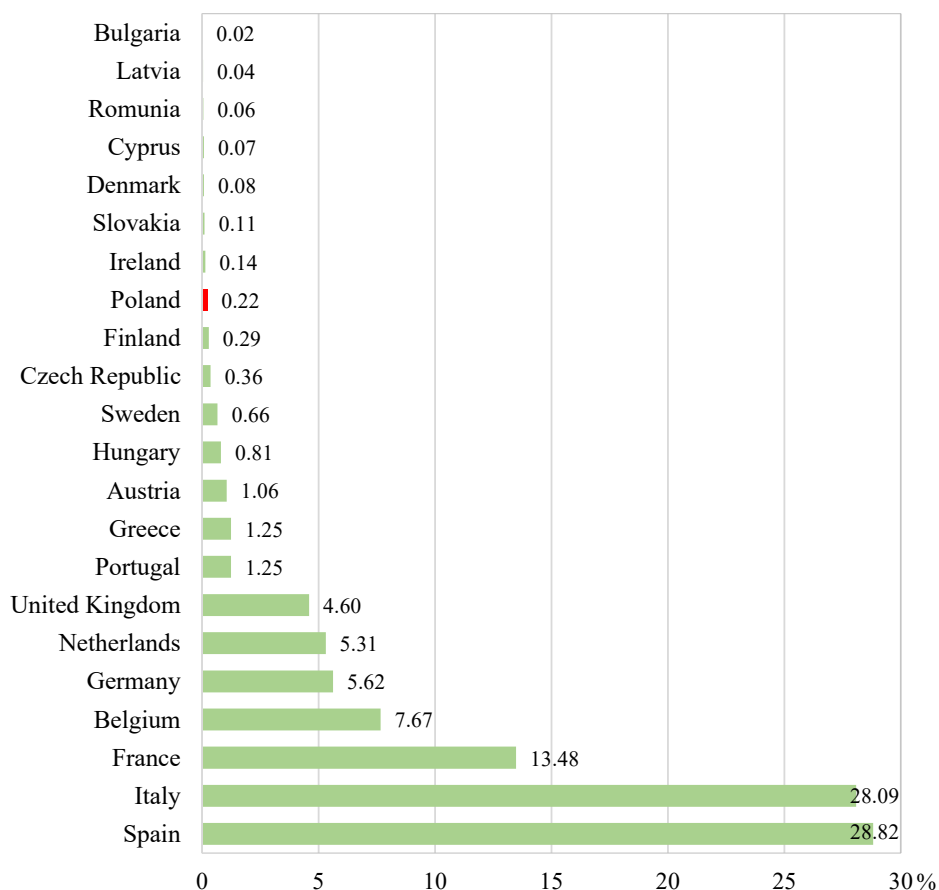


Figure 10. Share in the total value of EU financial support for operational programs in 2010-2019 per EU country

Source: own study based on [EC 2021c]

CONCLUSIONS

The need to organize the market to increase the competitive strength of fruit and vegetable producers in the supply chain is widely discussed. As part of the Common Agricultural Policy, there are tools created to support this process, however, as noted inter alia by Anna Martikainen [2019], they are not adapted to the actual needs of the beneficiaries. Based on the data presented in this study, it should be emphasized that:

1. The degree of organization of the fruit and vegetable market in the EU countries varies. Polish gardeners, encouraged by financial measures supporting the creation of producers' groups, began to integrate. However, considering the fact that the integration process ended with the close of the supporting program, we can say that they only used a kind of political rent in order to support their activities. The constantly decreasing number of operational producers' organizations and the low level of market organization may suggest that we are dealing with disintegration in the sector.
2. Within the support programs of the Common Agricultural Policy there are funds for fruit and vegetables producers' organizations. However, the level of their consumption by organizations from different countries is disproportionate to the number of organizations operating in the respective countries, which is particularly evident in case of Poland. Barriers to the process of obtaining those funds can be seen in the national legal and administrative regulations.
3. It should be noted that the most important objectives implemented with financial support within operational programs, were activities related to production planning and ensuring high quality of products. However, worrying is the size of the share of co-financing fruit and vegetable producers' organizations in the European Union for withdrawing products from the market. This proves an oversupply, which may have a negative impact on the profitability of production.

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WSPARCIE FINANSOWE NA REALIZACJĘ PROGRAMÓW OPERACYJNYCH ORGANIZACJI PRODUCENTÓW OWOCÓW I WARZYW W POLSCE

Słowa kluczowe: rynek owoców i warzyw, organizacja rynku, organizacje producentów, wsparcie finansowe, programy operacyjne

ABSTRAKT

Celem opracowania jest wskazanie zadań realizowanych przez polskie organizacje producentów owoców i warzyw w ramach programów operacyjnych oraz wielkości wsparcia finansowego wynikającego z polityki rolnej Unii Europejskiej. Cel zrealizowano na podstawie kwerendy bibliotecznej oraz danych wtórnych pochodzących z Komisji Europejskiej, Eurostatu, Ministerstwa Rolnictwa i Rozwoju Wsi i danych pozyskanych z Agencji Restrukturyzacji i Modernizacji Rolnictwa. Z analizy wynika, że w krajach UE poziom integracji producentów owoców i warzyw jest zróżnicowany, a w Polsce stopień zorganizowania rynku ulega zmniejszeniu. Odnotowano nieproporcjonalną absorpcję środków finansowych (relatywnie bardzo niską w przypadku Polski), które stanowią dofinansowanie programów operacyjnych organizacji producentów owoców i warzyw w poszczególnych krajach. Podkreślono, że najczęściej w ramach programów operacyjnych realizowano działania związane z planowaniem wielkości produkcji oraz podniesieniem jakości produktów. Niepokojąca była wielkość wsparcia z tytułu wycofania produktów z rynku, przekazywana organizacjom producentów, co może świadczyć o nadprodukcji owoców i warzyw.

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