

Structural Changes in the Fruit and Vegetable Industry and Their Importance in the Process of Agricultural Reform

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Abstract: The trend of global climate change and the growth of the world's population is to provide people with the needs of ecologically clean organic self-specific information, goods, services, etc. The problems of defining innovation development prospects of all structural areas are being focused on the priority level. For this reason, during the period from 2020 to 2025, the total amount of agricultural production in the world is 2.06 billion, and in 2024, the use of modern technologies in the first network has been allocated in the amount of 48,000 US dollars.

Keywords: Farms, perspective parameters, diversifying agriculture, economic reforms, agricultural products, export potential.

Structural reforms in agriculture in such directions as rational use of natural and climatic factors and resources, location and specialization of industries, selection of crops and their varieties in accordance with the climatic and soil conditions of the regions, their productivity, stable increase of income and profitability of farms are carried out not only at the national level, but also at the regional level. It is also of great importance in justifying the perspective parameters of socio-economic development. These problems are being solved, as the head of our state noted, "... our systematic work on diversifying agriculture, more rational use of land and water resources, and increasing the income of farmers by growing exportable products is gradually bearing fruit"¹.

As a result of the initial structural-organizational and economic reforms carried out in the agriculture of our republic:

- the legal-normative basis for keeping agricultural production in line with market relations and mechanisms was created;
- establishment of new economic entities in the agricultural sector, financing and insurance of their activities, a system of mutual settlements for agricultural products was developed and implemented;
- organizational and structural changes were made in agriculture, and a system of network management based on market principles was created;
- the cotton monopoly was put an end to, and the main attention was focused on placing and specializing high-income industries in accordance with regional conditions, and increasing the production of food products;
- the organization and improvement of ownership, including land relations, in accordance with the requirements of the free market, the legal and regulatory frameworks for the privatization of

¹ President of the Republic of Uzbekistan Sh.M. Mirziyoev's speech at the ceremony dedicated to the Day of Agricultural Workers Gov.Uz

properties have been developed, and the measures for their gradual introduction into life have been implemented and are being improved;

- the legal framework for the development of the cluster and cooperation system in the sector was developed in order to produce fruit and vegetable products in agriculture, ensure food safety and increase the volume of exports².

According to researches, today in our republic, 62.2% of agricultural products belong to peasant (private estate) holdings, 31.4% to farms and 6.4% to other enterprises. In order to further develop their activities, it is necessary to introduce facilities and incentive mechanisms. This process, in turn, requires the development of a system of "Green Economy" and "Smart Agriculture" based on optimal placement, specialization and digitization with extensive use of ICT. Currently, farms require the prospective development of our republic as an economic entity with the necessary resources in the field of grain and cotton production, which is of strategic importance. Therefore, the introduction of mechanisms to support and encourage them, as well as other economic entities, by the state creates the basis for the sustainable growth of the production of cotton, grain and other agricultural products (Table 1).

Based on the data of Table 1, it should be noted that in the course of the structural reforms implemented in the republic's agriculture, the share of fruit and vegetable products in the consumption basket of the population is growing at the same time as the development of agricultural industries. In this respect, another importance of the rational organization of interdependence and harmony of agricultural sectors is to ensure the perspective and efficiency of their development, and it creates a basis for directing less resources to other sectors and leads to a reduction in the cost of products.

According to the analysis, the ability to obtain marginal profit in the agricultural sector is also relatively high. If in the next five years, our country allocates 10-15 billion to agricultural industries. If investments equal to US dollars are attracted, it will be possible to increase the production volume of agricultural products by 1.5-2.0 times and to develop the activities of economic entities at the expense of domestic financial resources.

The following examples can be used to prove this. For example, if the income of 40 centners of wheat obtained from 1 hectare of land at world market prices is 800 dollars, then 1 hectare of land grown

The average price of 7-8 tons of grapes is 8 thousand dollars.

Table 1. Structural changes and main indicators of agricultural production in the republic in 2017-2022³

N	Indicators	Years:						2022 year. compared to 2017 (+), (-)
		2017	2018	2019	2020	2021	2022	
1.	Cultivated area, thousand ha	3474,5	3396.0	3309,4	3340,7	3396,1	3633,8	+159,3
2.	Composition of cultivated areas, %:	100,0	100,0	100,0	100,0	100,0	102,0	+2,0
	including: cereal crops	47,6	48,4	47,7	46,6	48,5	51,9	+4,3
	technical and other crops	45,4	43,7	44,1	44,9	43,6	46,7	+1,3
	vegetables	5,5	6,4	6,6	6,7	6,5	7,0	+1,5

²Decision No. PQ-52 of the President of the Republic of Uzbekistan dated December 15, 2021 "On measures to support the fruit and vegetable industry by the state, to further develop the cluster and cooperation system in the network"

³ Author's calculations based on the information of the State Statistics Committee of Uzbekistan.

	horticulture	1,5	1,5	1,6	1,8	1,8	1,9	+0,4
3.	Product production, thousand tons:							
	including: cereal crops	7288,5	6535,5	7437,8	7636	7634,6	8169,0	880,5
	cotton raw material	2853,9	2285,6	2691,7	2933,9	3064,0	3278,5	424,6
	vegetables	10219,9	9760,3	10251,1	10431,4	10850,2	11609,7	1389,8
	horticulture	2031,0	1837,0	2068,7	2134,4	2285,3	2445,3	414,3
	meat (live weight)	2286,8	2430,5	2473,6	2519,6	2635,1	2819,6	532,8
	Milk	10047,9	10466,4	10714,3	10967,9	11274,2	12063,4	2015,5

Also, according to calculations, if, for example, 300,000 hectares of grain are planted with high-yield crops, after 5 years, the export volume of agricultural and food products (goods) will increase to 10 billion. increasing to dollars. Taking into account the depletion of water sources, mineral fertilizers, fuel and the main means of land resources, increasing the export potential of the republic requires the expansion of land areas for the cultivation of vegetables, grapes, fruits, and sugar products and the introduction of modern technologies. Also, this, in turn, requires the effective use of land in cooperation between farmers and the promotion of crop rotation measures, the expansion of the areas of high-yielding and profitable crops (growing of fruits and vegetables, grapes, as well as fodder for livestock, etc.). Diversification of agricultural production by further expanding the scope of application of intensive factors in order to increase the productivity of this arable land requires to be considered as one of the main directions of prospective development of this sector. After all, it is worth noting that solving the problems related to this direction will create a solid foundation for expanding biodiversity, eliminating the negative effects of eco-mills, and diversifying the production of agricultural products (goods) based on market demand and supply.

From this point of view, in our opinion, in addition to traditional types of crops, the production of promising non-traditional high-income products (for example, pistachios, almonds, walnuts, etc.) it is advisable to pay serious attention to According to the analysis, in order to develop the production of scarce products such as pistachios, walnuts and almonds on an industrial basis, the development of special plantations working on the basis of modern technologies and the infrastructure of providing services suitable for their activities in the dry areas and in dry regions will help the fruit and vegetable industry in the export sector. It is important as the directions of the structural reforms being carried out in terms of development.

According to the calculations, "pistachio cultivation in the sub-mountain dry land is 50 times more profitable than wheat cultivation in these lands, while wheat cultivation is only 4.5% of the profit obtained from pistachio cultivation over the whole period. It is also possible to partially use the pistachio-planted mountain and sub-mountain areas as pastures. However, despite the progress achieved as a result of structural reforms in agriculture, as stated in the Decree No. PF-5134 "On measures to fundamentally improve the activities of the Ministry of Agriculture and Water Management of the Republic of Uzbekistan" adopted by the President of the Republic of Uzbekistan on August 4, 2017, there are still a number of unresolved problems in the field of agriculture and water management, which in turn have a negative impact on ensuring the sustainable pace and efficiency of the sector's development. In order to eliminate these negative situations, a number of structural changes were implemented in the following years.

In particular, as a result of agrotechnical measures and institutional changes implemented in the fruit and vegetable sector in the last 5 years, the production of products in the region increased, and the production of cotton raw materials decreased, and the food producing industries had a tendency to develop at a high rate.

In the decision of the head of our state dated May 11, 2020 "On additional measures for the specialization of the territories of the republic for the production of agricultural products" No.

indicators of specialization of certain regions have been developed. At the same time, from January 1, 2021 to January 1, 2023, seeds, seedlings and root crops, mineral fertilizers, chemical plant protection agents, modern energy-saving greenhouses and their components, imported drip irrigation systems are set to be exempted from customs duties.

In our opinion, the priority tasks for the placement and specialization of agricultural crops in the republic include: - rational placement of agricultural crops, especially vegetables, oilseeds, legumes and fodder crops, potatoes, orchards and vineyards based on intensive technologies in accordance with the soil and climatic conditions of the regions, soil fertility, availability of water resources, land reclamation condition, in-depth analysis of crop yields and other factors; - improvement of the mechanisms of efficient use of land and water resources on the basis of economy, application of the experiences of developed countries, as well as creation of legal conditions and guarantees that encourage the rational and effective use of these resources; - development and implementation of organizational and economic measures to reduce the shares of land with a low credit rating, as well as to improve the reclamation condition of arable land; - ensuring timely and high-quality planting of crops, implementation of agrotechnical measures in accordance with vegetation requirements of plants, as well as development and effective monitoring of measures for harvesting and selling products; - to choose high-yielding and early-ripening varieties of crops for farmers, peasant households and homestead land owners, to provide them with material and technical resources in a timely manner, to create favorable conditions for increasing their interest in the cultivation of agricultural products, etc.

It is known that in order to implement the above-mentioned priority tasks, starting from 2014, 150 mln. The project "Development of fruit and vegetable industry" is being implemented at the expense of dollar loan resources. In addition, at the end of 2017, 223 projects were financed in this area through local banks. At their expense, today, farmers, farmsteads and homestead landowners and agricultural enterprises are provided with financial support for the purchase of seedlings, the introduction of water-saving irrigation technologies (drip irrigation), cooling and processing equipment. Within the framework of these projects, support is provided to scientific and research institutes in the field of creating new technologies for growing, storing and processing fruit products, increasing professional knowledge in marketing and business.

According to the analysis, comparing the volume of manufactured products and exports, only 12-13% of the total manufactured products are exported, indicating the need to conduct research on the quality indicators of the grown products. In particular, in 2020, a total of 2813 thousand tons of fruits and berries were grown in our republic, of which 402.3 thousand tons, i.e. 14.3%, vegetables 13.9%, grapes 9.5% were exported. In 2022, the above indicators were 11.8%, 8.6%, 11.7%, respectively (Table 2).

Table 2. Changes in the quality, quantity, and value of fruit and vegetable products exported in our republic

Product name	2020 йил			2022 йил		
	total cultivated product, thousand tons	of which exports		total cultivated product, thousand tons	of which exports	
		quantity, tons	value, million US dollars.		quantity, tons	value, million US dollars.
Fruits and berries	2 813,0	402,3	353,9	3042,42	360	301,9
Vegetables	5515,32	768,3	400	10252,1	883,7	478,3
Grapes	1890,0	181,4	188,2	2728,5	318,9	280,1

Also, the agricultural and food products of Uzbekistan are currently gaining competitive advantages in

foreign markets, and this trend should be evaluated as an important positive change. In particular, the income from the export of fruit and vegetable products has increased dramatically in the last 5 years, and the export geography of this sector is expanding.

For example, in 2018, the main share of exports fell to the countries of Central Asia, and from 2020, the export of agricultural products to China, Turkey and other countries and further expansion of export markets was achieved. Already, consistently increasing the export potential of our republic, expanding its commodity and geographical composition, diversifying foreign trade and economic activities, as important directions of structural reforms in our national economy, in the future, achieving a quality change in agriculture, increasing its international competitiveness, and improving the well-being of the population creates.

Implementation of the above priority tasks, in our opinion, in the future, improvement of the distribution of land resources, effective use of arable land and, as mentioned earlier, the expansion of fertile and profitable arable land, restoration of land left out of production circulation, opening of new land, optimal placement of industries, regions and is directly related to the effectiveness of measures such as specialization of economic entities. Therefore, for example, in 2020, it is planned to plant agricultural crops on an area of 136 thousand hectares, and on an additional 63 thousand hectares, they will be planted in the main rows and between rows of gardens and vineyards, and by using underground artesian waters, it is planned to plant crops on 124 thousand hectares of land. In addition, by improving water supply in the republic, an additional 155,000 ha. 300 billion from the horticulture and viticulture fund for the development of dry lands. Soum funds were allocated.

According to FAO data, among the exporting countries of the world, Uzbekistan is the 2nd largest exporter of dried apricots, 4th largest exporter of fresh apricots, 7th largest exporter of plums, 8th largest exporter of cabbage, 9th largest exporter of raisins, 10th largest exporter of peaches and grapes. Relatively low production costs and high product quality have made it possible to increase the export of fresh, dried and processed fruits and vegetables in recent years⁴

Studies show that economically developed countries have their own programs and directions for organizing the export of fruit and vegetable products. For example, the following existing programs for supporting the export of agricultural products and food of the United States can be listed: Market Access program (Market Access program); foreign market development program (Foreign market development program); program for the development of the market economy in the transition period (Emerging Market program); program for showing samples of agricultural products to foreign buyers (Quality Samples Program); technical assistance program for export of⁵

Also, in the practice of our republic, since November 2018, legal entities were allowed to export fruits and vegetables without advance payment, without opening a letter of credit and without obtaining a license for wholesale trade, and mandatory customs inspection of exported fruit and vegetables was canceled, and since March 2019, fruits and vegetables it was allowed to export its products without a contract on the basis of an invoice in any amount⁶

In short, the structural reform and development of agriculture and all its sectors, the increase of export potential and the state support for providing the population with high-quality food products will create a solid basis for the development of this strategic sector in line with market competition in the future.

⁴ Adjustment of feasibility study. Project for the development of the horticultural sector in the Republic of Uzbekistan with the participation of the IBRD Book 1 Explanatory note Tashkent 2018 With. 76.

⁵ Foreign Agricultural Service, <http://www.fas.usda.gov>

⁶ Decree of the President of the Republic of Uzbekistan No. PF-5668 dated February 22, 2019 "On making changes and additions to some documents of the President of the Republic of Uzbekistan, as well as considering some of them as invalid", <https://lex.uz/docs/4212245>

Therefore, in solving these problems, it is important to research foreign experiences and introduce their advanced achievements into the fruit and vegetable industry of our republic.

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