UDC 338.433(12)
JEL Classification: Q15
DOI: 10.15587/2706-5448.2024.303578

Oksana Drebot,
Mariya Vysochanska

COMPREHENSIVE ANALYSIS AND ASSESSMENT OF THE PRODUCTION AND EXPORT POTENTIAL OF ORGANIC NICHE PRODUCTS

The object of the study is the determination of ecological and economic efficiency in relation to the production of organic niche products. The strategic perspective of the production and export of organic niche products in Ukraine is considered as one of the ways to overcome economic challenges exacerbated by global instability and geopolitical tensions. The production of organic products is outlined as a strategically important direction of the country's agricultural sector, which has significant export potential, especially to the countries of the European Union, where there is a steady increase in demand for organic products. A comprehensive approach to strategy implementation is proposed, which includes market research, production development, marketing and branding, as well as optimization of logistics and export processes. The dynamics of the main indicators of the development of organic agriculture in Ukraine from 2010–2021, the volume of imports of organic products to the countries of the European Union by exporting countries were analyzed. To date, only 1 % of agricultural crops are «eco», the volume of organic products has significantly increased, and the yield of organic products has increased by 5–20 % with a corresponding reduction in material costs. Since the end of the 1990s, the agricultural sector of Ukraine began to focus intensively on organic production, taking into account the growing global trend towards the sustainable development of the agro-industrial complex, etc. Given their uniqueness, growing niche crops can offer advantages such as minimal competition and the potential for significant profits, especially when the products find widespread use. A comparative analysis of the production of organic products on the domestic and foreign markets of Ukraine was conducted. A SWOT analysis of the production of organic products in Ukraine was developed to determine the strengths and weaknesses. The practical value is providing advice to producers on growing niche crops, creating market demand, attracting foreign partners to implement such projects in Ukraine, which will contribute to strengthening the economic potential of agricultural producers. This will help increase the competitiveness of domestic enterprises in the local and global markets, make them more resistant to economic challenges and help reduce risks, etc.

Keywords: *organic production, economic challenges, niche products, sustainable agriculture, market research.*

Received date: 26.02.2024
Accepted date: 29.04.2024
Published date: 30.04.2024

How to cite
Drebot, O., Vysochanska, M. (2024). Comprehensive analysis and assessment of the production and export potential of organic niche products. Technology Audit and Production Reserves, 2 (4 (76)), 41–45. doi: https://doi.org/10.15587/2706-5448.2024.303578

1. Introduction

The weak economic growth in many countries, including Ukraine, is the result of global instability and geopolitical tensions, which is particularly evident in rural areas and the agricultural sector. To overcome these challenges, including the loss of income sources for the working population, one option is for small and medium-sized enterprises to specialize in the production and export of niche products. Such a strategy would avoid direct competition with large agricultural holdings and help expand sales markets by entering international markets and attracting new demand segments.

Focusing on niche products may include the development of unique agricultural products that have special characteristics or quality, environmentally friendly production technologies, and products that meet the specific requirements of certain markets or cultural characteristics. These may include, for example, organic products, exotic crops grown in Ukraine, or value-added products such as cheeses with unique flavors, wines, honey, and others.

In a globalized economy, the organic market plays a strategic role, especially in the European Union, where the demand for organic products is constantly growing. Ukraine, as one of the leading exporters of organic raw materials to the EU, faces a unique opportunity to strengthen its position in this market. The development of the domestic organic market in Ukraine, despite the existing challenges, offers positive prospects due to the availability of natural resources and growing demand from the population.

ISSN 2664-9969

In their works, a number of researchers point out the prospects of growing niche crops as one of the strategic directions of development of the agricultural sector of Ukraine [1, 2]. Scientists reveal new opportunities for the agro-industrial complex of Ukraine in the field of growing niche crops, which can be realized in increasing the country's export potential and entering new markets [3]. For example, study [4] shows the diversification of the oilseed business and the development of non-traditional oil production. Some researchers point to the feasibility of organic production of many niche oilseeds [5]. Currently, niche crops are not traded on stock markets and are not intended for a wide audience of consumers. Depending on the type of such crop, demand for it can vary from individual situational cases to constant commercial or even social interest, meeting the needs of a certain group of consumers. This results in a limited sensitivity of prices for such products to changes in demand. Given their uniqueness, growing niche crops can offer advantages such as minimal competition and the possibility of significant profits, especially when the products are widely used.

The aim of the study is to comprehensively analyze and assess the potential for production and export of organic niche products in Ukraine as a strategic direction for the development of the country's agricultural sector in the context of global economic challenges and growing demand for environmentally friendly products.

2. Materials and Methods

The following research methods were used to study the economic efficiency of production and export of organic niche products:

– monographic (study of scientific publications and own publications in the national press for discussion in the civil society, regulatory documents, statistical data);
– abstract and logical (theoretical generalizations and formulation of conclusions);
– analysis and synthesis (substantiation of the systematic research methodology), etc.

This allowed for a comprehensive approach to the study of the issue, taking into account various aspects of organic production and exports.

3. Results and Discussion

Today, the trend of spreading the so-called middle-class consumption model, which is already common in developed countries and is growing rapidly in China, India and other developing countries, is gaining popularity around the world. This means that the number of people who want to consume high-quality and healthy food is increasing. A similar trend is observed in Ukraine. Accordingly, there is a growing demand for food with added consumer value – organic products, bioproducts, farm products, superfoods, fitness products, and other healthy foods based on niche products [1].

According to local scientists and market analysts, the inclusion of niche or specialized crops in agricultural production has the potential to significantly expand the range of crops grown in the grain and oilseeds sector, as well as reduce dependence on monocultures of sunflower and rapeseed. This will help to avoid overuse and depletion of the surface soil layer caused by their intensive cultivation.

Growing niche crops, as well as traditional crops, has both positive and negative aspects. Among the advantages of specialized crops is their high economic efficiency, including:

– enrichment of agricultural production through crop rotation, which helps to improve soil conditions (this is especially true when legumes are included in the crop rotation);
– diversification of production lines as a means of minimizing economic risks for the company in case of unfavorable conditions for the main crops.

In order to balance the positive and negative aspects of growing niche crops, it is necessary to thoroughly research markets in order to identify the most popular crops; develop an investment plan in detail; and study the technologies for their cultivation [1].

The development of organic, niche or specialized areas in the agricultural sector is a response to the efforts of the global community to find solutions to crises that arise from the confrontation between human activity and the ability of the environment to recover. One of the ways to achieve this goal is to develop agriculture in a way that does not harm environmental protection, as this industry is most directly dependent on natural resources. This approach to agricultural activities is based on organic farming, which is friendly to the environment [6].

As a special niche industry, organic agriculture has its own peculiarities, which are mostly negative: much lower crop yields, because of the need for more land for organic production, but at the same time less availability due to high prices [7–9]. Due to the high cost, more than 80% of organic products from Ukraine are exported. In the United States, organic products are 5–7 % more expensive than conventional products, and in stores this difference is more than 30 %, making their production economically profitable [10].

Today, only 1 % of crops are organic, and if the volume of organic products increases significantly, they will lose their price advantage over conventional products, as is the case in some other countries. In Poland, a third of citizens are already willing to pay 2–3 times more for organic products, so the growth rate of the organic agricultural market is 20–30 % per year, which is a result of public and private promotion of organic products as «healthy» [11].

A fundamental systemic factor that ensures the success of organic farming is crop rotation. Through proper crop selection, it is possible to preserve and improve soil fertility, in particular:

– stabilize the processes of humification and mineralization of soil organic matter;
– increase the efficiency of moisture and nutrient use, the activity of soil microorganisms, and the supply of nitrogen from the atmosphere;
– counteract the damage to cultivated plants by diseases and pests, to limit the competitiveness of weeds;
– increase the biodiversity and stability of the agroecosystem and the efficiency of production.

One of the rules of organic farming is to never leave the soil uncovered. This means that the soil should be covered not only with mulch made of straw or other plant residues, but also with plants that are included in the crop rotation as green fertilizer. Crop rotation is a planned and rational measure that increases yields by 5–20 % with a corresponding decrease in material costs [12].

Since the late 1990s, Ukraine's agricultural sector has been intensively focusing on organic production, given the

growing global trend towards sustainable agricultural development. The active participation of public organizations and associations, such as the Federation of Organic Movement of Ukraine, Organic Standard, BIOLan Ukraine, Naturproduct, Living Planet, Organic Farming Club, and Tiger House Organic Era, helps consolidate efforts to develop this area. This allows Ukraine not only to strengthen the domestic market, but also to effectively position itself in the international arena as a leading producer of organic products.

The systematic increase in the number of organic market operators, the expansion of the area of organically cultivated agricultural land, as well as the diversification of the range of organic products and their geography of supply, indicate the dynamic development of the industry (Table 1). According to the Ministry of Economy, Trade and Agriculture of Ukraine, in 2021, the total area of land for organic cultivation and land in transition reached 422.3 thousand hectares. The number of organic market operators registered in 2021 is 528.

As can be seen from Table 2, the analysis of export data to the European Union for the period 2021–2022 has identified important trends and volatility in global organic trade. Ecuador is a priority exporter, with a nominal increase in exports of 0.1 %, which is reflected in its dominance in the market with a share of 12.7 %. Togo's sharp growth of 83.8 % potentially indicates strategic changes in export policy that could help increase its share of the global market. On the other hand, significant declines in the export performance of India and Turkey, which amounted to –32.4 % and –32.8 %, respectively, emphasize the need for a deeper analysis of internal and external factors that could have negatively affected their economic situation. On the other hand, the positive dynamics of Ukraine's and China's export operations, which grew by 15.8 % and 30 %, respectively, illustrates the effectiveness of their adaptation and innovative approach to expanding trade opportunities internationally.

Despite the fact that exports of organic products significantly exceed domestic consumption, a study by the Organic Federation found that the share of products sold on the domestic market in 2019 was only 1.54 %, which correlates with the limited ability of the population to pay. At the same time, a comparative analysis with the European Union, where the level of consumption of organic products per person is 53.7 EUR per year, indicates a significant potential for growth in domestic consumption in Ukraine, where this figure does not exceed 3 EUR (Fig. 1).

Despite existing challenges, such as limited ability to pay and insufficient domestic consumption, the organic production industry in Ukraine continues to evolve, opening up new opportunities for sustainable development and integration into global value chains. Further stimulating domestic demand for organic products, increasing consumer awareness, and improving access to organic products can help strengthen Ukraine's position as one of the leaders in organic production on the global market.

In this context, the war threatens the stability of production and sales of agricultural products in Ukraine, which is critical for the country's economy. It is projected that by 2025, the area under grain crops will decrease by 58 %, and the grain harvest will be reduced by 69 % compared to the pre-war year of 2021. In 2022, farmers were ready to sow amid other problems, but now the most acute challenge for them is the lack of liquidity of agricultural products.

After all, organic production in Ukraine has great potential due to a number of industry strengths. These include the high fertility of Ukrainian land, the large amount of land that can be used for organic farming, and the growing demand for organic products both domestically and internationally. Government support additionally helps to create favorable conditions for the expansion of this industry. At the same time, there are weaknesses that need to be addressed, including high costs of certification and transition to organic farming, logistics and infrastructure issues. Nevertheless, the opportunities for the industry's development are significant, especially given the growing export potential and opportunities for agroecotourism, which offers Ukrainian producers a chance to gain a foothold in the global organic market.

Table 1

Dynamics of the main indicators of organic agriculture development in Ukraine in 2010–2021 [13]

Indicators	Years									Dynamics, 2021/2010
	2010	2012	2014	2016	2017	2018	2019	2020	2021	
Area of land certified for organic production, thousand hectares	270.2	278.8	400.8	411.2	420.0	429.1	468.0	462.2	422.3	152.1
Number of certified organic farms in Ukraine	142	164	182	360	375	510	617	549	528	386
Market volume of organic products in Ukraine, million EUR	2.4	7.9	14.5	21.2	29.4	33.0	36.0	38	39	36.6

Table 2

Imports of organic products to the EU countries by exporting countries, 2021 and 2022 (tons) [14]

Order	Exporting countries	2021	2022	Changes, %	Share in total, %, 2022
1	Ecuador	345.242	345.522	0.1	12.7
2	Dominican Republic	265.075	251.378	–5.2	9.2
3	Ukraine	189.239	219.125	15.80	8
4	Peru	203.577	197.297	–3.1	7.2
5	China	149.283	194.101	30	7.1
6	India	205.928	139.243	–32.4	5.1
7	Togo	68.341	125.619	83.8	4.6
8	Colombia	105.199	120.875	14.9	4.4
9	Turkey	154.938	104.041	–32.8	3.8
10	Brazil	55.452	65.977	19	2.4

ISSN 2664-9969

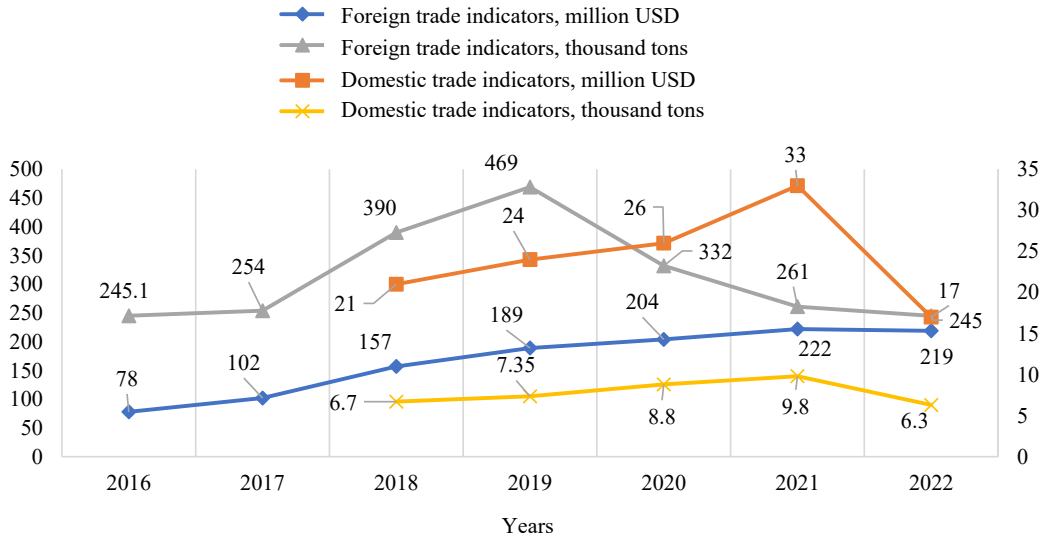

Fig. 1. Comparative analysis of organic production in the domestic and foreign markets of Ukraine in 2016–2022 [15]

However, the industry faces a number of threats, including competition from conventional and non-organic products, volatility in global market prices, and potential changes in government support, requiring constant monitoring of the market environment and flexibility in management decision-making. In summary, in order to succeed in organic production in Ukraine, it is necessary to actively work to overcome existing weaknesses and minimize threats, focusing on strategic planning and innovation, which will allow to fully utilize the existing potential of the industry (Table 3).

Table 3

SWOT analysis of organic production in Ukraine

Strengths	Weaknesses
– High soil fertility. – A large amount of land. – Growing domestic and foreign demand. – Government support	– High costs and certification and production. – Underdeveloped logistics and infrastructure. – Limited information support and marketing
Opportunities	**Threats**
– Export potential. – Development of agritourism	– Competition with conventional and non-organic products. – Volatility of global market prices. – Possible changes in government support and regulation

An analysis of the current status and trends of exports of certain niche crops from Ukraine revealed that export volumes in monetary terms varied significantly from year to year, especially for rye, flax, potatoes, and millet, where the coefficient of variation exceeded 50 %. At the same time, exports of sorghum, fruits, and vegetables were fairly stable, with coefficients of variation not exceeding 20 %.

Enhancing Ukraine's export potential in the organic sector to the EU through the introduction of innovative agricultural technologies can help restore and maintain soil quality, which is an important step in strengthening economic ties with the European Union. Effective implementation of this strategy requires a comprehensive approach, including:

– In-depth market analysis so that small and medium-sized farms can focus on the products that are in greatest demand.

– Development of production by investing in modern technologies and upgrading the skills of employees with a focus on sustainability and environmental friendliness of production processes.

– Marketing and branding should focus on creating a unique selling proposition and developing a brand that reflects the characteristics of organic products, while actively using digital channels for promotion.

– Logistics and exports require optimization of processes and simplification of customs procedures to ensure efficient access to international markets.

For small and medium-sized farms seeking to switch to organic production, it is particularly important to focus on several aspects. Initial research on production standards, certification requirements, and organic farming principles will help avoid common mistakes. Education and training will provide an opportunity to learn about the latest practices and agricultural technologies. A gradual transition to organic production, starting with small plots, will allow us to adapt to new conditions without significant risks. Cooperation with organic associations will provide access to useful resources and support on the way to certification. An effective marketing strategy focused on the value of organic products will help create sustainable demand and establish long-term relationships with customers. It is also important to pay attention to digital technologies to promote products, attract new customers and enter international markets. Organic farming opens up new horizons for Ukrainian farmers, offering not only the production of higher quality products, but also environmental protection and sustainable development of the agricultural sector.

Among the promising areas of research, it is worth noting the assessment and analysis of soil suitability and the investment attractiveness of land for growing niche crops. This will become the basis for the development and implementation of investment and innovation projects in the field of niche production.

4. Conclusions

Thus, despite existing challenges, such as limited solvency and insufficient domestic consumption, the organic production industry in Ukraine continues to develop, opening up new opportunities for sustainable growth and integration into global value chains. Increased domestic demand for organic products, increased consumer awareness, and improved access to organic products can help strengthen Ukraine's position as one of the world's leading organic producers.

Steady growth in demand for organic products in the consumer market, which occurs against the backdrop of limited consumer awareness of organic products and generally low purchasing power. Today, the need to apply organic technologies in agriculture is driven by the need for sustainable development of rural areas, improving the quality of life of the rural population, and restoring soil fertility. It is also necessary to preserve the environment, increase the profitability of agricultural production, strengthen the country's export potential, provide the market with healthy food and maintain the image of Ukraine as a producer and exporter of high-quality organic products, etc.

Conflict of interest

The authors declare that they have no conflict of interest in relation to this study, including financial, personal, authorship, or any other, that could affect the study and its results presented in this article.

Financing

The study was conducted without financial support.

Data availability

The manuscript has no associated data.

Use of artificial intelligence

The authors confirm that they did not use artificial intelligence technologies when creating the presented work.

References

1. Udova, L., Prokopenko, K. (2018). The niche crops as a new prospective guideline for small farms. *Ekonomika i Prognozuvannâ, 3,* 102–117. doi: https://doi.org/10.15407/eip2018.03.102
2. Holodna, A. V., Lyubchich, O. H., Remez, G. G., Stolyar, O. O., Lyubchich, O. Ya. (2023). Status and prospects of cultivation of niche crops in Ukraine. *Agriculture and Plant Sciences: Theory and Practice, 1,* 5–13. doi: https://doi.org/10.54651/agri.2023.01.01
3. Vozhehova, R. A., Borovyk, V. O., Hrabovskyi, M. B., Marchenko, T. Yu., Hrabovska, T. O. (2022). Niche cultures – new opportunities for the agro-industrial complex of Ukraine. *Agrarian innovations, 13,* 181–189. Available at: https://doi.org/10.32848/agrar.innov.2022.13.27
4. Petrova, O. (2020). Diversification of oil business and development of production of non-traditional oils in kherson region. *Agrosvit, 21,* 41–48. doi: https://doi.org/10.32702/2306-6792.2020.21.41
5. Stetsyshyn, P., Rekunenko, V., Pyndus, V. (2011). *Osnovy orhanichnoho vyrobnytstva.* Vinnytsia: Nova Kn., 552.
6. Malkova, T. (2021). *Yevropeiskyi Soiuz obyraie orhanichni produkty – zvidky vony pryidut?* Ukrinform. Available at: https://www.ukrinform.ua/rubric-economy/3205058-evropejskij-souz-obirae-organicni-produkti-zvidkivoni-priidut.html
7. *Organic Ukraine Business Hub CEREALS – vpershe v Ukraini shist orhanichnykh kompanii obiednalysia dlia spilnoho poshuku novykh rynkiv*. Organic Ukraine. Available at: https://www.facebook.com/OrganicUkraine/photos/organic-ukraine-business-hub-cereals-%D0%B2%D0%BF%D0%B5%D1%80%D1%88%D0%B5-%D0%B2-%D1%83%D0%BA%D1%80%D0%B0%D1%97%D0%BD%D1%96-%D1%88%D1%96%D1%81%D1%82%D1%8C-%D0%BE%D1%80%D0%B3%D0%B0%D0%BD%D1%96%D1%87%D0%BD%D0%B8%D1%85-%D0%BA%D0%BE%D0%BC%D0%BF%D0%B0%D0%BD%D1%96%D0%B9-/3230699940356878/
8. Novella, S. (2017). *Rolnictwo organiczne nie służy środowisku.* Listy z naszego sadu. Available at: http://www.listyznaszegosadu.pl/rolnictwoorganiczne-nie-sluzy-srodo wisku
9. *Wady i zalety żywności ekologicnej*. Ekodolina. Available at: https://e-sochaczew.pl/eko-dolina/strona-3478
10. *Zdrowy Sen: Kompleksowy Przewodnik do Osiągnięcia Optymalnego Odpoczynku Nocnego* (2023). Zdrowie powraca. Available at: http://zdrowiepowraca.pl/artykul,organiczne-rolnictwo-niedarady-wy zywic-swiata
11. Rotkiewicz, M. (2013). *Ekościema, czyli mity zdrowej żywności.* Polityka. Available at: https://www.polityka.pl/tygodnikpolityka/nauka/1549063,1,czym-na%20prawde-jest-rolnictwo-ekologiczne.read
12. Kaminskoho, V. F. (Ed.) (2018). *Vyrobnytstvo orhanichnoi produktsii roslynnytstva v mezhakh silskykh terytorii*. Vinnytsia: TOV «TVORY», 166.
13. *Orhanik v Ukraini. Federatsiia orhanichnoho rukhu Ukrainy*. Available at: http://organic.com.ua/organic-v-ukraini/ Last accessed: 02.03.2024
14. *Analytical Brief N°2: EU imports of organic agri-food products – Key developments in 2022*. Available at: https://agriculture.ec.europa.eu/document/download/1aa675d0-64ae-49d2-8c52-a95c75cb0105_en?filename=analytical-brief-2-eu-organic-imports-2022_en.pdf
15. *Prodazhi orhanichnoi produktsii za 2016–2022: zovnishnii rynok*. Available at: https://organicinfo.ua/infographics/export-market-2016-2022/

✉ ***Oksana Drebot,*** *Doctor of Economic Sciences, Professor, Academician of the National Academy of Agrarian Sciences of Ukraine, Institute of Agroecology and Nature Management of the National Academy of Agrarian Sciences of Ukraine, Kyiv, Ukraine, e-mail: drebot_oksana@ukr.net, ORCID: https://orcid.org/0000-0003-2681-1074*

Mariya Vysochanska, *Doctor of Economic Sciences, Senior Researcher, Institute of Agroecology and Nature Management of the National Academy of Agrarian Sciences of Ukraine, Kyiv, Ukraine, ORCID: https://orcid.org/0000-0003-2116-9991*

✉ *Corresponding author*