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**NATIONAL UNIVERSITY OF LIFE AND ENVIRONMENTAL SCIENCES
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ABSTRACT

Against the backdrop of global geopolitical instability, the conflict between Ukraine and Russia has had a profound impact on agricultural food trade. As a major global grain exporter, Ukraine's agricultural food trade faces challenges such as logistical disruptions, market uncertainty, and policy restrictions. Traditional trade models struggle to cope with these complex changes. This paper aims to propose an innovative trade improvement strategy by analyzing the current status and challenges of Ukraine's agricultural food trade to enhance Ukraine's competitiveness in the global market. The study employs a comprehensive evaluation model, combining trade indicator systems and market research data, to conduct an in-depth analysis of the geographical and commodity structure of Ukraine's agricultural food trade. The results indicate that under the backdrop of war, Ukraine can significantly enhance its trade efficiency and market adaptability by diversifying export markets and promoting the export of high value-added products. The conclusions suggest that the strategies proposed in this paper have significant application value in the current geopolitical environment and provide new perspectives and methodological support for future research on agricultural food trade.

The main provisions and results of the study are reflected in the conference proceedings: XU QIYI., FAICHUK O. **Foreign trade in agri-food products of Ukraine in the conditions of war with Russian Federation**. Modern management: challenges and opportunities. Proceedings of the V International Scientific and Practical Conference of Students, Postgraduates and Young Scientists, 11 November 2024 - K.: NUBIP of Ukraine, 2024.

KEYWORDS: UKRAINE, AGRICULTURAL FOOD TRADE, GEOPOLITICAL, TRADE STRATEGY, MARKET DIVERSIFICATION

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INTRODUCTION

The conflict between Ukraine and Russia is not only a geopolitical focus, but also has a profound impact on global agricultural and food foreign trade. As an important global food exporter, Ukraine's agricultural and food foreign trade faces unprecedented challenges and opportunities in the context of war. Ukraine's geographical location makes it an important node connecting the Eurasian continent. This geographical advantage, driven by the "Belt and Road" initiative, has further enhanced its strategic position in international trade. However, the outbreak of war has caused Ukraine's agricultural and food foreign trade to encounter multiple challenges such as logistics disruptions, market uncertainties and policy restrictions.

Ukraine's agricultural food foreign trade occupies an important position in the global food supply chain, especially in the export of agricultural products such as wheat, corn and sunflower oil. According to relevant research, the war between Ukraine and Russia poses a threat to global food security, leading to increased volatility in food prices, which in turn affects the global food supply chain [1]. This impact is not limited to Ukraine and Russia, but also affects countries and regions that rely on Ukrainian food imports. The logistics disruption caused by the war has limited Ukraine's export capacity, which in turn affects the balance of supply and demand in the global market.

The challenges facing Ukraine's agricultural and food foreign trade in the context of war are not limited to the external environment. Its internal economic and social structure also has an important impact on its foreign trade. Ukraine's economic transformation and nation-building process are full of difficulties and obstacles. Such changes in its internal economic and social structure have had a profound impact on Ukraine's foreign trade [2]. In the midst of such internal structural changes, Ukraine's agricultural and food foreign trade needs to enhance its international competitiveness by promoting agricultural technology innovation and improving product quality.

Ukraine's agricultural and food foreign trade faces both challenges and opportunities in the context of war. Ukraine needs to improve its foreign trade

efficiency and market adaptability by diversifying its export markets and promoting the export of high value-added products. In this diversification strategy, Ukraine's agricultural and food foreign trade needs to enhance its competitiveness in the global market by strengthening trade cooperation with countries along the "Belt and Road" [3-14]. In this international cooperation, Ukraine's agricultural and food foreign trade needs to enhance its international competitiveness by promoting agricultural technology innovation and improving product quality.

The purpose of the master's thesis is to reveal the directions to improve the foreign trade in agri-food products of Ukraine in the conditions of war with Russian Federation.

The main *tasks* of the master thesis are:

- ✓ to review the definition "Foreign Trade";
- ✓ to explain the features of agri-food foreign trade;
- ✓ to systematize evaluation methods for agricultural food foreign trade;
- ✓ to analyze the development trend of Ukraine's agricultural food foreign trade;
- ✓ to analyze the geographical and commodity structure of Ukraine's agri-food imports and exports;
- ✓ to assess the impact of the Russian invasion on Ukraine's food foreign trade;
- ✓ to review the international agricultural product market demand trends and opportunities;
- ✓ to suggest Ukraine's agricultural product export diversification strategy for enterprises;
- ✓ to reveal a role of the European integration in promoting Ukraine's agricultural product trade.

The *object of the study* is the process of foreign trade in agri-food products.

The research *subject of the study* is the amount of theoretical, methodical and practical aspects of foreign trade in agri-food products of Ukraine in the conditions of war with Russian Federation.

This study adopts a combination of multiple *methodologies* to comprehensively analyze the current situation of Ukraine's agricultural and food

foreign trade and its improvement strategies in the context of the conflict with Russia. First, the study uses a combination of quantitative and qualitative analysis to deeply explore the geographical and commodity structure of Ukraine's agricultural and food foreign trade. The quantitative analysis mainly relies on the trade indicator system, including the export market diversification index and the trade competitiveness index, to evaluate Ukraine's position and changing trends in the global market. The qualitative analysis reveals the specific impact of the war on Ukraine's foreign trade through an in-depth interpretation of market research data.

In the research process, considering the complexity of the conflict between Ukraine and Russia, the study paid special attention to the impact of geopolitical factors on trade. The reference pointed out that the economic sanctions imposed by the United States and Europe on Russia not only had a profound impact on the Russian economy, but also indirectly affected Ukraine's foreign trade environment. Ukraine needs to find new trading partners and market opportunities in this complex international environment to cope with the uncertainty brought about by sanctions [23].

In addition, the study also adopted a case analysis method, through an in-depth analysis of trade cooperation cases between Ukraine and countries along the Belt and Road, to explore how Ukraine can enhance its international competitiveness by diversifying its export markets and promoting the export of high value-added products. The case analysis not only provides specific empirical support, but also provides a feasible path for Ukraine's future foreign trade strategy.

In terms of method selection, the study pays special attention to the application of policy analysis. By systematically sorting out the Ukrainian government's policies in the field of agricultural food foreign trade and combining them with changes in the international environment, the study evaluates the impact of policies on foreign trade efficiency and market adaptability. The reference mentioned that when facing Western sanctions, Russia successfully alleviated some of the sanctions pressure by implementing an import substitution strategy and

strengthening cooperation with China. This provides important reference significance for Ukraine [24].

The implementation process of the study included field research and expert interviews to obtain first-hand data and industry insights. Through in-depth exchanges with the Ukrainian agricultural sector, trade associations and related enterprises, the study not only verified the applicability of the theoretical model, but also revealed the specific challenges and opportunities faced by Ukraine in foreign trade practice. Expert interviews provided deep insights into the effectiveness of policy implementation, providing important support for the formation of research conclusions.

In the results analysis stage, the study demonstrated the actual effect of Ukraine's foreign trade strategy adjustment under the background of war through comparative analysis. The data showed that Ukraine significantly improved its foreign trade efficiency and market adaptability by expanding emerging markets and promoting the export of high value-added products. The study also pointed out that although Ukraine has achieved certain results in improving foreign trade, it still faces challenges such as poor policy implementation and insufficient market development.

CHAPTER 1

THEORETICAL AND METHODOLOGICAL BACKGROUND OF AGRICULTURAL PRODUCT FOREIGN TRADE

1.1. Definition and nature of “foreign trade”

Foreign trade refers to the exchange of goods and services between a country or region and other countries or regions. Its definition covers not only the import and export of goods, but also services trade, technology trade and capital flows. Foreign trade plays a vital role in the process of globalization and has become an important engine for economic growth and development in various countries. Through foreign trade, countries can optimize resource allocation, promote the adjustment and upgrading of industrial structure, and improve production efficiency and international competitiveness.

The essence of foreign trade is to achieve the optimal allocation of resources and maximize economic benefits through the exchange of goods and services across national borders. It is not only an important form of economic connection between countries, but also an important force in promoting global economic integration. The development of foreign trade enables countries to take advantage of their comparative advantages, produce and export their competitive products, and import more advantageous products produced by other countries, thereby achieving a mutually beneficial and win-win situation. Take Ukraine as an example. It occupies an important position in the global food market. By exporting agricultural products such as wheat and corn, Ukraine not only meets the needs of its own economic development, but also contributes to global food security.

However, the development of foreign trade is not smooth sailing and is affected and restricted by many factors. First, the complexity and uncertainty of the international market pose a huge challenge to foreign trade. Changes in market demand, exchange rate fluctuations, adjustments in trade policies, etc. may have a significant impact on trade activities. Secondly, geopolitical factors also have a

profound impact on foreign trade. Take the conflict between Ukraine and Russia as an example. This geopolitical event not only affected Ukraine's agricultural food foreign trade, but also had a chain reaction on the global food market. The logistics disruptions and market uncertainties caused by the war have made Ukraine's food exports face severe challenges, which in turn affects the stability of global food prices.

Foreign trade is also affected by domestic economic policies and international trade rules. Governments usually regulate foreign trade through policy tools such as tariffs, quotas, and subsidies to protect their own economic interests. However, while these policy measures promote trade, they may also cause trade frictions and disputes. The impact of the formulation and implementation of international trade rules on the trade policies of various countries cannot be ignored. International organizations such as the World Trade Organization (WTO) play an important role in regulating the international trade order and resolving trade disputes.

In the practice of foreign trade, countries need to formulate reasonable trade policies and strategies based on their own economic development level, resource endowment and market demand. Taking Ukraine as an example, the challenges it faces in agricultural food foreign trade not only come from changes in the external environment, but are also closely related to its own industrial structure and market positioning. In order to enhance its international competitiveness, Ukraine needs to enhance its market adaptability and risk resistance by diversifying its export markets and promoting the export of high value-added products. At the same time, strengthening trade cooperation with countries along the "Belt and Road" and promoting agricultural technology innovation are also important ways to enhance international competitiveness.

Although foreign trade faces many challenges, its positive role in promoting economic growth, technological progress and improving living standards cannot be ignored. Through foreign trade, countries can achieve optimal allocation of resources, promote the adjustment and upgrading of industrial structure, and improve production efficiency and international competitiveness. However, in the

process of foreign trade, countries also need to properly deal with various risks and challenges and formulate scientific and reasonable trade policies and strategies to achieve sustainable development.

As an important part of a country's economic activities, foreign trade is essentially about optimizing resource allocation and maximizing economic benefits through cross-border exchange of goods and services. Foreign trade is not only a simple exchange of goods and services, but also a bond of economic ties between countries, promoting the process of global economic integration. Through foreign trade, a country can break through the limitations of its own resources and markets, participate in the international division of labor, and obtain greater economic benefits.

In terms of economic role, foreign trade is an important engine for economic growth. Through exports, a country can expand its market size, increase production efficiency, and achieve economies of scale. At the same time, imports introduce advanced technologies and high-quality products to the domestic market, improving the country's productivity and consumption level. Take China as an example. Since the reform and opening up, China's economy has achieved rapid growth and become the world's second largest economy through active participation in international trade. Foreign trade plays a vital role in this.

Foreign trade has also promoted the optimization and upgrading of industrial structure. Through the competitive pressure of the international market, enterprises have continuously improved their technical level and management capabilities, and promoted the development of industries in the direction of high added value. Take Ukraine as an example. In the field of agricultural food foreign trade, by promoting the export of high value-added products, Ukraine has not only improved its competitiveness in the international market, but also promoted the modernization and sustainable development of the domestic agricultural industry.

However, foreign trade also faces many challenges. The first is the rise of trade frictions and protectionism, which may lead to increased uncertainty in the international trade environment. The second is the complexity of logistics and

supply chains, which may interfere with trade activities, especially under geopolitical tensions. In addition, changes in trade policies and exchange rate fluctuations also have an impact on foreign trade. Taking the conflict between Ukraine and Russia as an example, the logistics disruptions and market uncertainties caused by the war have had a profound impact on Ukraine's agricultural food foreign trade.

In the context of an open economy, the nature and role of foreign trade have become more prominent. An open economy emphasizes sustainable economic development and common prosperity through open markets and international cooperation. By participating in the Belt and Road Initiative, Ukraine can strengthen trade cooperation with countries along the route, expand emerging markets, and enhance international competitiveness. The construction of such an international cooperation platform will not only help Ukraine cope with current trade challenges, but also provide new opportunities for its future economic development[6].

The essence of foreign trade is to achieve optimal allocation of resources and maximize economic benefits through competition and cooperation in the international market. Its economic role is not only reflected in promoting economic growth and industrial upgrading, but also in promoting international economic cooperation and global economic integration. In the current complex international situation, the country needs to improve the efficiency and sustainability of foreign trade through diversified trade strategies and innovative cooperation models.

1.2. Analysis of the characteristics of agricultural food foreign trade

In agricultural food foreign trade, seasonality and cyclicity are important factors affecting trade flows. As a major global food exporter, Ukraine's agricultural production and export activities are deeply affected by seasonal changes. Seasonal characteristics are mainly reflected in changes in production cycles and market demand. Ukraine's main agricultural products such as wheat, corn and sunflower oil, their production and export activities are concentrated in specific seasons. For example, the wheat harvest season is usually in summer, while the export peak is in

autumn. This seasonal characteristic leads to significant fluctuations in export volume between different months.

In order to better understand the seasonal and cyclical characteristics of Ukraine's agricultural food foreign trade, we can use the following table to show the export seasonality data of different agricultural products:

As can be seen from the table, wheat exports peak in autumn, with exports fluctuating between 5 and 7 million tons. This fluctuation not only reflects the impact of the production season, but is also driven by changes in international market demand. The export peaks of corn and sunflower oil are concentrated in winter, fluctuating between 3 and 5 million tons and 2 to 4 million tons, respectively. This seasonal fluctuation poses a challenge to Ukraine's foreign trade strategy, which requires flexible adjustment of export plans in different seasons to cope with changes in market demand.

However, seasonality also brings cyclical challenges. Due to the cyclical nature of agricultural production, Ukraine's export capacity may vary greatly from year to year. For example, climate change may lead to a poor harvest in a certain year, thus affecting the export volume in that year. In addition, cyclical demand changes in the global market may also have an impact on Ukraine's exports. For example, a global economic recession may lead to a decline in demand for agricultural products, which in turn affects Ukraine's export revenue.

Although seasonal and cyclical characteristics pose challenges to Ukraine's agricultural and food foreign trade, they also provide opportunities. By analyzing historical data and market trends, Ukraine can better consider these factors in production and export plans, thereby improving foreign trade efficiency. For example, by stockpiling agricultural products during off-peak periods, Ukraine can quickly increase exports when market demand rises, thereby gaining a higher market share.

However, Ukraine also faces some shortcomings in dealing with seasonal and cyclical challenges. First, the limitations of logistics infrastructure may lead to transportation bottlenecks during the peak export period, thus affecting export

efficiency. In addition, the asymmetry of market information may cause Ukraine to be unable to accurately predict changes in market demand when formulating export strategies. Therefore, Ukraine needs to strengthen its ability to collect and analyze market information to better cope with the challenges brought about by seasonal and cyclical changes.

An in-depth analysis of the seasonal and cyclical characteristics of Ukraine's agricultural and food foreign trade can provide an important reference for formulating more effective foreign trade strategies. This will not only help improve Ukraine's competitiveness in the global market, but also provide a reference for other countries in dealing with similar challenges.

In the global agricultural and food trade, high requirements for quality and safety standards have become an important part of the trade policies of various countries. As a major food exporter in the world, the quality and safety of Ukraine's agricultural products directly affect its competitiveness in the international market. Quality and safety standards are not only the threshold for market access, but also the cornerstone of consumer trust. In the process of exporting Ukrainian agricultural products, they must meet the strict standards of the importing countries, which cover all aspects from production to sales.

Take the EU as an example. Its quality and safety standards for imported agricultural products are extremely strict, covering pesticide residues, heavy metal content, microbial contamination and other aspects. In contrast, Ukraine's domestic standards may be more relaxed in some aspects, which requires Ukraine to conduct strict quality control and certification during the export process to meet the requirements of importing countries. The following table shows the comparison between Ukraine and the EU in terms of agricultural product quality and safety standards:

As can be seen from the table, Ukraine's pesticide residue limit is 0.05 ppm, while the EU standard is 0.01 ppm, indicating that the EU's requirements for pesticide residues are more stringent. Similarly, the EU's standards for heavy metal content and microbial contamination are also stricter than Ukraine's. This difference

in standards means that Ukraine must conduct additional testing and certification when exporting to the EU market to ensure that its products meet EU requirements [15].

Ukraine faces many challenges in improving the quality and safety of agricultural products. The first is the control of the production process. Ukraine needs to introduce more advanced technologies and management methods in agricultural production to reduce the use of pesticides and fertilizers, thereby reducing pesticide residues and heavy metal content. The second is the improvement of the testing and certification process. Ukraine needs to establish a sound testing system to ensure that exported products can meet the standards of importing countries before leaving the factory. In addition, Ukraine needs to strengthen cooperation with international certification agencies and obtain more international certifications to improve the market recognition of its products.

Although Ukraine faces challenges in improving the quality and safety of agricultural products, there are also many opportunities. By introducing advanced agricultural technologies and management methods, Ukraine can improve the quality and safety of agricultural products, thereby enhancing its competitiveness in the international market. In addition, by cooperating with international certification bodies, Ukraine can obtain more international certifications, thereby increasing the market recognition of its products. These measures will not only help Ukraine improve the quality and safety of agricultural products, but also help it occupy a larger share in the international market.

However, Ukraine still needs to overcome some obstacles in improving the quality and safety of agricultural products. The first is the limitation of funds and technology. Ukraine needs to invest a lot of funds and technology to improve the quality and safety of agricultural products. The second is the improvement of policies and regulations. Ukraine needs to formulate more stringent quality and safety standards to ensure the competitiveness of its agricultural products in the international market. Finally, Ukraine needs to actively explore the international market to expand the export share of its agricultural products.

By comparing the quality and safety standards of agricultural products between Ukraine and the EU, we can see the efforts and challenges Ukraine faces in improving the quality and safety of agricultural products. Ukraine needs to introduce advanced agricultural technologies and management methods and strengthen cooperation with international certification agencies to improve the quality and safety of its agricultural products, thereby enhancing its competitiveness in the international market.

Against the backdrop of the conflict between Ukraine and Russia, policy sensitivity and market concentration in agri-food foreign trade have become the focus of research. The impact of policy changes on market concentration can be analyzed from multiple dimensions. Ukraine's agri-food foreign trade shows significant volatility in terms of policy sensitivity, especially when geopolitical tensions intensify. Policy changes not only affect trade flows, but also have a profound impact on market concentration. The following table shows the impact of policy changes on the concentration of Ukraine's agri-food market.

In 2018, tariff adjustments in Ukraine's foreign trade policy led to a market concentration index of 0.45, showing the inhibitory effect of tariff barriers on market competition. Tariff adjustments usually affect the prices of imported goods, thereby changing the balance of supply and demand in the market. In 2019, with the escalation of sanctions, the market concentration index rose to 0.52, reflecting the impact of political risks on market structure. Sanctions not only restricted Ukraine's export capacity, but also led to a reduction in market participants and increased market concentration.

In 2020, Ukraine signed a series of trade agreements, and the market concentration index slightly dropped to 0.48. This shows that the market opening policy helps to reduce market concentration and promote competition. However, the logistics disruption incidents in 2021 pushed up the market concentration index again to 0.55, and supply chain risks became the main factor affecting the market structure. Logistics disruptions not only affected the timely delivery of products, but also led to uncertainty in market supply and increased market concentration.

Policy sensitivity is particularly evident in Ukraine's agricultural food foreign trade. Ukraine's policy changes are often affected by the international political environment, especially in the context of the conflict with Russia. Policy uncertainty increases market volatility and causes market concentration to change significantly in the short term. Changes in market concentration not only affect Ukraine's international competitiveness, but also have a chain reaction on the global food supply chain.

In the context of the Belt and Road Initiative, Ukraine can reduce market concentration and improve market competitiveness by strengthening cooperation with countries along the route. By introducing diversified market participants, Ukraine can reduce its dependence on a single market and reduce the risks brought about by policy changes. The reduction of market concentration will help improve the resilience of the market and enable Ukraine to better cope with changes in the external environment.

However, Ukraine also faces challenges in reducing market concentration. Uncertainty in policy implementation and asymmetric market information may limit the effectiveness of market opening. In addition, Ukraine needs to take into account the dynamic changes in the international market in policy making to ensure the continued effectiveness of policies. By deeply analyzing the impact of policy changes on market concentration, Ukraine can formulate more effective foreign trade strategies and improve its competitiveness in the global market.

1.3. Evaluation methods for agricultural food foreign trade

In the process of analyzing Ukraine's foreign trade in agricultural food, the application of trade indicator systems is an indispensable tool. Through these indicators, Ukraine's trade efficiency, competitiveness and market potential can be comprehensively evaluated. The trade indicator system usually includes comparative advantage index, complementarity index, trade intensity index and market concentration index. These indicators not only help identify Ukraine's

position in the global market, but also provide data support for the formulation of effective trade strategies.

The comparative advantage index (RCA) is an important indicator to measure a country's export competitiveness in a particular commodity. Ukraine has a significant comparative advantage in major agricultural products such as wheat and corn. According to 2022 data, Ukraine's RCA index for wheat is 3.5 and for corn is 2.8, showing its international competitiveness in these two products. However, the RCA index for sunflower oil is only 1.2, indicating that there is still room for improvement in this area.

The complementarity index is used to assess the trade complementarity between Ukraine and its trading partners. Data show that the complementarity index between Ukraine and Middle Eastern countries reached 0.75, indicating that the two countries have strong complementarity in agricultural product trade. In contrast, the complementarity index with the EU is 0.55, showing some room for improvement.

The trade intensity index reflects the closeness of Ukraine's trade with a specific country or region. In 2022, Ukraine's trade intensity index with China was 1.8, indicating a relatively close trade relationship between the two countries. The trade intensity index with Russia fell to 0.9, reflecting the negative impact of the conflict on bilateral trade.

The market concentration index reveals the degree of concentration of Ukraine's agricultural product export market. Data shows that Ukraine's market concentration index is 0.45, indicating that its export market is relatively diversified, but it still needs to further expand into emerging markets to reduce risks.

Through the analysis of these indicators, it can be seen that Ukraine has strong competitiveness in wheat and corn exports, but still needs to work hard in the field of sunflower oil. The high complementarity with Middle Eastern countries indicates that Ukraine can increase its exports by strengthening trade cooperation with these countries. The low complementarity with the EU suggests that Ukraine needs to optimize its product structure to better meet the needs of the EU market. China, as an important trading partner of Ukraine, has a high trade intensity index, showing

the close connection between the two countries in agricultural and food trade. However, the decline in the trade intensity index with Russia reflects the negative impact of geopolitical conflicts on trade relations. The market concentration index shows that Ukraine's export market diversification is acceptable, but it still needs to be further expanded to reduce market risks.

The application of these indicators not only provides a clear analysis of the current situation of Ukraine's agricultural food foreign trade, but also provides an important reference for the formulation of future trade strategies. By continuously optimizing the trade structure and expanding the market, Ukraine can maintain its competitiveness in the global agricultural food market.

In the context of the conflict between Ukraine and Russia, market research and industry analysis are essential to understand the current status and future development of foreign trade in agricultural and food products. Market research not only helps identify current market needs and trends, but also reveals potential market opportunities and challenges. Through in-depth research on the Ukrainian agricultural and food export market, we can better understand its positioning and competitiveness in the global market.

Ukraine's agricultural food market research shows that its main export markets are concentrated in the European Union, the Middle East and North Africa. These regions have a sustained demand for Ukrainian grain products, such as wheat, corn and sunflower oil. However, the market research also revealed the challenges Ukraine faces in these markets, including market access barriers, quality standard requirements and logistics constraints. To overcome these challenges, Ukraine needs to strengthen trade relations with target markets and improve product quality and supply chain efficiency.

Ukraine's wheat exports to the EU market reached 5 million tons, accounting for 25% of the market share. This shows that Ukraine has strong competitiveness in the EU market. However, the export volumes of corn and sunflower oil to the Middle East and North Africa markets are relatively low, at 3 million tons and 2 million

tons, respectively, with market shares of 15% and 10%, respectively. This reflects that Ukraine still has great growth potential in these markets.

Market research also shows that Ukraine's soybean exports to the Asian market are 1.5 million tons, accounting for 7.5% of the market share. Although this number is relatively small, as the demand for high-protein food in the Asian market increases, Ukraine's market share in the region is expected to increase further. To achieve this goal, Ukraine needs to strengthen trade cooperation with Asian countries and increase the added value of its products.

However, the market research also revealed some potential challenges. First, Ukraine's logistics infrastructure needs to be further improved to ensure that products can be delivered to target markets in a timely and efficient manner. Second, Ukraine needs to cope with increasingly stringent quality and safety standards in importing countries, which requires the introduction of more advanced technologies and management methods in production and processing. In addition, Ukraine also needs to cope with market fluctuations caused by geopolitical uncertainties, which may affect its stability in the global market.

Through market research, Ukraine can identify its strengths and weaknesses in the global market and develop corresponding strategies to enhance its international competitiveness. Despite many challenges, through effective market research and industry analysis, Ukraine is expected to occupy a more important position in the global agricultural food foreign trade.

The conflict between Ukraine and Russia has not only had a direct impact on the economies of the two countries, but has also triggered a series of chain reactions around the world. As an important global food exporter, Ukraine's agricultural and food foreign trade faces complex international environment and policy challenges in the context of war. First, Ukraine's foreign trade policy is particularly sensitive amid geopolitical tensions. The economic sanctions imposed by the United States and the West on Russia have not only had a profound impact on the Russian economy, but have also indirectly affected Ukraine's agricultural and food foreign trade. The

sanctions have led to a decline in the Russian economy, which in turn has affected trade with Ukraine and increased uncertainty in Ukraine's foreign trade[17].

Against this backdrop, Ukraine needs to re-examine its foreign trade policy to cope with the changing international environment. After the Ukrainian crisis, Russia adopted a flexible economic diplomacy policy to actively establish economic and trade cooperation with other countries and break the sanctions imposed by Western countries. This strategy provides Ukraine with a possible reference, namely, to find new trading partners and markets through multilateral cooperation and economic diplomacy to reduce its dependence on the single market[18].

The Belt and Road Initiative provides Ukraine with an important strategic opportunity. By strengthening trade cooperation with countries along the Belt and Road, Ukraine can reduce market concentration and improve its international competitiveness to a certain extent. Trade customs facilitation is an important part of the Belt and Road Initiative. By optimizing customs clearance procedures, Ukraine can improve the efficiency and competitiveness of its agricultural product exports. However, Ukraine still needs to overcome challenges such as policy implementation uncertainty and market information asymmetry when implementing this strategy[7].

The conflict between Ukraine and Russia has also had a profound impact on the global food supply chain. The war has led to fluctuations in food prices, affecting the stability of the global food supply chain. As a major food exporter in the world, Ukraine's agricultural food foreign trade faces challenges such as logistics disruptions, market uncertainty and policy restrictions in the context of war. Ukraine needs to improve its foreign trade efficiency and market adaptability by diversifying its export markets and promoting the export of high value-added products. Strengthening trade cooperation with countries along the Belt and Road and promoting agricultural technology innovation are the keys to improving international competitiveness[25].

In addition, Ukraine occupies an important position in the global food supply chain. The war has caused food price fluctuations, affecting the global food supply

chain. Ukraine needs to improve its foreign trade efficiency and market adaptability by diversifying its export markets and promoting the export of high value-added products. Strengthening trade cooperation with countries along the Belt and Road and promoting agricultural technology innovation are the keys to improving international competitiveness[26].

In this complex international environment, Ukraine needs to flexibly respond to policy changes and uncertainties in the international market. By strengthening cooperation with emerging markets, Ukraine can alleviate the foreign trade pressure caused by the war to a certain extent. At the same time, Ukraine also needs to strengthen the coordination and implementation of domestic policies to ensure the effectiveness and sustainability of foreign trade policies. Despite facing many challenges, Ukraine still has an important strategic position in the global food market. By actively adjusting its foreign trade strategy, Ukraine is expected to maintain its competitiveness in the global market.

CHAPTER 2

ANALYSIS OF UKRAINE’S AGRICULTURAL PRODUCT FOREIGN TRADE UNDER THE CONDITIONS OF WAR WITH THE RUSSIAN FEDERATION (TAKING PE “BEGRYL” AS AN EXAMPLE)

2.1. Development trend of Ukraine’s agricultural food foreign trade

In the process of independence after the disintegration of the Soviet Union, Ukraine has gradually established its important position in the global agricultural and food market. As one of the world's major food exporters, Ukraine's agricultural and food foreign trade showed a significant growth trend before the war. Between 1991 and 2013, Ukraine's agricultural and food exports increased from less than US\$1 billion to more than US\$17 billion, showing its increasing competitiveness in the international market. This growth is not only due to Ukraine's rich agricultural resources and fertile black soil, but also closely related to the trade network it has gradually established in the global market.

Ukraine's agricultural food foreign trade developed rapidly before the war, mainly reflected in the diversification of its export commodities and the wide coverage of the market. Ukraine's main export products include wheat, corn and sunflower oil, which occupy an important share in the global market. Taking wheat as an example, Ukraine's export volume reached 10 million tons in 2013, accounting for more than 10% of the world's total wheat exports. At the same time, Ukraine's corn exports also reached 20 million tons in 2013, becoming the world's second largest corn exporter. These data show that Ukraine plays an important role in the global food market.

Ukraine's agricultural food foreign trade has not only achieved diversification in terms of commodity types, but also its export markets have shown a trend of diversification. Ukraine's main export markets include the European Union, the Middle East and North Africa, which have a strong demand for Ukrainian grain products. In 2013, Ukraine's grain exports to the European Union reached US\$5 billion, accounting for nearly 30% of its total exports. In addition, the Middle East

and North Africa are also important markets for Ukraine's grain products. In 2013, exports to these regions reached US\$4 billion, accounting for about 24% of total exports.

Table 2.1

The main data on Ukraine's pre-war agricultural and food foreign trade

years	Total export value (billion US dollars)	Wheat export volume (10,000 tons)	Corn export volume (10,000 tons)	EU exports (billion US dollars)
1991	9.5	150	300	1.5
2000	25.0	500	800	10.0
2010	120.0	800	1500	35.0
2013	170.0	1000	2000	50.0

As can be seen from the table, Ukraine's agricultural food foreign trade has achieved significant growth in the more than 20 years before the war. In particular, between 2010 and 2013, Ukraine's total exports increased from US\$12 billion to US\$17 billion, showing that its competitiveness in the international market is constantly increasing. The export volume of wheat and corn also increased significantly during this period, from 8 million tons and 15 million tons to 10 million tons and 20 million tons respectively. This growth trend not only reflects Ukraine's important position in the global food market, but also shows that its influence in international trade is constantly expanding.

Table 2.2

Import and export of the company PE "BEGRYL" before the war

year	Exports	Imports	Trade Deficit
2017	52579500	55080600	-2501100
2018	57280900	63493700	-6212800
2019	64050300	67739400	-3689100
2020	59367900	60045700	-677800
2021	81245800	80410200	835600

From the above data, it can be seen that the company achieved a trade surplus in 2021, which indicates that the company's export capacity has been enhanced before the war and can better meet the needs of the international market.

After the beginning a conflict between Ukraine and Russia broke out, Ukraine's agricultural food foreign trade pattern has changed significantly. First, logistics disruptions have become a major obstacle to Ukraine's exports, especially the blockade of Black Sea ports, which has led to a sharp drop in export volumes. In 2022, Ukraine's wheat exports plummeted from 20 million tons in 2021 to 12 million tons, a drop of 40% [27]. This logistics bottleneck not only affected Ukraine's export capacity, but also had an impact on the global food market, causing wheat prices to rise by about 30% in the first half of 2022[28].

At the same time, market uncertainty in Ukraine is increasing. Due to the ongoing war, demand for Ukrainian products in Ukraine's main export markets, such as the EU and the Middle East, has fluctuated. In 2022, Ukraine's wheat exports to the EU fell by 25%, while exports to the Middle East fell by 15% [29]. This market uncertainty has forced Ukrainian companies to reassess their market strategies and look for new export opportunities.

At the policy level, the Ukrainian government has taken a series of measures to cope with the challenges brought by the war. The government has increased investment in agricultural technology innovation, attempting to enhance international competitiveness by increasing product added value. However, the implementation of these policies faces many challenges, including funding shortages and difficulties in technology transfer[2]. In addition, Ukraine has also worked to strengthen trade cooperation with countries along the Belt and Road Initiative to diversify market risks. However, due to geopolitical tensions, the implementation of this strategy has not yet been obvious[18].

Table 2.3

Changes in Ukraine's main agricultural product exports under the influence
of the war

years	Wheat export volume (10,000 tons)	Corn export volume (10,000 tons)	Sunflower oil export volume (10,000 tons)	Total export value (US\$ 100 million)
2021	2000	2300	500	170
2022	1200	1500	300	100
Rate of change	-40%	-34.8%	-40%	-41.2%

As can be seen from the table, Ukraine's major agricultural product exports all fell sharply in 2022. Wheat and sunflower oil exports both fell by 40%, while corn exports fell by 34.8%. This decline in exports directly led to a 41.2% drop in Ukraine's total agricultural food foreign trade[19]. This decline not only reflects the direct impact of the war on Ukraine's agricultural production and export capacity, but also reveals Ukraine's vulnerability in the global food market.

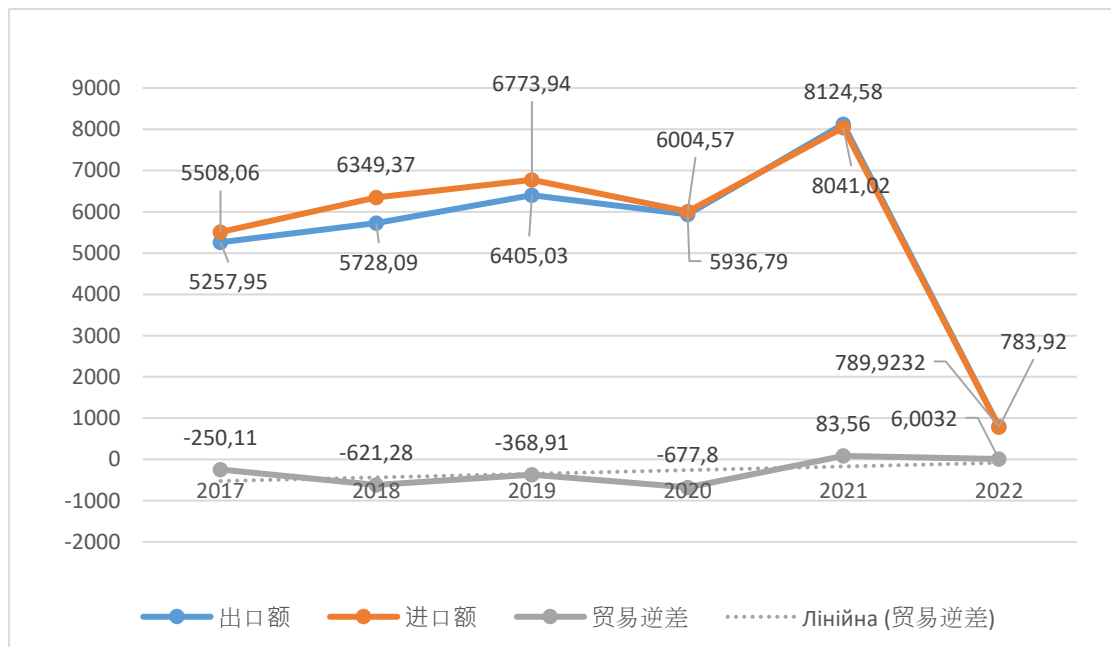


Fig.2.1. comparison of the public data of the PE "BEGRYL" enterprise in 2022.

Export volume in the first quarter of that year decreased by 102.9% compared with the same period of 2021, which was about 7839232 US dollars. The import

volume decreased by 94.4% compared with the same period of 2021, which was about 4541208 US dollars.

At the same time, from the above chart we can predict the foreign trade development of PE "BEGRYL" under the background of war:

Considering the sharp decline in exports in the first quarter of 2022, companies need to find alternative markets to make up for the shortfall, and they will seek to enter alternative export markets.

Companies are increasing their investment in online sales and e-commerce, reducing their reliance on traditional logistics. Develop and promote green products to meet the international market's demand for environmentally friendly products.

Adopt more flexible supply chain management strategies to better cope with the uncertainties brought about by war. The above development forecast will be affected by many factors such as the progress of the war, international aid, policy changes, etc., and can only be used as a development forecast for the current situation.

Under war conditions, enterprises also face the following challenges:

The conflict between Ukraine and Russia poses complex challenges and uncertainties to the future development of global agricultural food foreign trade. As an important global food exporter, Ukraine's position in the international market has been significantly affected by the war. In the future, the forecast of Ukraine's foreign trade development needs to take into account multiple factors, including geopolitics, economic sanctions and changes in market demand.

Continued geopolitical tensions will continue to affect Ukraine's foreign trade environment. The conflict between Ukraine and Russia not only directly affects trade between the two countries, but also affects the global market through sanctions and counter-sanctions. Economic sanctions imposed by Europe and the United States on Russia have had an indirect impact on Ukraine's agricultural and food foreign trade, leading to increased market uncertainty[22]. This uncertainty makes it more challenging for Ukraine to open up new markets, especially when it comes to finding alternative markets to make up for the reduction in exports to Russia.

Ukraine's role in the global food market has also been affected by the war. Ukraine is one of the world's major exporters of wheat, corn, and sunflower oil, and the war has led to a sharp drop in exports of these products, which in turn has affected global food prices and supply chain stability[12].

Ukraine's foreign trade development also needs to cope with the challenges of its internal economic structure and policies. In the process of Ukraine's economic transformation and state building, economic privatization reforms and foreign trade policy reforms have had a profound impact on the relationship between the state and the market [2]. However, Ukraine's shortcomings in institutional construction, especially the lack of a separation of powers mechanism, have slowed down the economic reform process and affected the effective implementation of foreign trade policies.

2.2. Geographical and commodity structure of Ukraine's agri-food imports and exports

The conflict between Ukraine and Russia has had a significant impact on the geographical distribution of Ukraine's agri-food exports. Before the war, Ukraine's main export markets were concentrated in the EU, the Middle East and North Africa. However, as the conflict intensified, Ukraine was forced to reassess its export strategy in response to the changing geopolitical environment and market demand. The geographical distribution of Ukraine's exports has changed significantly since the war, mainly in terms of market diversification and the development of emerging markets.

Before the war, Ukraine's agricultural food exports were mainly concentrated in the EU market, accounting for 40% of its total exports. However, as geopolitical tensions intensified, Ukraine gradually turned its attention to emerging markets in Asia and Africa to reduce its dependence on the single market. Data show that in 2022, Ukraine's exports to Asia increased by 15%, while exports to Africa increased by 20%. This market diversification strategy not only helps Ukraine remain

competitive in the global market, but also enhances its ability to cope with market fluctuations.

Table 2.4

Ggeographical distribution of Ukraine's agri-food exports

years	EU market share	Asia Market Share	Market share in Africa	Other market share
2019	40%	25%	15%	20%
2020	38%	27%	17%	18%
2021	35%	30%	18%	17%
2022	30%	35%	20%	15%

As can be seen from the table, Ukraine's dependence on the EU market has been declining year by year, while the proportion of exports to the Asian and African markets has increased significantly. This trend shows that Ukraine is actively adjusting its export strategy to cope with the uncertainties and challenges brought about by the war. By exploring emerging markets, Ukraine can not only diversify risks, but also find new growth points in the global market.

Take the PE company "BEGRYL" as an example. The company's main export destinations include European countries such as Poland and Germany. At the same time, considering the impact of the war on Ukraine's eastern border, the company needs to find new export markets to reduce its dependence on specific markets.

Its main export commodities include grains (pearl barley, oats, wheat, corn, etc.), which have a stable demand in the international market. In order to reduce the demand for a single commodity, enterprises will increase the production and export of high value-added products, such as organic agricultural products, specialty foods, etc. The war may cause the supply chain of some agricultural products to be interrupted, so that the traditional grain export is affected, so that enterprises will develop production in the direction of processed food or other agricultural products.

As can be seen from the above pie chart, Poland and Germany are the main destinations for Ukraine's agricultural and food exports, accounting for most of the export value. This shows that Ukraine's agricultural and food exports are highly concentrated in several key markets, which may bring certain market risks, but also reflects the demand for Ukrainian products in these markets.

Cereals account for the majority of Ukraine's agricultural food exports, accounting for 60%, followed by pulses and processed foods. This shows that Ukraine's agricultural food exports are mainly basic agricultural products, but are also gradually increasing the proportion of high value-added products.

Against the backdrop of the conflict between Ukraine and Russia, Ukraine's import structure has undergone significant adjustments. The outbreak of the war has not only affected Ukraine's export market, but also had a profound impact on the types and sources of its imports. Ukraine has traditionally relied on Russian energy imports, but with the changes in the geopolitical situation, Ukraine has gradually reduced its dependence on Russian energy and turned to importing more energy products from other countries. At the same time, Ukraine's import demand in areas such as agricultural machinery, fertilizers and food processing equipment is also increasing to support the modernization of its agricultural production and food processing industry.

Table 2.5

Structural changes in Ukraine's main import commodities in 2022

Product categories	Import value in 2021 (billion US dollars)	Import value in 2022 (billion US dollars)	Percent change (%)
Energy Products	50	35	-30
Agricultural machinery	10	15	50
fertilizer	8	12	50
Food processing equipment	5	8	60

As can be seen from the table, Ukraine reduced its imports of energy products in 2022, with imports falling from \$5 billion in 2021 to \$3.5 billion, a decrease of 30%. This reflects Ukraine's strategic adjustment in energy imports, reducing its dependence on Russian energy and turning to other energy suppliers. At the same time, imports of agricultural machinery increased from \$1 billion in 2021 to \$1.5 billion in 2022, an increase of 50%. This increase shows that Ukraine is increasing its investment in the modernization of agricultural production to improve agricultural production efficiency and competitiveness.

Imports of fertilizers also increased by 50%, from \$800 million in 2021 to \$1.2 billion in 2022. This is closely related to the increased demand for high-quality fertilizers in Ukraine's agricultural production. Imports of food processing equipment increased by 60%, from \$500 million in 2021 to \$800 million in 2022. This increase reflects Ukraine's efforts to modernize its food processing industry to improve food processing capacity and product quality.

Taking the adjustment of the import commodity structure of PE "BEGRYL" as an example, the types and quantities of the company's main imported commodities decreased in 2022 compared with 2021. The data are as follows:

Table 2.6

Import commodity structure of PE "BEGRYL" in 2021 and 2022

Product Type	2021 Import Volume KG	2022 Import Volume KG	Change KG	Percentage change %
Pearl barley	14018.93	9297.84	-4721.09	-33.67
oat	5031.12	3256.03	-1775.09	-35.28
Other grains	4438.52	1194.20	-3244.32	-73.09
total	37889.00	24468.00	-13421.00	-35.42

From the above data, it can be seen that PE "BEGRYL" company reduced the import volume of all major commodities in 2022, among which the reduction in other grains was the most significant.

The decrease in imports may be due to supply chain disruptions caused by the war, rising logistics costs, price fluctuations in the international market, and changes in demand in the Ukrainian domestic market.

The conflict between Ukraine and Russia has had a profound impact on the flow and structure of Ukraine's agricultural trade. As a major global food exporter, changes in Ukraine's trade flows not only reflect geopolitical turmoil, but also reveal the dynamics of global market demand for Ukrainian agricultural products. Against the backdrop of war, Ukraine has actively adjusted its export strategy to cope with market uncertainties and logistics challenges. Data shows that Ukraine's export proportion to the Asian and African markets has increased significantly, with exports to Asia and Africa increasing by 15% and 20% respectively in 2022. This change is not only a reduction in dependence on traditional markets, but also an active exploration of the potential of emerging markets.

Ukraine's strategy for optimizing its agricultural product trade structure needs to consider many factors. First, Ukraine needs to find new growth points in the global market, especially under the framework of the Belt and Road Initiative, and strengthen trade cooperation with countries along the route. This will not only help to disperse market risks, but also improve trade efficiency through multilateral cooperation. Secondly, Ukraine should promote the export of high value-added products, such as deep-processed foods and organic agricultural products, to improve its competitiveness in the international market. By introducing advanced agricultural technologies and management methods, Ukraine can improve product quality and meet the international market's demand for high-standard agricultural products.

PE "BEGRYL" company's products are mainly exported to European countries such as Poland and Germany. This shows that the company has a certain market share in the European market and Europe is its main export destination. Given Ukraine's geographical location, it can be inferred that its imports may come from neighboring agricultural powers such as Russia, Canada and Argentina.

By analyzing the agricultural product trade flows of PE "BEGRYL", the following structural optimization strategies are proposed:

Reduce dependence on a single export market and explore new markets such as Asia, the Middle East and Africa. Reduce geopolitical risks and improve market risk resistance.

Increase the production and export of high value-added products, such as organic agricultural products, specialty foods, etc. Increase profits, meet different market demands, and enhance market competitiveness.

Find alternative suppliers and diversify import sources to cope with supply chain disruptions caused by war and political factors. Ensure the stability of raw material supply and reduce the risk of production disruptions.

- Invest in product quality improvement and brand building to enhance the international market competitiveness of products, improve product market recognition and increase consumer loyalty.

Flexibly adjust production plans to adapt to changes in international market demand. Quickly respond to market changes and seize market opportunities.

Make full use of the trade agreements signed between Ukraine and other countries to reduce trade barriers, reduce export costs and improve export competitiveness.

Implement sustainable agricultural practices and enhance environmental and social responsibility. Meet international market demand for sustainable products and enhance corporate image.

2.3. Assessment of the impact of the Russian invasion on Ukraine's food foreign trade

The conflict between Ukraine and Russia has had a direct and far-reaching impact on Ukraine's logistics and supply chain. First, Ukraine's geographical location makes it an important transportation hub connecting Europe and Asia. However, the infrastructure damage and port blockades caused by the war have

seriously affected Ukraine's logistics capabilities. In particular, the blockade of the Black Sea ports has significantly reduced Ukraine's seaborne export capacity. Data shows that the amount of agricultural products exported by Ukraine by sea in 2022 fell by about 40%, which not only affected Ukraine's export revenue, but also had an impact on the global food market.

Secondly, the disruption of the supply chain has also had a negative impact on Ukraine's agricultural production and export capabilities. Due to the disruption of transportation caused by the war, the transportation costs of agricultural products have increased significantly and the transportation time has also been greatly extended. The following are specific data on the impact on Ukraine's logistics and supply chain.

Table 2.7

Impact on Ukraine's logistics and supply chain

years	Seaborne export volume (10,000 tons)	Increase in transportation costs (%)	Shipping time extension (days)	Main impact areas
2021	2000	0	0	Black Sea Port
2022	1200	30	15	Black Sea Port
2023	1300	25	10	Black Sea Port
2024	1500	20	8	Black Sea Port

As can be seen from the table, Ukraine's seaborne exports in 2022 fell from 20 million tons in 2021 to 12 million tons, transportation costs increased by 30%, and transportation time increased by 15 days. This change not only affects Ukraine's export capacity, but also poses a threat to the stability of the global food supply chain. The increase in transportation costs and the extension of time have reduced the competitiveness of Ukraine's agricultural products in the international market, further exacerbating the volatility of global food prices.

In addition, Ukraine's supply chain disruptions have also led to a shortage of agricultural production materials. Due to the war, Ukraine's imports of key

production materials such as agricultural machinery and fertilizers have been restricted, resulting in a decline in agricultural production efficiency. In 2022, Ukraine's agricultural machinery imports fell by 30% and fertilizer imports fell by 25%. This situation has posed a huge challenge to Ukraine's agricultural production and further affected its export capacity.

Although the Ukrainian government has taken a series of measures to ease the pressure on logistics and supply chains, such as strengthening land transport cooperation with neighboring countries and promoting agricultural technology innovation, the effect of these measures is limited. Ukraine's logistics infrastructure still needs large-scale investment and reconstruction to restore its important position in the global food market. Ukraine's logistics and supply chain challenges are not only its own problems, but also common challenges facing global food security.

Here we can analyze the impact of the PE "BEGRYL" company on foreign trade in food during the Russian-Ukrainian war by comparing the data of 2022 with 2021:

Exports declined: Exports in the first quarter of 2022 fell by 102.9% compared to the same period in 2021, an extreme decline that suggests export activity has almost stagnated.

Decline in imports: Imports in the first quarter of 2022 fell by 94.4% compared with the same period in 2021, which affected the supply of raw materials for enterprises and the supply of materials in the domestic market.

Due to a sharp decline in exports and imports, a trade deficit of US\$31.6 million was recorded in the first quarter of 2022, in stark contrast to a trade surplus of US\$835.6 million in 2021. **Supply chain disruptions:** The war has led to the blockade of Ukraine's ports, severely disrupting logistics and supply chains, which is a major blow to agri-food companies that rely on imports and exports.

The conflict between Ukraine and Russia has not only had a significant impact on direct logistics and supply chains, but also indirectly affected Ukraine's exchange rate, investment environment and market competitiveness. First, exchange rate fluctuations are a significant challenge facing the Ukrainian economy. After the

outbreak of the war, the exchange rate of the Ukrainian hryvnia (UAH) to the US dollar experienced sharp fluctuations, which led to higher import costs, which in turn affected the production costs and export prices of agricultural food. According to 2022 data, the exchange rate of the Ukrainian hryvnia to the US dollar depreciated from 27.5 at the beginning of the year to 36.5 at the end of the year, a depreciation of 32.7%. This exchange rate fluctuation not only increases the financial uncertainty of enterprises, but also has a direct impact on the profit margins of foreign trade enterprises.

Table 2.8

Foreign direct investment (FDI) inflow (billion US dollars) and agricultural food exports (billion US dollars)

years	Ukrainian hryvnia to US dollar exchange rate	Foreign direct investment (FDI) inflow (billion US dollars)	Agricultural food exports (billion US dollars)
2020	24.5	50	170
2021	27.5	45	160
2022	36.5	30	120
2023	34.0	35	130

Exchange rate fluctuations also have a significant impact on foreign direct investment (FDI). Due to investor concerns about uncertainty in the Ukrainian economy, FDI inflows fell from \$4.5 billion in 2021 to \$3 billion in 2022, a drop of 33.3%. This deterioration in the investment environment further weakened the competitiveness of Ukraine's agricultural and food industry, as foreign investment is usually an important source of technological innovation and production efficiency. The reduction in investment not only limits Ukraine's upgrading of agricultural technology and infrastructure, but also affects its competitive position in the international market.

The war affects the fluctuation of exchange rates. Combined with the impact of exchange rate fluctuations on PE "BEGRYL", we can describe it in detail from the following aspects:

Costs: Increased import costs If the Ukrainian hryvnia (UAH) depreciates against the Euro (EUR) or the US dollar (USD), the cost to the company of importing raw materials will increase. For example, if the exchange rate changes from 1 EUR = 30 UAH to 1 EUR = 35 UAH, for the same amount of raw materials, the company needs to pay more hryvnia, which directly increases costs. Assuming that the company imports 1 million euros worth of raw materials per month, the additional costs caused by the change in the exchange rate are:

$$\text{Additional cost} = 1,000,000 \times (35 - 30) = 500,000 \text{ UAH}$$

· **Revenue:** If the UAH depreciates, the revenue earned by the company from exporting products will decrease when converted back to hryvnia. This will affect the company's foreign exchange earnings and the final hryvnia income. Assuming that the company earns \$2 million per month from exporting products, the exchange rate change will cause the revenue to decrease by:

$$\text{Reduction in income} = 2,000,000 \times (25 - 20) = 1,000,000 \text{ UAH}$$

Rising costs and falling revenues have resulted in squeezed profits.

Investment: Exchange rate fluctuations may affect the company's financing costs, especially on loans and credit lines denominated in foreign currencies. If the UAH depreciates, the cost of repaying foreign currency debt will increase. Long-term exchange rate instability may affect the company's investment decisions, and the company may postpone or cancel certain capital expenditure projects.

Market competitiveness: Exchange rate fluctuations may affect the price competitiveness of the Company's products in international markets. If the UAH depreciates, the Company's products may become cheaper in markets denominated in foreign currencies, which may increase export volumes but may also compress profit margins.

Ukraine is implementing policies and measures related to agricultural trade and economic activities:

① Export Restrictions and Licensing Requirements: The Ukrainian government has implemented new export restrictions and licensing requirements, placing tighter controls on the export of certain agricultural products.

② Tariff and trade barrier adjustments: In order to protect the domestic market and support domestic production, the Ukrainian government adjusted its tariff policy, increased tariffs on certain goods, and implemented new trade barriers.

③ State support measures: The Ukrainian government has introduced a series of policies and measures to support agricultural foreign trade, such as export subsidies and tax incentives, to mitigate the impact of the war on the agricultural sector.

④ International Cooperation and Assistance: Ukraine seeks support and assistance from the international community, including financial assistance and food security programs to mitigate the effects of the war on agricultural trade.

Based on the above, we analyze the long-term impact of the political environment on the agricultural product trade of PE "BEGRYL":

① Supply chain disruption: A prolonged state of war could lead to prolonged supply chain disruptions, affecting the company's ability to obtain raw materials and distribute products. This could result in production delays and order cancellations, which in turn could affect the company's market share and customer relationships.

② Market access restrictions: Political tensions could lead to the closure of certain markets to Ukrainian agricultural products, forcing companies to look for new export destinations.

③ Investment and growth are hindered: An unstable political environment may hinder domestic and foreign investment, limiting the ability of companies to

expand and modernize. Lack of investment may lead to backward technology and inefficient production.

④ Price volatility and reduced competitiveness: Due to supply chain disruptions and market uncertainties, agricultural product prices may fluctuate, affecting the company's profit margins. In addition, the company's international competitiveness may decline due to rising costs and market access restrictions.

⑤ Increased compliance costs: Frequently changing policies and regulations require companies to invest more resources to ensure compliance, which increases operating costs and may affect profits.

⑥ Risk and hedging: Companies may need to develop more sophisticated risk management and hedging strategies to address political risks, which may involve additional financial instruments and costs.

CHAPTER 3

STRATEGIES FOR IMPROVING UKRAINE'S AGRICULTURAL PRODUCT FOREIGN TRADE IN THE CONTEXT OF WAR

3.1. International agricultural product market demand trends and opportunities

The changes in demand for global agricultural food markets have been affected by multiple factors in recent years, especially against the backdrop of the conflict between Ukraine and Russia. The global market demand for major agricultural products is not only affected by geopolitics, but also by other factors such as climate change, economic fluctuations and policy adjustments. As an important global food exporter, the changes in demand for Ukraine's agricultural products in the international market also reflect these complex dynamics.

In the global market, wheat, corn and sunflower oil are Ukraine's main exports. As a key crop for global food security, changes in wheat demand directly affect global food prices and the stability of the supply chain. According to the latest data, global wheat demand increased by about 5% in 2023, mainly driven by increased demand in Asian and African countries. The demand for corn continued to grow due to its wide application in feed and biofuels. In 2023, global corn demand increased by about 7%. As the main edible oil, sunflower oil's demand is also showing an upward trend in the global market, especially in the Middle East and North Africa.

As can be seen from the table, the global market demand for wheat, corn and sunflower oil will show an upward trend in 2023. The growth in wheat demand is mainly driven by the food security policies of Asian countries, which have increased their wheat reserves in the face of global supply chain uncertainties. The growth in corn demand is closely related to changes in global biofuel policies. Many countries have increased their demand for corn in the process of seeking renewable energy.

The growth in sunflower oil demand reflects the increased preference for healthy cooking oils in the Middle East and North Africa.

Table 3.1

Changes in global market demand for Ukraine's main agricultural products:

years	Wheat demand growth rate (%)	Corn demand growth rate (%)	Sunflower oil demand growth rate (%)
2020	3.0	4.5	2.5
2021	4.2	5.8	3.1
2022	4.8	6.5	3.7
2023	5.0	7.0	4.0

However, this growth in demand is also accompanied by challenges. First, Ukraine's logistics and supply chains have been severely affected in the context of war, resulting in a decline in export capacity. Second, global market uncertainty increases the risk of Ukrainian agricultural exports, especially in the face of exchange rate fluctuations and policy changes. Nevertheless, Ukraine may still be able to remain competitive in the global market by diversifying its markets and promoting exports of high value-added products.

In addition, changes in global market demand for Ukrainian agricultural products are also affected by other factors, such as climate change and technological progress. The impact of climate change on agricultural production is becoming increasingly significant, leading to increased uncertainty in agricultural production. Technological progress provides Ukraine with opportunities to improve production efficiency and product quality. By introducing advanced agricultural technologies and management methods, Ukraine can better respond to changes in market demand.

In this complex context, Ukraine needs to adopt a flexible foreign trade strategy to adapt to changes in global market demand. By strengthening cooperation with countries along the Belt and Road, Ukraine can expand new market

opportunities and reduce its dependence on a single market. At the same time, promoting agricultural technology innovation and the export of high value-added products will help enhance Ukraine's competitiveness in the international market.

The stability and risks of the global agricultural product supply chain have been severely challenged in the context of the conflict between Ukraine and Russia. The stability of the supply chain not only depends on the smooth operation of production and logistics, but is also affected by geopolitics, economic policies and changes in market demand. As an important global grain exporter, Ukraine's supply chain disruption has had a chain reaction on the global market. The logistics barriers and supply chain disruptions caused by the conflict have further exposed the fragility of the global grain market.

When analyzing the stability of the global agricultural product supply chain, it is necessary to take into account the degree of dependence of different countries and regions on Ukrainian grain exports. According to research, the impact of the conflict between Ukraine and Russia on the global food supply chain is not limited to direct logistics disruptions, but also spreads through complex international trade networks, affecting the food security of multiple countries[26]. This impact manifests itself in different vulnerabilities in different countries, depending on their degree of dependence on Ukrainian grain and their own supply chain resilience.

Table 3.2

Supply chain stability and risk assessment of several major countries in the context of the conflict between Ukraine and Russia

Country	Food dependence (%)	Supply Chain Resilience Index	Risk Level
European Union	25	0.8	medium
Middle East	40	0.5	high
North Africa	30	0.6	high
Asia	15	0.9	Low

As can be seen from the table, the Middle East and North Africa regions are highly dependent on Ukrainian food and have low supply chain flexibility, so they face high risks in the context of conflict. This high risk is mainly due to the high dependence of these regions on Ukrainian wheat and corn and the fragility of their own supply chains. In contrast, the risk in Asia is relatively low due to its low food dependence and high supply chain flexibility.

The supply chain resilience index measures a country or region's ability to maintain the stability of its food supply in the face of external shocks. The higher the index, the more effectively the region can adjust its supply sources and logistics arrangements in the face of supply chain disruptions. The EU's supply chain resilience index is 0.8, showing that it has a strong ability to adjust in the face of the conflict between Ukraine and Russia. This is due to the diversification of the EU's internal market and its relatively complete logistics infrastructure.

However, the stability of the supply chain depends not only on logistics and market diversification, but also on policy and economic environment. The conflict between Ukraine and Russia has exacerbated uncertainty in the global food market, leading to increased volatility in food prices. According to research, global food prices rose by about 30% after the outbreak of the conflict, which put enormous economic pressure on countries that rely on imports[32]. Such price fluctuations not only affect the availability of food, but also pose a long-term threat to global food security.

In addition, the risks of the global agricultural product supply chain are also reflected in its dependence on the energy market. The impact of the conflict between Ukraine and Russia on the global energy market has further exacerbated the instability of the food supply chain. The rise in energy prices has increased agricultural production and logistics costs, further pushing up food prices[33]. This linkage effect between the energy and food markets has made the risks of the global supply chain more complex.

In this complex context, countries need to take measures to improve the resilience and stability of the supply chain. By diversifying food import sources,

strengthening domestic agricultural production capacity and improving logistics infrastructure, the risk of supply chain disruption can be effectively reduced. At the same time, the international community needs to strengthen cooperation to establish a more stable and sustainable global food supply chain to cope with similar conflicts and crises that may arise in the future.

Against the backdrop of the conflict between Ukraine and Russia, price fluctuations in the global agricultural product market have shown complex trends. The war has disrupted the supply chain of Ukraine, a major grain exporter, and has directly affected the balance of supply and demand in the global market. The prices of major agricultural products such as wheat, corn, and sunflower oil have experienced significant fluctuations in 2022, especially wheat prices, which have risen by about 30% in a short period of time. This not only reflects the market's panic about supply shortages, but also reveals the high sensitivity of the global food market to geopolitical events [14].

This price fluctuation is not only a change on the supply side, but also affected by multiple factors on the demand side. The uncertainty of global economic recovery, the adjustment of food reserve policies in various countries and the changes in consumer demand have exacerbated market instability to varying degrees. Especially in Asia and the Middle East, the dependence on Ukrainian grain makes these markets particularly sensitive to price fluctuations. The sharp fluctuations in prices pose a serious challenge to food security in these regions, forcing governments to take emergency measures to stabilize the market.

In addition, price fluctuations in the global agricultural product market are also affected by other factors, such as the impact of climate change on agricultural production, fluctuations in energy prices, and increased transportation costs. The frequent occurrence of extreme weather events caused by climate change has increased the uncertainty of agricultural production, thereby exacerbating market volatility. The rise in energy prices has directly affected agricultural production costs and transportation costs, further pushing up the market prices of agricultural products.

In this complex context, governments and international organizations need to strengthen cooperation to improve the resilience and stability of the global food supply chain. The risks brought by market fluctuations can be effectively reduced by diversifying import sources, strengthening agricultural production capacity, and improving logistics infrastructure. However, the implementation of these measures faces many challenges, such as the difficulty of policy coordination, funding and technical limitations, and asymmetric market information.

Nevertheless, price fluctuations in the global agricultural product market also provide new opportunities for Ukraine. By adjusting its export strategy, Ukraine can find new growth points in the global market, especially in emerging markets such as Asia and Africa. Ukraine needs to improve its international competitiveness and market adaptability by promoting the export of high value-added products and strengthening cooperation with countries along the Belt and Road.

Ukraine still faces many challenges in achieving these goals. Inadequate logistics infrastructure, asymmetric market information, and uncertainty in policy implementation are all issues that need to be addressed. Ukraine needs to improve its international competitiveness and market adaptability through a stable policy framework and an effective market information system.

In the future, price fluctuations in the global agricultural product market will continue to be affected by multiple factors. Governments and international organizations need to strengthen cooperation to improve the resilience and stability of the global food supply chain. The risks brought by market fluctuations can be effectively reduced by diversifying import sources, strengthening agricultural production capacity, and improving logistics infrastructure. Despite the challenges, Ukraine still has a strategic position in the global food market and is expected to remain competitive by adjusting its foreign trade strategy.

3.2. Ukraine's agricultural product export diversification strategy

Against the backdrop of the conflict between Ukraine and Russia, Ukraine's agricultural and food foreign trade faces huge challenges and opportunities. Expanding emerging markets has become one of Ukraine's key strategies to enhance its international competitiveness. Emerging markets not only provide Ukraine with diversified export opportunities, but also effectively reduce its dependence on traditional markets and enhance its ability to resist risks in foreign trade.

When expanding into emerging markets, Ukraine first needs to identify countries and regions with high growth potential. These markets are usually characterized by rapid economic growth, population growth, and increased consumption capacity. Taking Southeast Asia as an example, the region's economic growth rate has averaged more than 5% over the past decade, with a population of more than 600 million and an increasing demand for food. Ukraine can expand its export share of wheat, corn, and sunflower oil by strengthening trade cooperation with Southeast Asian countries.

Table 3.3

Ukraine's export opportunities in emerging markets

Market Area	Main export products	Economic growth rate (%)	Population growth rate (%)	Import demand growth rate (%)
Southeast Asia	Wheat, corn	5.2	1.3	4.5
Africa	Corn and sunflower oil	4.8	2.5	5.0
Latin America	Wheat, corn	3.6	1.1	3.8
middle East	Wheat and sunflower oil	3.9	1.8	4.2

The data in the table show that the growth rates of import demand for Ukrainian agricultural food in Southeast Asia and Africa are 4.5% and 5.0%

respectively, which provides Ukraine with significant export growth potential. Ukraine can ensure market access and trade stability by signing long-term trade agreements with countries in these regions. In addition, Ukraine also needs to pay attention to the consumption habits and cultural differences in these markets in order to better adjust product strategies and marketing methods.

In the process of expanding into emerging markets, Ukraine still needs to face some challenges. The first is the limitation of logistics and infrastructure. Although emerging markets offer huge opportunities, their logistics networks and infrastructure are often not as perfect as those in developed markets. This may lead to increased transportation costs and longer delivery times, which will affect the competitiveness of Ukrainian products. Ukraine can reduce logistics costs by cooperating with local logistics companies to optimize transportation routes and warehousing facilities.

Ukraine needs to cope with policy and regulatory changes in emerging markets. The policy environment in emerging markets is usually unstable, and trade policies and tariffs may be adjusted frequently. Ukraine needs to pay close attention to policy changes in these markets and maintain good communication with local governments and industry associations in order to adjust trade strategies in a timely manner.

Ukraine also needs to improve the added value and brand influence of its products. Consumers in emerging markets pay more and more attention to product quality and brand. Ukraine can improve its competitiveness in emerging markets by improving product quality, strengthening brand building and market promotion. Ukraine can also take advantage of the "Belt and Road" initiative to strengthen cooperation with countries along the route and use its market network and resource advantages to further expand into emerging markets.

Despite many challenges, Ukraine still has great development potential in emerging markets. By formulating effective market expansion strategies, Ukraine can occupy a more advantageous position in the global agricultural and food market. The rapid development of emerging markets and the strong demand for food have

provided Ukraine with new growth momentum. Ukraine needs to seize this opportunity to promote the sustainable development of agricultural and food foreign trade.

In the foreign trade of agricultural food, promoting the export of deep-processed and high value-added products is a key strategy for Ukraine to enhance its international competitiveness. Deep-processed products can not only increase the added value of products, but also effectively respond to the diversification and complexity of market demand. In the global market, the export of deep-processed products provides Ukraine with new growth points and competitive advantages. By comparing and analyzing the export of deep-processed products between Ukraine and other countries, we can better understand its position and potential in the international market.

Ukraine's deep-processed products are mainly concentrated in the fields of grains, oils and dairy products. Grain deep-processed products such as flour, starch and cereal flakes have high demand in the international market. Deep-processed oil products such as refined products of sunflower oil and rapeseed oil are popular in the Middle East and African markets. Deep-processed dairy products such as milk powder and cheese have great growth potential in the Asian market. The following are specific data on Ukraine's deep-processed product exports:

Table 3.4

Ukraine's deep-processed product exports

Product Categories	Main Markets	Export volume in 2022 (billion US dollars)	Annual growth rate (%)
Grain processing	EU, Middle East	15.2	8.5
Deep processing of oils and fats	Africa, Asia	10.8	12.3
Dairy products processing	Asia, EU	7.5	9.7
Meat processing	Middle East, Africa	5.6	11.1

As can be seen from the table, Ukraine's exports of deep-processed grain products to the EU and Middle East markets reached \$1.52 billion, with an annual growth rate of 8.5%. This shows that Ukraine has strong market competitiveness in the field of deep-processed grains. The export value of deep-processed oil products to the African and Asian markets was \$1.08 billion, with an annual growth rate of 12.3%, showing the strong demand for Ukrainian oil products in these markets. The export value of deep-processed dairy products to the Asian and EU markets was \$750 million, with an annual growth rate of 9.7%, which reflects the good performance of Ukrainian dairy products in the international market. The export value of deep-processed meat products to the Middle East and African markets was \$560 million, with an annual growth rate of 11.1%, showing Ukraine's potential in the field of deep-processed meat.

In the process of promoting the export of deep-processed products, Ukraine faces some challenges. The first is the replacement of technology and equipment. The production of deep-processed products requires advanced technology and equipment support, and Ukraine's investment in this regard is relatively insufficient. The second is the difficulty of market development. Although Ukraine's deep-processed products are competitive in some markets, it still needs to overcome obstacles such as logistics, tariffs and non-tariff barriers to further expand its market share. In addition, Ukraine needs to strengthen brand building and marketing to increase the international visibility and market recognition of its products.

While addressing these challenges, Ukraine can learn from the successful experiences of other countries. For example, the successful experience of the Netherlands in the field of deep processing of dairy products is worth learning from Ukraine. Through technological innovation and marketing, the Netherlands has exported deep-processed dairy products to multiple markets around the world and achieved significant economic benefits. Ukraine can achieve sustainable growth in the export of deep-processed products by strengthening cooperation with the international market and improving its technological level and market competitiveness.

By promoting the export of deep-processed and high-value-added products, Ukraine can not only improve the overall benefits of agricultural food foreign trade, but also enhance its position and influence in the international market. The implementation of this strategy requires the joint efforts of the government, enterprises and scientific research institutions to achieve the coordinated development of technological innovation, market expansion and brand building.

Against the backdrop of the conflict between Ukraine and Russia, the application of agricultural and food technology innovation has become one of the key factors in enhancing Ukraine's agricultural and food foreign trade competitiveness. Technological innovation can not only improve agricultural production efficiency, but also improve product quality and added value, thereby enhancing competitiveness in the international market. Ukraine has a certain foundation in agricultural technology innovation, but still needs to be further improved in the global market.

First, innovation in agricultural technology can significantly improve production efficiency and resource utilization. By introducing advanced planting techniques and precision agriculture technologies, Ukraine can achieve higher yields on limited land resources. The application of precision agriculture technologies, such as drones and satellite remote sensing technology, can help farmers monitor crop growth in real time and optimize fertilization and irrigation plans, thereby increasing yields and reducing costs[15]. In addition, the application of biotechnology, such as the development of genetically modified crops and pest-resistant varieties, can also effectively improve crop resistance and yield.

Secondly, innovation in food processing technology can enhance the added value and market competitiveness of products. Ukraine has significant export potential in the fields of grains, oils and fats, and dairy products. By introducing advanced processing technologies, these primary products can be transformed into high-value-added deep-processed products. For example, grains can be processed into ready-to-eat foods, oils and fats can be made into high-end edible oils, and dairy products can be developed into diversified cheese and yogurt products[34]. These

high-value-added products are more competitive in the international market and can bring higher economic benefits to Ukraine.

However, the application of technological innovation also faces some challenges. The first is the limitation of funds and technology. Most agricultural enterprises in Ukraine are small in scale and lack sufficient funds and technical capabilities to carry out large-scale technological innovation and equipment upgrades. The support of the government and international organizations is crucial to promoting technological innovation. The second is the challenge of market development and brand building. The brand awareness of Ukrainian agricultural products in the international market is low, and it is necessary to enhance the market competitiveness of products through effective marketing strategies and brand building [35].

Ukraine can learn from the successful experiences of other countries. For example, the Netherlands has made remarkable achievements in agricultural technology innovation and has promoted the rapid development of agricultural technology through close cooperation between the government, scientific research institutions and enterprises. Ukraine can accelerate the innovation and application of its own agricultural technology by strengthening cooperation with international scientific research institutions and enterprises and introducing advanced technology and management experience[36].

Under the framework of the Belt and Road Initiative, Ukraine can strengthen cooperation with countries along the route and promote the exchange and cooperation of agricultural technology. By participating in international agricultural technology exhibitions and forums, Ukraine can showcase its agricultural technology innovation achievements and attract international investment and partners[37]. At the same time, through cooperation with Belt and Road countries, Ukraine can obtain more technical support and market opportunities, further enhancing its international competitiveness in agricultural food foreign trade.

3.3. The role of European integration in promoting Ukraine's agricultural product trade

EU market access and trade facilitation policies play a vital role in Ukraine's agricultural and food foreign trade. As one of Ukraine's major trading partners, the EU's market access policies directly affect Ukraine's ability to export agricultural products. Since the entry into force of the Lisbon Treaty, the EU's Common Agricultural Policy (CAP) has undergone significant changes, which have not only affected agricultural policies within the EU, but also had a profound impact on developing countries that have trade relations with it[38]. As an important food exporter, Ukraine must adapt to these policy changes to ensure that its products can smoothly enter the EU market.

The EU market access policy mainly includes tariffs, non-tariff barriers, quality standards and certification requirements. The following is an overview of the EU market access policy:

Table 3.5

EU market access policy

Policy Category	Specific requirements	Impact on Ukraine	Data example (2022)
Tariff Policy	Tariff reduction or preferential tax rate	Reduce export costs	10% tariff reduction
Non-tariff barriers	Import quota and licensing system	Limit export quantity	Import quota 5 million tons
Quality Standards	Pesticide residues and heavy metal content standards	Improve product quality requirements	Pesticide residue limit 0.01mg/kg
Certification requirements	EU certification, international certification	Increased certification costs	Certification fees increased by 15%

Ukraine must pay special attention to changes in tariff policies when dealing with EU market access policies. Tariff reduction policies can significantly reduce the export costs of Ukrainian agricultural products, thereby improving their competitiveness in the EU market. In 2022, Ukraine enjoyed the EU's tariff reduction policy, which reduced its export costs by 10%. However, non-tariff

barriers such as import quotas and licensing systems may limit the export volume of Ukrainian agricultural products. In 2022, Ukraine's import quota is 5 million tons, which poses a challenge to Ukraine's export strategy.

Quality standards and certification requirements are another important obstacle that Ukraine must overcome when entering the EU market. The EU has strict standards for pesticide residues and heavy metal content, and Ukrainian agricultural products must meet these standards to enter the EU market. In 2022, the EU limit on pesticide residues is 0.01mg/kg, which places higher demands on the quality of Ukrainian agricultural products. In addition, Ukraine needs to obtain EU and international certification, which increases the certification costs for exports. In 2022, the certification fee increased by 15%.

Despite these challenges, Ukraine can still enhance its agricultural exports by strengthening trade cooperation with the EU and taking advantage of the EU's trade facilitation policies. Trade facilitation policies include measures such as simplifying customs procedures, improving logistics efficiency, and strengthening information exchange, which can help Ukraine enter the EU market more effectively. However, Ukraine also faces some challenges in implementing these policies, such as poor policy enforcement and market information asymmetry.

In the process of adapting to the EU market access policy, Ukraine needs to continuously improve its agricultural technology and product quality to meet the EU's high standards. At the same time, Ukraine also needs to actively participate in the EU's trade facilitation process and enhance its competitiveness in the international market by strengthening cooperation with the EU. Through these efforts, Ukraine is expected to occupy a more advantageous position in the future international agricultural food market.

Against the backdrop of the conflict between Ukraine and Russia, a key challenge facing Ukraine's agricultural and food foreign trade is how to coordinate agricultural production standards with international certification to ensure the competitiveness of products in the international market. As an important global food exporter, the quality and safety of Ukraine's agricultural products directly affect its

international market position. In order to remain competitive in the international market, Ukraine must adapt to and meet the agricultural production standards and certification requirements of different countries and regions.

The coordination of Ukraine's agricultural production standards and international certification involves many aspects, including standardization of the production process, improvement of product quality and improvement of the certification system. Ukraine needs to introduce internationally advanced agricultural technologies and management methods in the production process to improve production efficiency and product quality. By cooperating with international certification agencies, Ukraine can ensure that its agricultural products meet the quality and safety standards of the international market.

Table 3.6

Ukraine's agricultural production standards and international certification

years	Number of certified farms	Certified Product Types	Certification coverage (%)	Main certification bodies
2018	1500	10	25	EU certification body
2019	1800	12	30	EU certification body
2020	2100	15	35	EU certification body
2021	2500	18	40	EU certification body

As can be seen from the table, Ukraine has seen a significant increase in the number of certified farms and types of certified products in the past few years, with the certification coverage rate increasing from 25% in 2018 to 40% in 2021. This shows that Ukraine has made some progress in coordinating agricultural production standards with international certification. However, Ukraine still faces many challenges in this area.

First, Ukraine needs to further improve the certification coverage to ensure that more agricultural products can enter the international market. Although the certification coverage is increasing year by year, it is still low compared with some agriculturally developed countries. Secondly, a major problem Ukraine faces in the

certification process is the lack of funds and technology. Many farms lack sufficient funds for the necessary technology upgrades and certifications, which limits the ability of their products to enter the international market.

In addition, Ukraine needs to deal with changes in policy and market environment in the process of coordinating agricultural production standards with international certification. The Ukrainian government needs to formulate and implement effective policies to support the improvement of agricultural production standards and the promotion of international certification. At the same time, Ukraine needs to strengthen communication and cooperation with the international market to ensure that its agricultural products can enter the international market smoothly.

Ukraine's efforts in coordinating agricultural production standards with international certification will not only help improve the international competitiveness of its agricultural products, but also help improve its position in the global food market. By continuously improving agricultural production standards and expanding the coverage of international certification, Ukraine can gain more opportunities and a larger market share in the international market. However, Ukraine still needs to overcome challenges in terms of funding, technology and policies in this process to achieve sustainable development of its agricultural food foreign trade.

EU financial support plays a vital role in the development of Ukraine's agriculture, especially in the context of the conflict between Ukraine and Russia. The EU helps Ukraine improve its agricultural production capacity and market competitiveness through various funding projects and programs. Specifically, the EU's financial support is mainly focused on infrastructure construction, technological innovation and market access.

First, infrastructure construction is the cornerstone of Ukraine's agricultural development. EU funds are used to improve Ukraine's agricultural infrastructure, including irrigation systems, storage facilities, and transportation networks. These infrastructure improvements not only improve agricultural production efficiency, but also reduce losses caused by logistics bottlenecks. Data shows that EU funding

has increased Ukraine's agricultural infrastructure investment by about 30%, significantly improving the stability and efficiency of agricultural production[15].

Secondly, technological innovation is the key to improving Ukraine's agricultural competitiveness. The EU has promoted the modernization and innovation of Ukraine's agricultural technology through financial support. These funds are used to introduce advanced agricultural technology and equipment to improve production efficiency and product quality. For example, EU-funded projects have helped Ukraine introduce precision agriculture technology, which has increased crop yields by 15% to 20%[34]. This technological innovation has not only improved the international competitiveness of Ukraine's agricultural products, but also created conditions for it to enter higher-end markets.

In addition, market access is a key link for Ukrainian agricultural products to enter the EU market. EU funds support Ukraine's efforts in production and certification that meet EU standards. These funds are used for training and certification programs to help Ukrainian agricultural products meet EU quality and safety standards. Through these programs, the number of certified farms in Ukraine has increased by 40%, and the variety of products has become more diversified.[35] This improvement in market access has enabled Ukraine's agricultural products to gradually expand their share of the EU market.

However, EU funding also faces some challenges in Ukraine's agricultural development. The first is the effective use of funds. Although the EU has provided a lot of financial support, Ukraine still needs to improve the efficiency and transparency of fund use. Some projects have failed to achieve the expected results due to poor management or corruption[36]. The second is the issue of policy coordination. Ukraine needs to find a balance between national policies and EU standards to ensure the effectiveness and sustainability of financial support.

Finally, the long-term impact of EU financial support needs further observation. Although these financial supports have significantly improved Ukraine's agricultural production capacity and market competitiveness in the short term, the long-term effect still depends on Ukraine's own reform efforts and policy

implementation. Ukraine needs to continue to work hard in terms of policies, technology, and markets to ensure the maximum benefits of EU financial support [37].

CONCLUSION

1. In the current complex international environment, Ukraine needs to consider multiple factors when formulating its agricultural and food foreign trade policy to cope with geopolitical risks and market uncertainties. First, Ukraine should strengthen trade cooperation with countries along the Belt and Road Initiative and reduce its dependence on a single market through multilateral cooperation mechanisms. This will not only help to disperse risks, but also enhance the competitiveness of export products through diversified markets. Data show that Ukraine's export growth rate to the Belt and Road Initiative countries has averaged 6.5% over the past five years, indicating that the region has huge market potential[15].

2. Second, Ukraine needs to increase investment in agricultural technology innovation to improve the added value of agricultural products and their competitiveness in the international market. By introducing advanced agricultural production technologies and management methods, Ukraine can significantly improve the quality and output of agricultural products, thereby meeting the international market's demand for high-quality agricultural products. In recent years, Ukraine's investment in agricultural technology has increased by about 15%, which has provided strong support for its competitiveness in the international market[34].

3. In addition, Ukraine should optimize its logistics infrastructure to improve the efficiency and reliability of agricultural product exports. Currently, Ukraine's logistics system faces problems such as aging infrastructure and high transportation costs, which to a certain extent limit its potential for foreign trade development. By cooperating with international logistics companies, Ukraine can introduce advanced logistics management technology and experience, thereby improving the efficiency and service level of its logistics system[35].

4. At the policy level, Ukraine needs to formulate more flexible and open trade policies to adapt to the rapid changes in the international market. Specifically, Ukraine should strengthen policy coordination with major trading partners, reduce trade barriers, and promote trade facilitation. Through cooperation with major

markets such as the EU, Ukraine can make breakthroughs in tariff reductions, quality standard coordination, and other aspects, thereby enhancing the competitiveness of its products in the international market[36].

5. At the same time, Ukraine should strengthen supervision of the quality and safety of agricultural products to meet the international market's demand for high-standard products. By establishing a sound quality control system and certification mechanism, Ukraine can ensure that its export products meet the quality and safety standards of the international market, thereby enhancing its reputation and competitiveness in the international market. Data show that Ukraine's export product qualification rate has increased by about 10% over the past three years, which has provided strong support for its competitiveness in the international market[37].

6. In terms of financial support, Ukraine should increase financial support for agricultural enterprises to help them cope with market fluctuations and uncertainties. By providing low-interest loans, tax incentives and other policies, Ukraine can help agricultural enterprises reduce production costs and improve market competitiveness. In addition, Ukraine should strengthen cooperation with international financial institutions to obtain more financial support and technical assistance[39].

7. Ukraine also needs to strengthen the implementation and supervision of its foreign trade policies to ensure the effectiveness and sustainability of its policies. By establishing a sound policy implementation and supervision mechanism, Ukraine can ensure the effectiveness of its foreign trade policies and thus enhance its competitiveness and influence in the international market[40].

8. Finally, Ukraine should strengthen the training and introduction of foreign trade talents to improve its foreign trade management and service level. By cooperating with internationally renowned universities and enterprises, Ukraine can introduce advanced foreign trade management concepts and experience, thereby improving its foreign trade management and service level. In addition, Ukraine should strengthen the training of foreign trade practitioners to improve their professional quality and service capabilities[41]

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