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Factors for Increasing Efficiency in the Fruit and Vegetable System

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Abstract: In this article are analyzed the factors of further development and economic efficiency of the system of providing the population of our country with food, including fruits and vegetables, based on improving the organizational and economic mechanism of the fruit and vegetable system.

Keywords: economic mechanism, organizational mechanism, organizational and economic mechanism, agriculture, food security, horticultural system, farming, market infrastructure.

Introduction. In modern economics, the development of food strategies aimed at increasing production and protecting the consumer market is considered one of the most important scientific research not only in the country, but also in the world. Because "...currently more than 900 million people in the world, that is, one in nine people, are undernourished, and more than 30 percent of the world's population faces the problem of malnutrition. According to statistics, today the growth rate of our country's population is 1.9 percent per year. In our country, more than 2,000 babies are born in one day. On this basis, further improvement of food strategies implemented in the sector is required. It is known that in the implemented food strategies, the stability of the population's supply of fruits and vegetables is of particular importance. Therefore, the issue of ensuring food safety based on the research and effective implementation of new innovative opportunities to increase the volume of fruit and vegetable production per capita in accordance with medical standards is relevant.

Literature review. Theoretical and practical aspects of the development of fruit and vegetable growing, problems of analyzing the formation of organizational and economic mechanisms at horticultural enterprises were presented in the studies of O. A. Gorb, E. A. Suslov, William Kurtz, Nazranov H.M., V.Z. Mazloev, N.R. Kurkina, I.T. Farnieva, John V. Bartok, K. John Holmes and other foreign researchers. Domestic researchers Z.A. Sagdillaeva, D.N. Saidova, S.T. Iskandarov, Kh. Khushvaktova, Sh. Murodov, S. Eshmatov, O. Sattorov, N. Ashurmetova, O. Norbekov also devoted their works to these problems.

Concepts such as "economic mechanism", "organizational mechanism", "market mechanism" have been widely used in the scientific literature in recent years. The authors also define these concepts in different meanings and contents.

Considering the question of the meaning of the concept of "mechanism" in economic research, economist O. A. Gorb substantiated the following distinctive features of the concept of "economic mechanism". In particular, "a mechanism cannot exist without a process, since it is an integral part of the process and is intended only to perform the functions of the process."

The organizational and economic mechanism is considered a multifaceted economic category and has not had a single meaning in the economic literature. In particular, "...the organizational and economic mechanism is a widely used concept that shows the state or sequence of systems, the order of systematization and the direction of economic activity. It should include

mechanisms that regulate the economic activities of enterprises: planning, organization, stimulation, control, evaluation, financing, lending, settlements and internal audit and financial actions.

The following definitions are given in dictionaries of modern economics: “An organizational and economic mechanism is a set of organizational infrastructures and special forms, management methods, as well as legal norms with the help of which organizational and financial laws and reproductive processes are implemented.” in unexpected conditions."

N.R. Kurkina defined this concept as follows: “The organizational and economic mechanism is a set of economic, organizational and social relations in the field of management and regulation of food supply processes for the purpose of the development and functioning of the national food system.”

In our opinion, the organizational and economic mechanism is a set of relationships between market segments, determined by the balance of supply and demand in the market and the characteristics of the movement of producers from production to the market.

If we consider the components of the organizational-economic mechanism as any management system, then we can note a number of basic elements: subject and object, implemented in the form of instruments of the mechanism; goals and objectives; performance criterion, resources; management methods or styles.

When forming an organizational and economic mechanism, the following methods are usually used: experimental testing, observation, economic and mathematical modeling, imitation (simulation) and others.

The organizational mechanism includes the legislative and regulatory framework, a control and support system, organizational and information support for the state. The economic mechanism includes planning, incentives, prices, taxes, finance and credit, insurance, subsidies.

Results. Based on improving the organizational and economic mechanisms of the fruit and vegetable growing system in our country, special attention is paid to the mutual integration of the processes of production, processing, storage, service and sale (export) of products, and the development of clusters. In particular, the mechanism of state support for the system has been successfully implemented. In particular, on December 15, 2021, Resolution No. PQ-52 of the President of the Republic of Uzbekistan was adopted “On measures to support the fruit and vegetable industry from the state, further development of the cluster and network cooperation system.” Based on Appendix 3 to this decision, the organizational structure of the “Agency for development of horticulture and greenhouses" under the Ministry of Agriculture. Also, this decision introduced a number of organizational and economic incentives for state support of the fruit and vegetable system of our country.

On January 18, 2024, Decree of the President of the Republic of Uzbekistan No. PF-15 “On additional measures to improve the procedure for leasing agricultural land” was adopted. According to this decree, it is now possible to lease agricultural land for up to 30 years through online electronic auctions. In these processes, the emergence of new farms, individual farms specializing in horticulture and vegetable growing will create the opportunity to further increase the volume of fruit and vegetable production in our country.

On February 12, 2024, a selector meeting on problems in the field of agriculture was held under the chairmanship of President Shavkat Mirziyoyev. In this selector, the President gave instructions to popularize compact greenhouses heated without fuel, paying special attention to the vegetable growing system. Today it was noted that “the construction of compact greenhouses heated without fuel is becoming popular; 308 hectares of compact greenhouses with felt mats have been built in our country, and tasks have been set to increase these greenhouses by 10-20 times.” This mechanism creates the opportunity to optimally satisfy the population’s demand for vegetable products in different seasons of the year.

Research shows that there are a number of problems and shortcomings in matters of sustainable growth in fruit and vegetable production and efficient use of land. Therefore, the implementation of specific structural changes and the consistent development of the fruit and vegetable sector, further strengthening the country's food security, expanding the production of environmentally friendly products, and significantly increasing the export potential of the industry are considered priority tasks. According to international data, the Netherlands cultivates 1 million hectares of land annually and exports $102 billion worth of agricultural products.

According to today's statistics, there are about 4 million hectares of arable land in Uzbekistan. In addition to cotton and wheat, agricultural land covers approximately 2 million hectares. About 2 million hectares of agricultural land include farms, land owned by landowners, as well as land owned by agricultural enterprises of various types (except cotton and grain). Today, the fact that the current activities of agricultural producers do not meet the requirements of a market economy poses a threat to the stability of food security in the future. Because, let's say, someone can grow a product on 1 hectare of land and make a profit of up to 10 thousand dollars by exporting it. Who else could plant a crop that would bring in $2,000 instead? This situation in science is called irrational land use. After all, some landowner is depriving himself and his country of 8 thousand dollars per hectare. In fact, those who supply our markets with the highest quality fruit and vegetable products are the owners of their personal plots and ordinary villagers who grow produce by renting land, and no one else. These same people work on farms operating today.

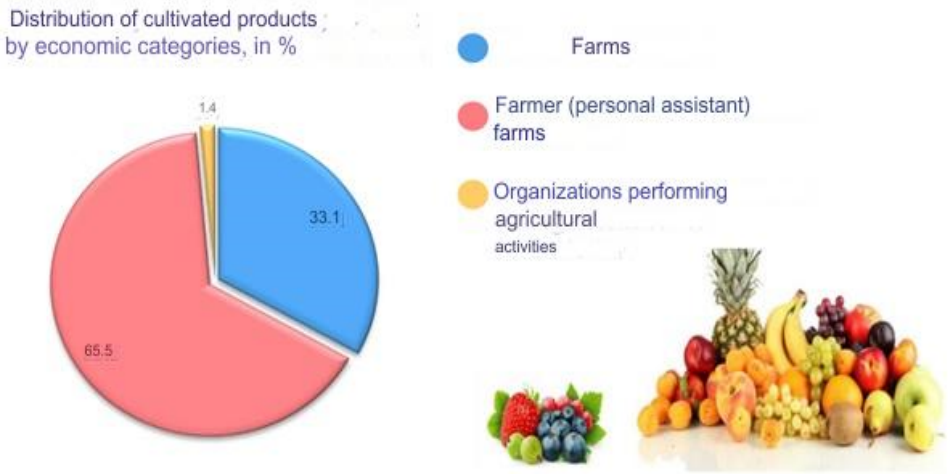
The question arises why the economic efficiency of household plots, dehkan farms and farms is different, i.e. it is high on household plots and dekhkan farms, and low among farmers. In our opinion, if farmers specializing in growing fruits and vegetables had the same economic and technological independence in relation to their property as the owner of farm and household land, efficiency would be high. Research shows that there are a number of problems and shortcomings in matters of sustainable growth in fruit and vegetable production and efficient use of land. Therefore, the implementation of specific structural changes and the consistent development of the fruit and vegetable sector, further strengthening the country's food security, expanding the production of environmentally friendly products, and significantly increasing the export potential of the industry are considered priority tasks. According to international data, the Netherlands cultivates 1 million hectares of land annually and exports $102 billion worth of agricultural products. According to today's statistics, there are about 4 million hectares of arable land in Uzbekistan. In addition to cotton and wheat, agricultural land covers approximately 2 million hectares. About 2 million hectares of agricultural land include farms, land owned by landowners, as well as land owned by agricultural enterprises of various types (except cotton and grain). Today, the fact that the current activities of agricultural producers do not meet the requirements of a market economy poses a threat to the stability of food security in the future. Because, let's say, someone can grow a product on 1 hectare of land and make a profit of up to 10 thousand dollars by exporting it. Who else could plant a crop that would bring in $2,000 instead? This situation in science is called irrational land use. After all, some landowner is depriving himself and his country of 8 thousand dollars per hectare. In fact, those who supply our markets with the highest quality fruits and vegetables are the landowners living in our villages and ordinary villagers who grow produce by renting land, and no one else. These same people work on the farms that operate today. The question arises why the economic efficiency of peasants, landowners and farms is different, that is, it is high for peasants and landowners and low for farmers. In our opinion, if farmers specializing in growing fruits and vegetables had the same economic and technological independence in relation to their property as the owner of farm and household land, efficiency would be high. Because in this case, a farmer who independently grows fruits or vegetables decides a number of issues, for example, what to plant on his land, when to plant, where to sell the grown products and how to distribute the profits.

According to the Statistics Committee, as of October 1, 2024, the population of Uzbekistan exceeded 37 million 320 thousand people. 51 percent of the population lives in cities and 49 percent in villages. Also, 30.4% of the population of Uzbekistan is below working age, 10.1% is

above working age and 54.6% of the population is of working age. The most important issue in the reform process is the formation of a stable supply of necessary food products to our population through the effective use of these 54.6 percent of labor resources. As mentioned above, the effective use of agricultural land for food production is of great importance in effectively solving this problem. We considered it appropriate to consider this issue using the example of the Andijan region, which occupies only one percent of the country's territory and where about 10 percent of the country's population lives.

According to statistics, today the population of the Andijan region has increased to 3 million 400 thousand people, and the average number of people per square kilometer is 789.4. This figure is an average of 74 people in the republic. The region has 201,026 hectares of irrigated arable land, of which 28,836 hectares are gardens and vineyards, 10,041 hectares are vegetables.

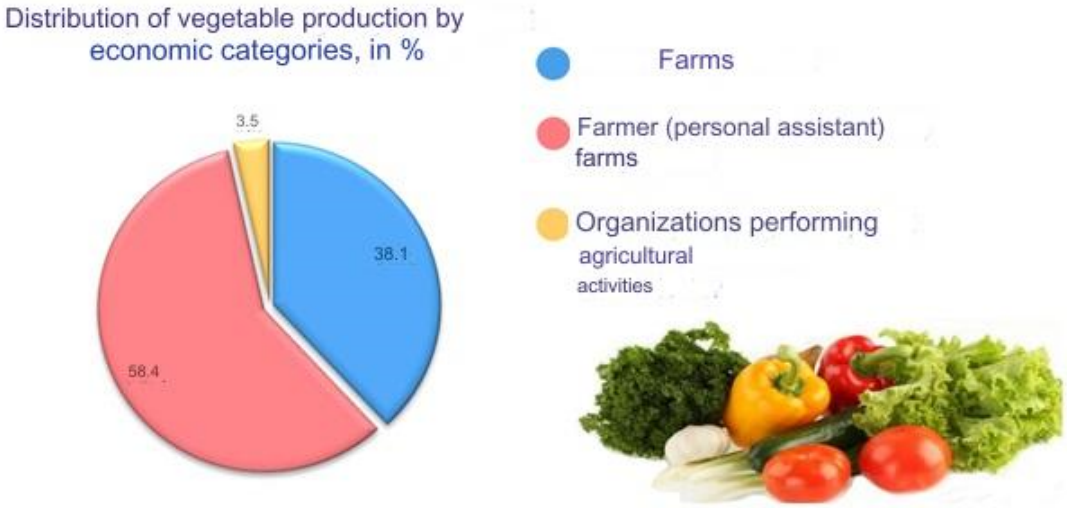
Distribution of fruits and vegetables grown in Andijan region in 2023, by economic category, in percentage



Source: Information from the Department of Agriculture of Andijan region.

According to the Department of Agriculture of Andijan region, 65.5 percent of fruits grown in the region in 2024 are provided by dexkans, 33.1 percent by farms, and 1.4 percent by other organizations engaged in agricultural activities.

Distribution of vegetable products grown in Andijan region in 2023, by economic category, in percentage



Source: Information from the Department of Agriculture of Andijan region.

In 2024, 58.4 percent of vegetable production will come from dehkans, 38.1 percent from farms, and 3.5 percent from other organizations engaged in agricultural activities.

In conclusion, the results of the analysis of the contribution of categories of farms growing fruits and vegetables in the region show that among the factors influencing the efficiency of growing fruits and vegetables, the most important factors are the availability of property and its effective use. Research shows that as the subject grows in these relationships, there is a process of transition from “my property” to “our property.” Efficiency indicators in both cases can be seen when analyzing the economic indicators of the Andijan region.

During the study, we became acquainted with the statistics of fruit growing in the Andijan region. In total, fruits are grown on 28,836 hectares of land in the region. Of these, 26,592 hectares, that is, 92% of orchards are considered fruit gardens. Today, the total production capacity of the region is 434,296 tons of fruit, which corresponds to an average of 367 grams per day per resident of the region (434296000 kg/3011700=134 kg/person/365 days=367 g/day).). Also, the number of dehkanss and household landowners in the region is 477,374 people, and the area of their land is 24,541 hectares. According to the regional department of agriculture, in 2022, 393,119 tons of vegetables were grown on dehkans and household plots in the region. This figure corresponds to an average of 357 grams per day for each resident of the region (393119000 kg/3011700=130.5 kg/person/365 days=357 g/day). In its data, the World Health Organization recognizes that the consumption of fruits and vegetables from agricultural products needs to be increased to 400-500 grams per person per day, but, unfortunately, the global average is 150-200 grams. According to the recommendations of international nutritionists, at least 50% of food consumed by a person should be fruits and vegetables. If the fruits and vegetables grown today in the Andijan region correspond to an average of 724 (367 grams of fruits + 357 grams of vegetables) grams per person per day, if 400 grams of this indicator per person per day is allocated for consumption according to the standards of the international health organization, 324 grams per person, fruits and vegetables grown can be exported, i.e. 356,284 tons of fruits and vegetables. This ratio corresponds to 53,377 hectares of fruit and vegetable fields with an average export of fruits and vegetables of 6.7 tons per hectare. If 1 kilogram of fruits and vegetables costs an average of 5,000 soums, then the export of fruits and vegetables per 1 hectare corresponds to 33,500,000 soums or 3,700 US dollars.

Conclusion. Based on the results of research on improving organizational and economic mechanisms in the fruit and vegetable production system in order to increase production in this area, bring product quality to the level of today's demand, as well as increase economic efficiency to an optimal level, we propose the following:

- create small farms with an area of up to 5 hectares in the field of fruit and vegetable growing. This requires a redistribution in this direction of the lands of agricultural enterprises that do not have working family members (there are currently many farmers specializing in horticulture) and in most cases use hired labor rather than labor, family members. The benefit from this is as follows: dehkans sincerely work on their land for personal gain; they think carefully about what to grow on the land they own; count on the product they plan to grow; study the market; strive for innovation; obtaining quality products, etc.;
- today, only 15% of fruits and vegetables grown in our country are processed. This negatively affects the interest of fruit and vegetable producers. On this basis, we propose to develop the activities of a cluster system for forming a value chain in the fruit and vegetable growing system;
- we believe that it is necessary to further improve the provision of qualified personnel in the modern economy, when innovations are rapidly entering the industry and human capital is developing. Because the effectiveness of today's innovations in most cases is associated with a skilled workforce.

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