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**Екологічна сертифікація аграрної продукції та її вплив на експортний потенціал регіонів України в умовах Європейського зеленого курсу**

**Макалюк Ірина Віталіївна,**

кандидат економічних наук, доцент,  
доцент кафедри економіки і підприємництва,  
Національний технічний університет України  
«Київський політехнічний інститут імені Ігоря Сікорського», просп.  
Берестейський, 37, м. Київ, 03056, Україна,  
<http://orcid.org/0000-0003-4800-4599>

**Дергалюк Марта Олексіївна,**

доктор економічних наук, доцент, доцент кафедри економіки і підприємництва,  
Національний технічний університет України  
«Київський політехнічний інститут імені Ігоря Сікорського»,  
просп. Берестейський, 37, м. Київ, 03056, Україна,  
<https://orcid.org/0000-0002-9244-1625>

**Васьків Степан Федорович,**

кандидат економічних наук, доцент кафедри статистики,  
Львівський національний університет імені Івана Франка,  
просп. Свободи, 18, м. Львів, 79008, Україна,  
<https://orcid.org/0000-0003-3781-2822>  
E-mail: [stepan.vaskiv@lnu.edu.ua](mailto:stepan.vaskiv@lnu.edu.ua)

**Анотація.** Мета дослідження полягає у встановленні закономірностей трансформації аграрного експорту України під впливом інтеграції до економічного простору Європейського Союзу та поширення екологічних стандартів виробництва. Увагу зосереджено на структурних змінах товарних потоків, регіональних особливостях виробництва аграрної продукції та поширенні екологічної сертифікації серед виробників. Дослідження спрямоване на визначення зв'язку між впровадженням стандартів органічного виробництва та змінами географії аграрного експорту. Методологія дослідження ґрунтується на використанні комплексу економіко-статистичних і аналітичних методів. Проведено структурний аналіз товарної структури експорту аграрної продукції України, порівняльний аналіз регіональних показників виробництва та статистичне групування підприємств за рівнем екологічної сертифікації. Інформаційну основу становлять статистичні дані державних інституцій і галузеві аналітичні матеріали. Результати дослідження демонструють зміну структури аграрного експорту України протягом останніх років. Зафіксовано збільшення частки продукції з підвищеним рівнем переробки та сертифікованої органічної продукції. Виявлено зростання кількості підприємств, які впроваджують міжнародні екологічні стандарти виробництва. Регіональний аналіз показує концентрацію сертифікованих виробників у центральних і західних областях України, тоді як південні регіони демонструють активізацію сертифікації підприємств переробної галузі. Встановлено

зв'язок між поширенням екологічної сертифікації та розширенням доступу української аграрної продукції до ринків ЄС. Практичне значення результатів полягає у формуванні підходів до розвитку екологічної сертифікації аграрного виробництва та розширення експорту продукції з підтвердженими стандартами якості. Наукова новизна дослідження полягає у комплексному аналізі взаємозв'язку між екологічною сертифікацією виробництва, регіональною структурою аграрного сектору та динамікою експорту продукції на ринки ЄС. Отримані результати розширюють уявлення про економічні наслідки інтеграції аграрного сектору України до європейського економічного простору.

**Ключові слова:** екологічна сертифікація, аграрний експорт, митна статистика, зовнішньоекономічна діяльність, товарна структура експорту, регіональний розвиток, органічне виробництво, Європейський зелений курс, конкурентоспроможність.

### **Environmental Certification of Agricultural Products and Its Impact on the Export Potential of Ukraine's Regions in the Context of the European Green Deal**

**Makaliuk Iryna,**

Candidate of Economic Sciences,

Associate Professor at the Department of Economics and Entrepreneurship,  
National Technical University of Ukraine

"Igor Sikorsky Kyiv Polytechnic Institute", Beresteyskiy Prospect, 37, Kyiv, Ukraine,  
03056,

<http://orcid.org/0000-0003-4800-4599>

**Derhaliuk Marta,** Doctor of Economics, Associate Professor,

Associate Professor at the Department of Economics and Entrepreneurship,  
National Technical University of Ukraine

"Igor Sikorsky Kyiv Polytechnic Institute",  
Beresteyskiy Prospect, 37, Kyiv, Ukraine, 03056,

<https://orcid.org/0000-0002-9244-1625>

**Vaskiv Stepan,**

Candidate of Economy Sciences,

Associate Professor of the Department Statistics,  
Ivan Franko National University of Lviv,

18 Svobody Ave., Lviv, Ukraine, 79008,

<https://orcid.org/0000-0003-3781-2822>

E-mail: [stepan.vaskiv@lnu.edu.ua](mailto:stepan.vaskiv@lnu.edu.ua)

**Abstract.** The purpose of the study is to identify patterns in the transformation of Ukraine's agricultural exports under the influence of integration into the economic space of the European Union and the spread of environmental production standards. Attention is focused on structural changes in commodity flows, regional characteristics of agricultural production, and the dissemination of environmental certification among producers. The study aims to determine the relationship between the implementation of organic production standards and changes in the geographical structure of agricultural exports. The research methodology is based on a combination of economic-statistical and analytical methods. A structural analysis of the commodity composition of Ukraine's agricultural exports was carried out, together with a comparative analysis of regional production indicators and statistical grouping of enterprises according to the level of environmental certification. The information base consists of statistical data from state institutions and sectoral analytical materials. The results of the study

demonstrate changes in the structure of Ukraine's agricultural exports in recent years. An increase in the share of products with a higher level of processing and certified organic products has been recorded. The study also identifies growth in the number of enterprises implementing international environmental production standards. Regional analysis indicates a concentration of certified producers in the central and western regions of Ukraine, while southern regions demonstrate an increasing level of certification among enterprises in the processing sector. A relationship between the spread of environmental certification and the expansion of access for Ukrainian agricultural products to European Union markets has been established. The practical significance of the results lies in the development of approaches aimed at expanding environmental certification in agricultural production and increasing exports of products that meet recognized quality standards. The findings can be applied in the design of support programs for organic production, stimulation of agricultural processing, and improvement of state export policy. The scientific novelty of the research lies in the comprehensive analysis of the relationship between environmental certification of production, the regional structure of the agricultural sector, and the dynamics of exports to European Union markets. The obtained results expand understanding of the economic consequences of integrating Ukraine's agricultural sector into the European economic space.

**Keywords:** environmental certification, agricultural exports, customs statistics, foreign economic activity, commodity structure of exports, regional development, organic production, European Green Deal, competitiveness.

### Introduction

The agricultural sector of Ukraine forms a significant share of national exports. Grain crops, oilseeds and products of their processing provide stable foreign exchange earnings. Changes in the requirements of international trade are gradually transforming the conditions for access of products to foreign markets. The European Union implements environmental standards for the production and control of the origin of agricultural products. Ukrainian enterprises are adapting production systems to these regulatory requirements. In recent years, agricultural producers have been implementing international certification systems. The use of these systems changes the organization of production processes. Enterprises are modernizing soil cultivation technologies, logistics and product quality control. The regional structure of agricultural production determines the differentiation of export opportunities of the regions. The central regions concentrate grain production, the southern regions specialize in oilseeds. The western territories show an increase in organic farming. The introduction of environmental certification systems contributes to the formation of new competitive advantages of Ukrainian agricultural enterprises in European markets. In connection with these processes, there is a need to study the impact of environmental certification on the regional structure of agricultural exports of Ukraine and determine the directions for increasing the export potential of the regions.

### Review of Literature Sources.

In the scientific publication Bondarenko S., Nikishina O., Zerkina O., Shaposhnikov V. [2] the results of studies of structural changes in agricultural exports of Ukraine during the period of economic shocks are presented. The growth of the role of adaptive mechanisms in the formation of export flows of agricultural products is shown. The authors investigated the transformation of the commodity structure of exports and changes in the geography of supplies. However, the issues related to the impact of environmental production standards on the regional competitiveness of agricultural enterprises remained unresolved. The study by Galan V. O., Samoilova A. R. [3] presents the results of the analysis of the processes of European integration of the agricultural sector of Ukraine. Changes in the regulatory environment of agricultural policy and harmonization of legislation with the law of the European Union are shown. The authors described the legal mechanisms of adaptation of the agricultural sector to

the requirements of the European market. Although there are problems related to the economic assessment of the impact of production certification on regional export indicators. The scientific publication Dotsyuk S. O. [5] presents the results of research on the formation of the export potential of enterprises of the agro-industrial complex. The relationship between the investment activity of enterprises and the volume of agricultural exports is shown. The author considered the institutional conditions for the development of foreign economic activity of agricultural enterprises. There are still issues related to the integration of environmental certification into the system of regional export specialization.

The study by Kim O. O. [6] presents the results of the analysis of the investment attractiveness of the Ukrainian economy for transnational corporations. The influence of investment processes on the formation of the export potential of the national economy is shown. The author considered the relationship between the inflow of investments and the development of foreign trade. In the scientific publication Korzhenivska N. L., Osadchuk I. O., Sydorak Y. I. [7] the results of research on the resilience of agricultural exports of Ukraine to economic crisis phenomena are presented. The dynamics of changes in export flows of agricultural products and adaptation mechanisms of enterprises are shown. The authors described the factors that determine the stability of agricultural exports. However, issues related to the impact of environmental production standards on the structure of agricultural exports remained unresolved. The study of Logosh R. V. [8] presents the results of the analysis of international experience in harmonization of legislation in the field of organic production. The mechanisms of adaptation of national regulatory systems to the requirements of international standards are shown. The author investigated the institutional conditions for the development of the organic sector of the agrarian economy. However, issues related to the assessment of regional effects of the spread of environmental certification remained unresolved. The scientific publication Obushnyi S. M., Venger K. O. [11] presents the results of the analysis of the instruments of the Common Agricultural Policy of the European Union. Mechanisms for stimulating the sustainable development of agricultural production are shown. The authors considered institutional tools to support environmentally oriented management practices.

The study by Honcharuk I., Logosha R., Tokarchuk D. [15] presents the results of the analysis of the prospects for the development of the organic market of Ukraine in the context of the implementation of the European Green Deal. The growth of demand for certified products in European markets is shown. The authors investigated the economic prerequisites for the development of organic production. There is an imperfection in assessing the impact of certification on the structure of regional export specialization. In the scientific publication Malyarets L. M., Norik L. O., Sklyar T. P., Molodetskyi G. G. [17] the results of research on the impact of the concept of green economy on the development of foreign economic activity of Ukraine are presented. The transformation of the structure of export-import operations under the influence of environmental requirements of international trade is shown. The authors described innovative directions for the development of foreign economic activity of enterprises. The cross-section of the scientific field of the study clearly indicates the need for further study of the implementation of agricultural certification in the work of agricultural enterprises in Ukraine.

#### **Statement of the task.**

**The purpose of the article** is to study the peculiarities of the use of environmental certification of Ukrainian agricultural products in the context of the realization of the export potential of the regions of Ukraine to the EU countries.

#### **Methods and materials.**

The study is based on the analysis of indicators of the development of agricultural production and foreign trade of Ukraine for 2021–2025. The information base of the study consists of the data of customs statistics of foreign trade in goods published by the State

Statistics Service of Ukraine and the State Customs Service of Ukraine, materials of the Ministry of Economy, Environment and Agriculture of Ukraine and international analytical reports on agricultural policy. Comparative analysis is used to assess regional differences in the spread of environmental certification of agricultural products. The method of structural analysis is used in the study of changes in the commodity and geographical structure of agricultural exports. Correlation analysis is used to determine the relationship between the number of certified enterprises and export volumes. To forecast the indicators of development of certified production until 2030, the method of extrapolation of dynamic series and analytical generalization of the results obtained were used.

### Results and discussion.

The agricultural sector of Ukraine forms a significant share of the state's foreign exchange earnings. The structure of exports is dominated by cereals, oilseeds and products of their processing. The European market imposes strict environmental requirements on products. Certification of production becomes a tool for integrating enterprises into international trade. Environmental standards are used in the production, storage and transportation of agricultural products. GlobalG.A.P., ISO 14001, HACCP, as well as organic certification systems remain widespread. Their introduction changes the structure of agricultural production and export flows. Enterprises are modernizing technologies, improving the quality management system and introducing control over the use of resources. The certification activity of enterprises has pronounced territorial differences. In the western and central regions, the spread of standards is faster. Production clusters of organic farming were formed there. In the southern regions, certification is developing through specialization in the export of grain and oilseeds. The eastern regions show lower dynamics due to production risks and infrastructure losses.

In the period 2021-2025, the number of enterprises with certified environmental quality management systems grew unevenly. Manufacturers have actively adapted crop cultivation technologies to the requirements of environmental standards. A significant part of agricultural companies have modernized systems for controlling soils, water resources and the use of agrochemicals. A systematic analysis of the dynamics of certification of enterprises demonstrates a change in the structure of production strategies. Some companies are switching to the production of products with increased added value. The number of enterprises focusing on the organic export segment is increasing. Other manufacturers concentrate on meeting food safety standards. The spread of certification covers various branches of agricultural production. Crop production remains the most active segment of the implementation of standards. The poultry industry and the processing industry are showing gradual adaptation to the requirements of environmental management. The number of farms integrating the principles of resource efficiency into the production cycle is growing. Statistical data indicate a gradual increase in the number of enterprises that meet international environmental requirements. At the same time, there is an expansion of the area of organic farming and an increase in the share of certified products in exports (Table 1).

**Table 1. Dynamics of the spread of environmental certification among agricultural enterprises of Ukraine in 2021–2025**

Year	Number of certified enterprises, units	Area of organic land, thousand hectares	Enterprises with the GlobalG.A.P. standard, units.	Enterprises with ISO 14001, units.	Share of certified products in agricultural exports, %
2021	520	462	210	145	12,4
2022	548	470	226	153	13,1
2023	586	489	245	168	14,3
2024	624	508	268	184	15,7
2025	671	536	296	201	17,2

Source: built by the authors on the basis of [10]

We have a stable expansion of environmental certification systems. The number of enterprises with confirmed standards has increased by almost a third. At the same time, the area of organic land increased. The share of certified products in the structure of exports increased by more than four percentage points. Increasing certification activity forms a new model of agricultural production. Enterprises integrate environmental technologies into the resource management system. Approaches to the use of fertilizers and plant protection products are changing. Enterprises strengthen product quality control at all stages of the production cycle [9, p. 201]. Environmental certification affects the geography of agricultural exports. Manufacturers with proven standards gain access to a wider range of markets. The share of exports to the countries of the European Union is growing. The companies are expanding their presence in the markets of Germany, the Netherlands, Italy and Poland.

Regional differences in the implementation of certification are determined by the structure of production and investment activity of enterprises. The western regions show the highest concentration of organic farms. The central regions specialize in grain exports in compliance with GlobalG.A.P. standards. The southern regions are developing certification of processing enterprises in the fat-and-oil industry. Structural analysis shows the uneven distribution of environmental standards between regions of the country. Some regions concentrate a significant share of certified enterprises. Other regions show limited integration into environmental control systems (Table 2) [13].

**Table 2. Regional structure of environmental certification of agricultural production in Ukraine in 2021–2025**

Year	Western regions, enterprises (units)	Central regions, enterprises (units)	Southern regions, enterprises (units)	Eastern regions, enterprises (units)	Share of organic farms in the structure of the region, %	Export of certified products, USD billion USA
2021	128	176	112	104	9,6	4,8
2022	135	183	117	113	10,1	5,1
2023	149	195	124	118	11,3	5,8
2024	163	207	132	122	12,6	6,4
2025	181	219	141	130	13,9	7,1

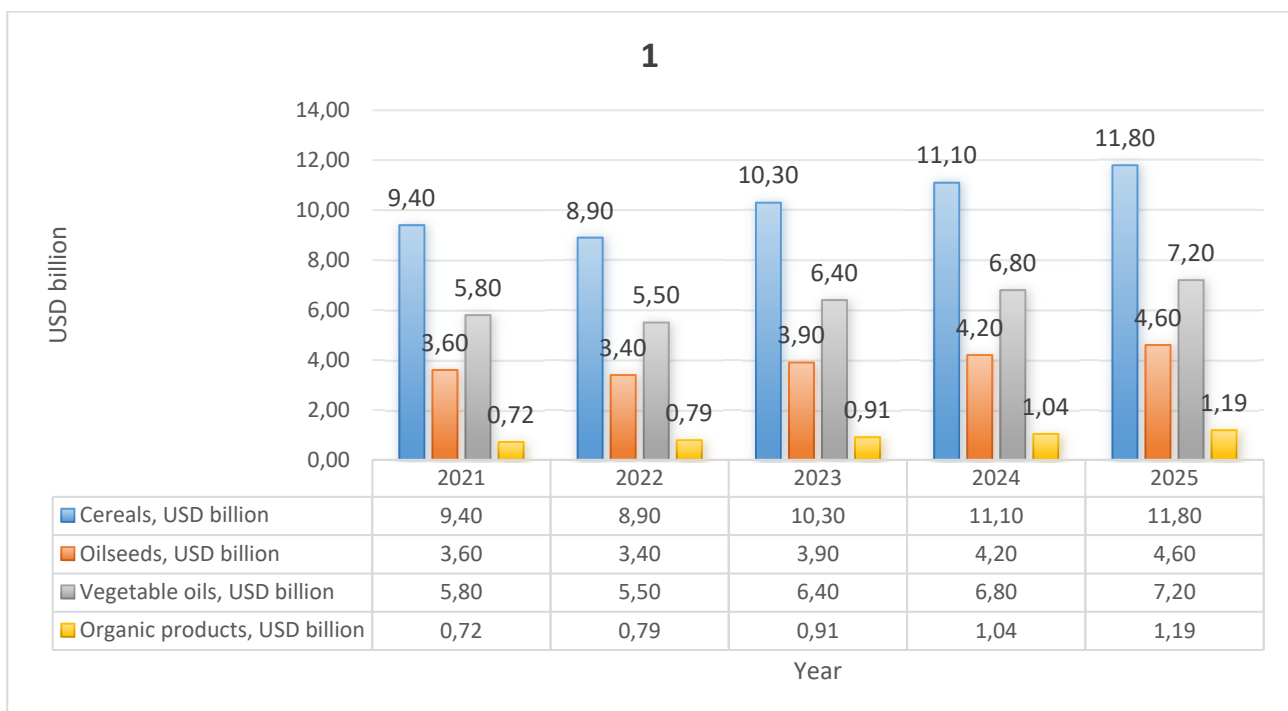
Source: built by the authors on the basis of [4, 10]

Regional indicators show a gradual increase in the number of certified manufacturers in all macro-regions. The western regions hold the highest share of organic production. The central regions concentrate the largest number of enterprises with international quality management standards. The southern regions show a steady growth in export operations. Enterprises with environmental standards form new production strategies. Producers are investing in precision farming technologies. Digital systems for monitoring the use of resources are proliferating. The use of biological plant protection products is expanding.

Certification stimulates the modernization of agricultural infrastructure. Enterprises are modernizing warehouses, elevators and logistics centers. Recycling companies implement emission control systems and energy use. The number of enterprises with environmental audit systems is growing. Export of agricultural products forms the basis of foreign exchange earnings of Ukraine. During 2021-2025, there were noticeable changes in the structure of agricultural exports. Some manufacturers have reoriented production systems to environmental certification standards. The enterprises have integrated the requirements of GlobalG.A.P., ISO 14001, HACCP and EU organic regulations. Production processes have adapted to control the use of resources and control the origin of agricultural products. The growth of certification coincided with a change in the geography of exports. European countries gradually

increased the share of purchases of Ukrainian agricultural products. Enterprises that have confirmed compliance with environmental standards have received stable contracts with importers. The certification system has become a factor in the formation of a new specialization of regions. Certified grain production has spread in the central regions. The southern regions increased exports of vegetable oils and meal. The western regions have expanded the production of organic products. The eastern regions continue to focus on basic grain crops, although the pace of certification there is lower [14].

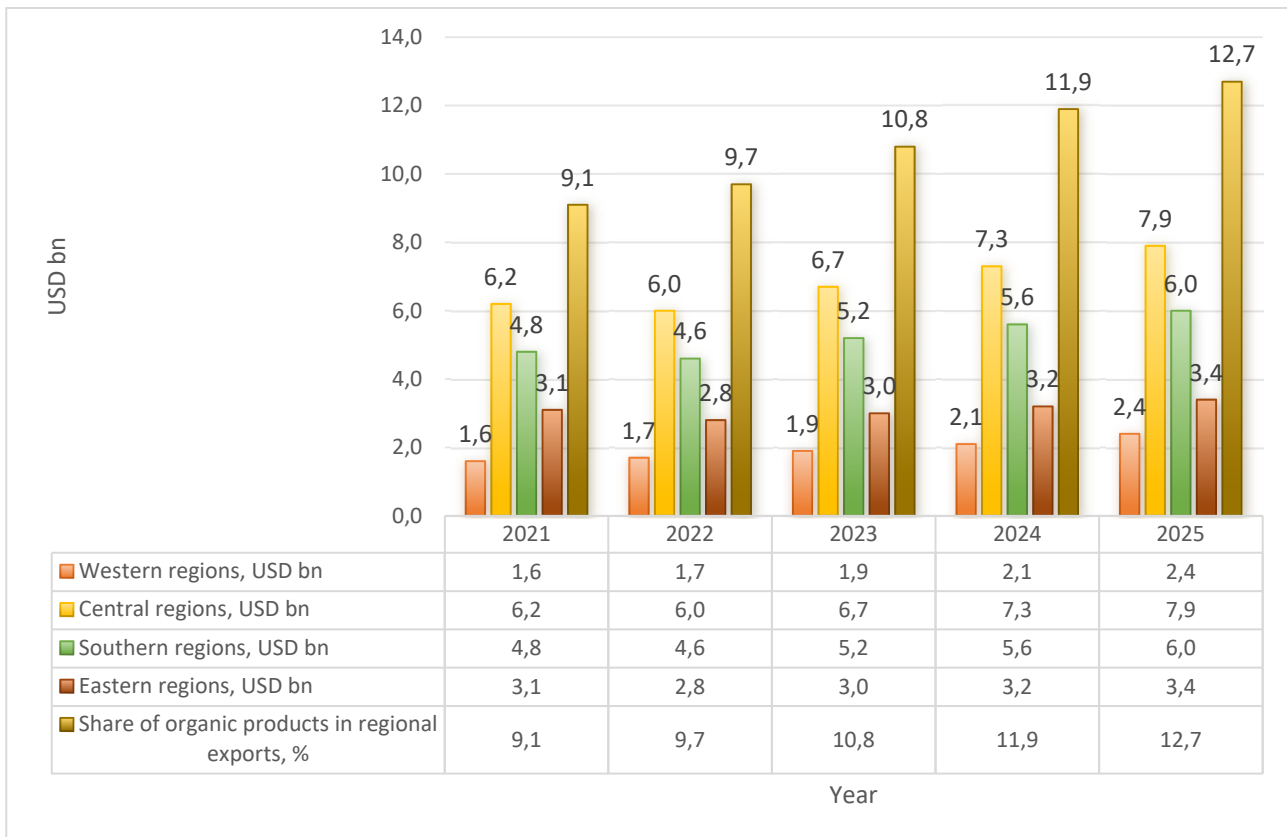
Regional manufacturers have adapted the production structure to the requirements of European buyers. Enterprises have changed soil cultivation technologies and fertilizer control systems. Some farms invested in certified elevators and logistics complexes. The analysis of the commodity structure of exports of agricultural products was carried out using the data of customs statistics on the main commodity groups of the Ukrainian Classification of Goods of Foreign Economic Activity (UCG FEA). The results of the statistical analysis show an increase in the share of certified products in agricultural exports. In 2021, this figure was 13.2%. By 2025, the share has reached 19.6%. Changes occurred unevenly between regions (Fig. 1).



**Figure 1. Dynamics of exports of certified agricultural products of Ukraine by main commodity groups in 2021–2025**

Source: built by the authors on the basis of [4, 10]

The grain segment retains the largest share of exports, while organic products show faster growth. Within five years, its exports increased by almost 65%. At the same time, the volume of vegetable oils increased. The expansion of certified production has changed the regional structure of agricultural specialization. Enterprises began to focus on segments with greater added value. The southern regions have intensified sunflower processing. The western regions have increased the area of organic farming. The central regions invested in grain logistics systems. Regional export indicators show an uneven distribution of certified production. The central regions form the largest volume of agricultural exports. The western regions show the highest share of organic products (Fig. 2.) [1, 18].



**Figure 2. Regional structure of exports of certified agricultural products of Ukraine in 2021-2025**

Source: built by the authors on the basis of [4, 10]

Thus, the western regions increased the volume of exports of organic products by 50%. The central regions demonstrate the highest indicators of grain exports. The southern regions remain the center of vegetable oil production. Environmental certification has influenced the structure of regional competitive advantages. Some regions are developing the production of products with high environmental quality. Others concentrate resources on large-scale grain production. Changes are also observed in the geography of exports. Until 2021, the main markets were the states of Asia and the Middle East. During 2022-2025, the share of the European Union countries in exports increased, Germany, the Netherlands, Italy and Poland became the largest importers of certified products. The enterprises expanded the export of organic grains, legumes and vegetable oils. European traders conclude long-term contracts with Ukrainian manufacturers. Certification ensures compliance with the requirements of environmental control and the origin of agricultural products. [1].

The introduction of environmental standards is changing the cost structure of agricultural enterprises. Farms are investing in laboratory control of soils and water resources. Manufacturers are modernizing their storage systems. At the same time, the use of digital systems for monitoring production processes is spreading. Certified enterprises receive more stable export contracts. European importers require confirmation of the environmental characteristics of products. with restrictions on access to markets. Under the influence of these factors, the structure of agrarian competitiveness of regions changes. Regions with a high concentration of certified enterprises generate higher export revenues [2, 13]. The assessment of the impact of environmental certification on the foreign economic activity of the regions was carried out on the basis of indicators of customs statistics. These include the volume of exports of agricultural products, the share of certified products in the structure of exports, the dynamics of foreign trade turnover and the index of competitiveness of agricultural exports. The use of

statistical methods, in particular correlation analysis, made it possible to establish the relationship between the spread of environmental certification and changes in the structure of foreign trade in agricultural products. The relationship between the level of certification and export volumes was also analyzed by comparative analysis of the relevant indicators (Table 3).

**Table 3. The relationship between the spread of environmental certification and the volume of agricultural exports of the regions of Ukraine in 2021–2025**

Year	Number of certified enterprises, units	Export of certified products, USD billion USA	Total agricultural exports, billion US dollars USA	Share of certified exports, %	Agricultural Export Competitiveness Index
2021	520	5,6	42,4	13,2	0,41
2022	548	5,9	41,8	14,1	0,43
2023	586	6,8	41,7	16,3	0,47
2024	624	7,6	41,8	18,2	0,52
2025	671	8,3	42,3	19,6	0,56

Source: built by the authors on the basis of [10]

The number of certified enterprises has increased by 29% in five years. Exports of certified products increased by almost 48%. The Agricultural Export Competitiveness Index shows a gradual increase. Manufacturers integrate environmental control standards into the enterprise management system. Farms are implementing precision farming and biological plant protection technologies. Enterprises are expanding the processing of agricultural products. Environmental certification forms a new structure of agricultural exports of Ukraine. Regions with a developed certification system demonstrate more stable export indicators. Enterprises concentrate on product segments with higher added value [16, p. 38].

The calculated Pearson correlation coefficient between the number of certified enterprises and the volume of exports of certified products is  $r = 0.995$ , which indicates a very strong direct linear relationship between these indicators and confirms the decisive role of environmental certification in the formation of the export potential of the agricultural sector of Ukraine.

In the period up to 2030, the share of certified products in total agricultural exports is expected to increase. Producers invest in technologies for controlling soils, water resources and the use of agrochemicals. At the same time, the use of product traceability systems is expanding. Agricultural companies are moving to management models that take into account environmental criteria of international trade. The regional model of increasing export potential is based on the integration of certification standards into the production systems of enterprises. Enterprises gain access to new market segments after confirming the environmental parameters of products. In the regions, there is a demand for certification laboratories, logistics centers and analytical quality control services. Manufacturers are changing the structure of investment programs. Part of the resources is directed to the modernization of elevators and warehouses. Enterprises are expanding the processing capacity of agricultural raw materials [18].

Forecast calculations show an increase in certified production by 2030. Organic farming areas and the number of certified enterprises are expected to grow. Manufacturers are gradually adapting technologies to environmental safety standards (Table 4) [20].

**Table 4. Forecast of the development of environmental certification of agricultural production in Ukraine in the period 2025-2030**

Year	Certified enterprises, units.	Area of organic land, thousand hectares, ha	Export of certified products, USD billion USA	Share of certified exports, %	Investments in certification, UAH billion
2025	671	536	8,3	19,6	6,3
2026	712	560	9,1	21,0	7,0
2027	756	588	10,0	22,7	7,8
2028	804	618	11,1	24,5	8,7
2029	856	650	12,4	26,8	9,8
2030	915	690	13,8	29,2	11,0

Source: built by the authors on the basis of [18, 20]

The forecast shows a gradual increase in the number of certified enterprises. By 2030, their number may exceed nine hundred units. The area of organic farming will increase by about 220 thousand hectares. ha. The growth of certification is accompanied by changes in the structure of agricultural exports. The regions specialize in the production of products with different levels of environmental certification. The western regions concentrate on organic crops. The central regions are developing grain logistics and processing [12]. The southern regions are increasing the production of vegetable oils. Enterprises are gradually integrating certification requirements into the production management system. Farms are switching to precision farming technologies. Manufacturers are expanding the use of biological plant protection products. There is a growing demand for laboratory quality control of products. The state policy of supporting certification is aimed at financial incentives for manufacturers. Regional programs provide for compensation of certification costs [19]. Part of the funds is directed to the modernization of laboratory infrastructure (Table 5).

**Table 5. Forecast of the effects of state instruments to support environmental certification in the period 2025-2030**

Year	State support for certification. billion UAH.	Share of enterprises with environmental standards. %	Export of organic products. billion dollars. USA	Level of investment in recycling. billion dollars. USA
2025	2,5	14,3	1,19	2,1
2026	2,9	16,0	1,36	2,4
2027	3,3	17,9	1,55	2,8
2028	3,8	19,7	1,76	3,2
2029	4,2	21,5	1,98	3,6
2030	4,8	23,8	2,24	4,1

Source: built by the authors on the basis of [18, 20]

An increase in financial support stimulates the modernization of production processes. Agricultural producers are more actively implementing environmental standards. The share of enterprises with certification is gradually approaching a quarter of the agricultural sector. At the same time, a new structure of regional specialization of agricultural production is being formed. Regions concentrate production in segments where environmental certification increases the competitive position of products. The production of organic grains, vegetable oils and by-products is growing. Export channels are also undergoing a transformation. The share of supplies to the countries of the European Union is growing, with Germany, Italy and the Netherlands remaining the largest buyers of certified products. Businesses enter into long-term contracts with traders and processing companies. Under the influence of these changes, a model

of regional development of agricultural exports is formed. Production systems focus on products with high added value. The regions plan to expand the quality control and certification infrastructure (Table 6).

**Table 6. Forecast of the regional model of growth of the export potential of the agricultural sector of Ukraine in the interval of 2025-2030**

Year	Western regions. exports billion US dollars. USA	Central regions. exports billion US dollars. USA	Southern regions. exports billion US dollars. USA	Eastern regions. exports billion US dollars. USA	Share of certified products. %	Regional Competitiveness Index
2025	2,4	7,9	6,0	3,4	19,6	0,56
2026	2,7	8,5	6,5	3,6	21,0	0,60
2027	3,1	9,1	7,1	3,9	22,7	0,65
2028	3,5	9,8	7,7	4,2	24,5	0,69
2029	3,9	10,5	8,3	4,6	26,8	0,73
2030	4,4	11,3	9,0	5,0	29,2	0,78

Source: built by the authors on the basis of [10, 20]

The forecast shows export growth in all regions of the country. The central regions retain the highest volumes of grain supplies. The southern regions are increasing the production of oilseeds and by-products. The western regions are expanding the segment of organic farming. The regional development model is based on a combination of certification standards and modernization of production. Agrarian enterprises integrate environmental criteria into the resource management system. Enterprises are expanding the use of digital production control technologies. Certification infrastructure is becoming an important element of regional development. Quality control laboratories are located near the main agricultural clusters. Logistics centers will increasingly ensure the transportation of certified products to EU ports and borders. Investments in certification and processing form new production chains. Manufacturers are increasing the share of products with high added value. Enterprises are expanding exports of finished food products. By 2030, environmental certification will transform the structure of agricultural exports of Ukraine [3, 20]. Regional economies concentrate resources in the production of products with proven environmental characteristics.

### Conclusions

Statistical analysis showed an increase in the scale of environmental certification of agricultural production in Ukraine during 2021-2025. The number of enterprises with international quality standards increased from 520 to 671 units. The area of organic farming during this period expanded from 462 to 536 thousand hectares. ha. At the same time, the share of certified products in agricultural exports increased, from 12.4% to 17.2%. Such changes reflect the transformation of production strategies of agricultural enterprises. Manufacturers are modernizing tillage technologies, logistics systems and product quality control. The spread of certification forms a new production model focused on the export markets of the European Union and increased environmental requirements for agricultural products.

Regional analysis shows significant differences in the implementation of environmental production standards. The western regions demonstrate the highest share of organic farming and dynamic growth in exports of organic products. The central regions concentrate most of the certified enterprises and form the main volumes of grain exports. The southern regions are developing the production of vegetable oils and products of their processing. The eastern regions are characterized by lower rates of certification, which is associated with production risks and infrastructure constraints. Regions with a high concentration of certified enterprises

form larger volumes of export supplies and demonstrate more stable positions in European agricultural markets. Forecast estimates show a further increase in the role of environmental certification in the formation of Ukraine's export potential. By 2030, the number of certified agricultural enterprises may exceed 900 units. The area of organic land will approach 690 thousand hectares. ha. The share of certified products in the structure of agricultural exports can reach 29%. The obtained results can be used in the course of further statistical analysis of foreign economic activity of the agricultural sector of Ukraine on the basis of indicators of customs statistics of foreign trade in goods. The identified trends are accompanied by an increase in investments in laboratory quality control, logistics infrastructure and processing facilities. The obtained results can be used in the course of further statistical analysis of foreign economic activity of the agricultural sector of Ukraine on the basis of indicators of customs statistics of foreign trade in goods. The integration of environmental standards into the state agricultural policy will contribute to strengthening Ukraine's competitive position in international agricultural markets.

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