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Agricultural and resource economy of Ukraine and problems for economic growth

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Abstract. Ukraine's economy is highly dependent on the agricultural sector; it is the main component of the country's international specialisation in the international arena and is one of the main representatives of budget revenues. Thus, its research remains relevant, as does the investigation of historical prerequisites and prospects for this. The purpose of the study was to assess the latest trends in the development of the industry and, based on them, form recommendations for the development of the country, in particular, in wartime conditions. The main methods used in the study were analysis, historical analysis, forecasting, and abstraction. Within the framework of the study, some statistical data describing the latest trends in the development of the agricultural sector of Ukraine were analysed, including international trade in industry products, the amount of land planted with agricultural crops, the amount of livestock products produced. It was found that there were positive trends in the development of agriculture in the country, especially in the field of crop production. However, the events of 2014 and 2022 have led to political and economic instability in the country, resulting in stagnation (in the case of animal husbandry) and a decrease in growth rates (for crop production). Considering the difficulties that exist for the development of crop production in war conditions, separate recommendations were proposed for the development of national policy. These include minimising the negative impact of

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corruption (developing institutions), promoting innovation, and attracting investment. Although some such actions are already being implemented by the state in the form of various support measures, they are still not enough to solve all the problems of development in the sector. The paper brings new knowledge to the field of research in the agricultural sector, in particular in Ukraine. This knowledge will allow for more effective policy-making for both public sector representatives and entrepreneurs

Keywords: innovation; international trade; entrepreneurship; finance; agriculture

INTRODUCTION

The agricultural sector as a whole plays an important role in the global and national economy, ensuring food security, creating jobs, and positively influencing the social, economic and environmental components of society. The agricultural sector is the main source of food products for the population, which becomes very important in conditions of various crises that can lead to an increase in prices for these products on the market. Developed agriculture in general strengthens the strategic power of the state, provides raw materials to other industries, and also has a positive impact on the socio-cultural landscape of individual regions. In modern conditions, this industry requires innovation and the latest technologies to increase productivity and sustainable development. Agriculture remains one of the main industries in Ukraine. This is related both to some geographical factors (for example, the high fertility of local soils) and historical ones (the country was often a component of empires or other associations, remaining their raw material appendage). Nevertheless, even in modern conditions, this area has many difficulties that complicate its development.

A significant number of researchers have studied the current features of the development of the agricultural sector in Ukraine. J.A.T. Silva *et al.* (2023) considered agricultural production in Ukraine in the context of a full-scale Russian invasion. Researchers described the significant damage that the agricultural sector received due to military operations and the economic consequences of the war, but did not indicate recommendations that the state authorities can take to reduce the existing negative impact. O.V. Zakharchuk *et al.* (2021) assessed the current state of agricultural development in Ukraine and highlighted the main macroeconomic factors that influenced decision-making in this area. In addition, they offered solutions in the context of improving the efficiency of activities for businesses in agriculture in Ukraine. O. Tomilin *et al.* (2023) investigated the current state and dynamics of changes in land resources in agriculture in Ukraine. They wrote about the importance of maintaining the sectoral structure of agro-industrial production and achieving macroeconomic equilibrium by maintaining the most effective intersectoral proportions in the national economy and coordinating national interests. The features of modern conditions for the development of national policy, in turn, were evaluated by I.P. Dynnyk (2022). The researcher noted the main areas

of modern state agrarian policy, in particular, stabilisation of agro-industrial production, ensuring food security, supporting agricultural markets, improving food supply, maintaining balance with other sectors of the economy, protecting domestic producers. However, he gave quite a few recommendations to improve the effectiveness of policy implementation. L. Moldavan *et al.* (2023) investigated the sustainable development of Ukrainian agriculture in the context of climate change. Researchers drew attention to the problems of specialised monocultural farming, which is managed by large agro-industrial companies to make a profit. In view of this, it was proposed to switch from monocultural production to reduce the negative environmental effect of the activities of large agricultural enterprises.

Thus, the purpose of this study was to assess the latest trends in the development of agriculture in Ukraine. This is important to be able to better understand the current state of the sector and more effectively form public policy in it, conduct business.

MATERIALS AND METHODS

The study was conducted on the time interval from 2001 to 2023, since this period allows the best assessment of recent trends in the development of agriculture in Ukraine (choosing a longer period may lead to distorted results, given that the factors of the country's secession from the Union of Soviet Socialist Republics played a significant role in the 1990s). The main source for such information was the State Statistics Service of Ukraine (Areas, gross harvests..., 2023). Information from this service was used to assess the natural characteristics of agricultural development in the country, and to assess the net income of enterprises. The data that characterised international trade in agricultural products was taken from another service, Trade Map, through easier and more complete access to data.

It was decided to aggregate and summarise the data provided by the State Statistics Service as much as possible to simplify the understanding and presentation of data on the development of agriculture in Ukraine. However, sometimes there were difficulties with this. For example, in the context of crop production, information was provided on the volume of gross production and crop yields separately by group. Indeed, this gives a better understanding of the general situation separately for each of them, but it would be

inappropriate to provide such data in a study. Thus, it was decided to aggregate them. Thus, the indicator of

the average change in the yield of agricultural products was calculated as follows:

$$C_n = \left(\frac{(I_{n1} * I_{n2} * \dots * I_{nm})^{\frac{1}{m}}}{(I_{(n-1)1} * I_{(n-1)2} * \dots * I_{(n-1)m})^{\frac{1}{m}}} \right) * 100 - 100 * C_{n-1}, \quad (1)$$

where C_n – value of the indicator in the period n ; I_n – value of the indicator that appears when finding the percentage of yield growth of a certain type of agricultural product; m – number of indicators; n – period; C_0 – 100.

This approach allowed estimating the average change in agricultural yield in the country. Although it does not evaluate the weight component of each type of product separately, it provides significantly more correct indicators (in terms of agricultural characteristics) than other approaches based on available data and their aggregation needs. A similar approach has become typical for further analysis of livestock products.

The paper also examined the volume of international trade in agricultural products of Ukraine, and the income of local enterprises. To estimate export and import data, the study used data from the Trade Map source adjusted for the inflation rate, the value of which was taken from Macrotrends (U.S. Inflation Rate..., 2023). Data on the income of enterprises were taken from the State Statistics Service of Ukraine, and also adjusted for the level of inflation published by the same service. Data in the context of financial results of agricultural companies were available only for the period since 2010, which explains this time limit when analysing this indicator.

The main approach that was applied during the study was systematic. It allowed the study to analyse the

selected elements within a single system, where they interact with each other. This enabled a more accurate assessment of current trends in the study of the Ukrainian agricultural sector. A significant number of different research methods were also used. The historical method was used to investigate data on the state of the agricultural sector of the Ukrainian economy in recent years and form conclusions on this issue for the current state of the country's agricultural sector. Using the forecasting method, assumptions were formed about how this sector might develop in the future, and the country's economy as a whole. Abstraction also allowed limiting the number of factors that were considered during the study to assess the development of agriculture. This, in turn, helped to increase the effectiveness of the study by improving its accuracy and clarity.

RESULTS

The trends described above can be seen using statistical data. Although their duration is limited to the period since independence, and often even shorter, they can reveal some trends that are characteristic of Ukraine's current situation. First, it is worth considering individual indicators that characterise both animal husbandry and crop production in natural terms. They are shown in Figure 1.

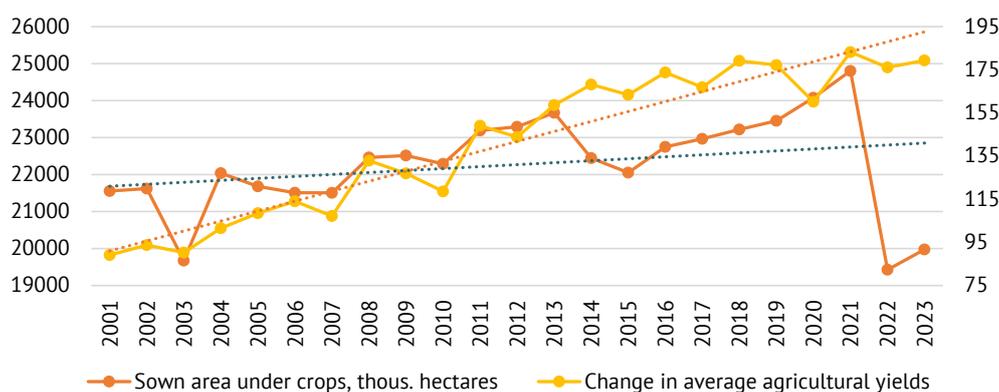


Figure 1. Data on the area of land planted with agricultural crops and information on the average yield of agricultural products in Ukraine in the period from 2001 to 2023

Source: compiled by the authors based on data from the State Statistics Service (Areas, gross harvests..., 2023)

As can be seen from Figure 1, the area under agricultural land gradually increased over time, including the average yield, which, in general, indicates the gradual development of this area. This was due to the export orientation of the agricultural sector of Ukraine and the simultaneous increase in demand for grain products, rising food prices. A significant decrease in acreage is

observed in 2014 due to the difficult political situation, the beginning of the events on the Maidan, the annexation of Crimea, and the beginning of the war with Russia. All of this has led to instability, reduced investment, and increased risks to the agricultural sector, while lower food prices have reduced farmers' motivation to expand their acreage. A similar situation is observed in

2022, but its volumes are much larger: the inflow of investment to the country significantly decreased, there were restrictions on trade in agricultural products, and

some territories were temporarily occupied. All this caused the loss of acreage. Information describing the field of animal husbandry can be seen in Figure 2.

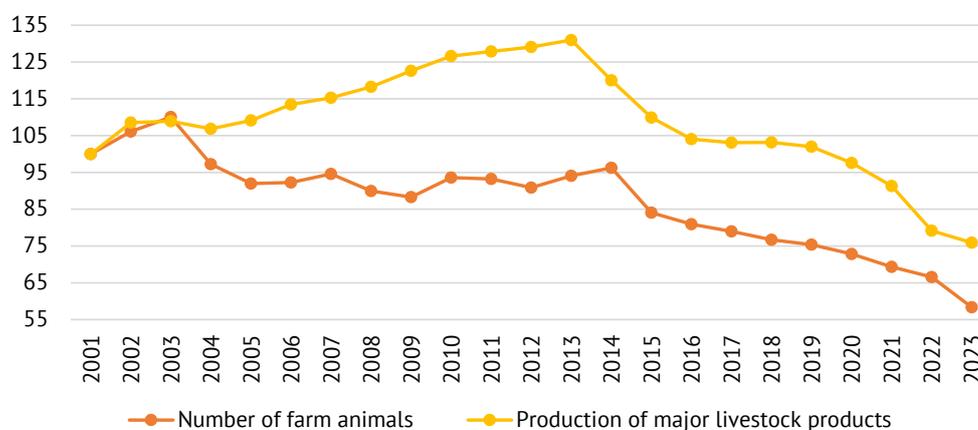


Figure 2. Data on changes in the number of farm animals and production of the main types of livestock products in Ukraine in the period from 2001 to 2023

Source: compiled by the authors based on data from the State Statistics Service (Areas, gross harvests..., 2023)

As can be seen from Figure 2, there is a trend in the country for a gradual decrease in the number of farm animals and the production of livestock products, which is generally a sign of stagnation of the industry. This is conditioned by the fact that environmental conditions in the country are more favourable for growing crop production, rather than animal husbandry. Thus, most farmers are gradually moving to growing grain. As for the production of livestock products, it grew until 2014 simultaneously with a decrease in the number of farm animals, which suggests that the reason for the growth is precisely the improvement of livestock productivity in the country, which is associated with the gradual recovery of the country after the collapse of the Union of Soviet Socialist Republics (USSR), attracting foreign investment, updating

the technological base in the industry. However, since 2014, there has been a gradual decline, which is also associated with the beginning of economic and political instability caused by the annexation of Crimea by Russia and the war in Donbas. The situation in 2022 only worsened due to the beginning of a full-scale invasion and even greater problems for farmers, both economic, such as restrictions on international trade and inflation, and military, namely the destruction of infrastructure and the loss of territories for growing livestock products. After analysing the data, it can also be seen from Figure 1 that the country has become more specialised in crop production, rather than animal husbandry, which causes changes in the structure of agricultural production. The income of agricultural enterprises in Ukraine is shown in Figure 3.



Figure 3. Net income of agricultural enterprises in Ukraine (adjusted for inflation) in the period from 2010 to 2022

Source: compiled by the authors based on data from the State Statistics Service (Areas, gross harvests..., 2023)

As can be seen from Figure 3, the net income of companies in the agricultural sector in Ukraine gradually increased between 2010 and 2021, even

considering inflation. In some years, both declines and increases can be seen, but they are all related to climatic factors (which affected yields) and agricultural

prices on international markets. In general, this is a factor in the gradual development of the sphere. However, there was a significant drop in 2022, which led to a real stagnation of the sector to the state it was in 10 years ago, which, as repeatedly noted above, was conditioned

by limited opportunities for development on the part of farmers due to the beginning of a full-scale Russian invasion. It is also worth considering information on the export and import of products by Ukraine in the field of agriculture. These data are shown in Figure 4.

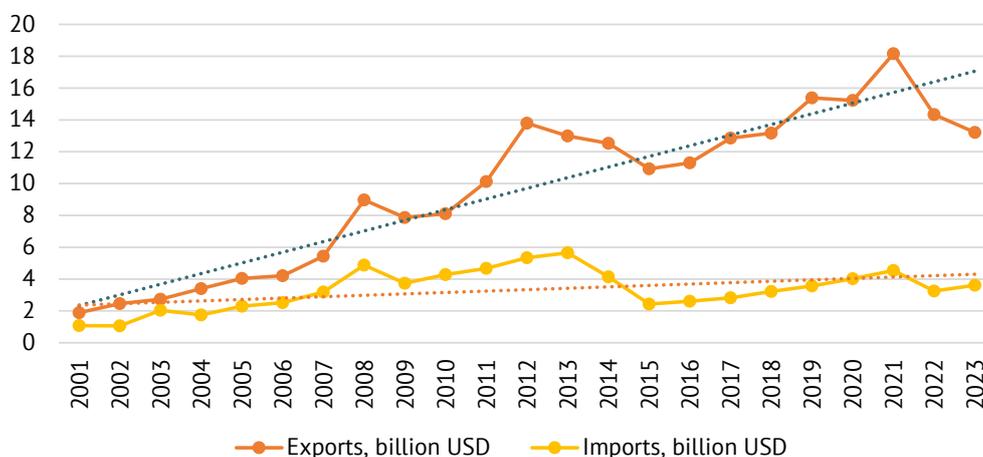


Figure 4. Exports and imports of Ukraine in the field of agriculture for the period from 2001 to 2023, adjusted for inflation, USD billion

Source: compiled by the authors based on data from the State Statistics Service (Areas, gross harvests..., 2023)

As can be seen from Figure 4, the country's foreign trade in agricultural goods also increased or remained at the same level, even considering inflation. Since the increase in foreign trade is a factor in the development of a particular sphere, the same can be said about agriculture. The trend generally remained upward, except for some years, namely 2008, 2014, and 2022, which was caused by various difficulties (namely, the global financial crisis, the outbreak of war with Russia and a full-scale invasion). The decline in 2022 and 2023 is characteristic: although it is significant, given the situation in the country and restrictions on the export of products abroad, it could be significantly greater if mechanisms were not created for the export and import of products by the country.

Thus, it can be concluded that agriculture in Ukraine is generally developing rapidly, especially crop production. However, there are serious problems in the country that slow down this process, in particular, low production efficiency (outdated methods and technologies are often used in the country), gradual loss of land resources (including due to military conflicts), high levels of corruption and low development of institutions, price instability, lack of infrastructure (Usman *et al.*, 2020). All these difficulties are compounded by the fact of military operations, and therefore, it is difficult to propose effective components of state policy that would avoid a significant number of negative existing effects. This is due to the fact that any support from the state from a financial standpoint cannot be relevant at such a time, since the maximum budget volumes should be directed to front-line needs. Thus, the most relevant

recommendation is to minimise the negative impact of the corruption component on the sector and on the country's economy as a whole (Zulfiqar *et al.*, 2019; Zhai *et al.*, 2020). This can be ensured both by the activities of the bodies responsible for combating corruption and through changes in legislation that would make this activity impossible.

A special role in the modern development of agriculture in Ukraine is played by innovation, or rather difficulties that do not allow it to develop. Thus, most projects require investment, but agriculture often has limited access to financial resources, which does not allow them to implement any technologies. In addition, the country has a weak legal framework to ensure all the necessary processes related to the introduction of innovative technologies and their further scaling. The problems of legislation also include difficulties in the context of land reform. In general, corruption, along with weak institutional development (as mentioned above), also has a negative impact: they create uncertainty for investors, which reduces their desire to invest. All the above factors have not allowed the country to form a strong innovation base in a high-quality way all the time of independence. However, all of them have become even more relevant in the context of a full-scale invasion, given that agricultural enterprises receive lower profits, new (military) risks have appeared, economic, social and political instability has increased. Thus, for the qualitative development of the country in this area, it is necessary to provide high-quality conditions for investors to finance (Yadav, 2020; Tang *et al.*, 2021). It is worth noting that ensuring the introduction of innovations in

agriculture is one of the most urgent opportunities for countering the negative effects of war: for example, losses in territories that were previously sown with agricultural products can be levelled by increasing the fertility of areas that are still under control.

As of now, the state is making significant efforts to support the agricultural sector in Ukraine. Thus, on November 9, 2023, a grant programme was adopted for creating businesses in the agricultural sector, in particular, for creating greenhouses, creating or developing horticulture, berry growing, and viticulture (Grants for business..., 2023). Grants were issued in amounts of up to UAH 7 million for the greenhouse business, and hundreds of millions of UAH for horticultural enterprises (depending on the area of planted gardens). In addition, there are some benefits in the field of insurance (Agricultural insurance, 2023), for land reclamation (Melioration, 2023), providing farmers with temporary grain storage facilities and equipment for loading/unloading hoses (Programs to provide..., 2023) and the like. Special attention should be paid to some other separate types of assistance. So it is allocated for 1 ha of land cultivated by a farmer, and for the maintenance of cattle: it is important to note that this programme is also supported by the European Union, which allocated an amount of EUR 50 million for it (Financial support for..., 2023). However, support is provided not only in this area, but also in others, in particular – small and medium-sized producers. In addition, back in 2021, programmes were formed to simplify interaction with banks and reduce the cost of loans (Lowering the cost..., 2023; Interaction with banks, 2023). Thus, the state is already taking actions aimed at supporting agriculture and its further development. However, after the end of the war, the number of such positions is expected to increase, as the budget will release funds that were previously used in the defence sector. Such a policy will accelerate the pace of recovery of the sector, which will have a positive impact on the development of the country's economy as a whole.

Active work is also underway to attract international support. Thus, the International Conference on the Restoration of Ukraine in Lugano, Switzerland, held on July 4-5, 2022, was devoted to solving the problems of the Ukrainian economy. Prime Minister Denys Shmyhal presented a project to restore Ukraine, according to which USD 37 billion will be allocated to the agricultural sector from the total budget of USD 750 billion for 10 years. The plan includes USD 4 billion for an irrigation system on 1 million hectares, USD 7.7 billion to increase the production of high-value agricultural products, USD 1.6 billion to restore war-damaged land, USD 5.5 billion to increase the production of livestock products, and USD 1 billion for the transition of the Ukrainian economy to the agricultural sector to "green" development. The document defines the need to attract USD 6.5 billion by 2032 for the reconstruction of 10.5

thousand post-war Ukrainian agricultural enterprises (Draft Ukraine Recovery..., 2022).

Considering the near future, the state budget of Ukraine for 2024 includes more than UAH 41 billion for programmes to support the national economy, some of which is allocated to agricultural enterprises (Business aid for..., 2023). Given that Ukraine needs immediate economic development instead of post-war plans, the budget aims to cover almost all defence spending from tax revenues. The Ministry of Economy seeks to improve the public procurement system to effectively use budget funds and attract more Ukrainian businesses, and the government plans to expand business participation in the provision of social services, encouraging small and medium-sized businesses in communities to offer services such as social support for military personnel.

DISCUSSION

Given the current trends in the development of the agricultural sector in Ukraine in the future, the situation in agriculture is expected to continue to deteriorate until the war is over. Ukraine will continue to specialise in crop production, namely wheat, and the industry itself will become a driver of economic development and post-war reconstruction of the country. In the field of animal husbandry, there may also be a recovery in the event of an influx of new investment after the end of the war. However, all this will be possible primarily through the implementation of high-quality public policies aimed at supporting these two sectors and ensuring the inflow of foreign investment using the tools already mentioned above. The forecast will also differ depending on when military operations will stop.

The impact of the war on Ukraine's agriculture and global food security was assessed by V.A. Verhunov (2020). Researchers stressed the significant negative impact on the agricultural sector of Ukraine by the Russian-Ukrainian war, which has been going on since 2014 and was aggravated by the invasion of 2022. The war disrupted the sowing season, destroyed agricultural land, and complicated distribution routes, including important seaports and land routes. These disruptions extend to transportation, affecting the movement of agricultural products, with additional problems caused by the fuel and energy crisis and rising fertiliser costs. Although the researchers did not give clear digital values of the damage that Ukraine and the world suffered due to the war, they write about the need for further assessments of it, and also note the long-term negative impact of the conflict on the global economy. Above, attention was paid primarily to the study of the development of agriculture in Ukraine: as it was shown, it was largely negative, which can be seen both in the analysis of the values of international trade and natural indicators that characterise the agricultural sector. However, a similar situation has had a negative impact on the global economy, causing the risk of a food crisis.

Although such an outcome was avoided, however, representatives of state authorities around the world should continue to pay attention to this problem in order to prevent the emergence of global or regional hunger.

The role of agriculture was also studied by G.W. Meijerink and P. Roza (2007) and M. Tudi *et al.* (2021). Researchers have considered significant changes in recent years regarding the role of agriculture in the economic development of developing countries. They emphasised the importance of agriculture and the links between the agricultural and non-agricultural sectors, agricultural and non-agricultural activities, as well as rural and non-rural regions. The researchers noted that “new” agriculture focuses on high-value crops, quality food, and modern distribution channels, including exports, health standards, organic food, and certification. They were concerned about how in the future small farms and poor farms from remote regions will be able to develop effectively in similar conditions. This is particularly important given that “local” agriculture as a whole plays an important role in how local communities can develop from both an economic, social, and environmental perspective. Researchers noted the need for state support for such farms to ensure their sustainable development and readiness to use the latest technologies. In today’s highly competitive environment, it is important to prevent the decline of the agricultural sector in countries to maintain their own strategic food security. The paper draws attention to the interdependence between agriculture and other sectors, and the numerous cross-sectoral links through which agricultural growth supports overall economic growth and provides benefits beyond economic performance. The paper above also highlighted the role of agriculture for regional development, as it can provide jobs for a significant number of people in rural areas. However, in Ukraine, its role is much broader due to the fact that the industry is the main one in the context of international specialisation (Singh *et al.*, 2021). The state budget and foreign exchange revenues to the country largely depend on it. Thus, state supervision of it is particularly important.

L.R. Magdalena *et al.* (2022) and R. Abbasi *et al.* (2022) evaluated the possibilities of using agricultural and industrial waste as raw materials for reuse in industry. Researchers considered the concept of a circular economy, focusing on the food and agricultural industries in Poland and related waste. They highlighted a significant problem in the country related to food waste, and described the importance of implementing the concept of a circular economy in the country. Researchers mentioned various ways to dispose of agricultural waste, such as the production of biofuels, biochar, and biosorbents. All of this applies to the construction of bio-processing plants where food waste can be converted into a range of biofuels or bio-products, emphasising the importance of sustainable development and

resource efficiency. Thus, the researchers emphasised the importance of environmental waste management practices and the importance of converting agricultural and food waste into valuable resources in accordance with the principles of a cyclical economy and sustainable environmental policy. In turn, A. Sengupta (2022) studied the current state of agriculture in India and assessed future prospects for its development. The researcher emphasised the importance of sustainable agricultural production, which depends on the efficient use of resources, including soil, water, genetics, and climate. It was noted that the country had a significant number of problems in the sector, which, in particular, led to a significant number of negative consequences, such as impoverishment of the population and a high proportion of farmers’ suicides. The paper describes that the solution of these difficulties can be achieved through the development of the latest technologies and ensuring a model of sustainable development in this area. The above paper did not describe the need to solve environmental problems in the field of agriculture, although it should be recognised that this is an important component of state policy in the long term. The reasons for not paying enough attention to this issue are that there is a war going on in the country, and therefore, the state should first of all focus on solving issues of the front. However, environmental problems can also be solved by introducing the latest technologies, the importance of which was mentioned in the paper. In addition, this component will become relevant again after the end of the war.

K. Jha *et al.* (2019), N. Yaqoob *et al.* (2022) examined the relationship between consumption of major food crops and their impact on overall agricultural productivity. Researchers wrote that climate variability and grain prices are now significant factors influencing food choices, which leads to a decrease in the consumption of carbohydrate-rich grain products per capita. Researchers see the solution to these difficulties (as one of the options) as an increase in production volumes due to the use of the scale effect. However, this currently seems unlikely, given the reduction in the area of land that can be used for agriculture due to the spread of urban influence. Another option is to develop and use the latest technologies, which is a more efficient and realistic option in modern conditions. In the framework of the study above, the need for the use of the latest technologies in the context of agricultural development in Ukraine was also considered, in particular, considering the military aspect. This can really increase the efficiency of the industry, which is very important in the context of the loss of a certain part of the territories and the actual impossibility of developing the sphere extensively.

CONCLUSIONS

The study analysed the development of the agricultural sector in Ukraine in the period from 2001 to 2023. The

analysis of certain statistical data, including the area of planted land, the number of farm animals, international trade volumes and some others, showed both positive trends and challenges faced by the agricultural sector of Ukraine. Thus, a general trend towards a gradual increase in the area of agricultural land and average yields was gradually noted, in particular, due to export-oriented practices that reflect the development of the sector over time. However, after 2014 and 2022, due to the intensification of the war with Russia, significant difficulties arose in the agricultural sector, which led to a deterioration in all the indicators analysed in the paper.

In light of these trends, Ukraine faces serious obstacles to agricultural development, including poor efficiency, loss of land resources, corruption, institutional deficiencies, price volatility, and infrastructure inconsistencies. The ongoing war exacerbates these problems, making it difficult to propose effective public policies in the face of limited financial resources aimed at the urgent needs of wartime. To solve them, representatives of the public sector must change their policies. For example, it is important to minimise the negative impact of corruption on the sector (and the economy as

a whole), promote innovation, and create conditions for further investment attraction, both during and after the war. The country's innovative development is hindered by limited access to financial resources, a weak legislative framework, and uncertainty for investors. Efforts to counter the negative consequences of war should prioritise high-quality funding conditions and encourage the introduction of innovative technologies. Now the state has initiated separate measures to support the agricultural sector, including grants for creating businesses and various benefits. It is aimed at supporting the sector and international support. However, it is still important to strengthen the country's ability to support not only agriculture, but also other sectors of the economy. Further consideration of the country's agriculture from other sides remains relevant, in particular, consideration of the sphere in the context of sustainable development, and assessment of its innovative capabilities.

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None.

CONFLICT OF INTEREST

None.

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Аграрно-сировинна економіка України і проблеми для економічного зростання

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Анотація. Економіка України сильно залежить від аграрної сфери; вона є основною складовою міжнародної спеціалізації країни на міжнародній арені та є одним із основних представників доходів бюджету. Таким чином, її дослідження залишається актуальним, так само як і вивчення історичних передумов та перспектив для цього. Ціллю роботи стало оцінити останні тенденції розвитку галузі та на їхній основі сформулювати рекомендації для розвитку країни, зокрема – в умовах воєнного часу. Основними методами, що були використані під час дослідження, став аналіз, історичний, прогнозування та абстрагування. В рамках роботи були проаналізовані окремі статистичні дані, що характеризують останні тенденції розвитку аграрного сектору України, серед яких міжнародна торгівля продукцією галузі, кількість засаджених земель сільськогосподарськими культурами, кількість виробленої продукції тваринництва. Було виявлено, що в країні спостерігалися позитивні тенденції в розвитку сільського господарства, особливо сфери рослинництва. Тим не менш, події 2014 та 2022 років призвели до політичної та економічної нестабільності в країні, що призвело до стагнації (у випадку із тваринництвом) та зниження темпів росту (для рослинництва). Зважаючи на складнощі, що існують для розвитку рослинництва в умовах війни, було запропоновано окремі рекомендації для формування державної політики. Вони включають мінімізацію негативного впливу корупції (розвиток інституцій), сприяння розвитку інноваційності та залучення інвестицій. І хоча окремі такі дії вже впроваджуються з боку держави у вигляді різного роду заходів підтримки, однак їх досі недостатньо для вирішення всіх проблем розвитку в секторі. Робота приносить нові знання в сферу досліджень аграрного сектору, зокрема в Україні. Вони дозволять більш ефективно формувати державну політику як для представників державного сектору, так і для підприємців

Ключові слова: інновації; міжнародна торгівля; підприємництво; фінанси; сільське господарство
