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Organic Farming from the Economic Perspective for Romania

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Abstract: Romania's accession to the European Union in 2007 produced several changes and advantages, but also various rules to follow and objectives to achieve. Some of the proposed objectives were the achievement of climate neutrality and environmental protection. The effects associated with global warming and environmental degradation have a significant impact on people's quality of life, both in urban and rural areas. In this sense, public programs and plans have an important contribution to the course of ecological improvement and bring methods that aim to achieve notable changes at the environmental, social and economic level. Organic agriculture in Romania currently occupies an important role in the country's economic development, it is a strategic branch of the economy because the population's interest in organic products is growing and farmers' profits are not negligible. The researched topic is current and important, because the subsidies granted by the European Union through European funds are consistent for the agricultural sector and have increased every year, being supplemented by the funds offered from the national budget of Romania. The purpose of this research is to identify the advantages of practicing ecological agriculture for Romania and for farmers, from an economic point of view, but also for the benefit of the environment and the climate. The results obtained through this study can support farmers to move towards organic farming, as it exposes the way to access agricultural subsidies and the compensatory payments possible to obtain. The opportunities that arise due to the development of this agricultural sector are diverse, namely: products with higher prices, traditional occupations, ecotourism with attractive incomes, sustainable development of agriculture, diversity of products and the formation of new market areas.

Keywords: European funds; ecological agriculture; financing; subsidies

JEL Classification: O00; O10; O13, Q14

1. Introduction

European funding continuously seeks to support and encourage climate neutrality, improve the standard of living and health of Europeans, promote an efficient and modern industry worldwide, strengthen a sustainable and competitive economy. The European Agricultural Fund for Rural Development grants Member States significant sums to provide compensatory payments to farmers practicing organic farming. This aid is provided to compensate for price increases, especially for energy, fertilizers and animal feed. These inconveniences disrupt the agricultural area and especially rural areas and lead to liquidity problems for farmers at all stages of their business processes. Liquidity flow is important and that is why subsidies contribute to mitigating disturbances in agricultural markets and provide stability in the area of European and global food security.

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Organic agriculture in Romania is experiencing rapid growth, as a direct result of the increase in consumer interest in organic products, people are much more educated in terms of nutrition and health, they want to consume fresh but at the same time quality food, without pesticides and chemical fertilizers. Fruits and vegetables are important in the daily basket and the demand for organic products is increasing. Likewise, birds and animals that are raised and fed according to organic standards provide products that have become increasingly attractive to humans. To find solutions to these challenges, the EU is constantly making changes, such as:

- the continuous improvement of monitoring and control systems, in order to increase the confidence of buyers in ecological agriculture carried out within the community space;
- new standards for farmers, which will make it easier for smaller agricultural producers to switch to organic production methods;
- new standards for imported organic products so that all organic products sold in the European Union comply with the same quality rules;
- diversified products that can be distributed and marketed as organic products (Burduja, 2020).

European funds have a crucial role from an economic point of view for organic agriculture in Romania. These funds provide financial support to farmers and organizations involved in organic farming, stimulating the development and expansion of this important sector.

Below are some aspects that highlight the importance of European funds for organic agriculture in Romania:

1. Investments in infrastructure. European funds facilitate farmers' access to financing for building or modernizing the infrastructure needed in organic agriculture. This includes investments in greenhouses, irrigation systems, machinery and specific equipment, all contributing to increased efficiency and productivity in the organic farming sector.

2. Support for conversion to organic farming. European funds provide financial aid to farmers who want to switch from conventional to organic farming practices. This support is crucial at the initial stage of conversion, when farmers often face additional costs and initial loss of income. European funds partially or fully cover conversion costs, including ecological certification and other necessary investments.

3. Development of supply chains and markets. European funds promote the creation and development of supply chains for organic agricultural products, as well as the improvement of processing and distribution capacity. This support helps organic farmers to market their products and obtain better prices, thus contributing to the economic sustainability of the sector.

4. Innovation and knowledge transfer. European funds support research and development projects in the field of organic agriculture, promoting innovation and knowledge transfer between farmers, researchers and experts in the field. This contributes to improving agricultural practices, optimizing efficiency and increasing competitiveness in the organic farming sector.

5. Promoting ecological agriculture internationally. European funds facilitate the participation of farmers and organic farming representatives in exhibitions, fairs and international events, where they can promote products and establish partnerships with potential customers and commercial partners. This support internationalizes Romanian organic agriculture and opens new business opportunities.

Overall, European funds represent an essential source of financing for organic agriculture in Romania, having a significant impact on the development and sustainability of this sector. They contribute to increasing the competitiveness of organic farmers, to the expansion of organically cultivated areas and to the improvement of the quality and diversity of organic agricultural products.

Through European funds, organic agriculture in Romania becomes more accessible and economically viable. These funds stimulate investments and innovations in the sector, providing financial resources necessary for the implementation and development of sustainable agricultural practices. They also contribute to the creation of jobs in rural areas and to the reduction of rural-to-urban migration. European funds also have a positive impact on the environment and climate, as they promote agricultural practices that respect the ecological balance and reduce the impact on natural resources. By supporting organic agriculture, these funds contribute to the conservation of biodiversity, the reduction of soil and water pollution and the sequestration of carbon in the soil, thus contributing to adaptation to climate change and mitigating its effects.

2. Research Methodology

The research methodology used in this article consists in the analysis of primary and secondary data of the European funds allocated to the Romanian ecological agriculture, by improving the quality of life, compliance with European programs and policies. By studying the documentation from the specialized literature and the critical analysis of the information, I made a practical analysis of organic agriculture in Romania, of the subsidies that can be obtained from non-reimbursable European funds by farmers, but also the economic importance of this agricultural sector. The documentation remains a basic element through which the problems raised by ecological agriculture and its implications, regarding the conservation of natural resources and ecosystems for future generations, are very well signaled. The data collected from the European Commission, the Ministry of Agriculture and Rural Development in Romania, the APIA and AFIR Agencies in Romania, were analyzed through qualitative and quantitative methods.

3. Literature Review

European Union legislation states that organic agriculture is an agricultural structure that aims to produce and market food using only natural solutions and methods (Cernicenco, et al., 2021). The European Union's organic farming methodologies aim to establish a clear system for the production of organic food throughout its region. These laws were designed to give consumers green products they can trust, while also regulating a balanced market for retailers, distributors and manufacturers. In Romania, the Ministry of Agriculture and Rural Development took over the community regulations and developed its own laws, which are public and implemented by the competent institutions.

4. Research Results

The European Union's organic farming framework seeks to transform the EU into a fair and prosperous society with a modern, competitive and resource-efficient economy with no net greenhouse gas emissions in 2050 and economic growth to be decoupled from the use of resources (Ministry of Environment, 2020). Thus, the European Union has the collective capacity to transform its economy and society to place them on a more sustainable trajectory (Commission, 2019).

1. The European Ecological Pact proposes a roadmap for achieving a sustainable and efficient economy at the level of the European Union, by transforming challenges into opportunities at the level of all public policies, by promoting a just and inclusive transition process for all. Among the elements of the European Ecological Pact we can mention: climate objectives, energy efficiency and renewable energy sources, air quality and waste management (Stefanescu, 2022). Also, the European Ecological Pact aims to support the achievement of a fair, sustainable and favorable transition towards environmental protection, which allows the involvement of interested factors in this process, by making proposals and projects for important changes from a climatic, ecological, economic point of view, cultural and historical. For this purpose, it is aimed to encourage the efficient use of available resources by promoting the circular economy in order to limit the amount of waste generated, namely the prevention and minimization of the effects of climate change, the decrease in biodiversity, as well as to stop pollution. To achieve all the proposed objectives, the European Green Pact establishes a set of policies designed to ensure the achievement of climate neutrality. As part of this effort, the European Climate Law (Commission E., 2021) provides a horizontal legislative framework for strengthening EU-wide efforts towards climate neutrality. It is also set as a mandatory objective at EU level to reduce net domestic emissions of 30 greenhouse gases by at least 55% by 2030 compared to 1990 levels (Cernicenco, et al., 2021). Regulation 2021/1119 establishes a legislative plan to improve efforts at European Union level to reach climate neutrality.

The transition to climate neutrality requires increasing ambitions in the field of environment, energy and climate, ambitions that can be found in the unitary approach offered by the European Green Deal and implicitly in the update of the 2030 Framework in the field of energy-climate change, which provided for an EU-wide reduction objective of greenhouse gas emissions of 40% compared to the level of 1990 (<https://www.consilium.europa.eu/ro/policies/climate-change/eu-climate-action>). Organic farming is a very well organized system that aims to produce organic food using only natural solutions and methods. Ecological agriculture has the main purpose of protecting the environment, plants, animals, climate and human life, it promotes a sustainable and environmentally friendly agriculture.

Thus, organic farming encourages:

- appropriate use of raw materials from nature;
- conservation of biodiversity;
- protecting certain ecological areas, special for flora and fauna;
- increasing soil fertility;
- maintaining water quality.

Each country in the European Union appoints control bodies or authorities to inspect operators in the organic food sector. Producer farmers but also those who distribute and sell organic food must register with an authorized control body, they are registered and checked periodically. After being inspected and verified, manufacturers receive a certificate confirming that their products meet ecological standards. For certain products there are specific regulations and the European Union is constantly debating with all interested parties to increase the quality of its regulations, including in the environmental and ecological area. As for the steps that Romania must take for the development of organic production, the following aspects were taken into account:

- supporting the increase of areas converted to the organic farming system;
- educating consumers about ecologically certified products;

- creating public-private partnerships in order to optimize costs related to ecological production;
- better transmission of information on conversion and green certification stages.

Organic agriculture receives compensatory payments from European funds but also from the national budget of Romania. Thus, in 2017, one hectare of land cultivated in an ecological system received a support of 326 euros, 305 euros from the European Union budget, and 21 euros from the national budget. Payments for organic farming are higher than payments for normal farming. Subsidies granted to beneficiaries for organic farming aim to compensate for additional costs and income losses resulting from the application of organic farming practices. The amounts granted in 2022 through measure 11, granted by the Payments and Interventions Agency for Agriculture from the National Rural Development Program 2014-2020, are presented in table 1.

Table 1. Compensatory Payments for Measure 11

The package	Amount of payments
Submeasure 11.1 – Support for conversion to organic farming methods	
Package 1. agricultural crops on arable land (including fodder plants)	€293/ha/year
Package 2. vegetables	€500/ha/year
Package 3 .orchards	€620/ha/year
Package 4 .vii	€530/ha/year
Package 5. medicinal and aromatic plants	€365/ha/year
Package 6. permanent meadows :	
<i>variant 6.1. (applicable at national level on surfaces without commitment M.10)</i>	€143/ha/year
<i>variant 6.2 .(applicable in eligible areas and only together with an M.10 commitment)</i>	€39/ha/year
Submeasure 11.2 – Support for maintaining organic farming practices	
Package 1. agricultural crops on arable land (including fodder plants)	€218/ha/year
Package 2 .vegetables	€431/ha/year
Package 3 .orchards	€442/ha/year
Package 4 .vii	€479/ha/year
Package 5 .medicinal and aromatic plants	€350/ha/year
Package 6. permanent meadows:	
<i>version 6.1. (applicable at national level on surfaces without commitment M.10)</i>	€129/ha/year
<i>variant 6.2 .(applicable in eligible areas and only together with an M.10 commitment)</i>	€73/ha/year

Source: developed by the author based on APIA data [3]

The analysis in Table 1 refers to the two sub-measures - 11.1 and 11.2, which refer to support for the conversion and maintenance of organic farming practices. The table presents information on the values of compensatory payments for each package under these sub-measures. For sub-measure 11.1, which focuses on conversion to organic farming methods, a variety of payments are granted depending on the type of crops and area. Payment values vary between €293/ha/year for agricultural crops on arable land and €620/ha/year for orchards. These payments aim to offset costs and encourage farmers to switch to greener and more sustainable practices. Regarding sub-measure 11.2 maintaining organic farming practices, compensatory payments are lower than those for conversion. However, they provide ongoing support for farmers who have already adopted organic practices. For example, payment values vary between €218/ha/year for agricultural crops on arable land and €479/ha/year for vineyards.

Concluding, the data of the table we can mention that both sub-measures 11.1 and 11.2, highlight the efforts to promote and support ecological agriculture. By granting compensatory payments, farmers are encouraged to adopt and maintain organic farming practices and methods. These measures can contribute to protecting the environment, improving biodiversity and achieving healthier and more sustainable food products. At the same time, these payments can help increase the competitiveness of

organic farmers and ensure a successful transition to a more economically and ecologically sustainable agricultural system.

Next, we will make a comparison of the compensatory amounts granted in the period 2007-2013, through APIA to support practices in ecological agriculture.

Table 2. Compensatory Payments for Organic Farming

The package	Amount of payments
Package 5 - organic farming	
Option 5.1 Agricultural crops on arable land (including fodder plants)	€162
Option 5.2 Vegetables (including mushrooms and potatoes)	€335
Variant 5.3 Orchards	€393
Variant 5.4 Vii	€393
Option 5.5 Medicinal and aromatic plants	€270

Source: developed by the author based on APIA data [5]

Table 2 analyzes the information on compensatory payments granted for the period 2007-2013, through APIA, for package 5 - organic agriculture. These values were compared with the compensatory payments for Measure 11, presented in table 1. Compared to the compensatory payments for Measure 11, the values of the payments within the National Rural Development Program for the period 2007-2013 are lower. For example, for agricultural crops on arable land - option 5.1, payments amount to €162 compared to €218/ha/year under Measure 11.2. For vegetables, option 5.2, payments are €335 compared to €431/ha/year under Measure 11.2. It is also noted that the compensatory payments under Measure 11 for the orchards and vineyards packages are higher than the corresponding figures in the National Rural Development Programme. In Measure 11.2, payments for orchards are €442/ha/year, while in the National Rural Development Program they were €393. Similarly, payments for vineyards under Measure 11.2 are €479/ha/year, while under the National Rural Development Program they were €393. Comparing the two compensatory payment systems, it can be seen that under Measure 11 the payment values are generally higher and reflect greater support for organic farming. This may indicate a stronger orientation towards the promotion and development of organic agriculture in the current period, with a greater emphasis on sustainability and environmental protection. It is important to note that these comparisons are based on the data provided in the analysis and compensation payments may vary based on specific policies and regulations, as well as changes from 2007-2013 to the present.

Practicing ecological agriculture in Romania brings a series of economic advantages, as well as for the benefit of the environment and the climate:

5. Economic Advantages

- a) *Higher prices*, organically certified agricultural products usually have higher prices in the market. People pay high prices for organic and higher quality products due to the perception of them as healthier and more sustainable. This gives farmers an opportunity to earn higher income.
- b) *Access to premium markets*. Organic farming can provide access to specialized and premium markets, such as health food stores or restaurants that promote healthy eating. These markets can be more profitable for farmers as there is increased demand for organic products.
- c) *Long-term cost reduction*. Organic farming emphasizes natural methods of crop protection and soil improvement, thereby reducing reliance on chemical fertilizers and pesticides. This can lead to lower costs in the long run as farmers do not have to invest in large amounts of chemical inputs.

1. Environmental advantages:

- a) *Soil protection.* By using organic farming practices such as crop rotation, composting and the use of organic fertilizers, soil quality is improved and the risks of soil erosion and degradation are reduced.
- b) *Conservation of biodiversity.* Organic farming promotes crop diversity and the use of natural habitats near farmland. This creates favorable conditions for plant and wild animal species, contributing to the conservation of biodiversity and the maintenance of ecological balance.
- c) *Reducing water and air pollution.* Organic farming reduces the use of pesticides and chemical fertilizers, helping to reduce water and air pollution. Thus, both drinking water sources and air quality are protected in the long term.

2. Climatic advantages:

- a) *Reducing carbon footprints.* Organic farming emphasizes practices that minimize the release of toxic substances into the atmosphere. This includes the use of organic fertilizers, which release fewer nitrogen compounds into the atmosphere, and soil conservation practices, which reduce carbon dioxide emissions.
- b) *Carbon storage.* Healthy soils rich in organic matter have the ability to capture and retain significant amounts of carbon, thereby reducing the concentration of toxic substances released into the air and contributing to the fight against climate change.

These advantages of organic agriculture both for Romania and for farmers represent a combination of economic aspects, environmental protection and adaptation to climate change. By adopting organic practices, farmers can benefit from higher incomes, access to premium markets and reduced costs in the long run. At the same time, organic farming contributes to soil protection, biodiversity conservation, pollution reduction and carbon storage, having a positive impact on the environment and climate change. These advantages are essential for promoting sustainable agriculture and building a healthier and more sustainable food system.

6. Conclusions and Recommendations.

In conclusion, we can mention that ecological agriculture has a significant potential for the economic development of Romania. Increasing consumer interest in organic products and access to premium markets provide opportunities for farmers to earn higher incomes. Subsidies and compensatory payments offered by the European Union through European funds and by the Romanian government support the transition to organic agriculture. They represent a consistent source of finance for farmers and motivate them to adopt ecological practices. Organic farming brings important benefits to the environment and the climate. By protecting the soil, conserving biodiversity, reducing pollution and storing carbon, organic farming contributes to protecting the environment and adapting to climate change. Therefore, the opportunities generated by the development of organic agriculture include higher prices for products, diversity of agricultural products, the development of forms of rural tourism and sustainable agriculture. All these aspects can contribute to increasing incomes and diversifying agricultural activities in Romania.

As a result of the research, the following **recommendations** are proposed :

1. The government should continue to support organic farming by providing substantial subsidies and compensatory payments in line with the European Union's common agricultural policy. This financial

support is crucial to encourage farmers to switch to green practices and invest in appropriate infrastructure and technologies.

2. It is important to promote awareness and education among farmers about the benefits and methods of organic farming. Provide technical assistance and information on good agricultural practices so that farmers can successfully implement and maintain these practices.

3. Developing partnerships between farmers, processors and distributors can help increase market access for organic agricultural products. These partnerships can ensure efficient distribution and proper promotion of organic products.

4. Investments in research and development in organic farming should be encouraged. New technologies and innovative practices can increase productivity and efficiency in organic farming, thus contributing to increasing the competitiveness of this sector.

Overall, ecological agriculture can bring multiple benefits for Romania, both from an economic point of view and for the benefit of the environment and the climate. The promotion and development of this agricultural branch should be a priority in Romania's agricultural and environmental policies. This could help diversify and improve farmers' incomes, increase the sustainability and resilience of agriculture, and protect natural resources and the environment. Romania can strengthen its position in ecological agriculture, contributing to the sustainable development of the agricultural sector and the protection of natural resources. Organic farming can bring long-term economic, social and environmental benefits, promoting sustainable agriculture and contributing to the achievement of environmental and climate protection objectives set at national and European level.

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