

**ЕКОНОМІКА ПРИРОДОКОРИСТУВАННЯ І ОХОРОНИ
НАВКОЛИШНЬОГО СЕРЕДОВИЩА**

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**AGRICULTURAL ORGANIC MARKET IN
UKRAINE ©**

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The analysis of the world experience of the market of organic production of agricultural products is conducted. A retrospective analysis of the organic farming market has been carried out. Areas of agricultural land with organic production have been determined. The organizational levels and determinants of the development of organic farming in Ukraine and foreign countries are analyzed. It is noted that the profitability of organic agriculture is significantly higher than that of other agricultural enterprises. It has been proven that the organic agricultural market has been profitable both in Ukraine and abroad for the last ten years.

Keywords organic production, agriculture, Ukraine, profit, organic farming, livestock, plant growing.

Table.:1. Fig.:3. Lit.: 8.

АГРАРНИЙ СІЛЬСЬКОГОСПОДАРСЬКИЙ ОРГАНІЧНИЙ РИНОК В УКРАЇНІ

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Проведено аналіз світового досвіду ринку органічного виробництва сільськогосподарської продукції. Здійснено ретроспективний аналіз ринку органічного сільського господарства. Визначено, площі сільськогосподарських земель з органічним виробництвом. Проаналізовано організаційні рівні і визначальні фактори розвитку сільського господарства, орієнтованого на виробництво органічної продукції в Україні та зарубіжних країнах. Зазначено, що рентабельність органічного сільського господарства є суттєво більшою порівняно із показниками інших аграрних підприємств. Доведено, що ринок органічної сільськогосподарської продукції є рентабельним як в Україні та і за кордоном на протязі останніх десяти років.

Ключові слова органічне виробництво, сільське господарство, Україна, прибуток, органічне землеробство, тваринництво, рослинництво.

Табл.: 1. Рис.: 3. Літ.: 8.

АГРАРНЫЙ СЕЛЬСКОХОЗЯЙСТВЕННЫЙ ОРГАНИЧЕСКИЙ РЫНОК В УКРАИНЕ

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Проведен анализ мирового опыта рынке органического производства сельскохозяйственной продукции. Осуществлен ретроспективный анализ рынка органического сельского хозяйства. Определено, площади сельскохозяйственных земель с органическим производством. Проанализированы организационные уровни и определяющие факторы развития сельского хозяйства, ориентированного на производство органической продукции в Украине и зарубежных странах. Отмечено, что рентабельность органического сельского хозяйства существенно больше по сравнению с показателями других аграрных предприятий. Доказано, что рынок органической сельскохозяйственной продукции является рентабельным как в Украине так и за рубежом в течение козаки десяти лет.

Ключевые слова: органическое производство, сельское хозяйство, Украина, прибыль, органическое земледелие, животноводство, растениеводство.

Табл.: 1. Рис.: 3. Лит.: 8.

Formulation of the problem. The agricultural sector is of great importance in Ukraine. It generates more than 15% of employment, much of it in rural areas. It makes an essential contribution to the country's economic growth, particularly through export related activities – despite the fact that most of the produce is exported with little or limited added value. Aiming to change this situation, since 2005, SECO has made considerable investments in Ukraine by financing projects on organic market development and certification.

In 2018, the Swiss-Ukrainian Organic Market Development Project is coming to an end. This study aims to evaluate its achievements by (a) documenting the development of the organic sector in Ukraine over the last decade and (b) assessing the number of new jobs and value addition opportunities that were stimulated by this project. The study's results reflect on the sector's competitiveness and how potential future interventions can capitalize on the project's achievements and boost employment outcomes by further strengthening the organic sector's competitiveness. The study draws on different sources of information. First among these are the findings obtained through an online survey sent to more than 600 sector stakeholders, of whom 140 completed it. The insights from this survey were complemented with information acquired through a literature review, expert interviews, company case studies and focus group discussions.

Analysis of recent research and publications. Issues of scientific and educational support the organic field were engaged in the following homeland-nannies and foreign theorists and practitioners, among which are P. Frydlova M., Vostra, H. [2], Grzelak P., Maciejczak M. [3], Gubbuk H., Polat, E., Pekmezci, M. [4]. But, despite the significant science and technology, the practical contribution of the abovementioned scientists, Problems of raising the level of scientific and scientific Educational and educational provision of the rice in our country requires detailed, which is theoretical, methodological and practical substantiation and activation at the national m and regional levels.

Formulating the goals of the article. The purpose of the article is to consider the agricultural market of organic products in Ukraine.

Presentation of the main research material. Ukraine's organic sector has gone a long way from a few 'mission-driven' pioneers in 1970ies to more than 500 certified organic operators in 2018. This Socio-Economic Study of the Organic Sector, carried out by FiBL, captures this journey, with a focus on the development of Ukraine's organic sector in the second millennium. It takes stock of developments, assessing Switzerland's contribution to these, and highlights key questions about sustainable growth while focusing on competitiveness, value addition and job creation. The study wraps up a decade-long engagement in Ukraine's organic sector by SECO, the Swiss State Secretariat for Economic Affairs through The Organic Market Development in Ukraine Project.

Strengthening the competitiveness of the organic production has been a major goal of this program. To our satisfaction, this study shows that this goal has been clearly met: many of Ukraine's organic arable crop producers are now able to compete internationally and command premium prices for their quality products in high-end markets in the EU and Switzerland, while the domestic market is dynamically growing, with a tripling of turnover within the last five years. We particularly invite the reader to peruse

the informative presentations of 'lighthouse' organic farms and enterprises, which also persuasively demonstrate how the organic sector has been benefiting from innovative leaders with long-term visions that go beyond economics.

Ukrainian agriculture is a vibrant sector that offers interesting investment opportunities. It generates around 11-14% of the national GDP and employs approximately 17% of the working population.

Ukraine has 42.2 million hectares of agricultural land, 70% of the country's total area. Of this, 32.5 million hectares (76%) is arable land. Ukraine has highly favorable conditions for large-scale agriculture, with warm summers, rich agricultural soils and access to abundant land and water resources.

Agricultural GDP (as of 2016) was 9.8 billion USD. Most of this comes from arable crop production, which generates 72.8% of the value of total agricultural production. In 2016, the main crops grown in Ukraine were wheat (6.2 million hectares) and sunflowers (6.1 million hectares), followed by maize (4.2 million hectares), barley (2.9 million hectares), soybeans (1.9 million hectares), and rape/canola (0.5 million hectares). Ukraine is the world's largest producer and exporter of sunflower oil and meal.

The introduction of explicit organic cultivation practices in Ukraine dates back to the late 1970s, when Semen Antonets pioneered the use of subsurface tillage and abandoned the use of mineral fertilizers, herbicides and other agrochemicals on his farm in the Poltava region (Serreau 2010). In the following years, the Agroecology Private Enterprise (see Box 2) became a model farm showcasing nature-conserving agricultural practices in Ukraine, which were in sharp contrast to Soviet production practices based on abundant chemical inputs.

Yet, the actual development of an organic sector within Ukraine didn't occur until the 1990s, when the demand for organic arable crops started to grow in Western and Central Europe and some investors saw the opportunity to convert big Ukrainian farms to organic production. The first organic exports took place in the late 1990s, and by 2003, 230,000 ha of land were either organic or 'in conversion' (see Figure 2) – involving 69 production units, with an average size of about 3,500 ha, mostly producing wheat, barley, sunflowers and maize for export. This development was sustained by the interest of international certification bodies in offering certification services for Ukrainian farms. By 2005, 5 certification bodies were active in Ukraine, including: Control Union (Netherlands) – with a market share of 66% of certified land, Lacon (Germany), Biokontroll Hungaria (Hungary), IMO and bioinspecta (both from Switzerland) (Schneider et al. 2005).

The rapid international development of the organic market in the early 2000s triggered the interest of the Swiss government in supporting the development of the organic sector in Ukraine. This initial interest was primarily related to the higher inherent sustainability of organic farming. With SECO becoming active, project funding shifted more towards promoting international trade in certified organic products, with the aim of contributing to the overall goal of Switzerland's cooperation with Ukraine – with 'trade' being an explicit part of SECO's strategy to stimulate innovation along value chains as a way of increasing competitiveness and sustainable economic growth.

While project funding was mostly focused on developing export opportunities, there was also increased interest in supporting the development of the domestic market, as surveys revealed a growing interest among consumers in accessing organic products and willingness to pay premium prices for them. At that time, there was already a range of different imported organic food products in Ukraine's supermarkets, together with a wide range of so-called "environmentally clean" products⁷ sold at premium prices (SECO 2005).

The foundation of the BIOLan Association in 2002 enabled also smaller farms to convert to organic production. With the main objective of creating and developing an internal organic market, the association involved more than 30 members, including producers, representatives of farmers' unions, representatives of training and advisory centers, research and administration and trade and processing companies (Schneider et al. 2005). Between 2003 and 2010, BIOLan received funding from the Swiss Agency for Development and Cooperation through 'The Sustainable Land Use in Ukraine EcoLan Project' to build capacities in the field of organic agriculture (BIOLan 2010). Farmers were trained in organic production techniques and marketing activities. The project also established a long-term agronomic trial to compare different farming systems (biodynamic, organic and conventional), in collaboration with the Illintsi State Agrarian College, and arranged student exchanges with Switzerland.

BIOLan's lobbying activities led to the first draft of the law on organic agriculture being presented to the Ukrainian parliament in May 2005. In order to get the first Ukrainian organic products onto the market, a private standard, the BioLan label, with its own logo, was introduced into the Ukrainian market (see Picture 1). However, for larger, export-focused companies, this label was of little interest. Their priority was to gain certification that would help them enter international markets, especially that of the EU (Regulation (EC) No 834/2007).

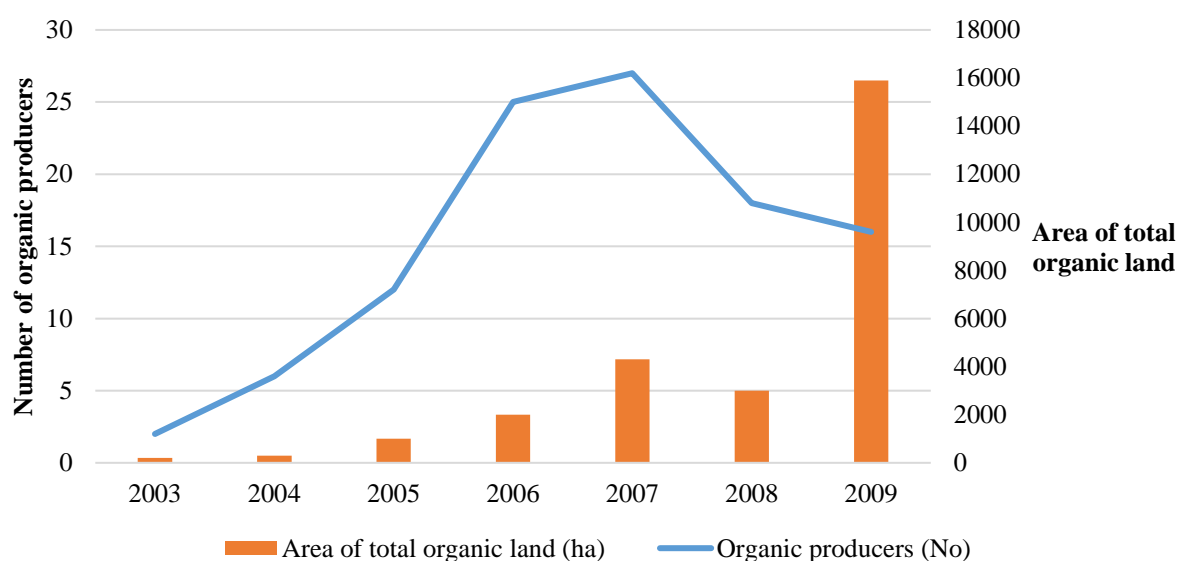


Fig.1. Changes in the number of organic BIOLan producers and their organic land during the BIOLan project (2003-2009)

Note: Created by the authors

In 2007, with the support of FiBL, the local certification body “Organic Standard” was founded, with BIOLan as one of the shareholders. FiBL’s involvement was made possible thanks to ‘The Organic Certification and Market Development in Ukraine project’, which started in 2005 with funds from SECO (see Box 1). This project aimed to lower certification costs for SMEs by helping to establish a local certification body⁸ in order to increase the competitiveness of organic farming in Ukraine, and thus enable the development of the country’s organic sector. In addition to supporting the establishment and development of a local certification body, this project targeted three other key areas, as identified in a previous FiBL expert mission (Schneider et al. 2005): (a) the lack of information concerning market demand and supply, (b) the lack of an organic law in Ukraine, and (c) the lack of an organic stakeholder network (SECO 2005).

BIOLan’s efforts to develop the organic market and help its farmers access external and internal markets ran into several problems. The first exports to Switzerland – two containers of organic grain – were not profitable, as the small volume could not cover the logistical costs and their quality did not meet Swiss standards. On the domestic market, potential buyers wanted processed end products, but the low volumes and the lack of suitable organic processing infrastructure made the endeavor impossible.

The difficulties in securing a market for organic produce led to a decline in the number of farmers involved in BIOLan. And when BIOLan stopped covering the certification costs for its members in 2008, the number of member farms dropped from 29 to 18 (see Figure 1). By 2009, it was mainly the bigger companies who remained as active members, as they were in a better position to generate profits and make the investments needed to improve their technologies, storage and marketing facilities; as well to cope with the financial crises that hit in 2008 (BIOLan 2010). In 2008, *Natur Boutique* opened in Kyiv the first shop in Ukraine to specialize in organic products (www.natur-boutique.ua), and started to sell Ukrainian organic products from BIOLan members. (Natur Boutique, 2018). In 2009, around 60 outlets were selling organic products, in all of the country’s bigger cities. Despite this, the range of organic products available was limited and the products very expensive (van Elzakker et al. 2009).

The closure of the EcoLan project in 2010 reduced BIOLan’s ability to provide services to its members, i.e. being unable to support marketing activities for producers selling to the domestic market or to provide loans to members. As a result, only a few organic producers were able to continue supplying products to local retailers.

In parallel with, and independently from, BIOLan’s efforts and struggle to develop the market and increase organic production, other big farms converted to organic during the same period, contributing to a constant growth of the area of land under organic cultivation in Ukraine. In 2005, The Organic Federation of Ukraine (OFU) was founded and also aimed to promote the organic movement within the country. An important instrument for this was OFU’s own magazine, *Organic UA*, starting 2008, which was supported with funds from USAID and other international donors, including SECO.

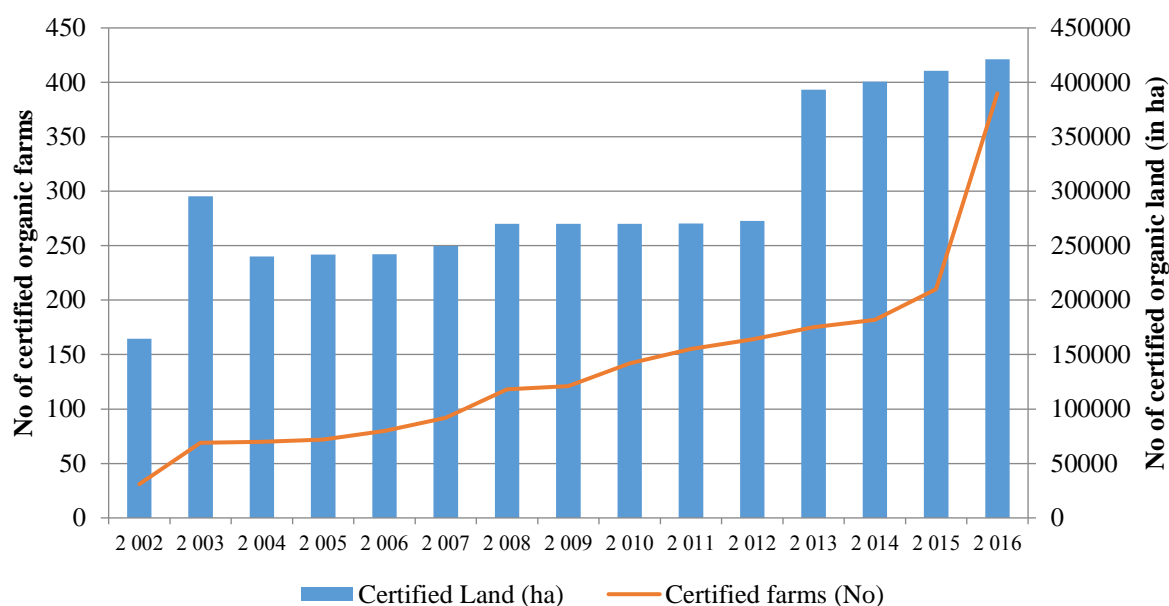


Fig.2. Organically certified farms and land (organic and in conversion) in Ukraine: 2002 to 2016
Note: Created by the authors.

Another important service that OFU offered was collecting and publishing data about the number of organically certified farms and land in Ukraine. As official government statistics were not available until 2018, OFU’s statistical data were also used as reference data for FiBL’s statistical yearbook on organic agriculture *The World of Organic Agriculture. Statistics and Emerging Trends* (www.organic-world.net).

With a yearly average growth rate of 13% between 2005 and 2011, OFU’s data reveal the steady interest among producers in converting to organic production. Nevertheless, export ventures faced different problems: inferior product quality, high logistical costs, high (EU) tariffs and import quotas, and the rather negative image of Ukraine internationally.¹¹

Since 2008, the SECO-funded Swiss Import Promotion Programme (SIPPO) supported through FiBL’s “Organic Market Development Project in Ukraine” individual Ukrainian companies to participate at Biofach in Germany. Involved companies highly appreciated this support in terms of learning, networking and finding clients (FiBL 2012)¹².

Other activities of the Swiss-Ukrainian Organic Market Development Project further strengthened the export capacity of the country’s organic sector, while also helping to create awareness about organic products domestically. Various project partners were supported in organizing local fairs, in Lviv, Kyiv, Donetsk, the Ivano-Frankivsk cities, and Trypillia (Kyiv region), which together attracted around 40,000 visitors. The project also supported dozens of capacity building events, including buyer missions, field days, training courses, seminars, and conferences, 13 with a total number of about 2,000 participants. The project estimates that it reached 5-7 million people through media (TV, print media, Internet, radio) with ‘organic messages’. Working together with Organic Standard, BIOLan and IMO, the project also published the country’s first organic input list in 2011 with the aim of enhancing the availability and use of inputs for organic production (FiBL 2012). These activities were complemented with funding from other donors – including Canada (CIDA), Germany (GTZ) and the Netherlands (Ministry of Agriculture and Environment)—supporting different activities relating to the development of the organic sector in Ukraine (Prokopchuk & Eisenring 2011).

In 2011, the Ukrainian parliament adopted an organic law, which was, however, vetoed by the President. This hindered the development of the domestic market as the term ‘organic’ had no legal protection (Prokopchuk & Eisenring 2011).

In any case, export opportunities at this stage promised a better perspective for SECO to promote ‘sustainable trade’ as a means to contribute to sustainable growth. Consequently, Phase II of the Swiss-Ukrainian Organic Market Development project prioritized organic arable crop production, as this was seen as the subsector with the most potential to boost the development of the country’s organic sector.¹⁴ Additionally, the project also focused on developing the domestic dairy sector, which was considered of strategic relevance in stimulating the development of the domestic market by broadening the assortment

of organic products with value addition products. With these two project components, also the concept of integral farms could be promoted, i.e. farms that integrate both arable crops and animal husbandry as part of an organic production system (FiBL 2012).

The activities of Phase 2 of the Organic Market Development Project, which started in 2012, helped to give further momentum to Ukraine's market development. Based on the lessons learnt from Phase I, the project targeted larger farms and companies through the Leader Approach, in which so called Leader Companies were chosen to act as drivers for developing the organic market while serving with their implemented organic practices as examples for small and medium sized enterprises (SMEs) to follow (Eisenring et al. 2014). The 4 companies that were selected as Leaders¹⁵ were supported technically and linked with potential buyers, in return for agreeing to be used as 'training sites' to showcase (best) organic practices.

The project continued to promote exports. Most important in this regard was the launching of a Ukrainian National Pavilion at Biofach in 2014 (Table 1).

Table 1.

Key data concerning the Ukrainian National Pavilion at Biofach 2014-2018

| Indicator data | 2014 | 2015 | 2016 | 2017 | 2018 |
|-------------------------------------|------|------|------|------|-------|
| Total number of exhibitors | 9 | 9 | 11 | 17 | 20 |
| Direct exhibitors | 9 | 9 | 11 | 12 | 17 |
| 'Remote' exhibitors | | | | 5 | 3 |
| Total number of business meetings | 272 | 462 | 517 | 810 | 1,133 |
| New contacts | 250 | 319 | 396 | 688 | 855 |
| Existing contacts | 22 | 143 | 121 | 122 | 278 |
| Value of contracts (in million EUR) | 4.0 | 7.6 | 10.2 | 11.2 | 13.7 |
| Number of visitors from Ukraine | 291 | 211 | 309 | 320 | 438 |

Note: Created by the authors

Every year since, this pavilion has provided a key opportunity to connect Ukrainian producers with potential buyers. At the same time, Biofach helped enhance SME's awareness and understanding about relevant production and trade related issues and place Ukraine on the 'organic world map', respectively help change unfavorable perceptions about Ukraine among visitors of the pavilion. Table 1 highlights the continuous development of the Ukrainian Pavilion during five subsequent years.

Biofach also has served as an opportunity for exchanges with and among donors who were supporting the development of the organic sector in Ukraine. In addition to SECO, a number of other projects and organizations have contributed to the Ukrainian National Pavilion, including the EU funded EaPGreen project, the German projects 'Agritrade' and 'German-Ukrainian cooperation in organic agriculture', the US funded WNISEF project, FAO, EBRD, the EU4Business Initiative, and Ukrainian funding through the side of DZI (Ministry of Economic Development and Trade of Ukraine) and MoAF.

All in all, the Ukrainian Pavilion at Biofach has certainly had a very positive impact on organic exports from Ukraine. Year on year, the number of Ukrainian exhibitors and visitors, as well as the number of business contacts and the volume of contracts signed, have increased (see Table 1).

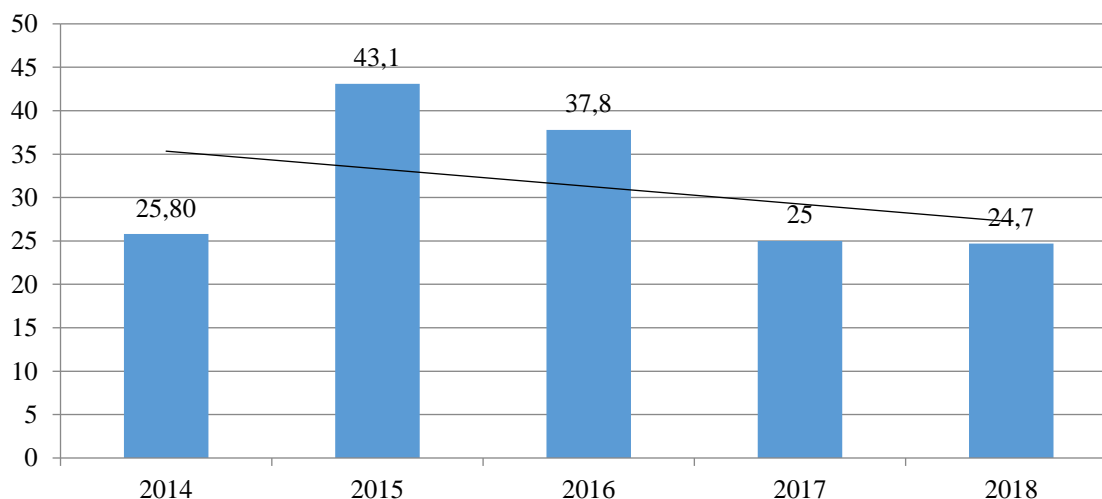


Fig. 3. Profitability of plant products in Ukraine

Note: Created by the authors

The profitability of organic agriculture is substantially higher than that of other agrarian enterprises. Expected results of implementing program activities:

- an increase in the share of arable land used by the target destination by 2022 to 100% relative to the 2015 level;
- the involvement in agricultural production of unused 207 thousand hectares of arable land with a designated area 110 thousand hectares for the production of organic products;
- creation of effective involvement in agricultural production not used for the purpose of recognition of arable resources;
- reproduction of soil fertility of arable land;
- annual planning of areas for the production of arable crops land.

Conclusions. In agriculture oriented to organic production we proposed to understand the parallel management of the traditional component of the industrial system and production system, oriented to organic agricultural production, adjusted for the share of the organic sector on the basis of the rational, territorial and technological sectors of agricultural process.

All in all, the (new) EU import rules applied to Ukraine and other ‘risk countries’ since 2016 hamper export procedures; these imply additional product sampling for pesticide residue screening—creating an additional burden for both Ukrainian exporters and importers, and reducing the attractiveness of Ukraine as a supplier of organic raw materials (QueS et al. 2018).

On the domestic front, the economic crises still affect the purchasing power and behaviour of consumers, with the consequence that retailers’ propensity to invest in promoting organic products in their stores is rather low. Nevertheless, these investments are likely to increase once the national organic law is set in place, ensuring the protection of organic products in the domestic market.

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ПЕРСПЕКТИВИ ВИРОБНИЦТВА ТА ВИКОРИСТАННЯ БІОПАЛИВА У ВІННИЦЬКІЙ ОБЛАСТІ ЯК ФАКТОР ВПЛИВУ НА РОЗВИТОК ЕКОНОМІКИ ТА АГРАРНОГО СЕКТОРУ РЕГІОНУ ©

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Стаття присвячена актуальності використання екологічно чистих джерел енергії, як альтернативу традиційним видам палива. Висвітлено перспективи енергетичного розвитку Вінницької області, на основі праць вітчизняних науковців. Проаналізовано перспективність біоенергетики Вінниччини та її вплив на сталий розвиток аграрного сектору та економіки регіону. Розкрито тісний взаємозв'язок між аграрним сектором та біоенергетикою. В результатах дослідження визначено, що Вінницька область має значний енергетичний потенціал відновлюваних джерел енергії, а найбільша частка його належить енергії біомаси. Проаналізовано структуру та потенціал деревної біомаси по районах області. Розглянуто перспективність раціонального