

#### FACTORS OF INTENSIVE DEVELOPMENT OF AGRICULTURE IN ENSURING FOOD SECURITY

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## Annatation

Among the global problems, the problem of food security has a leading position, and in order to solve this problem, intensive development of agriculture is urgent. The article presents scientific and analytical information on the development of agriculture in the Republic of Uzbekistan, regions and regions in order to eliminate the problem of food security.

**Keywords:** Global problem, food security, agriculture, consumption rate, agroclimatic resource, land, water.

## Introduction

In the process of globalization of the world economy, some of the existing problems are distinguished by their global nature. This process represents the formation of a completely new economic, social-political, natural-biological global environment, and at the same time, the existing national and regional problems are turning into global problems. The problem of food security, which is currently seen as the basis of global problems, existed in ancient and medieval times, but it was not emphasized in the literature. This problem was first highlighted by the Brazilian scientist Jose de Castro in the 50s of the 20th century in his book "Geography of Famine" [1].

### **Analysis and Results**

In 2020, between 720 million and 811 million persons worldwide were suffering from hunger, roughly 161 million more than in 2019. Also in 2020, a staggering 2.4 billion people, or above 30 per cent of the world's population, were moderately or severely food-insecure, lacking regular access to adequate food. The figure increased by nearly 320 million people in just one year. Globally, 149.2 million children under 5 years of age, or 22.0 per cent, were suffering from stunting (low height for their age) in 2020, a decrease from 24.4 per cent in 2015 [10].

The difference between the rapidly increasing population of the earth and the limited possibilities of growth of food production volume is the main reason why the problem of solving the food program is becoming more acute every year [2]. Therefore, the dynamics of agricultural production must be directly proportional to the growth of the



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population. In the desert region of Kashkadarya region, where almost all of the agricultural land is irrigated by the Amudarya, which is transboundary, agriculture is specialized in cotton, grain and animal husbandry. , 40.1 kg of fruit, 91 kg of meat, 348.5 kg of milk, 105.7 eggs were grown (table). Potatoes, fruits and eggs grown in the region are below the recommended annual consumption per person.

In Lower Surkhandarya region, per capita, grain is 433 kg, potatoes 75 kg, vegetables 399 kg, fruit 44 kg, meat 70 kg, milk 341 kg, and eggs 163. Fruits and eggs do not meet the requirements according to the established standard. From the administrative districts of Muzrabot, Termiz and Qizirik, potato growing and fruit growing are almost in all districts, and egg growing does not meet the requirements of the consumption norm in the rest of the districts, except for Termiz district. Agricultural products in Surkhandarya region are fruits and eggs, and in Kashkadarya region, potatoes, fruits and eggs are not at the level of demand. The consumption of fish and fish products is almost 30 times less than the level of demand (13.4 kg per year), including 0.4 kg of fish per capita in Surkhandarya region in 2022, and 0.6 kg in Kashkadarya (in the republic, this indicator is 0.9 kg constitutes).

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Agricultur	Recom-	Surkhandarya region				Kashkadarya region			
al product	mended	High	Mediu	Lower	by	High	Mediu	Lower	by
	standar	distric	m	distric	region	distric	m	distric	region
	d	t	district	t		t	district	t	
wheat	128,4	193	205	433	295	184	309	609	353
potatoes	54,6	102	83	75	87	125	20	28	51
vegetable	109,2	382	261	399	363	241	120	162	159
fruit	65,9	73	52	44	56	59	27	40	38
meat	46,1	58	74	70	66	51	93	91	75
milk	156,3	290	314	341	318	270	308	348	317
egg	295	50	106	163	107	67	107	105	95
fish	13,4				0,4				0,6

1.Table Cultivation of agricultural products in the agrogeographic regions of Southern Uzbekistan (2022, kg/capita)

The table was compiled by the author based on the data of Surkhandarya and Kashkadarya regional statistical offices.

In order to ensure the implementation of the decision of the President of the Republic of Uzbekistan No. 273 (June 7, 2027) "On additional measures to effectively organize the implementation of the tasks specified in the strategy for the development of agriculture of the Republic of Uzbekistan for 2020-2030". In this case, it was justified to carry out structural changes in agricultural specialization taking into account the geographical factors affecting the development of the sector and territorial organization - agroclimate, the state of provision of land and water resources, the



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increase in the consumption level of the population, and it was suggested to optimize the composition of cultivated areas [5, 8, 9].

In particular, taking into account agro-climatic factors - the high sum of effective temperatures in the area, the length of the growing season, the high sum of temperatures during the growing season, a scheme for placing vegetable crops harvested 2-3 times a year was proposed. From the factors of regional organization of agricultural land use and the level of land resource use - the fact that arable land is fully irrigated land, the main characteristics of soil types, the level of provision of irrigated land with collector-drainage networks, the quality assessment of soil geographical differences based on the results of grouping by score credit and reclamation Farms with poor condition and unproductive soil type have been identified. Factors of the organization of water management and the use of water resources - taking into account the fact that water supply is carried out through the transboundary Amudarya river with the help of an artificial irrigation system, the high level of filtration, evaporation and technical wastage in irrigation systems, the useful work coefficient of irrigation systems and the regional aspects of the state of interfarm water distribution farms that are difficult to be supplied with water have been identified. Also, consumption factors of the population - geographic aspects of compliance of agricultural products grown per capita in the region with the average standard demand, as well as products that are not grown at the level of the standard demand (fruit, potatoes, eggs, fish) were identified and effective use of land freed from cotton in order to provide the population with these products recommendations were developed [4, 7, 9].

In 2025-2030, in order to create an economic geographic system that provides an effective solution to the problems of agricultural development and territorial organization of the republic, to determine the ways of intensive development of agriculture in the regional conditions in the future, as well as the near, medium and long-term state of the development of the sector, in 2025-2030, the main agricultural arable land, productivity, and gross yield forecast indicators were developed. According to these indicators, until 2030, the area under cotton cultivation will be reduced by 18-20 percent, the gross yield will decrease by 17-18 percent, and the yield will increase by 1-1.5 t/ha. Proposals have been made over the years to replace the reduced cotton fields with vegetables, nutritive crops, oilseeds, vineyards, and potatoes. Depending on the type of soil, melioration of irrigated land, availability of water resources and the needs of the population, vegetables, legumes, desert-pasture livestock (poaching) and meat-dairy livestock, which require 2 times less water than





cotton, will be fed with fodder. It is planned to expand sunflower areas from nutritious crops (alfalfa, corn, millet, beets), oil crops.

## Conclusion

The level and geography of the problems in the agricultural system in ensuring food safety are different, and the conditions for solving them are also different. Therefore, traditional approaches proven in scientific literature and practice, that is, a programmatic approach to problems, are of great importance in this regard. In this, the main problem - increasing the efficiency of agricultural development in the regions of Uzbekistan and improving its territorial organization - was considered in the section of several blocks (economic, social, ecological and organizational). In turn, in each block, different levels of problem or "problems" take place sequentially in a systematic way. The lowest problem or problem leads to the solution of the problem above it, and in this order the solution of the main problem is achieved.

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