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PROBLEMS OF ENSURING FOOD SECURITY IN THE CONTEXT OF GLOBALIZATION

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Abstract
Achieving food security and independence involves overcoming various risks and threats. The most probable and dangerous risks should be recognized: natural, weather and man-made; economic and industrial; innovative. Macroeconomic risks, including those related to the global market situation, as well as political risks of a national and global scale, have a strong impact on the agri-food complex. The most important aspects of food security are considered, the main criteria and measures for the formation of effective mechanisms for ensuring food security in the context of globalization.

Keywords: Food security, self-sufficiency, availability, access, utilization, stability.

Introduction

Food security is a state of the economy in which, on the one hand, food products are produced in quantities that meet scientifically established norms regardless of fluctuations in global markets, and on the other hand, conditions are created to meet consumption needs at medically recommended levels and to ensure stable supply of food products to the population. The main goal of ensuring food security is to supply production enterprises with raw materials and the population with food products regardless of internal and external negative factors. It is also necessary to ensure that the lack of foreign currency, imposition of embargoes by other countries, or price increases do not pose a threat to this security.

LITERATURE REVIEW

At the World Food Summit held in 1974, food security was defined as the presence of sufficient global reserves of essential foodstuffs to ensure stable growth of food consumption and to cover fluctuations in production volumes and prices.In 1996, the definition was expanded to state that “all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life”. In 2001, the concept of food security was further expanded to include not only material and economic, but also social access: “food security exists when all people, at all times, have physical, economic, and social access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life” [1].

In Uzbekistan, the priority direction in ensuring food security is to guarantee the availability and stability of food products, and to reduce the import of food resources, as well as goods and equipment for the agro-industrial complex from other countries. To this end, long-term strategies aimed at ensuring food security have been adopted and are being implemented. Among them are:

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- ✓ Presidential Decree No. PF-60 dated January 28, 2022, "Development Strategy of New Uzbekistan for 2022–2026";
- ✓ Strategy for the Development of Agriculture of the Republic of Uzbekistan for 2020–2030;
- ✓ Strategy for the Transition of Uzbekistan to a "Green" Economy for 2019–2030;
- ✓ Environmental Protection Concept of Uzbekistan until 2030;
- ✓ Concept for the Development of Uzbekistan's Water Sector for 2020–2030;
- ✓ Strategy for Solid Waste Management in Uzbekistan for 2019–2028 [2].

Furthermore, Presidential Decree No. PF-36 dated February 16, 2024, "On Additional Measures to Ensure Food Security in the Republic," sets the goal of increasing the production of high value-added food products by 1.5 times and doubling export indicators over the next five years to ensure food security and healthy nutrition in changing conditions [3].

RESEARCH METHODOLOGY

The object of the research is defined as the threats of an economic, industrial, and innovative nature arising from the globalization process and related to various aspects of human activity. The subject of the study is the processes of ensuring food security in the Republic. During the research, theoretical methods such as induction, deduction, generalization, and comparison were used, as well as typological analysis and synthesis of statistical data.

ANALYSIS AND RESULTS

The impact of globalization and the development of the world economy on food security is an undeniable and objective process. These factors directly affect the stability of national food systems, mechanisms for production and distribution, and the physical and economic accessibility of food for the population. Changes in global markets, trade policies, transport and logistics systems, and the macroeconomic environment play an important role in making strategic decisions related to food security. The negative impact of unhealthy diets and malnutrition on the global economy amounts to $3.5 trillion annually, or $500 per capita [4].

In 2024, the share of the population suffering from insufficient nutrition was 9.4%, affecting more than 757 million people. In 54 countries, a decline in household financial well-being has been observed. Populations in more than 20 countries are suffering from hunger, and in 12 countries, life expectancy has decreased. Every year, 20 million children are born with low birth weight in developing countries, 5 million children die due to malnutrition, and the rest suffer from various diseases. Globally, 3.1 billion people do not follow healthy eating guidelines.

According to analyses by the World Health Organization and the United Nations Development Programme, the hidden additional costs in Uzbekistan caused by reduced productivity due to undernourishment are 3.5 times higher, amounting to 7.3 trillion UZS.

In Uzbekistan, positive dynamics have been observed in the development of agriculture and the production of crop and livestock products. There has been significant growth in the production of meat, milk, eggs, grain, legumes, melons, vegetables, fruits, berries, grapes, and fish. Specifically, the gross agricultural output of the country increased by 18.5% over the past five years, reaching 467.6 trillion UZS in 2024. The average annual growth rate of gross production over the past five years was 103.5%.

Uzbekistan's agriculture sector continues to hold a leading position in the region: the volume of

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gross output surpasses that of Kazakhstan, Tajikistan, and Kyrgyzstan, reflecting its scale and strategic importance.

According to the World Bank, the added value per worker employed in agriculture in Uzbekistan is 4.4 times higher than the global average, demonstrating increased efficiency and productivity in the agricultural sector.

Despite the country's growing population, per capita production of major food products has steadily increased:

- ✓ Grain – 238.2 kg (+7.6% over 5 years)
- ✓ Potatoes – 100.0 kg (+8.7%)
- ✓ Vegetables – 322.7 kg (+6.1%)
- ✓ Fruits and berries – 88.0 kg (+7.4%)
- ✓ Grapes – 49.1 kg (+2.9%)
- ✓ Melons – 72.2 kg (+17.2%)
- ✓ Meat – 79.2 kg (+7.5%)
- ✓ Milk – 334.8 kg (+4.9%)
- ✓ Eggs – 236.9 units (+2.4%)

The consistent implementation of measures aimed at increasing the potential of the livestock sector, as well as systematic government support, have contributed to the growth of livestock numbers and the stable supply of animal products in the domestic market.

Thanks to the measures taken to develop the food industry, attract investment to the sector, and support export activities, the volume of food production has exceeded $6.1 billion, and annual exports have surpassed $510 million. In addition, over the past three years, the production of import-substituting food products of 75 types worth $289.9 million has been established, reducing the volume of food imports by 7.4%. The share of the food industry in the national industrial structure has increased from 14% to 16.6%.

Currently, out of the total 21.2 million hectares of pasture land in the country, 16.9 million hectares (79.5%) are in use, while the remaining 4.3 million hectares are part of the state forest fund and reserve lands [6]. According to geobotanical research conducted on 10.3 million hectares of pasture land up to 2023, 703,000 hectares (7.7%) have undergone degradation and have become unsuitable for agriculture.

More than 2.0 million hectares (65%) of irrigated land have humus levels below 1%, and 44% of the land is saline to varying degrees, including 14% that is moderately to severely saline. This negatively affects crop yields and the sustainable use of agricultural land.

Wheat Production and Import Trends in Uzbekistan Due to the expansion of areas sown with cereal crops (at the expense of reduced cotton fields) and a significant increase in crop yields, wheat production in Uzbekistan rose from 6.4 million tons in 2016 to 7.1 million tons in 2023. Despite these increases, 28% of wheat intended for domestic consumption is still imported due to the growing population. Today, per capita wheat consumption in Uzbekistan averages 244 kilograms per year, a figure significantly higher than in most countries.

In recent years, wheat flour imports have declined—by 70% in 2019–2020 compared to 2011–2012—while grain purchases have increased due to the rise in the number of local processing enterprises. On average, Uzbekistan imports around 3 million tons of wheat annually. This has allowed not only to meet domestic demand for high-quality wheat flour but also to export surplus

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volumes to neighboring countries, notably 970,000 tons to Afghanistan.

However, food imports have been growing faster than exports—food imports accounted for 20% of total food trade in 2022. Despite the positive trends in agriculture, there remains a mismatch between the level of agricultural production and market output, and the sector's economic capacity. This calls for a system of interrelated measures aimed at:

- ✓ effective resource management,
- ✓ cost optimization,
- ✓ income maximization,
- ✓ increased production profitability, and
- ✓ improved competitiveness.

Along with recent achievements, several issues still pose risks to sustainable and efficient use of natural resources. Addressing these challenges requires creating conditions for the introduction and implementation of resource-saving, innovative technologies.

Despite high self-sufficiency levels in staple foods, Uzbekistan continues to import high-tech products and raw materials. For many crops, yields are still 1.5–2 times lower than in developed countries. This gap is not only due to harsh climate conditions but also the relatively low level of technology, limited capacity, and other factors.

Uzbekistan's agricultural sector also depends on imported resources and investments. Disruptions in the supply of agricultural machinery and components, and a high dependency on imported seeds, create political, economic, and logistical risks for maintaining production levels, attracting new investments, and modernizing existing agro-industrial enterprises.

For an arid country like Uzbekistan, it is critical to implement land regeneration, rational land use, efficient water use, and water-saving technologies in agriculture.

Alternative Mechanisms for Ensuring Food Security National food security must be ensured through alternative mechanisms such as:

- ✓ strategic food reserves and commodity interventions,
- ✓ targeted social assistance programs.
- ✓ To guarantee food security, especially from the perspective of domestic demand, the following priorities should be established:
- ✓ creation of guaranteed reserves of essential food products;
- ✓ increased production of protein- and micronutrient-rich foods necessary for healthy diets—fruits, vegetables, melons, legumes, meat and dairy, and fish;
- ✓ development of local seed production for key crops;
- ✓ rational use of natural resources to support livestock feed reserves;
- ✓ improved indicators in global indices like the Global Food Security Index and Global Hunger Index;
- ✓ increased yields of key crops per hectare: wheat – 100 quintals, rice – 56.5 quintals, potatoes – 222 quintals, vegetables – 295 quintals, melons – 200 quintals, fruits and berries – 150 quintals, grapes – 180 quintals, oilseeds – 22 quintals;
- ✓ by 2030: intensive orchards should cover 110,000 hectares, intensive vegetable fields – 55,400 hectares, the share of forage crops – 15%, and the share of oilseeds – 5.7%;
- ✓ reduce the share of undernourished population relative to the total population.

This will allow Uzbekistan to ensure food security through the development of domestic seed

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and breeding materials for agriculture, livestock, poultry, fisheries, and beekeeping. Food Security and Public Health Achieving food security and implementing a healthy nutrition system will reduce food-related diseases and increase life expectancy across the population.

CONCLUSION AND RECOMMENDATIONS

In Uzbekistan's food security policy, the main priority is to ensure food availability while reducing dependency on imports of food resources and agro-industrial equipment. To ensure stability, it is necessary to establish strategic reserves using storage systems for critical food products, prevent the impact of natural and man-made disasters, and avoid disruptions in supply chains. Mechanisms must be put in place to ensure timely access to essential food items, especially for vulnerable groups.

For arid countries like Uzbekistan, the regeneration and rational use of land resources, efficient water usage, and introduction of water-saving technologies are crucial. Yields of many crops in Uzbekistan remain 1.5–2 times lower than in developed countries. This is not only due to climatic conditions, but also the lower technological level of production and insufficient capacity. It is necessary to create a unified system for identifying, assessing, managing, warning, and monitoring risks to food security.

Measures should be developed and monitoring systems established to ensure food security programs are supported by timely, reliable, and high-quality information for decision-making, analysis, and dissemination.

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