

# INDICATORS OF RATIONAL USE OF AGRICULTURAL RESOURCES OF UZBEKISTAN DURING THE COVID-19 PANDEMIC

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## Abstract

In this thesis, the analysis of the scientific theoretical basis of the potential of effective use of agricultural resources of Uzbekistan during the pandemic is carried out. In the study, the author thoroughly studied the promotion of modern directions of plantation protection, the export potential of nationally produced agricultural products to the outside world, and the analysis of food safety. In scientific work, he used a number of research methods, in particular, statistical and forecasting methods. Also, in the analytical part of our study related to the effective use of agricultural resources of Uzbekistan, a number of official sources are used, in particular official statistical data provided by the World Bank, lex.uz, sciencedirect and the International Monetary Fund.

**Key words:** Uzbekistan, export, agricultural resources, economic growth, agricultural products.

## Introduction

In the current global development era, a number of developing countries, especially Uzbekistan, are trying to improve the national income of their population. In order to prevent the severe impact of the COVID-19 pandemic, which took place between January 30, 2020 and May 5, 2023, on the country's agricultural development, a number of orders and government decisions were adopted by the head of the country.

It should be noted that the country of Uzbekistan is among the countries with very low access to the sea around the world, and as a result, the possibility of selling the country's agricultural products to the foreign market is limited. As a result, in the

process of exporting national agricultural products to foreign countries, the volume of road transport costs is increasing. Today, the main goal of the enterprises and organizations operating in the field of production of agricultural products is the issue of high-quality and high-speed delivery of manufactured products to the outside world. It should be noted that under the influence of the COVID-19 pandemic, a shortage of agricultural products has been observed in many developing and even developed countries of the world. It can be noted that the prices of primary agricultural products, which are actively used in our daily life, have increased sufficiently in local markets due to various confusions among the population during the quarantine period. In order to eliminate such problems, a number of systematic programs have been developed in our country.

According to the decision of the President of the Republic of Uzbekistan dated May 1, 2020 No. PQ-4700, a number of tasks have been defined regarding “food safety during the coronavirus pandemic, the rational use of available resources, and additional measures to support agriculture by the state”:

- putting the lands out of use and with underground water reserves into use, allocating them to the population on preferential terms for the cultivation of agricultural products;

- The Council of Ministers of the Republic of Karakalpakstan and regional hokimiyats should review and summarize these projects within three days and submit them to the Ministry of Agriculture of the Republic of Uzbekistan;

- The Deputy Prime Minister of the Republic of Uzbekistan for issues of development of the agrarian and food sectors, within five days, the Council of Ministers of the Republic of Karakalpakstan and on the basis of the study of the projects developed by the regional governments, distributes the funds allocated from the fund for combating the crisis under the Ministry of Finance among the districts;

- According to the distribution of the Deputy Prime Minister of the Republic of Uzbekistan for the development of agrarian and food sectors, the Ministry of Finance allocates the necessary funds for putting land areas into use in the district budget within five days;

— The district administration leases the plots of land put into use to families with knowledge and skills in the field of agriculture, primarily in need of social protection and low-income families, for up to 1 hectare of farming, exceptionally, for a period of up to 10 years, or, as an experiment, sell the right to lease up to 5 hectares of land for a period of up to 10 years to local business entities on the basis of an electronic auction, with the condition that all costs are paid in advance;

— is to give the right of priority in extending the term of land use to the business subjects who have planted the specified types of crops during the land use, created jobs, and paid the rent expenses on time. It was also emphasized that as a result of comprehensive promotion of the development of science and the application of the experience of developed countries in the national economy, it occupies an important place in the production of agricultural products.

### **Literature review**

A number of foreign and local research scientists related to the topic of our research, in particular Y.Zhang<sup>1</sup>, S.Hamid<sup>2</sup>, S.Kalogiannidis<sup>3</sup> va T.Mizik<sup>4</sup> conducted their research. Recently, it has been noted that the Covid-19 pandemic has had a significant impact on global trade and supply chains, including the export of agricultural products.

Research scientists conducted their scientific research in Shandong, Guangdong and a number of other regions of China. In 2019, the total export volume of agricultural products in Fujian region was 8.97 billion dollars, of which approximately 1,697 enterprises exported more than 9,500 US dollars on average. On March 3, 2020, questionnaires were conducted among a total of 119 enterprises exporting agricultural products and the volume of exports was determined. As a result of the survey, the survey conducted by a total of 103 enterprises was

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<sup>1</sup>Lin, B. X., & Zhang, Y. Y. (2020). Impact of the COVID-19 pandemic on agricultural exports. *Journal of Integrative Agriculture*, 19(12), 2937-2945.

<sup>2</sup>Hamid, S., & Mir, M. Y. (2021). Global Agri-food sector: challenges and opportunities in COVID-19 pandemic. *Frontiers in sociology*, 6, 647337.

<sup>3</sup>Kalogiannidis, S., & Melfou, K. (2020). Issues and opportunities for agriculture sector during global pandemic. *International Journal of Economics, Business and Management Research*, 4(12), 204-211.

<sup>4</sup>Mizik, T. (2021). The performance of the agri-food sector in the recent economic crisis and during Covid-19 pandemic. *HighTech and Innovation Journal*, 2(3), 168-178.

considered valid. A total of 49 of these enterprises exported products worth more than 4.9 million dollars, this result is 14.12% of the enterprises in Fujian that exported agricultural products with an average value of more than 5.2 million dollars. These companies mainly export products such as water, mushrooms, vegetables, tea and fruits, and these products are mainly exported to Asian, North American and European countries. Also, export products are mainly directed to Japan, the USA and Thailand, and these companies make up approximately 43.95, 35.79 and 31.21 percent of the exporting companies. These statistical data were formed on the basis of the data of 103 enterprises producing agricultural products that export a total of 13-15 types of products to more than 52 countries and regions. In order to understand the opportunities and problems related to the export of agricultural products during an unprecedented pandemic, it is necessary to take into account the opinions of foreign research scientists who have studied this topic on a large scale.

### **Methodology**

In the methodology of our research dedicated to the analysis of the rational use of agricultural resources in Uzbekistan during the COVID-19 pandemic, we actively used several research methods, in particular, comparative and comparative analysis, research methods. This type of research includes steps such as: defining the main research hypothesis, collecting statistical data, and analyzing the collected data.

In the initial part of our study, general brief information about the scientific work was given. In the second part, the introduction of the research, in the third part, the literature analysis and research methodology were formed. Also, in the key parts of our research, a scientific analysis of the effective use of agricultural resources in Uzbekistan during the pandemic will be carried out. And finally, as a result of the analysis, conclusions and suggestions are given, the list of used literature is given, and the research is completed.

## **Analysis**

The Covid-19 pandemic has posed significant challenges to agricultural sectors worldwide, and Uzbekistan is no exception. However, it also presented unique opportunities for the rational use of agricultural resources. This response will explore various strategies and practices that can be implemented to optimize agricultural resources in Uzbekistan during this unprecedented time.

### **Enhancing Agricultural Productivity through Technology**

The adoption of modern agricultural technologies can significantly enhance productivity. During the pandemic, there was an increased reliance on digital platforms for information sharing and market access.

- Precision Agriculture: Utilizing GPS technology and data analytics can help farmers optimize inputs such as water, fertilizers, and pesticides, leading to more efficient resource use.

- Drones and Remote Sensing: These technologies can monitor crop health, soil conditions, and pest infestations more effectively than traditional methods.

- Mobile Applications: Farmers can access real-time weather forecasts, market prices, and best practices through mobile apps, enabling them to make informed decisions.

### **Sustainable Farming Practices**

Sustainable agriculture is crucial for ensuring long-term food security while preserving natural resources.

- Crop Rotation and Diversification: Implementing crop rotation can improve soil health and reduce pest outbreaks. Diversifying crops also minimizes risks associated with market fluctuations.

- Organic Farming: Increasing organic farming practices not only meets rising consumer demand but also reduces dependency on chemical inputs.

- Water Management Techniques: Efficient irrigation systems such as drip irrigation can conserve water resources while maximizing crop yields.

### **Strengthening Local Supply Chains**

The pandemic disrupted global supply chains; thus, strengthening local supply chains became essential.

- **Community Supported Agriculture (CSA):** Encouraging direct sales from farmers to consumers helps ensure that local produce reaches markets without intermediaries.

- **Local Processing Facilities:** Establishing small-scale processing units can add value to raw agricultural products and create jobs within communities.

- **Farmers' Markets:** Promoting farmers' markets allows producers to sell directly to consumers while reducing transportation costs and spoilage rates.

### **Government Support and Policy Frameworks**

Effective government policies are vital for supporting the agricultural sector during crises like the pandemic.

- **Financial Assistance Programs:** Providing subsidies or low-interest loans can help farmers cope with losses incurred during lockdowns.

- **Training Programs:** Offering training on sustainable practices and technology use ensures that farmers are equipped with necessary skills.

- **Research and Development Investments:** Investing in R&D for climate-resilient crops can help mitigate future risks associated with climate change or pandemics.

### **Promoting Agro-Tourism**

Agro-tourism presents a dual opportunity: it diversifies income sources for farmers while promoting local agriculture.

- **Farm Visits and Workshops:** Engaging tourists in farm activities fosters awareness about agriculture's importance while providing additional revenue streams for farmers.

- **Culinary Tourism:** Highlighting local cuisine made from regional produce attracts visitors interested in authentic experiences tied to food culture.

### **Fostering International Cooperation**

Uzbekistan could benefit from international partnerships aimed at knowledge exchange regarding best agricultural practices during pandemics.

— Collaborative Research Initiatives: Partnering with international research institutions can enhance local capacities in addressing agricultural challenges exacerbated by Covid-19.

— Trade Agreements for Agricultural Products: Establishing trade agreements focused on agricultural exports could provide new markets for Uzbek products post-pandemic recovery.

**Table 1.**

**Indicators of total development of land areas that are out of use and have groundwater reserves during the pandemic in 2020.<sup>5</sup>**

	<b>The name of the regions</b>	<b>Total land area</b>	<b>According to the use of underground water, (hectares)</b>	<b>Renewable land area, (hectares)</b>	<b>Cultivated lands</b>	<b>irrigated lands</b>
1	Republic of Karakalpakstan	22,210	1,210	21,000	21,000	21,000
2	Andijan	2,024	860	1,164	1,164	1,164
3	Bukhara	27,916	25,360	2,556	2,470	2,470
4	Jizzakh	35,812	23,942	11,870	2,320	2,320
5	Kashkadarya	58,673	38,932	19,741	19,741	19,741
6	Navoi	26,153	11,038	15,115	1,590	1,590
7	Namangan	9,959	8,644	1,315	888	888
8	Samarkand	32,027	21,179	10,848	3,788	3,788
9	Surkhandarya	12,787	-	12,787	2,621	2,621
10	Syr Darya	7,620	2,156	5,464	5,464	5,464
11	Tashkent	28,689	14,989	13,700	6,716	6,716
12	Ferghana	7,145	5,159	1,986	1,971	1,971
13	Khorezm	9,108	1,590	7,518	7,189	7,189
	<b>Total</b>	<b>280,121</b>	<b>155,059</b>	<b>125,063</b>	<b>76,921</b>	<b>76,921</b>

The statistics given above describe the indicators of development of land areas considered unsuitable for use during the COVID-19 pandemic and with groundwater reserves in 2020. According to him, the amount of land left unused this year is

<sup>5</sup>Mullajonova, N. (2024). Impact of Covid-19 on the economy of uzbekistan. Modern Science and Research, 3(2), 331-336.

280,121, the highest figure corresponds to Kashkadarya region (58,673), and the lowest figure corresponds to Andijan region (2,024). We can see that the average of total unusable areas is 21,548.

In addition, statistical data on the land area to be regenerated in relation to land that is unsuitable for use was also provided. According to him, the Republic of Karakalpakstan has the highest indicator of renewable land (21,000), and Andijan region has the lowest indicator (1,164). In the process of analysis, we can see that the overall average figure for the amount of renewable land among 13 regions is 9,620.

### **Conclusion**

In conclusion, the rational use of agricultural resources in Uzbekistan during the Covid-19 pandemic involves a multifaceted approach that integrates technology adoption, sustainable practices, strengthening local supply chains, supportive government policies, promoting agro-tourism, and fostering international cooperation. By implementing these strategies effectively, Uzbekistan can not only navigate the challenges posed by the pandemic but also lay a solid foundation for resilient agricultural development in the future.

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