

REVIEW PAPER

# Ukraine's Contribution to Global Food Security: Contemporary Challenges and Future Opportunities

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## ABSTRACT

The article assesses the actual state of export potential to determine priority directions for strengthening Ukraine's role as a guarantor of global food security. The dynamics of production of the main types of crop products are presented. Ukraine's position in global production and export of major types of agricultural products is determined. Forecasting of wheat exports to the world market until 2027 is carried out. The characteristics of Ukraine's dominance in the global sunflower oil market are described. To reflect the impact of the war on global and Ukrainian food security, a benchmarking analysis of wheat exports in Ukraine and Russia for 2014-2024 was conducted, and the change in the global Food Price Index and certain types of products (2009-2024) was considered. A SWOT analysis of Ukraine's agricultural sector in the international market is presented. The priority directions for developing Ukraine's agricultural sector as a future guarantor of global food security are outlined.

## HIGHLIGHTS

- ① The place of Ukraine in the world production and export of major agricultural products is determined, and the actual state of export potential is assessed to determine the priority areas for strengthening Ukraine's role as a guarantor of global food security.
- ② A benchmarking analysis of wheat exports in Ukraine and Russia for 2014-2024 is carried out and the changes in the world price index for food and certain types of products (2009-2024) are considered.

**Keywords:** Food security, export potential, agricultural sector

Ukraine, one of Europe's largest countries, has significant agricultural potential due to its fertile black soils. It is one of the leading countries in the world in producing and exporting grain crops, particularly wheat, maize, and barley. The agricultural sector is vital to Ukraine's economy, providing jobs and generating substantial export revenue. The growth of agricultural production contributes to the country's economic stability and development. Ukrainian agricultural products are crucial for ensuring food security in many countries, especially regions with a deficit in grain production. Thus, the stability and development of Ukraine's agricultural sector have global significance. Like other countries, Ukraine faces the challenges of climate change, which affects agricultural

production. Research in this area allows for developing strategies for adaptation and minimising the negative impacts of climate change on crop yields and product quality. Integrating modern technologies into agricultural production, such as precision farming, biotechnology, and digital solutions, contributes to increasing the efficiency and resilience of Ukraine's agricultural sector. Research in this field is crucial for enhancing the competitiveness of Ukrainian agricultural products in global markets.

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## LITERATURE REVIEW

Researchers have established the significance of Ukraine as a producer of agricultural products over a long period in ensuring global and domestic food security. It has been established that the involvement of the agricultural sector in global commodity flows related to food production is increasing (Shubravska & Prokopenko, 2022). It has been proven in practice that scientifically based use of fertilisers, rational land use, balanced pricing, developed logistics, and improvement of innovative, technological, and market components in the Ukrainian economy contribute to the development of the agricultural sector and its export potential (Vasylieva, 2018; Lagodiienko *et al.* 2019).

It has been determined that consolidating efforts by management bodies, socially responsible businesses, and rural populations contributes to ensuring effective production relations in the agricultural market (Mykhailova *et al.* 2018; Kravchenko *et al.* 2020). Currently, the issues of the state and prospects of Ukraine's foreign trade in agro-industrial complex products in the context of European integration and global challenges are particularly relevant (Matyushenko *et al.* 2018; Lohosha *et al.* 2020). The peculiarities and trends in the export and import of agri-food products, evaluating the global impact, are being studied (Radchenko, 2022). As a result of scientific research, it has been established that Ukraine has unrealised export potential, which requires considering the experience of various countries worldwide (Bazaluk *et al.* 2020). In particular, studying foreign experience in the rational use of fresh water has allowed for identifying priority vectors for adapting agribusiness to climate change (Dvigun *et al.* 2022). Recently, increasing attention has been paid to the problems of exporting agricultural products in connection with Russia's military aggression on the territory of Ukraine (Tereshchuk, 2023; Mamonova *et al.* 2023; Halkin, 2023a). A comprehensive assessment of the direct and indirect market consequences of the war in Ukraine on agricultural business development has been conducted (Lopatynskyi *et al.* 2023). Scientists emphasise a scientifically based approach and balanced pricing policy to minimise the global food crisis caused by armed conflicts, the COVID-19 pandemic, and climate change (Halkin, 2022; Halkin, 2023b). The connections of global prices

have been studied, and the current "price leaders" of the world wheat market have been identified, among which three countries of the Black Sea region stand out — Russia, Ukraine, and Kazakhstan. It has been established that creating a futures market in the Black Sea region will significantly improve the participation of Black Sea markets in forming the price of the world wheat market (Svanidze & Đurić, 2021). The main directions of intensifying Ukraine's agricultural production, considering the quality and safety requirements of products in the conditions of developing European integration processes, have been identified (Petrychenko *et al.* 2022).

Thus, researching Ukraine's role as a guarantor of global food security is relevant and essential to economic development, global food security, adaptation to climate change, and innovation implementation.

The study aims to assess Ukraine's agricultural potential and determine specific measures to strengthen Ukraine's role as a guarantor of global food security.

## METHODS

This article empirically analysed scientific articles, monographs, reports, and other publications on food security, the agricultural sector, and Ukraine's role in international trade. The selection of publications was carried out using the Scopus, WoS, and Google Scholar databases. Monographic research and forecasting methods were used to identify trends in Ukraine's changing role in the global agricultural market. The analytical review of production and export volumes of agricultural products on the global market and in Ukraine was based on processing statistical data from FAO, Statista, USDA, and SSSU. The graphical method was used to depict the dynamics of the development of Ukraine's agricultural sector from 2000–2023 and Ukraine's position in the global market for individual types of agricultural products (Stepasyuk & Titenko, 2020). Benchmarking analysis was applied to compare the impact of Russia's military aggression against Ukraine on the state of agricultural exports. A trend line was used to visually represent future changes in the global agri-food market over time among leading countries. A SWOT analysis of Ukraine's agricultural sector in

the international market was used to summarise the research results.

These methods allowed for identifying the main factors influencing the agricultural sector and developing effective strategies to ensure food security both at the national and international levels.

# RESULTS

Ukraine is essential in the global food market due to its significant natural resources, particularly fertile soils and a favourable climate for agriculture. Crop production is a critical component of Ukraine's agricultural sector. Both domestic needs and export opportunities determine priorities in this area. Ukraine's significance in ensuring the food security of certain countries is also substantial, especially concerning the main export crops. The production of major crop products in Ukraine undergoes

significant changes under various economic, technological, and climatic factors. However, the agricultural sector shows stable growth trends in the production of the main types of crop products (see Table 1).

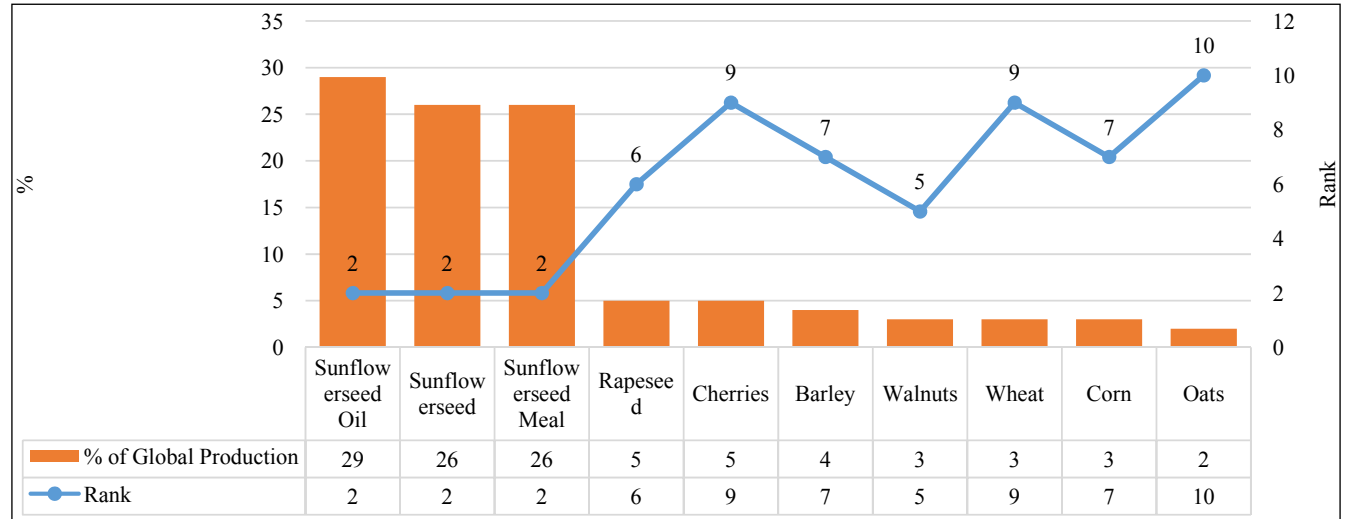
Thanks to modern technologies, innovations, and the expansion of sales markets, Ukrainian producers continue strengthening their global positions. In the overall TOP-10 ranking of countries worldwide (Filipenco, 2024), Ukraine ranked 2<sup>nd</sup> in 2023 for the production of sunflower and its processed products (oil, meal), 5<sup>th</sup> for walnut production, 6<sup>th</sup> for rapeseed, 7<sup>th</sup> for barley and maize, 9<sup>th</sup> for cherries and wheat, and 10<sup>th</sup> for oats (see Fig. 1).

Ukraine is an essential player in the global food market due to its significant production of grain and oilseed crops. Its influence extends to many countries and regions that import Ukrainian

**Table 1:** Production Dynamics of the Main Types of Crop Farming in Ukraine, thousand tonnes

| Crops                     | Years |       |       |       |       |       |       |       |       | Growth, 2023 to |         |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|---------|
|                           | 2000  | 2005  | 2010  | 2015  | 2019  | 2020  | 2021  | 2022  | 2023  | 2000, %         | 2010, % |
| Wheat                     | 10197 | 18699 | 16851 | 26532 | 28328 | 24877 | 32151 | 20729 | 21625 | 112,1           | 28,3    |
| Maize                     | 3848  | 7167  | 11953 | 23328 | 35880 | 30290 | 42110 | 26187 | 31030 | 706,4           | 159,6   |
| Sunflower seeds           | 2842  | 3689  | 4526  | 5166  | 5959  | 6481  | 6665  | 5238  | 12760 | 349,0           | 181,9   |
| Soya beans                | 64    | 613   | 1680  | 3931  | 3699  | 2798  | 3493  | 3444  | 4743  | 7264,2          | 182,3   |
| Winter rapeseed and colza | 132   | 285   | 1470  | 1738  | 3280  | 2557  | 2939  | 3318  | 4184  | 3074,2          | 184,7   |

Source: Compiled from SSSU (2024).



Source: Compiled from USDA (2023).

**Fig. 1:** Ukraine's Place in Global Agricultural Production, 2023

products to ensure food security. Below is the production of Ukraine's prominent export grain and oilseed crops (see Fig. 2).

The growth in the production of grain, oilseed, leguminous crops, and vegetables contributes to ensuring food security in Ukraine and other countries. Wheat remains one of the main crops in Ukraine. Wheat production is steadily increasing due to modern agrotechnologies and high-yield varieties. Ukraine is essential in the global food security system due to its ample agricultural resources and potential. Ukraine is the largest producer and exporter of sunflower oil in the world. Annual sunflower production exceeds 15 million tonnes.

Ukraine is vital in global soybean production and contributes to food security. Although it is not the largest soybean producer in the world, its contribution to this sector is significantly increasing. Soybean production in Ukraine has grown significantly in recent years. FAO data shows that production volumes exceed 3.5 million tonnes

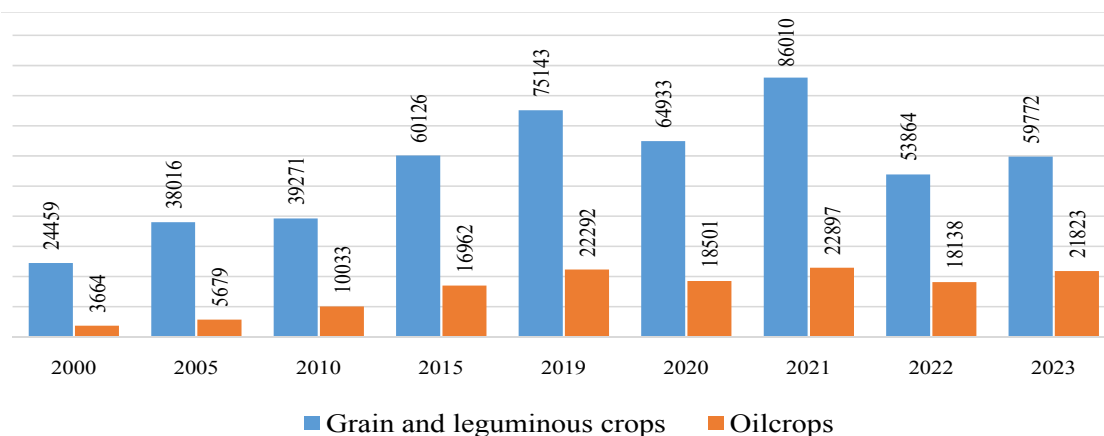
annually (FAO, 2023). The areas under soybeans in Ukraine are increasing, indicating growing interest from farmers in this crop. Using modern technologies and high-yielding varieties contributes to increasing soybean yields in Ukraine. Ukraine is a significant exporter of soybeans. Annual export volumes exceed 2 million tonnes. The leading importers of Ukrainian soybeans are the European Union countries, China, and Turkey. Demand for Ukrainian soybeans is also growing in Southeast Asian countries. Soybeans are an important source of high-quality plant protein, making them a key component in ensuring food security. They are used as a feed base in livestock, contributing to the production of meat, milk, and other animal products.

Ukraine is one of the leading rapeseed producers in the world, with an annual production of about 3-4 million tonnes. Rapeseed from Ukraine is exported to the European Union countries to produce biodiesel and edible oil, contributing to the EU's energy and food security (see Table 2).

**Table 2:** Ukraine's Share in Global Oilseeds Production, %

| Culture        | Marketing year (MY) | World  | Ukraine | Ukraine's share in the world production, % |
|----------------|---------------------|--------|---------|--------------------------------------------|
| Soybean        | 2021/2022           | 360,43 | 3,8     | 1,05                                       |
|                | 2022/2023           | 378,37 | 4,1     | 1,08                                       |
|                | 2023/2024           | 395,41 | 5,2     | 1,32                                       |
| Sunflower seed | 2021/2022           | 56,86  | 17,5    | 30,78                                      |
|                | 2022/2023           | 52,78  | 12,2    | 23,11                                      |
|                | 2023/2024           | 55,14  | 14,5    | 26,30                                      |
| Rapeseed       | 2021/2022           | 75,79  | 3,02    | 3,98                                       |
|                | 2022/2023           | 88,75  | 3,5     | 3,94                                       |
|                | 2023/2024           | 88,76  | 4,75    | 5,35                                       |

**Source:** USDA (2024a); Statista (2024b); FAO (2023).



**Source:** Compiled from SSSU (2024).

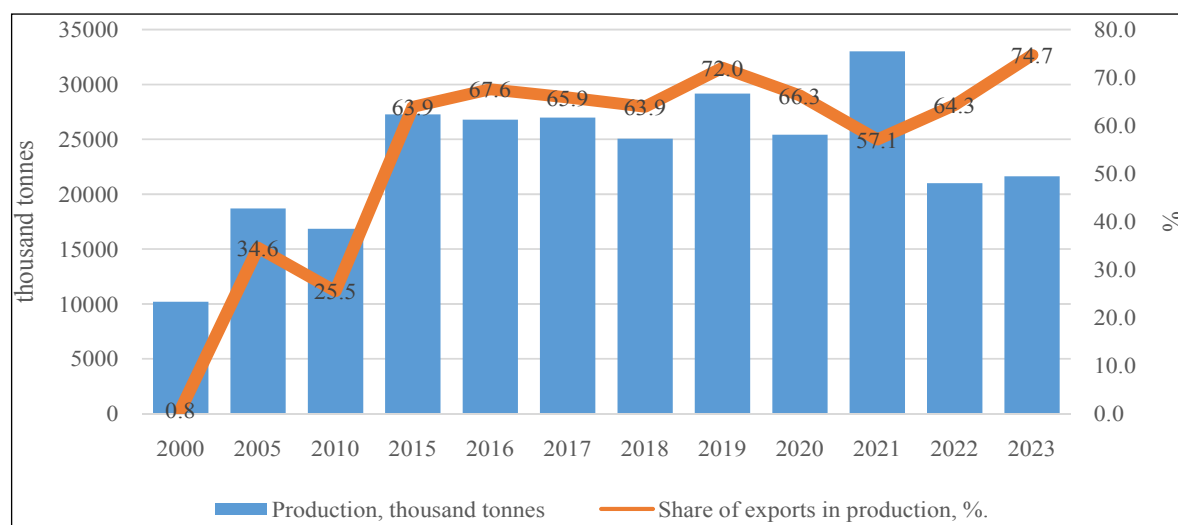
**Fig. 2:** Production of Ukraine's Main Export Grains and Oilseeds, thousand tonnes

Ukraine continues to be one of the largest wheat exporters in the world. The main markets are the countries of Europe, the Middle East, and North Africa. Ukraine is among the top ten wheat producers (Statista, 2024a). In 2023, Ukraine produced 21.6 million tonnes, of which 74.7% was exported (see Fig. 3).

According to preliminary estimates, considering current natural and climatic changes, the effects of the 2019-2020 pandemic, and the war, Ukraine will supply the world market with 14 million tonnes of wheat in 2027 (see Fig. 4).

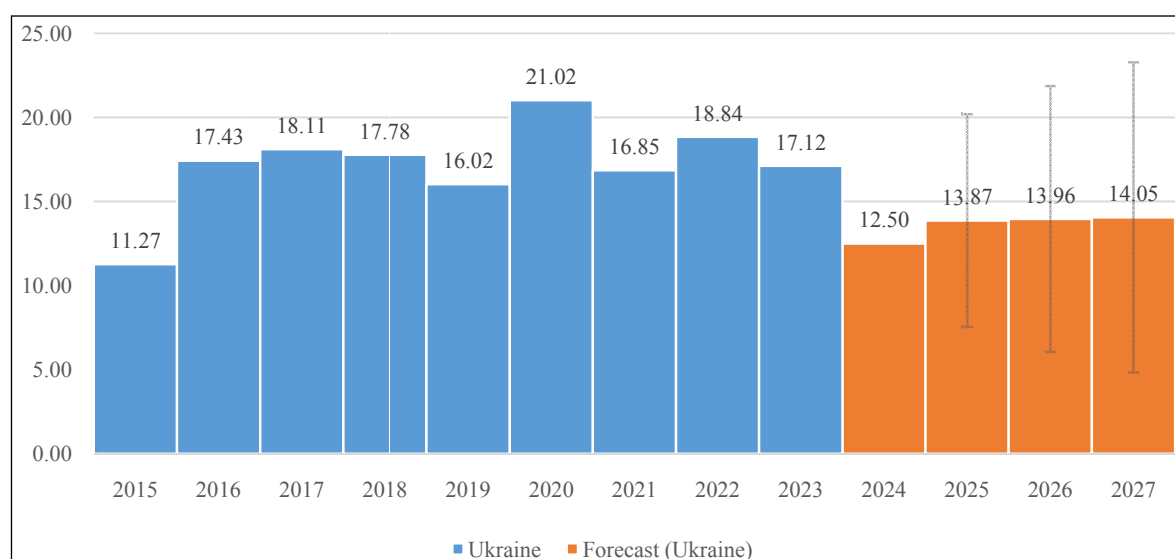
Finally, for the long-term survival and resilience of the maize sector, the central maize-producing countries should focus on sustainable farming practices, resource management, and innovation. Ukraine is among the top three maize exporters in the world, with the ten largest maize-producing countries playing a crucial role in supplying the world with this vital crop (see Table 3).

With large maize production capacities, these countries help ensure global food security and significantly impact agriculture and global trade. Maize is the second most important grain crop. The areas under maize cultivation are increasing due



Source: Compiled from SSSU (2024).

**Fig. 3:** Wheat Production and Exports in Ukraine



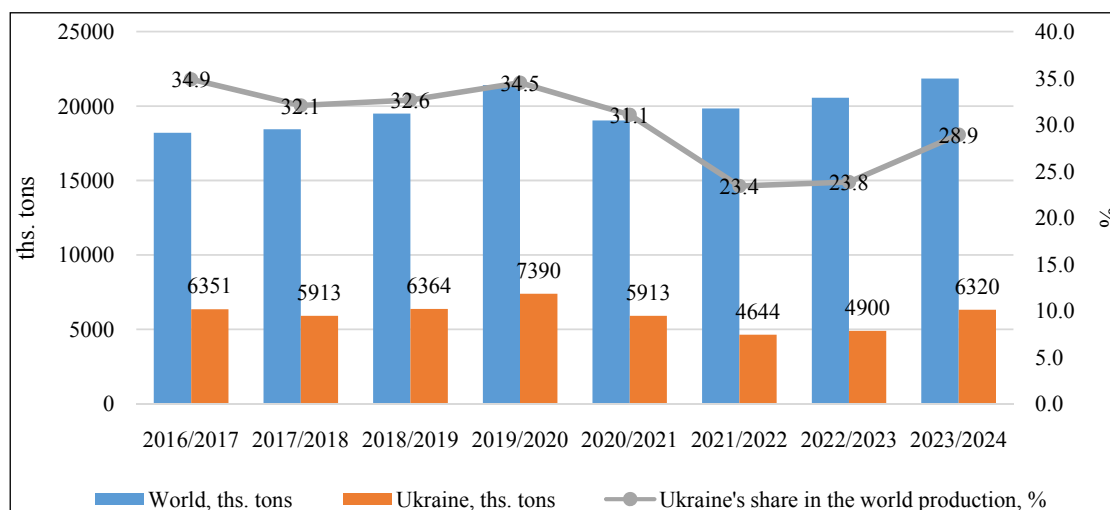
Source: Compiled by the author based on USDA (2024b).

**Fig. 4:** Actual and Forecasted Level of Wheat Exports from Ukraine to the Global Grain Market, mln tonnes

**Table 3:** Ukraine's Place in Global Corn Production

| Marketing year (MY) | Million tons |         | Ukraine's share in the world production, % |
|---------------------|--------------|---------|--------------------------------------------|
|                     | World        | Ukraine |                                            |
| 2021/2022           | 1217,27      | 42,13   | 3,5                                        |
| 2022/2023           | 1159,6       | 27      | 2,3                                        |
| 2023/2024           | 1225,45      | 31      | 2,5                                        |

Source: USDA (2024b).



Source: Compiled by the authors based on USDA (2024c)

**Fig. 5:** Ukraine's Share in the Global Sunflower Oil Market, mln tonnes

to the high demand for this crop in domestic and international markets.

Ukraine occupies a leading position in the global sunflower oil market, being the largest producer and exporter of this product. Annually, the country produces about 6-7 million tonnes of sunflower oil, which accounts for approximately 30-35% of global production (see Fig. 5).

Ukraine cultivates sunflowers in large areas, approximately 6-7 million hectares annually. Ukrainian farmers use modern technologies to grow and process sunflowers, allowing for high yields and quality oil. Ukraine is the world's largest exporter of sunflower oil, accounting for about 50-60% of global exports (Ukrainian agribusiness, 2022–2023). In 2023, export volumes amounted to about 5-6 million tonnes. The leading importers of Ukrainian sunflower oil are the European Union countries, India, China, Turkey, and the Middle Eastern countries. In recent years, demand for Ukrainian sunflower oil has been increasing in African countries and Southeast Asia. Due to

high production and export volumes, Ukraine holds leading positions in the global sunflower oil market. Despite numerous challenges, the country has significant potential for further development and strengthening its position. Implementing modern technologies, expanding sales markets, and improving infrastructure will help Ukraine maintain its leading role in the global sunflower oil market (see Table 4).

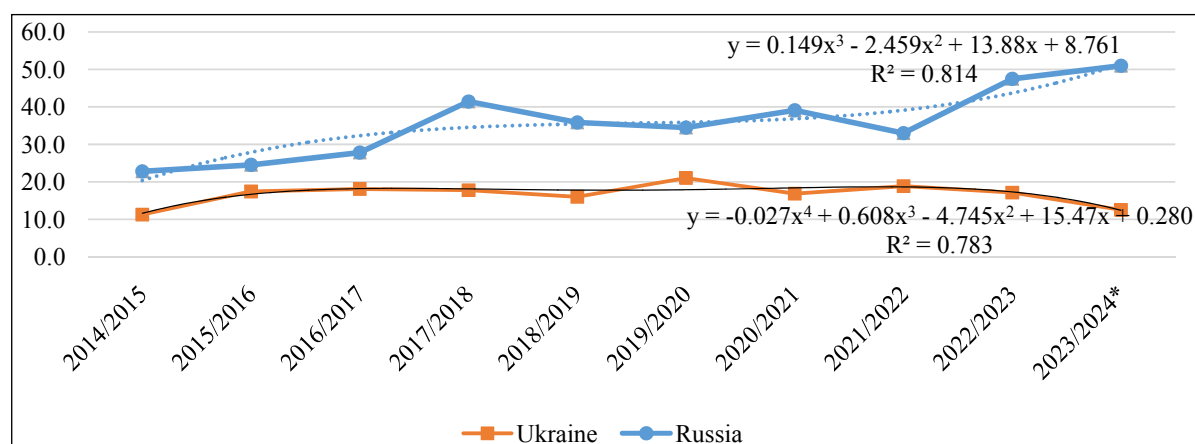
The development of Ukraine's agricultural sector has been negatively impacted by the global COVID-19 pandemic in 2019 and Russia's military aggression since February 2022. A direct consequence of this has been reduced agricultural production, exports, and Ukraine's GDP. Russia's war in Ukraine has also led to historic disruptions in global agricultural, energy, and fertiliser markets, worsening food security for millions of people (Dankevych, 2022).

Since 2022, statistical data indicate a decline in the production and export of essential agricultural commodities in Ukraine and an increase in production and export in Russia (see Fig. 6).

**Table 4:** Ukraine in the Global Sunflower Oil Market

| Advantages                                                                                                                     | Challenges and threats                                                                              | Development prospects                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| High soil fertility, especially black soil, is conducive to growing high-quality sunflower.                                    | Dependence on global sunflower oil prices may lead to financial risks for producers.                | Opening of new markets in Africa and Asia may contribute to export growth                                                         |
| Favourable climatic conditions and modern cultivation technologies allow Ukraine to achieve high sunflower yields              | Climate change may affect sunflower yields, which will affect production and export volumes         | Implementation of new technologies for sunflower cultivation and processing can improve production efficiency and product quality |
| Ukraine has a well-developed infrastructure for sunflower oil processing, which allows the production of high-quality products | Insufficient development of transport and logistics infrastructure may complicate export operations | Investments in transport and logistics infrastructure could improve export opportunities                                          |
| Relatively low production costs make Ukrainian sunflower oil competitive on the global market                                  | Increasing competition from other sunflower oil producers, such as Russia and Argentina.            | Production of organic sunflower oil and other value-added products could increase the industry's profitability.                   |

Source: Compiled by the authors.



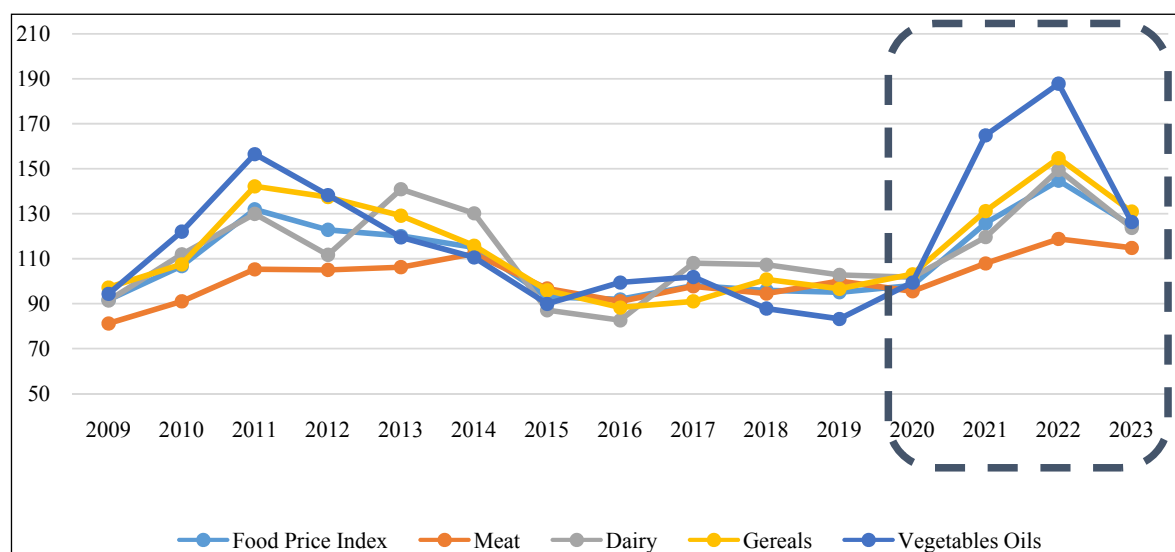
Source: Compiled by the author based on Filipenco (2024).

**Fig. 6:** Benchmarking Analysis of Wheat, Flour and Wheat Products Exports in Ukraine and Russia, 2014/2015 – 2023/2024, thsd tonnes

Global shifts in the agricultural market due to Ukraine's reduced production and exports have been severe. According to the Food Price Index of the Food and Agriculture Organization of the United Nations, in March 2022, global food prices reached a nominal all-time high (FAO, 2024). The changes in the Food Price Index confirm this trend (see Fig. 7).

The Russian war in Ukraine has caused the most significant military destabilisation of global agricultural markets in the past century. The war has directly and indirectly impacted agricultural production in Ukraine. The occupied territories of Donetsk, Luhansk, Kherson, and Zaporizhzhia regions accounted for about 21% of wheat, 17% of barley, and 19% of sunflower seeds produced in Ukraine from 2016 to 2020, while very little maize

was grown there (SSSU, 2024). According to NASA Harvest, the amount of abandoned arable land in Ukraine in 2023 due to the war is approximately 7.5% of the total arable land area in the country (Becker-Reshef & Mitkish, 2024). The war has also increased the costs of transporting grain and other agricultural products to export markets, forcing Ukrainian producers to accept lower prices and reducing the profitability of crops such as wheat and maize. As a result, Ukraine planted and harvested less. According to the State Statistics Service of Ukraine, sown areas under grain and leguminous crops in 2023 decreased by 31.3%, sunflower by 21.2%, vegetables by 13.7%, and fruit and berry crops by 13.8% compared to 2021 levels (SSSU, 2024). The total loss of agricultural land and unharvested crops as of June 2022 amounted to 50%,



Source: Compiled by the author based on FAO (2024).

**Fig. 7:** Dynamics of the Global Food and Commodity Price Index, %

grain storage to 9%, and agricultural machinery to 22% (Neyter *et al.* 2022).

According to the Global Report on Food Crises, in 2022, 258 million people suffered from acute food insecurity, the highest number on record (GRFC, 2023). At the same time, the costs of addressing these issues also increased due to simultaneous shocks in global energy and fertiliser markets caused by Russia's war (Welsh & Glauber, 2024).

Ukraine has significant potential in the livestock sector, but its impact on the global livestock market is less significant than in the grain and oilseed segments. However, the sector's development could increase its role. Beef and pork production in Ukraine is stable but does not reach the volumes of the leading global producers. The primary consumers are the domestic market and neighbouring countries (Georgia, Moldova). Ukraine is one of Eastern Europe's leading producers and exporters of poultry meat. Large poultry farms provide significant volumes of products for domestic consumption and export. Ukraine has a strong dairy industry produces a wide range of dairy products. The leading producers are large agrohholdings and cooperatives. Dairy products are exported to the European Union, Asia, and Africa. Exports cover various products, from fresh milk to cheese and butter.

The livestock sector has also been significantly affected by the war. The estimated value of lost

animals exceeds USD 136.4 million. Agricultural animals die not only from direct combat but also from limited access to farms, lack of feed, and veterinary services. The estimated number of animals lost due to Russian aggression in the affected areas includes 92,000 cattle, 258,000 pigs, and about 6 million poultry. Additionally, agricultural machinery and equipment are also damaged due to shelling, airstrikes, and combat operations (SSSU, 2024). The estimated cost of replacing and repairing machinery is USD 926.1 million (Neyter *et al.* 2022).

The appropriation of Ukraine's crops by Russia as a result of military aggression has caused severe economic and humanitarian consequences. Russian troops seize Ukrainian farms and agricultural enterprises, confiscate the harvest, and transport it to Russia. This leads to significant losses for Ukrainian farmers and the country's economy. Moreover, such looting results in food shortages in Ukraine, exacerbating the humanitarian crisis. These actions by Russia are part of a broader strategy to undermine Ukraine economically, highlighting the need for international support to restore Ukraine's economy and ensure food security.

Despite all the upheavals, Ukraine has opportunities to increase its role in the global livestock market. Strategic investments in technology, infrastructure, and regulatory improvements can contribute to the sector's development and strengthen Ukraine's position in the global food security system.

## DISCUSSION

Ukraine occupies an essential place in the global food market due to its natural resources, significant production volumes, and export of major crops. Despite numerous challenges, the country has significant potential for further development and strengthening its position in the international market. It implements modern technologies, expands into new markets, and improves its infrastructure (see Table 5).

Ukraine's agricultural sector has significant potential for development in the international market due to its natural resources and export opportunities. However, several problems must be addressed to realise this potential, including improving infrastructure, implementing new technologies, and reducing dependency on climatic conditions. Overcoming corruption and creating favourable conditions for investment in the sector are also important aspects.

Food security is critical to national security, especially for a country with great agricultural potential like Ukraine. Ensuring food security involves several key aspects: stable production, access to food, product quality, and supply stability (see Table 6).

Ukraine faces several challenges, including political instability, economic difficulties, climate changes, and conflicts. However, due to its natural resources and agricultural potential, the country has significant opportunities to strengthen its food security.

Ensuring food security in Ukraine requires a comprehensive approach that includes supporting production, ensuring access to quality food, developing exports, and fostering international cooperation. The implementation of these strategies will contribute not only to enhancing food security in Ukraine but also to its contribution to global food stability.

**Table 5:** SWOT Analysis of the Ukrainian Agricultural Sector in the International Market

| Strengths                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Weaknesses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Ukraine has some of the most fertile soils in the world (chernozem), which contributes to high agricultural crop yields;</li> <li>Significant areas are suitable for agricultural production, allowing for the cultivation of large volumes of products;</li> <li>Ukraine is a major producer of grains (wheat, maize), oilseeds (sunflower), and other agricultural products;</li> <li>High levels of agricultural product exports, especially grains, to international markets;</li> <li>Relatively low cost of labour and land compared to other countries.</li> </ul>      | <ul style="list-style-type: none"> <li>Poor state of transport and logistics infrastructure, which complicates the transportation of products;</li> <li>The low intensity of implementing new technologies and modern equipment;</li> <li>Frequent droughts and other adverse weather conditions affecting crop yields;</li> <li>Limited access to credit and investments, which hinders the development of the sector;</li> <li>Corruption and complex regulatory requirements create additional difficulties for farmers and agricultural enterprises.</li> </ul>                   |
| Opportunities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Threats                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <ul style="list-style-type: none"> <li>Increased demand for Ukrainian products in new markets such as Asia and Africa.</li> <li>Investments in precision farming, biotechnology, and other innovations can significantly increase yield and production efficiency.</li> <li>The growing demand for organic products can become an essential direction for development. Participation in international programmes and projects aimed at agricultural development can enhance competitiveness.</li> <li>Investments in transport and logistics infrastructure can significantly improve export capabilities.</li> </ul> | <ul style="list-style-type: none"> <li>Climate change may increase the frequency of extreme weather conditions, which will negatively affect crop yields.</li> <li>Growing competition from other agricultural exporting countries.</li> <li>Internal political conflicts and international sanctions may create risks for the agricultural sector.</li> <li>Dependency on global agricultural product prices can lead to financial risks.</li> <li>Imposing tariffs and other restrictions in international markets may reduce the competitiveness of Ukrainian products.</li> </ul> |

*Source: Compiled by the authors.*

**Table 6:** Priority Directions for Developing Ukraine's Agricultural Sector as a Guarantor of Food Security in the World

| Direction                                      | Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>National level</b>                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Supporting agricultural production             | Development of agricultural infrastructure, including irrigation systems, storage facilities, and transport infrastructure; provision of financial incentives and subsidies for farmers and agricultural enterprises; investment in agricultural research and development to enhance productivity and crop resilience to climate changes; transformation of the export structure towards increasing the share of processed products; diversification of export product positions in agriculture, food, and processing industries (including organic products) |
| Ensuring access to food                        | Introduce support programmes for low-income groups to ensure their access to basic foodstuffs; stimulate the development of local markets and cooperatives to ensure equal access to food in different regions of the country                                                                                                                                                                                                                                                                                                                                 |
| Food quality and safety                        | Establishment and control of compliance with food quality and safety standards; development of a system for monitoring and controlling food safety at all stages of production and sales (according to HACCP)                                                                                                                                                                                                                                                                                                                                                 |
| Sustainable land use and resource conservation | Programmes for soil protection and restoration, prevention of erosion and land degradation, conservation of biodiversity through the introduction of sustainable land use practices                                                                                                                                                                                                                                                                                                                                                                           |
| <b>International level</b>                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Expanding export opportunities                 | Providing support to agricultural exporters through consultations, financing and participation in international exhibitions and forums; establishing strategic partnerships and alliances with other countries to share experience and technologies in the field of agricultural production                                                                                                                                                                                                                                                                   |
| Humanitarian aid                               | Participation in international humanitarian programmes through food supplies to countries suffering from the food crisis; providing technical assistance to other countries in the development of their agricultural sector; the need to fully unblock the Black Sea to ensure global food security                                                                                                                                                                                                                                                           |

*Source:* Compiled by the author based on data CMU (2019); GRFC (2023); ISO (2018); Welsh & Glauber (2024); Dankevych (2022).

## CONCLUSION

Ukraine is one of the leading players in the global agricultural market. Its agricultural sector is vital in ensuring global food security due to significant production volumes of grain, oilseed crops, and livestock products.

Ukraine has significant potential to strengthen its global market position as a guarantor of food security. Several tasks related to developing the agricultural sector, improving infrastructure, implementing the latest technologies, and enhancing the regulatory framework must be addressed to achieve this.

Strengthening Ukraine's position in the global market as a guarantor of food security requires a comprehensive approach and the resolution of several tasks. This goal is vital to increasing productivity and product quality, developing infrastructure, diversifying sales markets, improving the regulatory framework, and ensuring sustainable development. Investments in these areas will allow

Ukraine to maintain its positions and significantly strengthen them, contributing to global food security and the development of the national economy.

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