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## **Russian military aggression as a challenge for Ukraine's agriculture**

### INTRODUCTION

The purpose of this paper is to present the main results of the conducted research on identified challenges to the agriculture of Ukraine caused by the aggressive military Russian invasion, and the economic assessment of the possibilities of overcoming them. As the main hypothesis of the conducted research, there is an assumption that the scale of the challenges and real consequences of the mentioned aggression are staggering and unique in size and significance, but the actions that are foreseen and already aimed at overcoming them are fully justified and have an appropriate financial support. The main motive for writing this paper is the difficult state of agriculture in Ukraine, caused by the military actions of the Russian invaders pursuing geopolitical and economic goals, and objectively high relevance of these issues, which are caused by the reality and scale of military actions taking place in Ukraine and have objectively vitally important consequences for the whole world.

The research methodology was based on the implementation of a dialectical approach, in which the method of historical-logical unity was used in the study of socio-economic phenomena in combination with the methods of analysis and synthesis, scientific abstraction, induction, systematisation and generalisation.

The results of expert assessments by relevant specialists and the author's own observations made during the war were used as sources of information. The results of the assessment of the damages and losses caused to Ukraine by Russia and of the corresponding needs of Ukraine to deal with the consequences, obtained by the World Bank, the Government of Ukraine and the European Commission based

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on the use of the Damage and Loss Assessment (DaLA) methodology, were also processed.

The study includes an introduction with the justification of the expediency of its publication, a short review of the literature in the context of the study with a theoretical justification of its topic, the research methods, the main results, their interpretation and conclusions, as well as the summary.

## LITERATURE REVIEW

The issues of the challenges and threats facing Ukraine at the beginning of the 21st century are discussed in the literature, and at numerous forums at the intergovernmental, diplomatic, and scientific levels. Understanding their depth and acuteness requires an awareness of the fundamental theoretical developments that relate to the functioning of civilisations, their changes, and the challenges they face as discussed, in particular, in the publications of Arnold J. Toynbee (1889–1975), a British historian, philosopher, cultural scientist and sociologist, and specifically, in his 12-volume work “A Study of History”, (1934–1961). A. Toynbee believes that any society is a complex and dynamic formation of an evolutionary type. Its development is conditioned by internal factors and external conditions. The development of a society depends on a combination of factors and conditions that act as a “challenge” ordering an appropriate “response”. If the response is successful, the society acquires a new quality. If it is inadequate, the society stops developing and may perish (Toynbee, 2019). By “challenge”, Toynbee meant some unpredictable factor or event that posed a threat to the ways in which a group of people had made their livelihood in the past. A challenge could arise as the result of many things – population growth, exhaustion of a vital resource, or climate change (Schmandt, Ward, 2000). That is, we are talking about the fact that by responding to the challenge, the society solves the task set before it and thereby transforms itself into a higher, more perfect state (Brylo, 2014, pp. 397–398). This is especially relevant in the case of the present day challenge of war waged by Russia on Ukraine. The Ukrainian society, with the support of the civilised world community, gives a worthy rebuff to the aggressors. As is written in the Bible: ‘Then Jesus said to him, “Put your sword back into its place. For all who take the sword will perish by the sword”’ (From Matthew 26:52).

In this regard, there are reasons to categorically disagree with the interpretation of the essence of the challenge by L. Kalashnikova (2017, pp. 19–20) or A. Kravchuk (2016, p. 71), according to which the challenge is a certain set of factors that do not pose a threat, and the challenge represents a minimal risk and is characterised by an imaginary readiness to harm a security object (Kalashnikova, 2017,

pp. 19–20). The real state of affairs testifies an extremely high degree of threat and danger of a modern military challenge for Ukraine, up to the complete destruction of the country. For the same reason, the legitimacy of the interpretation of the challenge in the approach of I. Boyko (2017, p. 96), according to whom challenges do not create factors that can affect the state of economic security, is questionable. Reasoning in this way, “uncertainty”, “challenge”, “threat”, “danger”, and “risk” are different things (Kalashnikova, 2017; Boyko, 2017; Kravchuk, 2016), and may take place at the level of security theory, but the practice of today’s war shows that we are dealing with a situation where both “uncertainty” and “challenge”, and “threat”, “danger” and “risk” appear simultaneously, on the basis of “all in one”. For more than 10 months, Ukrainians have constantly felt the danger of this challenge directly, as well as of the threats it contains, and are almost constantly at risk of being killed by Russian missiles or drones at any time, regardless of whether it is about “uncertainty” or “threat”, etc. Therefore, V. Kravchenko’s point of view of makes a certain amount of sense, where a challenge is a problematic situation, the solution of which depends on further functioning, the very existence of the society and of the state (Kravchenko, 2016).

In the context of modern challenges in Ukraine, the provisions on the peaceful coexistence of various political and economic systems, substantiated by the famous American economist J.K. Galbraith (1908–2006), are also relevant (Galbraith, 2003). Assessments of challenges and threats to Ukraine are contained in many publications by V. Horbulin, who emphasises the danger of such a global challenge to the whole world due to Russia’s new geostrategic course, which he calls a “geopolitical revenge” (Horbulin, 2009). The analysis of the nature of hybrid wars and the hybrid war in Ukraine by O. Neklessa, presented in September 2015 at the XXV Economic Forum in Poland, is useful in this regard (Neklessa, 2015).

The most complex and concise characteristic of a challenge is contained in definitions that can be found in dictionaries and texts of publishers. In particular, IGI Global interprets a challenge as “Something that by its nature or character serves as a call to make a special effort, a demand to explain, justify, or difficulty in an undertaking that is stimulating to one engaged in it” (IGIGlobal, 2022). According to the Collins English Dictionary, “a challenge is something new and difficult which requires great effort and determination” (Collins Dictionary, 2022). The authors of the Oxford dictionary interpret “challenge” as a task or situation that tests one’s abilities (English Oxford Living Dictionaries, 2017).

At the same time, a challenge by its very nature creates threats to a person, to a community of people, to society as a whole, which can be implemented in various spheres, in particular: economic, financial, military, socio-political, territorial, national, informational, etc. (Kravchenko, 2016). Therefore, for example, M. Baidak considers a challenge both as a threat and as an opportunity (Baidak, 2021).

Based on the approach to the interpretation of the concept of “challenge” presented here, and many other existing interpretations, there are reasons to understand it as a situation that contains a real potential for the emergence of prerequisites for the formation of a real threat and the occurrence of fatal consequences, which does not exclude the presence, in this situation, of the possibility of the presence of stimulating effects and potentials for its positive change. Moreover, a challenge can have both a general character when it concerns the entire society, and a purely individual character, if it is a challenge for someone personally. In this regard, the Russian-Ukrainian war by its nature is a challenge not only for Ukraine and its population, but also for humanity as a whole. Publications on the topic of such a challenge, which is a large-scale Russian military aggression against Ukraine, especially affecting its agriculture, which deserve attention given the “freshness” of the events and their dynamism, are currently not observed in available sources, therefore this paper claims high relevance and importance in contributing to the formation of the necessary scientific context for studying the situation and predicting its outcomes.

#### RESEARCH METHODOLOGY

Methodologically, challenges to the agriculture of Ukraine caused by Russia's military aggression are studied from the standpoint of their interpretation as a socio-economic phenomenon. The methodology of the conducted research involved the implementation of a dialectical approach to the identification and study of the main challenges to the agriculture of Ukraine, which are taking place as a result of the military aggression of the Russians. Within the framework of this approach, the method of historical and logical unity is used in the study of socio-economic phenomena in combination with methods of analysis and synthesis, scientific abstraction, induction, systematisation, and generalisation.

The study uses data obtained by the World Bank, the Government of Ukraine and the European Commission to assess the damages and losses caused by Russia, and the corresponding needs of Ukraine to deal with their consequences, based on application of the internationally recognised Damage and Loss Assessment (DaLA) methodology (GFDRR. *Damage...*, 2022), which provides a comprehensive assessment of the specified damages and needs for restoration, and which were published in the report “Rapid assessment of damage and needs for restoration of Ukraine” (GFDRR. *Assessment ...*, 2022). Expert assessments of relevant specialists and the author's own observations are also used, which relate to changes closer to the current situation, since the war is ongoing and the damage caused to Ukraine and the need for both budgetary funding and rapid reconstruction of the destroyed infrastructure is constantly increasing.

ANALYSIS RESULTS, THEIR INTERPRETATION AND CONCLUSIONS  
FROM THE RESEARCH

The essence of Russian military aggression as a challenge for Ukrainian agriculture is that this aggression has dealt a powerful blow to the country's economy in general, but especially to its agriculture, since this industry is unique in its spatial dispersion over the surface of the land territories, on a significant part of which military actions are taking place. About 30% of agricultural lands have been under occupation or in the zone of active hostilities (*How did the war...*, 2022).

Ukraine has suffered a large-scale destruction, as a result of which direct losses amounted to \$97 billion as of June 1, 2022, while losses caused by the disruption of economic flows and production chains are estimated at \$252 billion. According to forecasts, by the end of 2022, poverty in Ukraine will increase tenfold, and one out of five Ukrainians will live in poverty. By the end of 2023, 55% of the country's population will live in poverty (The World Bank: *the level...*, 2022). Under conditions of military aggression carried out by Russia, Ukraine's direct expenses for comprehensive defence and support of the economy currently amount to more than \$500 million every day, and this is without taking into account the cost of the damage caused (Havunka, 2022).

According to the Kyiv School of Economics (KSE), the total amount of losses caused directly to the agricultural branch of Ukraine as a result of the full-scale Russian invasion on the country's territory has already reached \$4.29 billion, which is almost 15% of the country's capital (*Ukraine Invest...*, 2022).

The direct damage caused to the agriculture of Ukraine includes granaries, greenhouses, farms and agricultural machinery damaged or completely destroyed by the enemy, killed animals, burned fields and stolen grain. According to the FAO's calculations (Food and Agriculture Organization of the United Nations), Ukrainian farmers have lost four to six billion dollars in this way (Yashchysheh, [http; Ukraine Invest...](#), 2022). On the other hand, indirect losses concern even enterprises which do not come under Russian fire. For example, it concerns a decrease in production and of income due to war-disrupted logistics. Such losses are even greater.

According to the results of the analysis "Overview of Indirect Losses from the War in the Agriculture of Ukraine" by the Centre for Food and Land Use Research of the KSE Institute together with the Ministry of Agrarian Policy and Food, as of mid-September 2022, the potential direct damage to the agricultural sector of Ukraine amounted to more than six billion US dollars, and indirect (as a result of the drop in production due to the destruction or damage of agricultural land and lack of harvesting, blockade of ports and rising prices) – more than \$23 billion (Korzh, 2022). Add to this more than \$22 billion in lost potential income from unallocated food stocks (Lysa, 2022). Naturally, investments in agriculture

stopped with the beginning of the war, and the development of the industry was pushed back for years (*Laws regulating...*, 2022). The decrease in the income of agriculture and related sectors as a result of the war is expected to amount to 10 to 30% (Korz, 2022).

In terms of its functioning, agriculture is strategically important for the maintenance of Ukraine's economy. According to the results of 2021, the share of the agro-industrial complex was 10.6% of the national GDP (Korz, 2022). The share of agricultural products and food in the total volume of Ukrainian exports in 2020 was 45% or \$22.2 billion (*In 2020...*, http). In addition, Ukrainian agriculture plays a significant role in solving the problem of food security in the world, since Ukraine is the world leader in the export of grain, sunflower oil, honey, chicken and other food products. Every fifth ton of Ukrainian wheat is used for baking bread and bread products in the countries of the Middle East, Africa and Southeast Asia. Twenty percent of the exported corn feeds livestock and poultry in Italy, Spain, and Portugal (BRDO, 2022). The problems will lie not only in an increase in the price of food but also in its physical shortage, which can lead to catastrophic social problems. The US Secretary of State A. Blinken warned that Russia's attack on Ukraine could add 70 million more people who are in acute food insecurity to more than 190 million people in the world already in such a situation (Blinken..., 2022). As reported by the UN, due to the war in Ukraine and the actions of the Russian invaders, hunger will threaten 323 million people (*Since the beginning...*, 2022).

More than 30% of the territory of Ukraine has suffered losses from war-related pollution, destruction, bombings, etc. (*Pollution...*, 2022). About half of the destruction caused by the war is recorded as a result of the destruction or partial damage of agricultural lands and failure to harvest – \$2,135 million. Explosives from mines and munitions contaminate the earth and soil with heavy metals, the damage from which is estimated at the equivalent of \$20 billion. According to the information of the State Service of Ukraine for Emergency Situations, it is currently necessary to demine approximately 270,000 square kilometres, which may take five to ten years (Yashchyshen, 2022). Taking into account the experience of demining the territory in Croatia, according to FAO calculations, the cost of a demining campaign in Ukraine could reach \$10 billion (Kravchenko, 2022). Just the cost of surveying lands with a high risk of mine contamination and demining the affected territories is estimated at \$436 million (*What damages...*, 2022).

In addition to the direct damage to land, occupation, military action and mine contamination limit farmers' access to fields and harvesting opportunities. Approximately 2.4 million hectares of winter crops with a total value of \$1,435 million remained unharvested (*What damages...*, 2022).

The estimated cost of replacing and repairing machinery damaged as a result of shelling, airstrikes, and military operations is 926.1 million US dollars. There

is evidence that the Russian Federation is purposefully destroying grain elevator capacities in order to weaken the Ukrainian agricultural sector (*Ukraine Invest...*, 2022). Fourteen percent of grain elevators have been damaged or destroyed, 10% are located in Russian-occupied territory, so access amounts to only 65% of the existing storage facilities (*The losses...*, 2022). The total amount of losses due to the damage or destruction of granaries is estimated at \$272 million. The estimated value of killed animals is more than \$136 million. The estimated number of animals that are killed in the affected areas is 42,000 sheep and goats, 92,000 cattle, 258,000 pigs and over 5,700,000 poultry (*What damages...*, 2022). The Ministry of Agrarian Policy and Food of Ukraine says that the country as a whole has lost up to 15% of its meat and dairy production capacity (Yashchysheh, 2022).

The occupiers simply steal whatever they can. They have already exported grain worth about \$600 million from the occupied territories (Ministry..., [http](#)). According to the estimates of the investigation department of the German broadcaster NDR, by the end of 2022, Russia could export a total of 1.8 million tons of grain from the occupied territories of Ukraine. Most of the cargo is sent to Russia, Syria and Turkey (Venkina, 2022).

The indicated amounts of damage do not mean that there will be a food crisis in Ukraine. The structure of consumption, of course, as a result of the action of various factors caused by the conditions of a real war and the implementation of military operations, has a tendency to change. In particular, in 2023, the production of eggs in Ukraine may stop if the producers fail to restore the chicken population. As it is ageing, the number of eggs will decrease as a result, and the prices will rise accordingly (ROMANK, *There will be ...*).

This also applies to problems with milk and milk products. Dairy factories are in a difficult situation and need support in uninterrupted energy supply, since milk processing is a systematic and non-stop production process. The purchase of generators will inevitably affect the cost of dairy products. Still, despite the change in logistics routes, the work of enterprises in dangerous conditions is demonstrated in the Ukrainian dairy sector by the growth of exports in 2022. The sale of Ukrainian dairy products for 9 months amounted to 72.43 thousand tons in natural terms and \$186.2 million in value terms, which is 11% and 41% more than in 2021, respectively (*Milk...*, 2022). In addition, the market under modern conditions is capable of covering local product shortages, so there is no reason to fear a “dairy famine” today.

Despite the occupation of part of the south, there will be no shortage of fruit and vegetables. Areas in which there are no active hostilities have increased the area under vegetable cultivation, and there has always been overproduction of fruit and berry crops in Ukraine (Yashchysheh, 2022).

No problems are expected with grain in Ukraine, even taking into account all the negative aspects caused by the war. According to the final estimates, the wheat

harvest in 2022 is expected to be at the level of 18–20 million tons, which is five times higher than the country's needs, and there are still stocks left from 2021. Also, much more buckwheat was sown in 2022, which will saturate the market and equalise prices. At the same time, it is possible that a significant part of the fields will be used for spring crops.

The blockade of Ukrainian ports was another manifestation of the general military challenge for Ukraine, as it practically stopped foreign currency receipts, because, for obvious reasons, the land export of grain turned out to be much less productive than the sea export. Before the start of the full-scale war, about 80% of Ukrainian exports of agricultural products were carried out by sea. The situation has created a challenge for the whole world, as it has put a significant number of the population of other countries at risk of starvation. The grain agreement between Ukraine and Russia, concluded with the mediation of Turkey and the UN, led to the resumption of grain exports by sea. The countries to which Ukrainian grain ships have been heading since the opening of the grain corridor are Egypt, Yemen, Israel, Iran, India, China, South Korea, Libya, Somalia, Sudan, Djibouti, Turkey, as well as EU countries. During the three months of the corridor operation, Ukraine sent 10.1 million tons of grain to the world from the ports of Great Odessa.

On October 29, 2022, Russia announced that it had suspended its participation in the “grain agreement” due to the attack in Sevastopol; however, on the morning of November 2, 2022, Russia returned to the agreement after Turkey, Ukraine and the UN agreed to the continued passage of grain trucks despite the Kremlin's demarche, effectively ignoring it. Currently, Russia is deliberately inhibiting the productivity of joint inspections – an average of only 12 inspections per day are planned, of which 8–9 are actually completed, against 35–40 per day while Russia was not taking part in this agreement (*Russia ...*, [http](#)). Such uncertainty with the grain corridor has forced Ukraine to significantly improve transportation logistics. Yet, rail transportation is much more expensive than sea freight. Ukrainian track gauges are wider than European gauges, so it is necessary to transship grain, which requires both time and money. Due to insufficient port capacity, the European infrastructure is not able to accept more Ukrainian products to transport them by sea to other continents. Romanian and Polish ports can handle 33 million tons of grain per year, while 50–60 million tons are needed (Harkhalis, 2022).

The blockade of ports showed the disadvantages of exporting a large volume of these goods, therefore the demand for niche, high-margin crops (peas, berries, mustard, etc.) is growing, the transportation of which is more variable. There is reason to believe that this will not harm the cultivation of wheat, sunflower and corn as the main crops. Ukrainian farmers are now inclined to choose oil crops as alternative to grains, which have a higher added value and, accordingly, are higher-priced. Ukraine possesses sufficient capacity to process sunflower seeds into oil for later export. There is a tendency to increase the cultivated area of rapeseed,



which can be processed both for edible oil and for biofuel. As a ton of Ukrainian rapeseed for export currently costs \$600, and a ton of rapeseed oil costs \$1,700, and it is very problematic to export rapeseed and soy as raw materials, increasingly, many producers are looking towards its processing and the reorientation of their activities to the export of finished products. This will be facilitated by the signed agreement with the Polish government on the construction of a unique pipeline for the transportation of Ukrainian vegetable oil to the port of the city of Gdansk for its export to third countries.

However, the assessment of the consequences of the hostilities for the agricultural industry is complicated by the lack of an analogy, where a country with such a large-scale and globally important agricultural sector as Ukraine is embroiled in a war. Based on the latest assessments of the extent of damage caused by the Russian military aggression against Ukraine, carried out by the team of K. Tymoshenko in the Office of the President, the Kyiv School of Economics, Advanter Group, and the Ministry of Finance and Economy, \$750 billion will be needed to rebuild and compensate for the direct and indirect losses suffered as a result of the armed aggression by Russia (Sukov, 2022). More than \$30 billion will be needed to compensate for the losses in the agricultural sector (Nedogybchenko, 2022). Funds necessary for the restoration of critical infrastructure are included in the budget. Funds of the Russian Federation seized on the territory of Ukraine can also be used for recovery (ROMANK, *The Cabinet...*). This is also taken into account in the developed Ukraine Renewal Plan for 2022–2032, which was presented to Western partners on July 4, 2022 and provides for the implementation of 850 projects in various areas of the economy.

Another source of funding for the reconstruction of Ukraine is hundreds of millions of dollars in international donor aid. The finance ministers of the EU countries were instructed to develop a mechanism for allocating at least €18 billion to Ukraine in 2023, that is, about €1.5 billion per month (€3–4 billion, if needed) (ROMANK, *The EU...*).

After the outbreak of war, the FAO developed a rapid response plan and is calling for \$115.4 million to support nearly a million rural residents by providing agricultural assistance and ensuring food security for those most affected by the war. Within the framework of this program, the FAO has already provided assistance to 80,000 people in 13 regions of Ukraine (Gromov, 2022).

The target audience of international donor organisations is rural households and farmers, who are rightly considered as the most important factor in the fight against unemployment and a guarantee of inclusive economic growth in rural areas. The programs already implemented in Ukraine by the FAO and other donors provide land bank for the maximum size of the recipient at the level of 250–1,000 hectares. This discrimination will intensify the processes of semi-disintegration of agrarian holdings, which have already begun, and a new leader will increase

its presence on the market – a state that will receive maximum benefits from the integration of Ukraine and the agrarian sector into the European Union.

Currently, it is critical for Ukraine to restore exports to ensure global food security, and to support internal currency reserves and a stable exchange rate of the hryvnia. Before the war, agriculture accounted for more than 40% of the country's total exports (Lysa, 2022). From a macro-financial point of view, the export of agricultural products supports currency reserves and the exchange rate of the hryvnia. From a macroeconomic point of view, Ukraine's inability to sell goods means a drop in GDP, in wages, and demand among suppliers for fertilisers, seeds, and other agriculture-related products.

#### FINAL REMARKS

Ukraine faces numerous challenges and threats as a result of Russia's military aggression which has caused enormous damage and losses to the country, both economic and social – the lost lives of Ukrainian heroes in the war against the Russian aggressors cannot be estimated. Ukraine has temporarily lost significant territories and their economic potential as a result of its occupation by the Russian invaders and the conduct of military operations within them. The living standard of the people has decreased significantly. Ukraine suddenly faced the question of how to respond to these challenges and threats, how to ensure rapid economic growth, and create a powerful national security system, army, and defence-industrial complex, how to strengthen and diversify international ties, and how to find a model for a victorious resolution of the war with Russia.

The situation is such that appropriate solutions must be found both in Ukraine directly, through its fundamental strengthening and modernisation, and in the international arena, through the creation of a new international legal format for solving the so called Ukrainian crisis, supporting the country with the participation of the United States, Great Britain, China and the European Union. In this situation, Ukraine objectively deserves such support, because at the cost of the lives of its citizens, it is resisting, on behalf of all civilised humanity, the challenge which Russia and its invading military aggression turned out to be.

At the same time, any challenges provide new opportunities. Russia's military aggression against Ukraine has showed that, as Toynbee's concept of "challenge-response" predicts, the challenge in the form of war shook the entire civilised world, and especially Ukraine directly. Ukraine's response to this challenge will have the character of the rebirth of the country at a new level. Ukraine will rise with renewed quality and will turn from a country of raw materials into a country of innovations, becoming a country of inventors, entrepreneurs, and people who challenge established practices and are able to achieve economic breakthroughs.

Ukraine's agriculture has suffered as a result of the war, perhaps the most of all branches, since a large part of the country's territory is either under temporary occupation or under direct military clashes. Nevertheless, in the near future, the development of industry will become an economic engine for the recovery of Ukraine and beyond. Agriculture will increase its value in the national GDP. The processing of agricultural raw materials will improve the agricultural productivity and energy independence of the country. Despite the war, the large-scale destruction, and the reduction in production volumes, agriculture is unlikely to be threatened with losing its status as one of the leading branches of the Ukrainian economy, which also has a corresponding positive international effect.

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### Summary

The purpose of this paper is to present the main results of the conducted research on the identified challenges to the agriculture of Ukraine caused by the aggressive Russian military invasion, and the economic assessment of the possibilities of overcoming them. It was assumed that the scale of challenges and the real consequences of the mentioned aggression are astonishing and unique in terms of size and importance, but the actions envisaged and already aimed at overcoming them are fully justified and have adequate financial support.

The research methodology was based on the use of a dialectic approach to identify and study the main challenges for agriculture in Ukraine, which are present as a result of the military aggression of the Russians. Within this approach, the method of historical and logical unity was used in the study of socio-economic phenomena in combination with methods of analysis and synthesis, scientific abstraction, induction, systematisation, and generalisation.

Studies have shown that Ukraine faces numerous challenges and threats as a result of Russia's military aggression which has caused enormous damage and losses to the country, both economic and social. Russia's military aggression against Ukraine shocked the entire civilised world. At the same time, any challenges provide new opportunities. Ukraine will rise with renewed quality and will turn from a country of raw materials into a country of innovations, becoming a country of inventors, entrepreneurs, and people who are able to achieve economic breakthroughs. Ukrainian agriculture was perhaps the worst affected by the war, as a large part of the country's territory is either under temporary occupation or under direct military clashes. However, in the near future, the development of this industry will become the economic engine for the revival of Ukraine and beyond, which will also have a positive international effect.

*Keywords:* Ukraine, agriculture, war, challenge.

## Rosyjska agresja militarna wyzwaniem dla rolnictwa Ukrainy

### Streszczenie

Celem artykułu jest przedstawienie głównych wyników przeprowadzonych badań nad zidentyfikowanymi wyzwaniami dla rolnictwa Ukrainy spowodowanymi agresywną inwazją militarną Rosji oraz ekonomiczną oceną możliwości ich przezwyciężenia. Przyjęto założenie, że skala wyzwań

i realne konsekwencje wspomnianej agresji są zdumiewające i niepowtarzalne pod względem wielkości i znaczenia, jednak działania przewidziane i już zmierzające do ich przewyżczenia są w pełni uzasadnione i mają odpowiednie wsparcie finansowe.

Metodyka badań polegała na zastosowaniu dialektycznego podejścia do identyfikacji i badania głównych wyzwań dla rolnictwa Ukrainy, jakie mają miejsce w wyniku agresji militarnej Rosjan w tym kraju. W ramach tego podejścia zastosowano metodę jedności historycznej i logicznej w badaniu zjawisk społeczno-ekonomicznych w połączeniu z metodami analizy i syntezy, abstrakcji naukowej, indukcji, systematyzacji i uogólnienia.

Badania wykazały, że Ukraina stoi przed licznymi wyzwaniami i zagrożeniami w wyniku agresji militarnej Rosji, która spowodowała ogromne szkody i straty dla kraju, zarówno gospodarcze, jak i społeczne. Agresja militarna Rosji na Ukrainę wstrząsnęła całym cywilizowanym światem. Jednocześnie, wszelkie wyzwania dają nowe możliwości. Ukraina może z kraju surowców zmienić się w kraj innowacji, stać się krajem wynalazców, przedsiębiorców, ludzi, którzy zdołali dokonać gospodarczego przełomu. Ukraińskie rolnictwo ucierpiało w wyniku wojny bodaj najbardziej ze wszystkich gałęzi, gdyż znaczna część terytorium kraju znajduje się albo pod czasową okupacją, albo pod bezpośrednimi starciami zbrojnymi. Jednak w niedalekiej przyszłości rozwój tej branży stanie się ekonomiczną lokomotywą żywienia Ukrainy i poza nią, co będzie miało również pozytywny efekt międzynarodowy.

*Słowa kluczowe:* Ukraina, rolnictwo, wojna, wyzwanie.

JEL: Q18, Q38, D62, H53, H56.