

Oleg Kucher[✉], Zoia Pustova, Nataliia Pokotylska, Natalia Pustova

State Agrarian and Engineering University in Podilya, Ukraine

ORGANIC MARKET FORMATION IN UKRAINE

Summary. The article examines modern state and prospects of the development of organic market in the context of rationalization of the available natural-resource potential of Ukraine. Basing on the analysis of key organic production indicators it is relevant to conclude that during last year's there is stable positive dynamics in growing of the area of farmlands that take part in the certified reduced production. Due to the improvement of the organic production recycling the level of organic production consuming and number of certified manufacturers have significantly increased. Consumers of Ukrainian organic production are predominantly the EU countries. Ukraine is interested in the organic market development and there are inevitable resources that can be found in every region of the country. We have characterized the legal principles that enable the organic market and the establishing of relation that are linked to the organic production development which are regulated by the Law of Ukraine and other legislative acts that are related to the issue. Basing on the data of the article and estimation of the organic production consuming level in Ukraine in 2010-2019 there were evaluated forecast indicators of the Ukrainian organic market capacity until 2023.

Key words: organic market, organic production, organic products, certification, organic production marking

Introduction

The urgency of the problem of the development of organic production in Ukraine is due to the fact that, due to the deterioration of the ecological situation in the world, organic products are gaining popularity. An analysis of many years of practice in other countries has shown the economic, environmental and social benefits of organic production¹. Considering that Ukraine has favorable geographical description it can easily abandon the industrialized methods of agricultural production and develop organic

¹V. Ivanyshyn, O. Kucher, T. Bilyk: Marketing strategy formation for the development of organic production in the Ukraine. Proceedings of the 2018 International Scientific Conference 'Economic Sciences for Agribusiness and Rural Economy' No 1, Warsaw, 7-8 June 2018, p. 34-39. ISBN 978-83-7583-802-2, <https://doi.org/10.22630/ESARE.2018.1> (access: 20.10.2021).

Oleg Kucher ORCID: 0000-0002-2086-5971; Zoia Pustova ORCID: 0000-0003-3511-5054; Nataliia Pokotylska ORCID: 0000-0003-3163-2900; Natalia Pustova ORCID: 0000-0003-3184-6378

[✉] kucheroleg68@gmail.com

agriculture. Most part of land in Ukraine is suitable for farming. It's more than 41 millions ha of farmlands 8 millions ha out of which have relatively clean soil².

Organic production in Ukraine began to evolve in the end of 1990s. In recent years, Ukraine has follow world trends and develop organic production. In order to increase the demand for organic products, it is necessary to implement an effective marketing policy, to stimulate its development and organize production in accordance with all international requirements and standards³.

According to the Law of Ukraine "On the production and using of organic agricultural production and raw material thereof": Organic production is production made in the result of certified manufacturing which excludes the using of chemical fertilizers, pesticides, genetically modified organisms, preserving agents etc., on every stage of production methods, principles and rules defined by this Law are used to acquire natural production and to preserve and sustain natural resources. This Law defines legal and economic foundations of production and using of organic agricultural production and raw materials and is directed to proper operating of the market and guaranteeing the confidence of consumers concerning products and raw materials traded as organic.

In Ukraine every person or enterprise has a right to manufacture organic production if it has passed the assessment of compliance with organic production standards, received the certificate of compliance and has been included in the registry of manufacturers. Individuals or enterprises which haven't been included in the registry have no right to engage in this activity. Organic agricultural production is subject to mandatory marking by using certain government-issued logo⁴.

The most important objective in the process of the development of organic concepts in Ukraine is transition from exceptional agricultural aspect to the perception of organic domain as an agrifood system that provides:

1. Production of quality, safe of food and drinks in necessary quantity and reasonable price.
2. Reduce of pollution and greenhouse gas emissions in the process of food production, trade and consuming thereof.
3. Creation of food chains on the basis of renewable energy recycling of nutrient materials.
4. Protection of soil, water, air, biodiversity and landscape.

² O. Pavlenko: Ukraine has chance to become an organic basket of the world 2016, https://lb.ua/blog/opavlenko/326957_ukraina_maie_usi_shan-si_stati.html (access: 20.10.2021).

³ A. Jasiulewicz, O. Kucher: Marketing strategies of organic production development. International Scientific and Practical Conference dedicated to the 45 anniversaries of the Economic Faculty of State Agrarian and Engineering University in Podilya "Actual problems of agrarian economy: theory, practice, strategy" 12-13 October 2017, Aksioma, Kamianets-Podilskyi, p. 233-237.

⁴ The Law of Ukraine. 2018. "On the main principles and requirements to the organic production, use and marking of the organic goods" Publications of the Ukrainian Parliament (BBP) 2018, no 36, p. 27, <https://zakon.rada.gov.ua/laws/show/2496-19> (access: 20.10.2021).

5. Considering present and future ethical principles, food habits, consumer lifestyles and needs⁵.

Currently there are seven paramount directions of scientific research in the agricultural production domain which are inevitable for long-term balanced development in Ukraine:

1. Organic agriculture, including the performing of researches in order to complete comparative characteristics of different technologies tillage and its impact on the change of soil, accumulation of biome, humidity, formation of humus, decrease and suspension of soil degradation, protection from aerial and water erosion; education concerning efficient methods of disease, pests and weed control;
2. Organic horticulture (in the first place, learning and popularization of the most effective organic crop rotation acknowledging soil and climate conditions of different regions of Ukraine; learning specific characteristics of organic cultivation of various crops, legumes, olives, vegetables, fines herbs, medication herbs etc.);
3. Organic gardening, berry farming, nut farming and viticulture;
4. Organic animal husbandry; with no limitation to the research of cattle and pigs cultivation, but also learning the perspectivity of organic cultivation of chicken and other poultry, goats, sheep, rabbits, bees etc.;
5. Organic aquaculture, including not only cultivation of products that are typical for Ukraine, but also gaining knowledge of global experience and implementing organic cultivation of new promising products of aquaculture;
6. Processing of organic production, organic food industry with consideration of features and tendencies of the developing of demand and consumption of such in different parts of the Ukraine and worldwide;
7. The research of organic markets and forecasting of their development on regional, national, international and global levels. Scientific researches organic agricultural production must correspond with foundational principles of agriculture reduce practices and substances which are used in organic production and processing⁶.

The purpose of the article is to assess the state and prospects of the organic market in the context of rationalizing the use of existing natural resource potential of Ukraine.

Materials and methods

For the purposes of the research of development state of organic market in Ukraine the following documents and data were used:

- the legislation of Ukraine, main principles and requirements of organic trade, use and labeling of organic products;

⁵ Y. Mylovanov: History of establishing the organic 3.0 idea and prospects of its future development in Ukraine. Theory and practice nature using. "Sustainable use of natural source" 2018, no 3, http://organic.com.ua/wp-content/uploads/2019/10/organic_3.0_concept_and_ukraine.pdf (access: 20.10.2021).

⁶ I. Kyrylenko, Y. Mylovanov: Scientific support for the development of organic agricultural production. "Economics Agro-Industrial Complex" 2019, no 3, p. 27-41, http://organic.com.ua/wp-content/uploads/2019/10/nauka__organic.pdf (access: 20.10.2021).

- data taken from Ministry of agrarian policy and food of Ukraine;
 - data of Organic Federation of Ukraine;
- In order to represent the results of the research were used:
1. Schemes, diagrams, calculus methods, which enabled to make an analysis of development dynamics of organic production in 2010-2019.
 2. Forecasting method which using correlation analysis enabled to calculate forecast indicators of the organic production development until 2023.

Results

In Ukraine the organic production is actively evolving. According to data of The Research Institute of Organic Agriculture (RIOA) and International Federation of Organic Agriculture Movements (IFOAM), Ukraine is in the 11th place in Europe in terms of agricultural farmlands area. It has increased by 54% in the last 5 years.

However, in terms of the capacity of internal organic market Ukraine is in the 25-th place in Europe. From every single hectare of organic farmlands internal market receives the amount of production equivalent to 50 €. In the EU countries this indicator equals 2345 € on average. In the result the »effectiveness« of European organic hectare is 47 times higher.

The proportion of certified organic areas in relation to overall agricultural farmlands of Ukraine is higher than 1%. Ukraine is on the first place in terms of area of organic arable in Eastern Europe at the same time. Additionally, there are 570 000 hectares of certified wild farming areas harvest from which had predominantly being exported into the EU countries⁷.

Organic map of Ukraine illustrates the level of organicity of agricultural farmlands of the country and contains data on organic operators and agricultural farmlands (organic and transitional) – Figure 1⁸.

In terms of organic farmlands area there are 5 leading districts in Ukraine: Kherson (82 th. ha), Ternopil (62 th. ha), Odessa (58 th. ha), Zaporizhzhia (45 th. ha) and Cherkasy (40 th. ha). The size of Ukrainian certified organic farms varies from a few hectares (which is usual for European countries), to a few thousand hectares⁹.

Modern internal consumer market of organic goods in Ukraine began its development in the beginning of 2000-s. During last year's there is stable positive dynamics in growing of the area of farmlands that take part in the certified reduced production. Despite certain decline in 2018, we can notice stable growth of organic market operator's quantity and the level of organic production consuming in Ukraine. This is due to the tendency of active filling of the internal market by own organic goods on account

⁷ Y. Mylovanov: Organic Market of Ukraine: Current State and Prospects. Organic Federation of Ukraine. Kiev 2019, http://organic.com.ua/wp-content/uploads/2019/10/ukrainian_organic_market.pdf (access: 20.10.2021).

⁸ Organic production in Ukraine: realities and prospects 2019. Ministry of Agrarian Policy and Food of Ukraine.

⁹ <https://organicinfo.ua/en/infographics/organic-map-of-ukraine-2020/> (access: 20.10.2021).

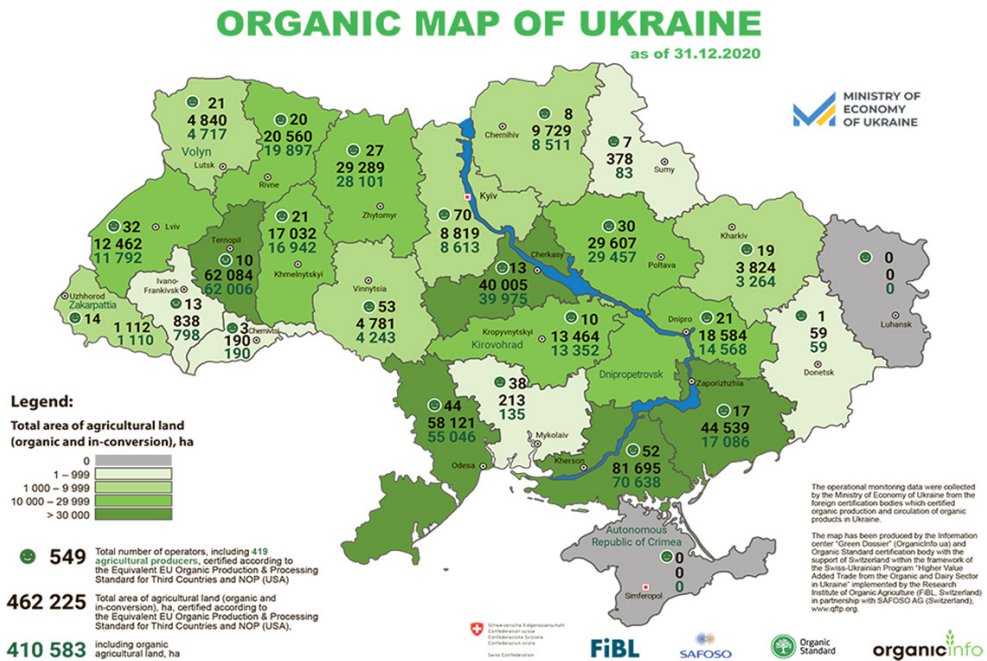


Figure 1. Organic map of Ukraine
 Source: Organic Map of Ukraine 2020, <https://organicinfo.ua/en/infographics/organic-map-of-ukraine-2020> (access: 20.10.2021).

of organic raw material processing mending. In particular grain, flour, dairy and meat products, juice, honey, sunflower oil, tea, medication herbs¹⁰.

By active development of the internal market Ukraine stabilize its position on the international organic market, by becoming one of the world leaders in terms of area of organic farmlands, and by increasing the variety of goods and their logistics.

The analysis of organic production development indicators shows sustainable growth. For certified organic production in 2018 there are 501 thousand ha of farmlands which are 114% relative to the data of 2010 p. The research demonstrated that in 2010 in Ukraine there were 142 farms with area of 270,23 ha, which received “organic” status. As of the end of 2018, the quantity of farms that produce organic goods increased by 3,5 times (Fig. 2).

While average farm area decreased from 5,30 ha to 1,08 ha. It indicates the increase of small farms and peasant enterprises which started producing organic goods, which is a positive aspect in context of the organic production development in Ukraine. The following types of organic production were certified: cereal and grain, oils, vegetables, watermelons, melons, pumpkins, fruits, berries, grape, essential oils, meat, milk, mush-

¹⁰ Organic production in Ukraine: realities and prospects..., op. cit.

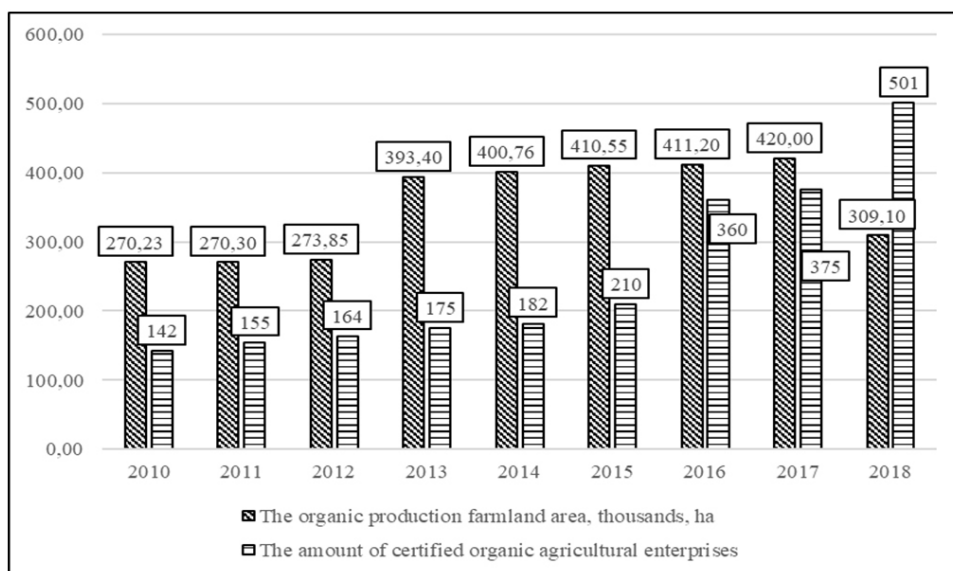


Figure 2. Organic production development indicators in Ukraine

Source: own elaboration based on: Organic production in Ukraine. Ministry of Economy 2021, <https://www.me.gov.ua/Documents/Detail?lang=uk-UA&id=ed6463ce-f338-4ef0-a8a8-e778d3d0ffd1&title=OrganichneVirobnitstvoVUkraini> (access: 20.10.2021).

rooms, nuts and honey. Certified processed products include: grain, cereals, jam, syrup, juice, oils, flour and canned vegetables.

Currently organic production is concentrated mainly in, family enterprises with area from 0,05 to 2 ha. Main direction of this operators is berry production, vegetables, greenery, salads; animal husbandry; dairy; baking. Only minority of enterprises have area of a few thousand hectares. These operators cultivate grain, oils and its processing, they also have sustainable livestock base and develop dairy goods production.

Basing on the data of The Reform Support Team (RST), in 2018 Organic consumer market in Ukraine constituted 33,0 mln €, and consumption per capita – 0,68 €. While average European spends 40,8 € on organic goods per year, EU resident – 60,5 €.

Presently internal consumer market of organic production in Ukraine continues to expand through main supermarket network which often more developed, attractive and fashion-savvy organic product line. Basic types of organic production, which is being produced and consumed are crops, meat and dairy products, and grits. Among the variety of organic production there is more than a hundred titles made by the Ukrainian industry¹¹.

Consumers can purchase the following types of Ukrainian organic goods: dairy and meat products, grocery products and bakery, flour, pasta products, sugar, plant oils, spi-

¹¹ Organic production in Ukraine: realities and prospects..., op. cit.

ces, condiments, sweets, chocolate, honey, drinks (fruit/ vegetable/berry juices, birch juice, herbal tea), vine, canned products (syrup, jam, berry paste, mushrooms, sauces), vegetable, fruits etc.

Despite complex economic situation of Ukraine, during 2010-2018 consumption growth rates of organic goods have had uneven dynamics, although the positive trend was still constant. This indicates perspectivity and relevance of certified organic production expansion in order to at least satisfy the internal market needs (Fig. 3).

For the last few years Ukraine has become an important supplier of organic goods into the western markets. Export predominantly consists of raw materials, in particular grain, oil and legumes, wild berries, mushrooms, nuts and medication herbs. However, finished Ukrainian organic articles not often appeared on the European store shelves.

The volume of export in 2017 was equivalent to 99 mln € (Fig. 4), which three times more than internal consumer market, that equals 29,4 mln € (Fig. 3).

Consumers of Ukrainian organic production are predominantly the EU countries. The largest importers are the Netherlands, Germany, The Great Britain, Italy, Austria, Poland, Switzerland, Belgium, The Czech Republic, Bulgaria, Hungary, The USA, Canada, Australia and some Asian countries. The main exported products are grain, oils, legumes, berries fruits and wildflower. The other products are sunflower press cake, flour, sunflower oil, sunflower grist, apple concentrate, nuts and birch juice.

The inevitable volumes of production for a contractor can be provided mainly by those agricultural operators which own large areas of farmlands. They are engaged in

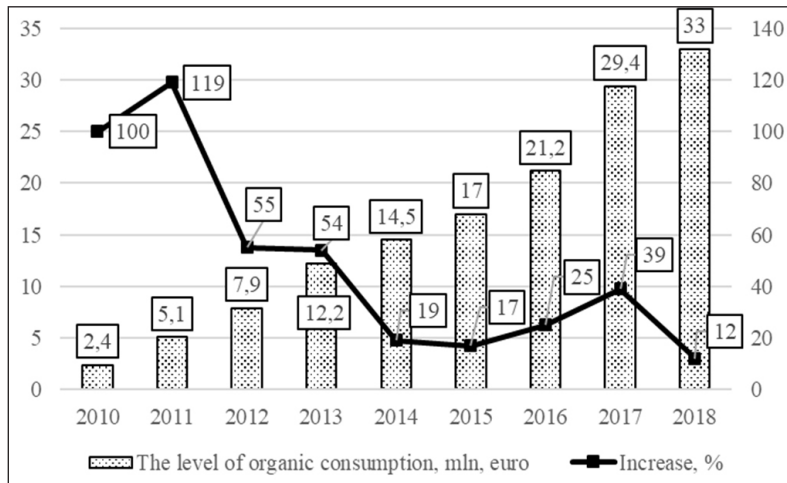


Figure 3. The organic production consumption dynamics and its yearly growth

Source: own elaboration based on: Organic production in Ukraine. Ministry of Economy 2021, <https://www.me.gov.ua/Documents/Detail?lang=uk-UA&id=ed6463ce-f338-4ef0-a8a8-e778d3d0ffd1&title=OrganichneVirobnitstvoVUkraini> (access: 20.10.2021); Federation of Organic Movement of Ukraine, 2020, <http://organic.com.ua/organic-v-ukraini/> (access: 20.10.2021).

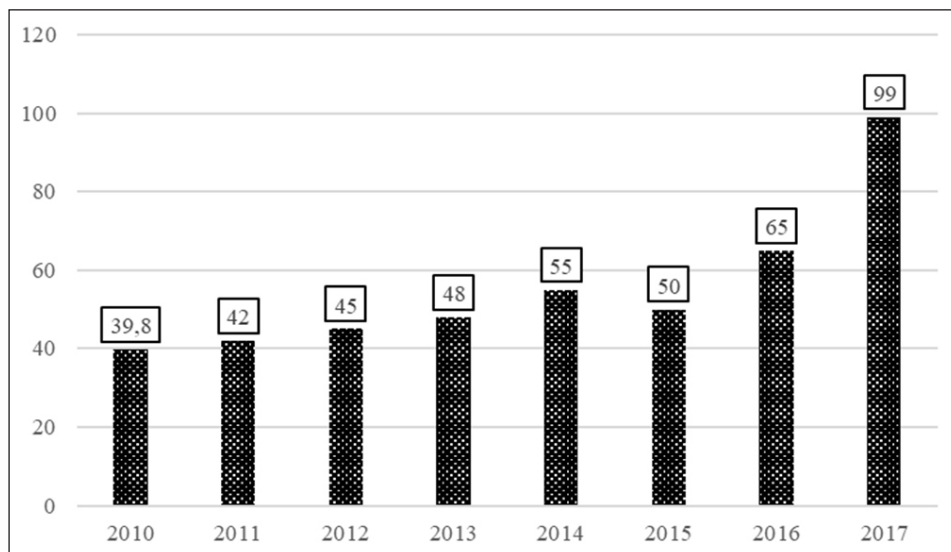


Figure 4. The organic production export dynamics in Ukraine [mln €]

Source: I. Kyrylenko, Y. Mylovanov: Scientific support for the development..., op. cit.; Ukrainian Agrarian Export Association 2021. Ukraine is steadily improving its organic exports. <http://uaexport.org/2021/03/12/ukrayina-stabilno-pokrashhuye-pokazniki-organichnogo-eksportu/> (access: 20.10.2021).

cultivating crops for export. That's the reason why the internal market is filled with small farming enterprises. Nevertheless, they also may sell their own production abroad using the services of intermediaries.

It is worth noting that the only food market in Europe, that demonstrates constant and stable growth is the organic one. For Ukraine, the organic market is a new niche market. Demand on organic goods will grow at a faster pace in the coming years. Sales increase faster than the farmland areas.

According to «Organic standard», in march of 2019 in Ukraine there are 617 organic production operators, 324 certified horticulture operators, 53 animal husbandry operators where beekeeping is leading and rapidly growing industry. 54 operators have been processing wildflower. 167 organic operators have been engaged in export, which was a result of the demand on organic traders.

“Organic” trend acquires greater popularity as a result of which small and medium enterprises in Ukraine more actively cultivate such production and retail networks provide store shelves and open the entire “organic” departments.

Basing on data of the research and organic production consumption estimations in Ukraine during 2010-2018 (Fig. 3.), the forecast for the Ukrainian organic consumer market capacity has been completed. By using MS Excel, we have construed linear trend

diagram that illustrates dependence between time periods, energy production and the coefficient of determination (denoted R^2), which calculates automatically¹².

In the presented diagram $R^2 = 0,9734$, which indicates strong connection between variables, which means that the mathematical model corresponds to real data (Fig. 5).

Given the resulting trend equation $y = 3,7867x - 3,0222$, calculation of forecast indicators of Ukrainian organic consumer market capacity until 2023, for which in 2023 production will be at the level of 50 million €, which in comparison to 2018 the forecast growth 2023p would be 161% – Table 1.

The research demonstrated, that Ukraine is interested in the organic market development and there are inevitable resources that can be found in every region of the country. However, there are plenty of issues that prevent the organic market from its development. Ukrainian agriculture having production potential that dwarfs internal market can contribute to the development of the national economy and its successful integration into the global market. Ukraine possess great possibilities for export of this production especially in the context of European Integration.

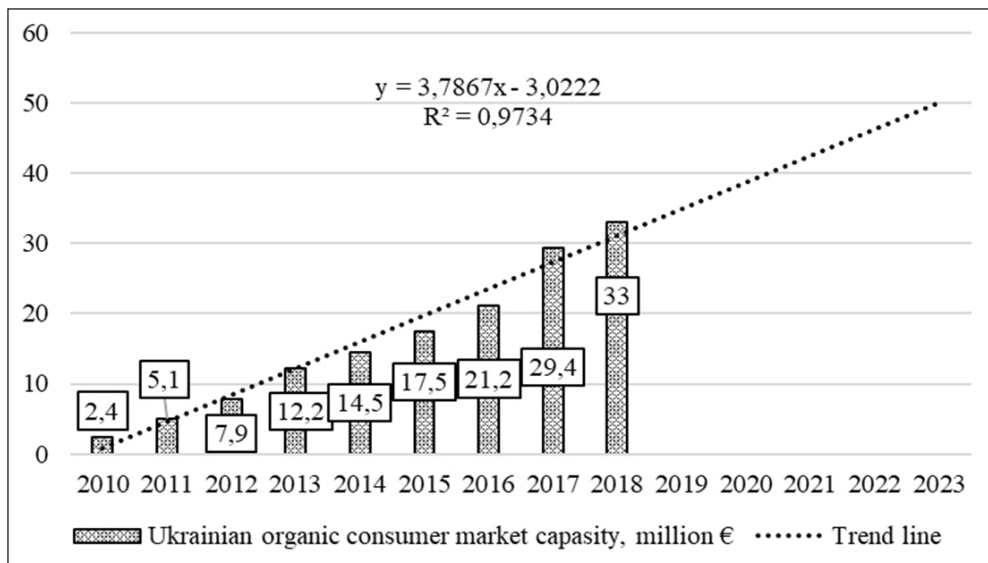


Figure 5. Trend model of the Ukrainian organic consumer market capacity [mln €]

Source: own elaboration based on: Federation of Organic Movement of Ukraine 2020, <http://organic.com.ua/organic-v-ukraini/> (access: 20.10.2021).

¹² O. Kucher: Formation of a marketing strategy for sales of agro-industrial complex enterprises production. European University, Kiev 2011. p. 164, https://scholar.google.com.ua/scholar?hl=ru&as_sdt=0,5&cluster=8769438497449096774 (access: 20.10.2021).

One of the most complex issues of organic market development is unsettled legal framework, which complicates the activity of the domestic organic operators. Unsettled legal framework that in 2013 The Law of Ukraine “On the production and use of organic agricultural production and raw material thereof was established which has been in use until 02/08/19. Nonetheless, this legal act was ineffective because the articles weren’t flawless and didn’t correspond the EU legislation in terms of organic production, use and marking of the organic goods”^{13, 14}.

In order to improve principles of legal regulation of the organic production, use and marking of the organic goods. and also, to adapt the requirements consistent with the EU legislation, using support of civil domain, organic market professionals, and the executive power new legal act was established: “On the main principles and requirements to the organic production, use and marking of the organic goods” No 2496-VIII^{15, 16}.

Table 1. Calculation of forecast indicators of Ukrainian organic consumer market capacity [mln €]

Indicators	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Ukrainian organic consumer market capacity	2,4	5,1	7,9	12,2	14,5	17,5	21,2	29,4	33	x	x	x	x	x
Trend line	0,8	4,6	8,3	12,1	15,9	19,7	23,5	27,3	31,1	34,8	38,6	42,4	46,2	50,0

Source: own elaboration.

First of all the Law fully takes into account EU directives and regulations, that will allow adapting Ukrainian legislation to European legislation; improved requirements for the production, labeling and turnover of organic products; the provision regarding the assessment of the suitability of land for organic production were removed which contradicted international experience; the principles of production certification have been radically changed; requirements for certification bodies and organic production inspectors have been significantly improved; responsibility for violation of the law in terms of the organic production, use and marking of the organic goods is specified, for operators as well as for certifiers, etc.

Of course, organic production should be natural in everything, it implies taking care of nature, people and the world at all stages. Chemical fertilizers, pesticides, genetically modified organisms (GMOs) or preserve agents shouldn’t be used during production.

¹³ The Law of Ukraine 2013 “On the main principles and requirements to the organic production, use and marking of the organic goods”, <https://zakon.rada.gov.ua/laws/show/425-18> (access: 20.10.2021).

¹⁴ Economical truth 2019. Who produces real organic products in Ukraine, <https://www.epravda.com.ua/publications/2019/04/3/646613/> (access: 20.10.2021).

¹⁵ The Law of Ukraine 2018. “On the main principles and requirements to the organic production, use and marking of the organic goods” Publications of the Ukrainian Parliament (BBP) 2018, no 36, p. 27, <https://zakon.rada.gov.ua/laws/show/2496-19> (access: 20.10.2021).

¹⁶ Agriculture Growing Rural Opportunities (AGRO) Activity in Ukraine Annual Progress Performance Report, https://pdf.usaid.gov/pdf_docs/PA00X994.pdf (access: 20.10.2021).

However, to become an organic producer, you need to pass a complex and expensive certification procedure. This procedure is unlikely for small producers because of high price. This applies to households and small farms that grow agricultural products for sale and at the same time for their own consumption. It is obvious that such producers will not use chemicals when growing small amounts of agricultural products. Accordingly, when harvesting wild plants (forest berries, mushrooms, and others), it makes no sense to certify such production. The experience of Poland shows that not only certified agricultural products can be considered organic or environmentally safe, but also products that are grown or collected both for sale and for their own consumption by households and small farms.

To ensure the stable development of organic production, it is necessary to develop an organizational and economic mechanism for establishing the market for organic products that would meet the requirements for agricultural products that can be considered organic or environmentally safe.

Conclusions

Summarizing the results of the research, we can highlight the following key positions in the development of organic production:

- due to favorable natural and climatic conditions and a large potential for the production of organic agricultural products, their export and consumption in the domestic market, Ukraine has achieved certain results in the development of its own organic production;
- in recent years, there has been a steady positive growth in the area of farmland where certified organic production is conducted;
- actively developing the domestic market, Ukraine is increasingly asserting itself on the international market of organic products, increasing the range of products offered and the geography of deliveries;
- the domestic consumer market of organic products in Ukraine continues to expand through the main supermarket chains, which are increasingly developing an attractive and image-oriented line of organic products;
- over the last few years, Ukraine has become an important supplier of organic products to Western markets. However, we are talking mainly about the export of organic raw materials, as finished Ukrainian organic products on the shelves of European stores are extremely rare;
- legal, economic and organizational foundations of organic production development are regulated by the Laws of Ukraine and other legislative acts. However, presently the legislative regulation and state management of organic production in Ukraine is not effective enough;
- to ensure the stable development of organic production, it is necessary to develop an organizational and economic mechanism for establishing the market for organic products that meet the requirements for agricultural products that can be considered organic or environmentally safe.

References

- Agriculture Growing Rural Opportunities (AGRO) Activity in Ukraine Annual Progress Performance Report, https://pdf.usaid.gov/pdf_docs/PA00X994.pdf (access: 20.10.2021).
- Economical truth. 2019. Who produces real organic products in Ukraine, <https://www.epravda.com.ua/publications/2019/04/3/646613/> (access: 20.10.2021).
- Federation of Organic Movement of Ukraine 2020, <http://organic.com.ua/organic-v-ukraini/> (access: 20.10.2021).
- <https://organicinfo.ua/en/infographics/organic-map-of-ukraine-2020/> (access: 20.10.2021).
- Ivanyshyn V., Kucher O., Bilyk T.: Marketing strategy formation for the development of organic production in the Ukraine. Proceedings of the 2018 International Scientific Conference 'Economic Sciences for Agribusiness and Rural Economy' no 1, Warsaw, 7-8 June 2018, p. 34-39. ISBN 978-83-7583-802-2, <https://doi.org/10.22630/ESARE.2018.1> (access: 20.10.2021).
- Jasiulewicz A., Kucher O: Marketing strategies of organic production development. International Scientific and Practical Conference dedicated to the 45 anniversaries of the Economic Faculty of State Agrarian and Engineering University in Podilya "Actual problems of agrarian economy: theory, practice, strategy" 12-13 October 2017. Aksioma, Kamianets-Podilskyi, p. 233-237.
- Kucher O.: Formation of a marketing strategy for sales of agro-industrial complex enterprises production. European University, Kiev 2011, p. 164, https://scholar.google.com.ua/scholar?hl=ru&as_sdt=0,5&cluster=8769438497449096774 (access: 20.10.2021).
- Kyrylenko I., Mylovanov Y.: Scientific support for the development of organic agricultural production. "Economics Agro-Industrial Complex" 2019, no 3, p. 27-41, http://organic.com.ua/wp-content/uploads/2019/10/nauka__organic.pdf (access: 20.10.2021).
- Mylovanov Y.: History of establishing the organic 3.0 idea and prospects of its future development in Ukraine. Theory and practice nature using. "Sustainable use of natural source" 2018, no 3, http://organic.com.ua/wp-content/uploads/2019/10/organic_3.0_concept_and_ukraine.pdf (access: 20.10.2021).
- Mylovanov Y.: Organic Market of Ukraine: Current State and Prospects. Organic Federation of Ukraine. Kiev 2019, http://organic.com.ua/wp-content/uploads/2019/10/ukrainian_organic_market.pdf (access: 20.10.2021).
- Organic Map of Ukraine 2020, <https://organicinfo.ua/en/infographics/organic-map-of-ukraine-2020> (access: 20.10.2021).
- Organic production in Ukraine. Ministry of Economy 2021, <https://www.me.gov.ua/Documents/Detail?lang=uk-UA&id=ed6463ce-f338-4ef0-a8a8-e778d3d0ffd1&title=OrganichneVirobnitstvovUkraini> (access: 20.10.2021).
- Organic production in Ukraine: realities and prospects. 2019. Ministry of Agrarian Policy and Food of Ukraine.
- Pavlenko O.: Ukraine has chance to become an organic basket of the world. 2016. Retrieved from: https://lb.ua/blog/opavlenko/326957_ukraina_maie_usi_shan_si_stati.html (access: 20.10.2021).
- The Law of Ukraine 2013 "On the main principles and requirements to the organic production, use and marking of the organic goods", <https://zakon.rada.gov.ua/laws/show/425-18> (access: 20.10.2021).
- The Law of Ukraine 2018 "On the main principles and requirements to the organic production, use and marking of the organic goods" Publications of the Ukrainian Parliament (BBP) 2018, no 36, p. 27, <https://zakon.rada.gov.ua/laws/show/2496-19> (access: 20.10.2021).
- Ukrainian Agrarian Export Association 2021. Ukraine is steadily improving its organic exports, <http://uaexport.org/2021/03/12/ukrayina-stabilno-pokrashhuye-pokazniki-organichnogo-eksportu/> (access: 20.10.2021).