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ECONOMIC-STATISTICAL ANALYSIS OF THE DEVELOPMENT OF THE FRUIT AND VEGETABLE SECTOR IN UZBEKISTAN

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ABSTRACT **DOI No: 10.36713/epra17939** **Article DOI: https://doi.org/10.36713/epra17939**

This article describes the current state and dynamics of the agricultural network of our republic, an economic and statistical analysis of the production of agricultural products in economic entities and promising directions. The activities of farms operating in our country were also carefully analyzed, and with the help of statistical methods, the role and importance of this industry in the development of the industry was revealed. Dynamic changes in statistical indicators of network development over the years are shown.

KEY WORDS: ***agriculture, agricultural products, gross domestic product, gross regional product, agriculture, livestock breeding, structural changes, investments, regional economy, economic and statistical analysis, agrarian reforms, socio-economic processes .***

INTRODUCTION

Scientific research is being carried out to study the issues related to food safety that have arisen in the world. Special attention is paid to the improvement of agriculture, in particular, the field of fruit and vegetable growing. But the fact that the increase in the volume of production of fruit and vegetable products on the world scale lags behind the growth of the population and their demands shows that this issue cannot find its scientific solution.

The occurrence of global instability in the world requires paying special attention to the study of problems related to food security and conducting extended scientific research in this regard. In these studies, development of the economic development strategy of the agrarian sector, ensuring the proportionality of the growth of the population and demands with the increase in the production volume of agricultural products, sustainable development of the agrarian sector, specialization of production processes, increasing the level of economic efficiency of economic entities through the use of modern innovative technologies and methods , comprehensive statistical research of the factors influencing their activity, ensuring their competitiveness appear as the priority areas of scientific research in this regard.

According to official statistics , the world population's demand for agricultural products has been growing by an average of 5-7% per year in the last 20 years [1]. In this regard, according to the experience of the European Union countries , as well as the USA, Israel , and Japan, economic development of the activities of farms specializing in the field , increasing their efficiency, introducing advanced innovations, developing special state programs through economic and statistical research of the field and their systematic formation, clustering of the field activities in modern forms have been effectively established.

In the development strategy of New Uzbekistan for the period of 2022-2026, it is also called "growing export-oriented products and developing fruit and vegetable growing, increasing the area of intensive gardens by 3 times and greenhouses by 2 times, increasing the export potential to 1 billion US dollars, by 2026, the volume of food products will be 7, "To 4 million tons, to raise the processing level of milk to 32%, meat to 25%, fruits and vegetables to 28%" [2].

Today, in the 2020-2030 strategy for the development of agriculture of the Republic of Uzbekistan, special attention is paid to the issues of supporting the development and diversification of entrepreneurship in the agricultural sector [3].

Important legal, organizational and economic measures are being implemented in our country for the development of forms of entrepreneurial activity within the framework of agrarian reforms. In particular, in the agricultural development strategy of the Republic of Uzbekistan for the period of 2020-2030, it is stated that the limited processing and packaging capabilities of the agricultural farms producing the main part of the exported fruits and vegetables lead to large losses, the seasonal sharp changes in prices and the instability of the market conditions also have a negative effect on their activities. shown [3].

Climate change, land degradation, water scarcity, pests and diseases, limitations in the market system, and existing labor shortages are major challenges facing agriculture today, requiring increased scientific research to develop the sector. In this regard, our scientific research presented in this article shows its incomparable importance.

The future development of the economy of Uzbekistan, including the fruit and vegetable sector, is directly related to the processes of globalization and integration into the world economy, and this integration is causing the problem of international competition. The tightening of the domestic demand of the country causes the fruit and vegetable producers to fall into a more complicated situation. As a result, product suppliers are competing with foreign competitors in two directions, i.e., to maintain their position in the domestic market, and to enter a new foreign market [4].

ANALYSIS OF LITERATURE ON THE SUBJECT

Agroeconomist scientists, describes the economic essence of cooperation as a relationship that ensures the common economic interests of different economic entities that independently combine their activities in the economic problems of developing the field of fruit and vegetable production and the development of the process of cooperation and integration in agriculture. The author emphasizes here that the main focus should be on serving the interests of independent entities entering into cooperative relations, not property.

This concept is thought by I.N. Buzdalov that "Cooperation is the joint activity of various economic entities, it combines personal, collective and social interests, and stimulates the creative work of individual people" [5].

In our opinion, the tariff given by A.I. Allakhverdiev on the economic essence of cooperation illuminates the issue more fully. In particular, the author specifies that "Agricultural cooperation is a form of joint economic activity of producers of agricultural products in one or more interrelated processes of labor and production, which allows to achieve results and economic benefits that are difficult to achieve separately" [6] . In addition, M.I. Tugan-Baranovsky, one of the mature economists, focused on the forms of cooperation and the social aspects of the cooperation process and interpreted it as a social movement. He put forward the opinion that it means "organizations of cooperative production and other economic activities based on the consolidation of share contributions by producers of agricultural goods in order to meet the material and other requirements of cooperative members" [7]. Agricultural economist R.H. Husanov studies the economic aspects of cooperation in his work. The main focus is on small producers, and the economic and social nature of cooperation is interpreted from the point of view of that time [8]. It is shown that the material and technical base of small individual farmers' farms is very weak, and the low level of marketability has led to the fact that farms operate more as a social entity than an economic one and is an obstacle to the process of cooperation. L.S. Mikulovich described in detail the nutritional value, chemical composition, quality and storage technologies of grains and legumes, fruits, vegetables, potatoes and dairy products [9].

A.F. Djafarov the chemical composition of fruits, vegetables, roots, and the biochemical processes occurring in the fruits during their storage are described in detail. Also, detailed information on storage methods and the effect of each method on fruit quality is given. By comparing these data with today's data, it will be possible to conclude about the changes in the development of science and practice and the survival of fundamental knowledge[10].

E.N. Mikheeva, M.V. Seroshtan the role of modern quality management in the delivery of products to end consumers, the evolutionary change of the forms and methods of product quality management, the management system in product quality management, audit, collection of product quality , certification issues are included within the requirements for products in storage and sales processes[11]. A.V. Litvinova's book "Upravlenie kachestvom prodovolstvennyx tovarov: theory, methodology, practice" contains the author's own reflections on the theoretical issues of quality management of agricultural products. The author described the systematic approach to quality management, which covers the issues of determining, storing and evaluating the quality of products in the processes of storage and marketing. He described the place and role

of food products in the socio-economic system of the country [12].

Among our local economists, Yo.Abdullaev[13] and N.Soatov[14] analyzed the theoretical aspects of economic-statistical analysis, T.Shodiev[15] analyzed the econometric models of agricultural network development theoretically and practically.

RESEARCH METHODOLOGY

During the research, methods such as analysis and synthesis, induction and deduction, statistical grouping, expert assessment, scientific abstraction, dynamic series, economic indices, statistical tables and graphs were widely used.

The activities of farmers and farms specializing in the cultivation of fruit and vegetable products in our republic were selected as the object of the research.

The purpose of the research is to grow fruit and vegetable products in our country and its regions, changes in them and the main analysis of trends using statistical methods, assessment of its impact on the country's economy, and development of scientific proposals and practical recommendations for future trends.

The practical significance of the research results is that, as a result of conducting a comprehensive statistical analysis of the development processes of the fruit and vegetable industry in our republic, their changes and trends, and evaluating their effectiveness, it expands the possibilities of making alternative management decisions and defining the main directions for the future.

ANALYSIS AND RESULTS

In our country, complex measures aimed at actively attracting funds from international financial institutions are being implemented to improve the fruit and vegetable sector, including significantly increasing the areas where fruit and vegetable crops are planted, storage and processing capacities, and the development of this industry.

Includes the value of fruits and berries, grapes, fodder crops, seeds and planting materials of all agricultural crops from the current year's harvest , as well as unfinished production in agriculture, other types of agricultural products

A farm is a farm that cultivates and sells agricultural products on a plot of land given to the head of the farm on the basis of the right of lifetime ownership or lease (secondary lease) based on the labor of members of the farm.

Farming is a labor activity related to the cultivation (processing) of agricultural products both for free trade and for family needs on private homestead land plots. Organizations carrying out agricultural activities are economic subjects with the right of a legal entity, which grow agricultural products, serve agricultural production, own land and other productive assets in the course of economic management[16].

Vegetables are one of the necessary products for providing the population with food products. Taking into account the growing population, it is necessary to ensure a constant increase in the volume of production of vegetable products. It is important to provide the population with vegetable products at the level required by medical standards and to maintain product quality. Changes in the volume of production of fruit and vegetable products depend primarily on the convenience of the farmer in the field of selling products and the stability of the level of demand in the market.

Today, these two factors are the main determinants. Because the main product can be grown on farms, which can ensure an increase in production even with a small investment. However, at the same time, problems in the field of product sales are a strong factor leading to a sharp decrease in product volume.

Dynamic changes in some macro-economic indicators of our country are important in researching aspects of interconnection in network development. According to the end of 2023, the volume of GDP of the Republic of Uzbekistan at current prices is 1,066,569.0 billion amounted to soums and increased by 6.0% compared to 2022. The GDP deflator index was 112.2% compared to 2022 prices. In 2023, agriculture, forestry, and fishing sectors will contribute 1.0 p.p., industrial sector - 1.5 p.p., construction sector - 0.4 p.p. and service network 2.6 f.p. made a positive contribution. Due to the increase in net taxes on products, GDP increased by 0.5 p.p. increased to The volume of gross added value created in all sectors of the economy made up 94.5% of the total volume of GDP and grew by 5.9% (the impact on the absolute growth of GDP was 5.5 percentage points). The share of net taxes on products in GDP was 5.5% and increased by 7.4% compared to 2022 (impact on absolute GDP growth – 0.5 p.p.). Also, according to the results of 2023, small changes were observed in the structure of GDP. The share of the services sector in GDP (GDP) increased from 41.6% to 43.4%. At the same time, the share of agriculture, forestry and fisheries decreased from 24.9% to 24.3%, the share of industry decreased from 27.0% to 26.1%, and the share of the construction sector decreased from 6.5% to 6.2%.

According to the results of 2023, in the agriculture, forestry and fishing industry, it is positive at the level of 4.1% (in 2022 – 3.6%, in 2021 – 4.0%, in 2020 – 2.9%, in 2019 – 3.1%) growth was noted. These

positive growth rates are associated with the increase of livestock production by 3.7% (in 2022 – 3.3%, in 2021 – 3.5%, in 2020 – 2.1%, in 2019 – 1.6%). At the same time, the production of agricultural products increased by 4.2% (3.8% in 2022, 4.3% in 2021, 3.2% in 2020, 4.8% in 2019) [1]. Before analyzing the dynamics of fruit and vegetable products grown in our country, it is necessary to pay attention to changes in the field in the region (Table 1).

Table 1.
Rates of Production of Agricultural Products in the regions, in %[17].

Areas	2019	2020	2021	2022	2023
Uzbekistan	**103.3**	**102.7**	**103.9**	**103.6**	**103.9**
Karakalpakstan	107.0	102.3	104.2	103.7	104.0
Andijan	103.0	101.1	104.5	102.3	104.0
Bukhara	103.6	101.9	104.7	103.9	103.8
Jizzakh	106.4	102.7	104.2	101.8	104.0
Kashkadarya	101.4	103.7	101.3	104.9	104.2
Navoi	101.6	103.3	104.4	103.8	101.9
Namangan	102.7	104.0	107.0	105.7	104.4
Samarkand	103.1	102.5	103.1	102.3	104.3
Surkhandarya	103.5	105.3	104.2	101.7	103.6
Syrdarya	108.4	101.8	103.8	103.9	106.2
Tashkent	101.1	100.1	104.1	104.2	103.6
Ferghana	103.5	104.9	103.2	104.9	103.7
Khorezm	103.8	101.7	102.9	103.9	104.0

From the table above, we can see that in January-December 2023, Samarkand and Andijan regions will occupy the leading positions in the Republic in terms of the total volume of agricultural, forestry and fishery products (services), meat, milk, vegetables, potatoes, grapes, fruits and berries of these regions It is explained by the fact that it has a high share among the regions in the cultivation of agricultural products. On the contrary, it should be noted that the Syrdarya region and the Republic of Karakalpakstan have a small share in the production of agricultural products such as meat, milk, eggs, vegetables, potatoes, grapes, fruits and berries of agricultural products and fruit and vegetable products in the following table (Table 2).

According to the data of this table, 8,426,600 t were produced by all categories of farms in our country in 2023. grain crops (5.5% more than January-December 2022), 3,574,100 tons. potatoes (3.8% more), 11,553.7 thousand tons. vegetables (3.5% more), 2,553,500 tons. polys (up by 5.5%), 3 121.7 thousand t. fruits and berries (4.1% more), 1,737,600 tons. we can see that grapes (1.3% less) are grown.

Table 2
Growth rates of the volume of the main types of agricultural products grown in Uzbekistan in 2023, in %[17].

Product Name	All Categories Households	Farms	Farmer And Homesteads	Agricultural Enterprises
Cereal Crops	105.5	104.0	108.8	112.8
Vegetables	103.5	103.3	102.7	120.0
Potatoes	103.8	109.5	101.5	111.1
Police Crops	105.5	108,0	101.9	108,0
Fruit And Berry	104.1	105.9	103.2	95.1
Grapes	98.7	97.5	99.5	102.5

It is important to determine the contribution of agricultural organizations, farmers and homesteads and farms to the development of the fruit and vegetable sector in the production of agricultural products through the share of economic categories in the main types of agricultural products grown in our country.

Using the above table, the main types of agricultural products grown in Uzbekistan in 2023 Analyzing the data on agricultural production by farm categories, it should be noted that 78.3% of grain crops are cultivated by farms, 9.5% by farmers and homesteads, and 12.2% by organizations engaged in agricultural activities. Accordingly, 36.1% of vegetables fell to farms, 59.9% to farmers and homesteads, 4.0% to organizations implementing agricultural activities,

[1] *www.stat.en taken from the official website.*

and 27.8% of potatoes to farms, 69.9 % fell to farmers and homesteads, 2.3% to organizations performing agricultural activities, 55.5% of field crops went to farms, 39.8% to farmers and homesteads, 4.7% to agricultural activities fell to growing organizations, 45.3% of fruits and berries fell to farms, 51.4% to farmers and homesteads, 3.3% fell to organizations implementing agricultural activities, 44.7% of grapes fell to farms, 52 .4% fell to farmers and homesteads, 2.9% to organizations performing agricultural activities.

Today, farms form the basis of the agricultural network of our country. A farm is a business entity engaged in the cultivation of agricultural products using leased land and other types of activities not prohibited by law [18] .

The share of regions in the cultivation of vegetables, potatoes, fruits and grapes from the main types of agricultural products grown in our country was statistically analyzed. Andijan region accounted for the highest share of the total volume of vegetables grown (15.3%). At the same time, a high share was recorded in Samarkand (13.7%), Fergana (11.4%), Surkhandarya (10.1%) and Tashkent (10.0%) regions. Low indicators were observed in the Syrdarya region (2.6%) of the Republic of Karakalpakstan and Navoi region (2.9%). Fergana (105.5%), Tashkent (104.8%), Kashkadarya (104.8%), Navoi (104.6%), Republic of Karakalpakstan (104.5%) regions have high growth rates compared to the corresponding period of 2022. It was recorded in Jizzakh (104.1%) and Namangan (104.0%) regions. Also, Samarkand region (20.3%) accounted for the highest share of the total volume of potato cultivation. In addition, high rates of potato cultivation were noted in Andijan (12.3%) and Tashkent (10.8%) regions. The lowest indicators of the share of potato cultivation in the total volume corresponded to Syrdaryo (1.9%) and Navoi (2.5%) regions. In the current period, high growth rates are observed in Kashkadarya (105.2 %), Navoi (104.8 %), Samarkand (104.8 %), Jizzakh (104.7 %), Namangan (104.4 %), Ferghana (104.1 %) and Andijan (104.1%) regions. (Table 3).

Table 3.
Fruits and vegetables grown in regions in Uzbekistan[17] .

Areas	Vegetable		Potatoes		Fruits and berries		Grapes	
	thousand tons	%	thousand tons	%	thousand tons	%	thousand tons	%
Karakalpakstan	333.4	2.9	96.4	2.7	67.2	2.2	11.6	0.7
Andijan	1772.6	15.3	437.6	12.2	696.8	22.3	82.2	4.7
Bukhara	914.6	7.9	257.2	7.2	303.4	9.7	221.4	12.7
Jizzakh	472.9	4.1	103.9	2.9	93.7	3.0	29.8	1.7
Kashkadarya	559.3	4.8	195.4	5.5	177.8	5.7	110	6.3
Navoi	335	2.9	88.1	2.5	106.2	3.4	85.6	4.9
Namangan	989.3	8.6	337	9.4	366.7	11.7	151.7	8.7
Samarkand	1576.7	13.6	726.3	20.3	373.4	12.0	639.2	36.8
Surkhandarya	1169.2	10.1	356.5	10.0	180.3	5.8	74.5	4.3
Syrdarya	302.6	2.6	68.4	1.9	46.3	1.5	14.8	0.9
Tashkent	1155.7	10.0	386.6	10.8	137.1	4.4	87.8	5.1
Ferghana	1319	11.4	372.6	10.4	403.8	12.9	179.1	10.3
Khorezm	653.4	5.7	148.1	4.1	169.0	5.4	49.9	2.9

From the data in the table above, we can see that the largest share in the total volume of cultivated fruits and berries by regions is Andijan (22.3%), Fergana (12.9%), Samarkand (12.0%), Namangan (11.7%) and Bukhara (9.7%) was contributed by regions. At the same time, the lowest share in the total volume of fruits and berries was observed in Syrdarya region (1.5%) and the Republic of Karakalpakstan (2.2%). High growth rates in the indicated periods were observed in the regions of Kashkadarya (107.3%), Namangan (105.8%), in the Republic of Karakalpakstan (105.8%), Navoi (105.1%), Samarkand (104.8%), Syrdarya (104 ,6 %), Fergana (104.5 %) was recorded in Jizzakh region (104.4 %). Samarkand region (36.8%) accounted for almost a third of the total volume of grapes grown. Also, a high share was recorded in Bukhara (12.7%), Fergana (10.3%), Namangan (8.7%) and Kashkadarya (6.3%) regions . At the same time, the lowest share in the total volume of grape cultivation was observed in the Republic of Karakalpakstan (0.7%) and Syrdarya region (0.9%). Compared to 2022, high growth rates are observed in the regions of Namangan (106.6%), Kashkadarya (104.2%), Samarkand (103.4%), Syrdarya (103.0%), Khorezm (102.6%), Republic of Karakalpakstan (102.2 %), Bukhara (102.1 %), Andijan (100.6 %), Jizzakh (100.1 %) regions were recorded.

As a result of our research, we obtained the following SWOT analysis results (Table 4).

Table 4
SWOT analysis of fruit and vegetable growing activities

STRENGTHS	WEAKNESSES
high potential of fruit and vegetable industry; favorable climate for growing many agricultural products (fruits, vegetables, sugarcane, fodder crops, viticulture, etc.) the availability of fertile arable land; favorable geographical situation, sufficiently developed transport infrastructure and road transport system; sufficient labor resources necessary for the development of the industry; existence of scientific research institutions in the field of agriculture; - developed system of financing, lending and insurance organizations.	lack of basic production funds in farms, their high physical and moral obsolescence; - lack of modern technologies for production of high-quality and processing products and services; that there are not enough production facilities for processing fruit and vegetable and grape products; that the population does not have enough information about the opportunities provided.
OPPORTUNITIES	**THREATS**
effective use of regional resources (land, real estate), improvement of accounting of real estate, vacant land areas; increasing the production of fruit and vegetable products: fruit and vegetables, grapes, etc.; the possibility of delivering agricultural products grown in the region to other regions of the country (fruits and vegetables, apples, grapes); creation of necessary opportunities for the organization of fruit and vegetable clusters; development of social infrastructure facilities in rural areas.	the instability of the price of fruit and vegetable products in competitive conditions; non-compliance with technologies for growing agricultural products, resulting in a decrease in land productivity and productivity; environmental pollution; purchase of products grown at low prices based on the monopoly position of some fruit and vegetable processing enterprises; insufficient storage space.

CONCLUSIONS AND SUGGESTIONS

In conclusion, the development of the fruit and vegetable sector in our country is characterized by high growth rates compared to the levels of other regions . Positive trends in agricultural production preserved in difficult economic climate conditions in the regions, effective economic policy and active investment activity on state support of the industry as a result good fit indicates its capabilities . This village in the coming years x core networks, in particular, Statistical forecasting of the achieved results is a necessary condition for sustainable development in the fruit and vegetable sector . also confirmed . In the future , farms specializing in vegetables directions for increasing economic efficiency can be classified as follows:

1. In farms specializing in fruit and vegetables implementation of measures to increase gross yield and improve its quality;
2. Activities that ensure saving of material, labor and money expenses of farms specializing in fruit and vegetable production ;
3. Innovations in the activities of farms specializing in fruit and vegetables it is necessary to implement implementation and acceleration measures .

Also, natural and climatic factors, which are inextricably linked to the quality of fruit and vegetable and grape products; selection-variety factors; technological factors; organizational and economic factors; depends on factors such as human factors. In the conditions of a strong competitive environment in the market, it is an urgent issue to develop and implement a strong marketing strategy of the company from product manufacturers. It is also important for fruit and vegetable and grape growing enterprises to implement marketing strategies that ensure their competitiveness in the market. It is desirable to implement the level of competitiveness of enterprises producing fruit, vegetables and grape products and measures to increase it in the form presented in the dissertation.

The most important means of marketing for enterprises producing fruit, vegetables and grape products are the quality of the produced product, its assortment, wrapping and packaging, when entering the foreign market. on pricing policy – system of discounts and surcharges, price differentiation; on distribution policy - marketing, logistics, selection of distribution networks, promotion of product sales; on communicative policy - planning and organization of business communications, advertising, sales activation is appropriate.

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