

ORGANIC NICHE AGRICULTURE IN THE SUSTAINABLE DEVELOPMENT OF RURAL AREAS

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Abstract

The purpose of the study is to determine the possibilities of creating conditions for the development of organic agriculture as an effective direction of its greening and niche direction of further development of this branch as a resource basis for sustainable development of rural areas of Ukraine. The research methodology is formed on the basis of a dialectical approach to the study of economic phenomena and includes such methods as the method of analytical generalizations, induction and deduction, scientific abstraction, comparison and monographic description. The results of the study show that organic agriculture in Ukraine has the necessary natural conditions for its development, but its rate is much lower than in European countries. This is evidenced by the low share of organic crops, the extremely negative situation in organic livestock and low levels of consumption of organic products. The development of organic agriculture in Ukraine requires the creation of conditions to increase access to credit for small producers, adapt foreign experience in the industry, to promote the development of certification of products and producers, to develop cooperation and information and advisory services, to promote the consumption of organic food, as well as increasing of government support within the framework of the implementation of the National Economic Strategy of Ukraine for the period up to 2030.

Key words: agriculture, organic production, niche direction, ecologization, sustainable development, rural areas.

INTRODUCTION

The sustainable development of rural areas should objectively be the main way of forming their perspective due to its content, which is the optimal combination of development of social, economic and environmental spheres of rural life. There is every reason to agree with that social development cannot be fully possible without simultaneous economic and ecological development, economic – without social and natural, ecological – without social and economic [26]. Naturally, the defining sphere in this triad is economic, which is represented mainly by agriculture as the dominant sphere of economic activity of rural residents. Assessing the situation, it can be affirmed, that agriculture was, is and in the foreseeable future remains the basis for the sustainable development of villages and rural areas as a set of economic, social and environmental spheres of life of the rural population, and hence – a determining factor in their development. Under conditions of aggravation

of social and ecological problems of the present as a consequence of deterioration of an economic condition of the village diversification of directions of economic, including directly agricultural activities can objectively play an important role in their solution.

One of the real and effective ways of this diversification under the existing conditions is niche agricultural production, especially organic, the importance of which is growing in the context of the need to implement the concept of sustainable development of rural areas. At the same time, the development of niche organic agriculture is a real way to its greening. It should not be overlooked, that the period of problems less connections between humanity and its activities and the environment has long passed and seems irreversible, so the question of the relationship between society and nature and the use of natural resources are becoming increasingly important. Famous V. Vernadsky warned mankind, that humanity, social systems, the structure of scientific knowledge, engineering

and technology are in unity with the environment. Changes in any component will sooner or later affect the state of the whole system [44]. So, the development of organic agriculture is also one of the most practical ways of the economy ecologization, because, given that agriculture is a branch, in which contact with the environment, comparing to other sectors of the economy, is the closest, as natural resources are the basis of this branch, we can say that agriculture creates the most intense specific negative impact on environment. It is also logical to conclude, that the ecologization of agriculture is one of real ways to resolve the contradictions between the needs of intensifying the use of natural resources and ever increasing human needs meeting.

Apart of that, organic products provide real benefits for the environment and the health of consumers, who prefer to use organic production methods. In addition, there is virtually unlimited demand for organic products in European countries, although their markets require very high quality products. So, the general market for organic products is constantly growing, but the analysis shows, that the rate of this growth could be much higher.

The results of research of economic aspects of the general problem of sustainable development or rural areas are contained in the works of such well-known scientists as V.Ambrosov, D.Dobryak, P.Makarenko, P.Sabluk, M.Khvesyuk, V.Shebanin, O.Tsarenko, N.Zinovchuk and others. Regarding the niche crops growing economy and niche products, producing from agricultural raw materials, especially when it is talking about organic farming, it can be argued, that the problems of development of this agricultural sector in Ukraine are also in the spotlight of agricultural economists, analysts and practitioners, including V.Aristov, R.Bezus, V.Bolokhovskyy, A.Gubin, V.Harmashov, Ye.Havaza, G.Humeniuk M.Zhybak, O.Kardash, O.Khodakivska, Yu. Kernasyuk, M.Kobets, O.Maslak, V. Medvedyuk, E. Milovanov, N.Prokopchuk, V.Tereshchenko, V. Shcherban, Yu.Voskobiynyk and others.

Important results of the research of the problem are contained in the works of agrarian scientists from other countries such as M.Altieri, G.Beddington, C.Burghlea, K.Ditrtova, C. M.Ene, J.Golaś, B.Grujic, B.Huber, B.Klepatskyy, M. Klodzinsky, E.Krajenbrink, M.Rotkiewich, S.Roljevic, K.Shor, D.Topor, C.Uzlău, P.Vukovic, H.Wheeler, V.Zientara and others. In particular, O. Khodakivska points on the development of organic production as one of the main strategic objectives of agricultural production ecologization [25].

“Organic farming represents a system of safe food in accordance with environmental protection, maintaining soil fertility, ecosystem and human health” [38, p.241].

It is impossible to speak of a high level of well-being of rural residents, if their livelihood, albeit economically and socially efficient, takes place in conditions of low quality of the natural environment. “Organic production in agriculture is definitely fulfilling the idea of sustainable development.” [20, p.165].

«Organic agricultural production enables the production of controlled, certified, safe, and high-quality food, and at the same time it provides high economic and ecological profit and preserves a healthy environment» [21, p.125].

The existent low level of rural social-economic development and low general standard of living in the Ukrainian countryside, especially in terms of its environmental friendliness, indicate the need to continue and to deepen of research on this issue in accordance with today's conditions and needs, especially regarding Ukraine's course to prepare for European integration. Therefore, taking into account the above and assessing the situation with organic agriculture in Ukraine, the aim of the study is to evaluate the condition and to identify main ways of further development of the agricultural sector of the Ukrainian economy as a resource basis for sustainable development of rural areas and diversification of its areas, in particular - through the development of organic niche agriculture.

MATERIALS AND METHODS

Under conditions of the limited official statistical information on the niche organic sector of agriculture as the main sources of information for conducted research were used the results of the authors' own observations and processing of available scientific and practical publications and data on the research topic, as well as data from: AgroPolit.com; Bakertilly; Ecobusiness Group; Ecoindustry.pro; EUR-Lex; Federation of Organic Movement of Ukraine; FiBL Statistics; International Federation of Organic Agriculture Movements (IFOAM); Landlord; Latifundist.com; Organic.info; Organic Standard; Research Institute of Organic Agriculture FiBL; SSSU State Statistics Service of Ukraine.

The general approach to the scientific search for solutions to the problem was based on the use of a dialectical method of cognition of economic phenomena. The study used general scientific research methods, in particular, analytical generalizations - to present the results of systematization and generalization of modern views on niche organic agricultural production as a way of ecologization of the branch in the context of its impact on the sustainable development of rural areas; inductions and deduction - to analyze the state of organic niche agriculture and its impact on the quality of food security of the country; comparison - to compare the efficiency of individual niche crops growing; monographic description - to present some good practices of niche organic production. Statistical analysis of numerical data was carried out using methods of analysis of dynamic series, comparison, calculation and indexes. The main indicators used in the conducted research: number of farms in organic agriculture, cultivated surface in organic agriculture, number of animals in organic farming, organic production volumes.

RESULTS AND DISCUSSIONS

According to FiBL, organic agricultural land in the world in 2019 increased by 1.1 million hectares (1.6%) and amounted to 72.3 million

hectares (1.5% of total area of agricultural land) (against 11 million hectares in 1999), and sales of organic products continued to grow, so the market for organic products in the world reached € 106.4 bln (against € 15.1 bln in 2000), incl. € 44.7 - in USA, as it evidenced by data from 187 countries, engaged in organic production. The leader in terms of organic market turnover in the United States is following by Germany - € 12 billion and France - € 11.3 billion [18, p.19]. The analysis shows high growth rates of organic agriculture and that, the increase in the area of organic farmland in the world is slower than the growth of demand for organic products. The number of producers of organic products in the world in 2019 became 3.1 million [18, p. 55].

In Europe the area of organic farming has reached about 16.5 million hectares in 2019 (EU-14.6 million hectares) and its share is 3.3% of the total agricultural area (EU: 8.1%) [18, p. 228] what is largely due to the International Federation of Agricultural Organic Movement (IFOAM). Over the past 10 years in EU, market of organic food volume has more than doubled - from about € 18 billion in 2010 to over € 41 billion in 2019 (€ 41 billion totally in Europe). So, organic market grew faster (by 8%) than the organic area (by 6 %) [18 p.228].

Ukraine's agricultural sector generates more than 10% of the country's GDP and creates about 40% of total export revenue. According to official data from the State Statistics Service of Ukraine, 41.4 million hectares of land in Ukraine are used in agriculture. Of these, 32.7 million hectares are arable land, what forms one of the largest indicators in the world of plowed land - almost 79% (54% of the country area) [42]. Agricultural producers in Ukraine have been consciously engaged in organic production since 1997. That is, comparing to the developed countries of the world, the historical development of the organic sector of agriculture in Ukraine dates back 15-20 years and its evolution can be divided into three main stages:

➤ 1991-2001 - the emergence of organic agriculture in Ukraine - its legal framework lays down, the first international agreements

on cooperation are concluding and the first export deliveries of organic products are realizing;

➤ 2002-2012 - formation of the organic market in Ukraine - creation of the Association of participants of organic production "BIOLan Ukraine", of the Federation of Organic Movement of Ukraine, expanding of the range of organic products, adoption of the Law "On Organic Production", which defined legal, economic, social and organizational bases of organic agriculture;

➤ approximately since 2013 - a jump in the size of organic areas (by 44.2%) and the number of organic producers, the adoption of the Law "On basic principles and requirements for organic production, circulation and labeling of organic products" (came into force on August 2, 2019 p.).

In Ukraine, the total area of agricultural land with organic status and certified according to the standard equivalent to the EU Regulation on organic production in 2019 is 467980 hectares (1.1% of the total area of agricultural land), including the area of agricultural land with organic status (Table 1).

Table 1. Dynamics of the main indicators of development of organic agriculture in Ukraine

	Years					
	2010	2015	2017	2018	2019	2019 in % to 2010
Area of land certified for organic production, thousand hectares	270.2	410.5	420.0	429.1	468.0	173.2
Number of certified organic farms	142	210	375	510	597	4.2 times
Average farm size, ha	1,903	1,952	1,120	841	788	41.4
Volume of the market of organic products in Ukraine, € million	2.4	17.0	29.4	33.0	36.0	15 times

Source: Constructed by authors according to IFOAM and Organic Standard [14], [18], [19], [36].

The results of the calculations presented in Table 1 showed, that in Ukraine in 2010-2019 the size of the market for organic products increased 15 times, while the area under organic crops increased by only 73.2%, and the average farm size decreased by 58.6%. The latter indicates a gradual transition of organic production to smaller farms due to the specifics of organic production. According to calculations, in Ukraine, about 4 million hectares of land can additionally be used for organic production [40]. That is, currently only 11.7% of the possible area is used for growing organic products. According to other estimates, large areas of ecologically clean land - over 7 million hectares - remain unused for the production of organic products [8, p.37)]. Studies show, that "the development of organic production in Ukraine can be carried out not less than on 19% of the total area of agricultural land, which are suitable for the implementation of organic farming" [24, p.

21]. At the same time, Ukraine occupies the first place in the Eastern European region in the certified area of organic arable land, specializing mainly in the production of cereals, legumes and oilseeds [15]. Ukraine currently ranks 20-th place out of 175 countries in terms of the area of all organic agricultural lands [18, p.39-40] (against 23-rd place from 191 countries in 2018) [17, p. 39-40], but unfortunately it was not and is not included into group of 16 countries, where the share of organic agricultural land in their total area is at least 10% [18, p.42] and in the overall ranking of this indicator ranks as much as 68-th with a rate of 1,1% [18, p.43], against 80th with a rate of 0.7% in 2018 [17, p.43]. That is, progress is clearly visible. In 2019, Ukraine entered the group of 10 countries with the highest rates of growth of organic space and ranked 5th there after India, the United States, France and Bolivia with 158,880 hectares per year [18, p. 47].

In Europe, Ukraine ranks 12th in the area of organic land (after Poland) [18, p. 232].

IFOAM and Organic Standard data confirm, that for 2010-2019, the number of producers of agricultural organic products in Ukraine increased 4.2 times and in 2019 there were already 597 organic farms (Table 1), certified according to standards equivalent to EU and US organic legislation (NOP), what indicates the interest of Ukrainian producers in organic production [18].

But the share of producers of organic products in Ukraine is only 0.01% of the total in the world [18, p.63].

The largest Ukrainian organic producers are presented in Table.2.

Table 2. Top 10 companies of Ukraine by organic area, 2019

No	The company name	thousand hectares
1	Arnica Group	15.0
2	Galex-Agro Group	13.4
3	Agricultural Production Cooperative "Rodyna"	10.0
4	Private Enterprise "Agroecology"	6.9
5	All in foody Group	6.7
6	Agricultural Cooperative after Lenin	6.3
7	Sviatovit-Eco LLC	5.8
8	Agroinvest-Natural Products LLC	5.3
9	Biocore Organic LLC	5.1
10	Ros Agro LLC	4.9

Source: Constructed by authors according to [1, p.21].

Ukrainian certified organic enterprises vary in size from a few hectares, as in most European countries, to several thousand hectares of agricultural land.

The specialization of small organic enterprises focuses primarily on the cultivation of fruits, vegetables and berries. The larger is the enterprise, the more it deals with organic cereals, and legumes (Table 3).

According to FiBL and IFOAM studies, 16 types of organic products have been certified in Ukraine: cereals and legumes, oilseeds, vegetables, watermelons, melons, pumpkins, fruits, berries, grapes, essential oils, meat, milk, mushrooms, nuts and honey. Certified processed products include: grains, cereals, jams, syrups, juices, butter, flour, dairy and meat products, cereals, eggs, flour, pasta,

vegetable oils, beverages (fruit/vegetable/ berry and birch juices, herbal teas), dark and white chocolate, spices, canned foods (berry pastes, syrups, jams, vegetables), semi-finished products, snacks (corn sticks, energy bars) etc. [37]. According to Organic Standard, only 154 producers of organic berries, 39 producers of vegetables and 31 producers of fruit are certified in Ukraine. The area of organic gardens is about 2,500 hectares - only 7% of the total area of garden plantings [8, p.37].

Table 3. Examples of diversification of organic agricultural companies in Ukraine

Name	Area, ha	Direction (type of product)	Countries - importers	Specifics
Agricultural firm "Field", Cherkasy region	9,000	millet, pasta cereals, barley, soybeans, rye, chickpeas, lentils, peas, mustard, sunflower, flax	Netherlands, Germany, Austria, Great Britain, Italy, Belgium, Australia, Malaysia, Poland, Czech Republic, France	Quality control - own certified laboratory and European laboratories. There is an organic elevator complex of 5,000 tons for organic millet. The company has two offices in the Czech Republic and Poland.
Arnica Organic, Poltava region	9,460	green lentils, chickpeas, wheat, soybeans, corn, industrial hemp, oil flax, oil sunflower	Switzerland, Germany, Netherlands, Austria and New Zealand	The largest in Ukraine exporter of organic products to Switzerland. Monitoring compliance with organic standards with GPS-monitoring, barcodes. Elevator for 20.5 thousand tons, terminals for road and rail transport, container transportation.
"Danube Agrarian", Odessa region	2,000	watermelon, chickpeas, canola, wheat, peas, barley, millet, peach, lentils, sunflower	Austria, Germany, Romania, Great Britain	The only enterprise in Ukraine that produces certified organic watermelon.
Small Fruit, Kyiv region	300	raspberries, blackberries, strawberries	Germany, France, Denmark, Poland, Switzerland, Norway, USA and Japan	2014 - on the basis of the company established a service cooperative "Kyiv" of farmers of organic farming. Since 2016, Small Fruit distributes the first in Europe and the only franchise in Ukraine for growing organic raspberries
Farmberry, Zaporozhye region	14	dogwood		The only industrial dogwood producer in Ukraine, it has the largest dogwood garden in Europe. Own processing of berries: jams, pastilles, dried fruits, sauces, fruit juices, fresh-frozen berries.

Source: constructed by authors according to [6].

In 2020, Ukraine produced 2,945 tons of organic vegetable products, almost 50% of which are pumpkins, zucchini and other melons. 24% of organic vegetables are the so-called borscht set: potatoes, carrots, beets and other roots. About 10% are onions and garlic (twice as much by 2019). All other vegetables and greens together make up less than 15%. In Ukraine, there are just over 10 companies engaged in the production of organic vegetables indoors. Most of them are small farms, mostly with an area of up to 0.1 ha under organic cucumbers and tomatoes and provide 25% of their production in Ukraine [39].

Of the 485 Ukrainian entrepreneurs which received an organic certificate, only 15 entrepreneurs or 3% of their total number produce livestock products [36]. In this sector, organic production is carried out in meat and dairy cattle and poultry breeding. Organic eggs are not yet in the TOP-5 of organic products in terms of consumption in Ukraine, but in Switzerland it is organic eggs that rank first in terms of consumption. But in 2018-2020, the number of large producers of organic eggs in Ukraine increased from 2 to 5. [35]. It is planned to put into operation two more large poultry complexes, what generally stimulates the demand for appropriate feed.

The production and consumption of organic livestock products is of particular importance, as it provides saturation of the people diet with essential animal proteins, unsaturated fatty acids and trace elements, which has a positive effect on improving health and intellectual potential of the nation, what, combined with the accumulation of added value, forms a solid synergistic effect. The small scale of development of organic livestock deprives the country of this effect.

The unsatisfactory situation with organic animals husbandry is not unique to Ukraine. IFOAM's information shows similar disappointing statistics in this area. In Europe, the share of organic animals in total production is as follows: bovine animals - 4.0% (in EU – 6.0%; in Ukraine - about 1%), sheep - 3.5% (in EU – 5.3%; in Ukraine no subject is certified), pigs - 0.9% (in EU – 1.1%; in Ukraine - less than 1%), poultry –

2.5% (in EU – 4.2%; in Ukraine - less than 1%); milk production in EU – 3.4% (in Ukraine - about 1%) [18, p. 243-244; 28, p.79]. That is, in European countries the share of organic livestock is higher than in Ukraine, but as for Europe it is also very low.

In the EU, high quality of livestock products are also associated with "Protected Designation of Origin" (PDO) and "Protected Geographical Indication" (PGI) products. Of the 565 registered in EU PDOs, almost 70% are designations of origin for livestock products [27, p.56], [28, p.79]. The first Ukrainian products with a geographical indication, recognized in the EU, in 2020 were Hutsul cow and sheep bryndzia, which are completely authentic products and are not produced anywhere else in the world. Such registration of a geographical indication mark will help to expand markets, and consumers will receive products of guaranteed high quality.

According to OrganicInfo.ua., in Ukrainian market in 2020, according to estimates, it has been sold 7,850 tons organic products worth 709 million UAH (equivalent to \$25.1 million) [34]. Dairy products make up almost 65% of the total consumption of organic products in Ukraine. The greatest demand is for milk and butter. Second place in terms of consumption (18%) is occupied by cereals and grains, flour and seeds. The greatest demand in this category is for cereals and cereals. In 2020, the consumption of organic eggs and oilseeds increased significantly. Instead, consumption of vegetables and fruits, canned food and ice cream decreased. Despite some market growth, Ukraine's per capita consumption of organic products remains the lowest in Europe at around €1 [18, p.266]. Although every European, according to FiBL and IFOAM, spends about €55.8 (in EU - €84.2) on average per year for organic products [18, p.252] the annual consumption of organic products per capita varies considerably between states-members from € 344 (in Denmark) to € 1 (Slovakia) [13]. This differentiation can be explained by differences in the purchasing power of the population as well as insufficient consumer knowledge of

the logo and the benefits of organic production.

In terms of the volume of the domestic market of organic products, Ukraine ranks only 25th in Europe. For every hectare of organic farmland in Ukraine, only €50 enters the domestic market. The "return" of the European organic hectare is 47 times higher - in European countries there is an average of € 2,345 of domestic "pure" market per 1 hectare [29].

The export orientation of organic producers in Ukraine remains a fact. Exporters of organic products from Ukraine enjoy the benefits of the Association Agreement signed in June 2014 between the EU and Ukraine. Since January 2016, the EU and Ukraine have been applying the Deep and Comprehensive Free Trade Area, which is part of the Association Agreement [11].

In general, about 85-95% of all Ukrainian organic products are exported, and the rest remains for processing and domestic consumption [41]. Total exports of Ukrainian organic products in 2020 are estimated at \$ 204 million [32]. In 2019, Ukraine ranked first in Europe in terms of exports of organic products and second in the world out of 123 countries, rising two places compared to the previous year. During 2019, 3.24 million tons of organic agri-food products were imported into the EU, more than 10% of which were Ukrainian. At the same time, Ukrainian imports to the EU increased by 27%: from 265.8 thousand tons in 2018 to 337.9 thousand tons in 2019, what is \$189 million [10]. According to the Organic Standard, the main organic products exported by Ukrainian producers directly from agricultural production are cereals, oilseeds, soybeans, fruits, and millet. Ukraine is the largest exporter of organic cake, fruit juices and vegetables. Top 3 in Ukrainian agricultural export - corn, wheat, soybeans [2]. Moreover, the structure of exported organic Ukrainian products is changing dynamically - if 10 years ago in the structure of export of organic products up to 100% were occupied by cereals, today - wheat - 28.5%, soybeans - 5%. Also, the share of fresh and dried fruits in the supply is 5%, cereals and flour - 1.5% [30]

According to Organic Standard, Ukrainian organic products are bought mainly by EU-countries - Netherlands, Switzerland, USA, Germany, Lithuania, Italy, Austria, Georgia, France, Great Britain, Poland, Denmark [3] in total, more than 200 foreign companies import organic products from Ukraine [33, p.2].

The main problems of organic agriculture in different countries are quite similar and well described in the economic literature [for example [9, p.74]. However, in Ukraine there are certain specifics of the reasons for the low rate of development of this sector of the branch, which lie in the shortcomings of organic production itself, compared to conventional, and in not very appropriate for the development of organic production institutional and organizational environment. In particular, Ukraine's incomplete accession to the OECD Variety Certification Schemes has a negative impact - organic products without proper certification do not even have the right to be called organic in Ukraine, where GMO products are actually outlawed, even ordinary soybeans grown without GMO-technologies are rare. Generally solving the problem of certification of organic production and products in Ukraine is still quite slow. EU Regulation №1235 / 2008 lists 18 certification bodies for Ukraine: 17 foreign and 1 Ukrainian. The only Ukrainian certification body is Organic Standard LLC; all others are foreign or their local offices. However, on a positive note, most certification bodies in Ukraine are members of the European Council of Organic Certification Bodies (EOCC).

There is also no necessary level of some of niche organic products consumption culture. For example, food, made from frogs, snakes or snails is quite unusual for Ukrainians, although abroad these products have become almost traditional, as they are well understood there for their usefulness and safety.

Organic products are still sold at a relatively high price, because from an economic point of view, organic production is very expensive. Organic products should not be used with pesticides and yield-enhancing chemicals, so its volume may be 50-70% of traditional agriculture. Organic animal husbandry has clear requirements for the number of animals

on farms per unit area, restrictions on animal husbandry, feeding and treatment, the use of antibiotics and growth hormones, the need for more humane treatment of animals, which ultimately affects pricing. In addition, the high cost of organic livestock products is forming by the high price of organic feed and by its shortage. Organic raw materials proceeding products have a shorter shelf life, which increases the cost of logistics. Pricing is also affected by the cost of annual organic certification [31]. And high prices negatively affect sales volumes. According to scientists from the NSC "Institute of Agrarian Economics", the difference in retail prices for traditional and organic agricultural products is 50-200%. Thus, organic chicken eggs are 60% more expensive than their counterparts from the traditional sector, lard - 50%, milk - 2.2 times, pork (tenderloin) - 2.8 times, chicken - 3.3 times, honey - 2.1 times [22, p.133]. Only 2-5% of respondents in Ukraine are ready to overpay more than 80% of value added (for organic meat - 5% of respondents, for organic sour-milk products - 4%, for eggs - 3%) [7, p. 235-236]. Ye. Gavaza and Yu. Voskobijnyk obtained similar data - in Ukraine at a margin of 75% and above to buy organic meat and meat products to completely replace them with traditional products are ready only 5% of consumers, milk and cheese -7%, eggs -8% [23].

There is reason to expect that after increasing the number of producers of organic products and expanding the range of organic raw materials, this price will be normalized and will not be higher than, according to foreign experience, by 10-30% over the same traditional. In Poland, according to surveys, a third of citizens are willing to pay at least from time to time for organic products 2-3 times more than for its traditional counterparts, so the growth rate of the market for organic agricultural products is at 20-30% per year [39]. This is largely due to the implementation of an intensive policy of reasoned persuasion of the population about the usefulness of organic food and care for the environment protection, because it is organic agriculture that should promote it.

The specifics of the technology of organic production determine the higher level of time capacity and labor capacity of organic products, which accordingly also affects the pricing. Therefore, this direction is economically advantageous mainly in smaller farms - smaller volumes of production require less manual labor. And the look of such products is mostly not as bright as conventional.

It is also characteristic of Ukrainian organic agriculture that, according to foreign experts, in Ukraine there is a low level of competition among producers in the organic sector, and sometimes even its complete absence in most product lines. This fact, together with a narrow range of organic products, regional dispersion of organic producers and ever-increasing demand, has the consequence that the organic market in Ukraine is a seller's market [12, p.8].

In contrast to traditional farming, there is a transition period in organic production, which is 24 months for annual crops before sowing. That is, the products may receive organic status not earlier than three years from the beginning of such activities. In addition, during the transition period, yields and profits are usually significantly reduced. Therefore, the start of organic production is usually associated with long-term planning and investment, which is difficult to do on leased land. In addition, until organic products are certified, they cannot be branded and sold as organic. Therefore, it is very important for the state to support organic agriculture, especially in such transition periods. European farmers have the possibility to develop the organic direction and reduce the cost of organic products, because the state provides them with sufficient financial support, the average amount of which is 200-300 €/ha. [4]. Until recently, this practice was underdeveloped in Ukraine.

Requirements for organic production include the creation of mandatory buffer zones. Therefore, producers depend on landlords who can sell their land, which is located inside the organic farm. In addition, the new EU Regulation 2018/848, which comes into force on January 1, 2022, shifts all

responsibility even for accidental contamination of organic crops entirely to the producer [41].

Only in Lviv and Poltava oblasts there are programs of compensation of the costs of organic farms certification and also some support at the local budget level is in action. State support directly for organic producers in Ukraine was introduced for the first time in 2021. It is planned to help first of all family business at the rate of 5 thousand UAH on 1 hectare (near \$200). First of all, we are talking about family farms, which, according to the law, have a maximum size to 20 hectares [43]. In 2021, the government allocated UAH 50 million for state support of producers of organic agricultural products, which will be used in following way (Table 4).

Table 4. State support for producers of organic agricultural products in Ukraine in 2021

Kind of support	Support size
Budget subsidy per unit of arable land (1 hectare)	In the amount of 5 thousand UAH, but not more than 100 thousand UAH. per one operator (total amount UAH 30 million)
Budget subsidy for keeping cattle identified and registered in accordance with the legislation as of August 1 of the current year	In the amount of 5 thousand UAH per 1 head of cattle (total amount UAH 15 million)
Partial reimbursement of the cost of certification of organic products	In the amount of 30% (excluding value added tax), but not more than UAH 20,000 per business entity (total amount of UAH 5 million).

Source: constructed by authors according to [5],[16].

This is not a very significant amount comparing to what farmers in the EU have from the state, but for small producers in Ukraine it is also significant.

According to the National Economic Strategy of Ukraine until 2030, approved by the Cabinet of Ministers in March 2021, 3% of the total area of agricultural land in Ukraine should be used in organic production (about 1.3 million hectares). Ukraine's Second Nationally Defined Contribution (NDC2) also

identifies organic production as one of its priorities for reducing the greenhouse gas emissions, regarding which Ukraine is taking obligation to do and will require € 2.3 billion in investment by 2030 [41]. In addition, Ukraine continues to adapt to EU legislation in the framework of the Association Agreement (AA), where many issues are related to improving legislation in the field of environmental protection and agricultural production. If the AA is seen mainly as an opportunity for the development and expansion of sale markets, the Nationally Defined Contribution, together with the changes required for its implementation, are perceived by both farmers and politicians with restraint.

CONCLUSIONS

A real way to solve the problem of ecologization of agriculture as a way to rationalize the use of natural resources and create favorable conditions for the implementation of the concept of sustainable development of rural areas is the reorientation of agricultural producers to niche organic production and on this basis - to social and environmental problems of the village solving.

The study shows that Ukraine, having significant potential for production of organic agricultural products, for exports, for consumption in the domestic market, in recent years has achieved some results in this direction, showing a stable positive growth of agricultural land areas under certified organic production and of the number of organic market operators, as well as of the level of organic products consumption in Ukraine, what is facilitated by the trend of active filling of the domestic market with its own organic products through the gradual establishment of processing of organic raw materials. However, compared to the European Union and the world, the development of organic agriculture in Ukraine is much slower, because the culture of consumption of such products in Ukraine is still underdeveloped, prices for such products are objectively much higher than conventional counterparts, and

processing of such products as of raw materials is underdeveloped. The share of organic products in the domestic market of Ukraine does not exceed 0.1%. Only a bit more than 1% of the agricultural land in the country is certified for the production of organic agricultural products, 80% of Ukrainian organic agricultural products are exporting. Organic animal husbandry has special difficulties in Ukraine.

The situation is a consequence of the lack of necessary state support for organic agriculture, especially in transition periods, of lack of necessary experience and qualifications, underdeveloped certification system and its high cost, lack of cooperation and information and advisory services. Organic directions of agriculture are characterized mainly by lower levels of crops yield and productivity of animals, higher costs for sowing and tillage, higher labor intensity of the unit, lack of reliable markets for its products. Ukraine still lacks niche organic products of high export quality to form its wholesale batches. The development of the industry requires the creation of conditions for increasing the level of access to credit for small producers, adaptation of foreign experience in the industry, promoting the development of certification of products and farms, development of cooperation and information and advisory services and state support increasing.

To promote the use of organic food and to acquaint potential consumers with their benefits requires extensive use of all types of media. Building consumer confidence in certified organic products will increase demand for it. Another important point is the creation of an extensive sales network in domestic and foreign markets. Given the European orientation of Ukraine, there is an urgent need to develop and adopt the "State Program for the Development of Organic Production" as an ecologically, socially and economically feasible area of production, which would take into account the provisions of the Main Directions of Ukraine's policy in environmental protection, natural resources use and ecological security, as well as the Concept of sustainable development of agro-

ecosystems of Ukraine in the framework of the National Economic Strategy of Ukraine until 2030.

Despite the fact that Ukraine has significant problems hindering the development of organic production, this sector of the economy is very promising due to the presence of fertile chernozem soils in Ukraine, strong agricultural traditions and the desire of major market players to create the necessary institutional and legal conditions. The development of organic agriculture will contribute to the improvement of the economic, social and environmental situation in Ukraine, to the sustainable development of rural areas and to the improvement of public health.

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