



PROSPECTS OF SUSTAINABLE DEVELOPMENT OF THE AGRICULTURAL SECTOR IN THE MODERNIZATION OF THE ECONOMY

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Abstract: This article raises the issue of providing the population with food through the sustainable development of the agricultural sector of our country. In fact, the article analyzes the scale of production of farms and dekhkan farms as a result of the reforms carried out in the agro-industrial complex of Kashkadarya region, one of the southern regions of our republic, and draws conclusions aimed at using innovations in a more sustainable development of the agricultural sector. The article also developed proposals and recommendations aimed at introducing innovative approaches to determining the prospects for sustainable development of the agricultural sector.

Keywords: *agricultural sector, global climate change, food products, modernization and diversification, strategic development, food independence, scientific and technological achievements, innovations, innovative development, sustainable development of the agricultural sector, material and technical base.*

INTRODUCTION. Along with the increase in the world's population, the role of agricultural production in solving current problems, such as the volume of food production, storage and processing, as well as increasing the volume of exports of products that are in demand in world markets, is increasing. After all, according to UN data, "by 2050, the world's population will be 9.2 billion. per person makes it necessary to increase the production of agricultural products by 70%"¹. Improvement of the structural structure of the agrarian sector, development of farmers, peasants and personal auxiliary farms, development of effective mutual settlement mechanisms for agricultural products and expansion of the scale of processing of these products on an industrial basis, its economic importance in the development of the agrarian sector are scientific trends in increasing efficiency.

Global climate change and the regular use of chemicals on agricultural fields are leading to ecological degradation of the land. As a result, the arable land required for the production of food products is significantly reduced. Also, according to the Food and Agriculture Organization of the United Nations, about 1.3 billion tons of about 1 trillion dollars' worth of food is perishing.²

It is no secret that food safety and the production of ecologically clean products are becoming urgent issues on a global scale. The President of our country Sh.M. Mirziyoyev said, "For the first

¹Let's take care of the future of agriculture – www.bayer.ru

² Saidova D.N., Rustamova I.B., Tursunov Sh.A. Agrarian policy and food security. Study guide. - T.: Publishing House "Main Library of the Academy of Sciences of the Republic of Uzbekistan", 2016, 257 p. (4 p.)



time, more than 600 million dollars of loans and grants will be attracted to modernize agriculture, digitalize it, increase land productivity, and introduce modern agro-technologies." The land areas where water-saving technologies will be introduced will be increased by 5 times to 430,000 hectares, 90,000 hectares of new land will be acquired,"³ he said.

Developing the agricultural sector and increasing its efficiency, positively solving the socio-economic problems of the regions and raising the standard of living of the population are among the urgent issues of today.

MATERIALS AND METHODS. Comparative and comparative analysis, complex assessment methods were used in the study of the problem.

RESULT AND DISCUSSION.

Targeted, systematic and diligent work on the formation of a highly efficient, competitive and socially oriented agro-industrial complex of the Republic of Uzbekistan, technical and technological modernization of production processes used in agriculture, and improvement of the quality of resource potential. it is possible only when it is carried out.

In the "Economic Dictionary" published under the editorship of A.N. Azrilian⁴, the term modernization is defined as "the introduction of improvements that meet modern requirements." This definition should not be understood as a one-time process of updating equipment and technologies.

The essence of modernization in the agricultural sector is understood as the mass transition of most of the agricultural enterprises to intensive and resource-saving technologies. Such a mass phenomenon will eventually lead to high labor productivity, yield, productivity, energy efficiency and other indicators of agricultural development in line with world standards.

In the scientific research work of N. Khushmatov, the innovative management of the development of the agrarian sector, at the same time, taking into account the need to solve the tasks of modernizing the agrarian sector of the economy and transferring it to the innovative path of development, many problems and issues in the field of activation of innovative activities in this sector opinions on ways to solve it are expressed⁵.

T.K.Farmonov's scientific research work combines institutional and synergistic approaches to the formation of an effective system of agricultural management in the conditions of the transition to an innovative way of development of the agrarian sector, taking into account the specific characteristics of agro-economy as a complex object of management, based on the main methodological principles, more oriented to the application of management models by adaptation⁶

In the scientific research work of Q.A. Choriev⁷, an opinion was expressed on the effectiveness of innovative management of the development of the agricultural sector, the development of agriculture, the planning of the activities of farmers and farms.

³ Address of the President of the Republic of Uzbekistan Shavkat Mirziyoyev to the Oliy Majlis dedicated to "2021 - the year of supporting youth and strengthening the health of the population" // Xalq sozi, December 30, 2020

⁴ Economic Dictionary / Ed. A.N. Azrilian. - M.: Institute of New Economics, 2007.

⁵ Khushmatov N., Faizullaeva T. "Fundamentals of development of agricultural service networks and farms" // Ekonomika i klass sobstvennikov. – Tashkent, 2004. #1. -46 p.

⁶ Farmanov T.Kh. Prospects for the development of farms. - Tashkent: "Generation of the New Age", - 2004. - 30 p.

⁷ Choriev Q.A. Formation of the market infrastructure - a guarantee of the deepening of economic reforms// The main directions of the deepening of the market reforms and the development of infrastructures in the countryside: a collection of lectures of the republican scientific-practical seminar. - Tashkent: UzBIITI, 1998. - P.15.



As a result of the economic reforms being carried out to modernize the country's economy, more than 180 regulatory legal documents have been adopted in the country's agricultural sector. Also, there are more than 450 regulatory legal documents related to the agricultural sector⁸.

As the main laws and subordinate documents regulating the field of legal services in agriculture: the Constitution of the Republic of Uzbekistan, the Civil Code of the Republic of Uzbekistan, the "Land Code" of the Republic of Uzbekistan, " On the farm", " On agriculture" and "On the contractual and legal basis of the activities of economic entities" can be mentioned.

The following table analyzes the main economic indicators of agricultural production in the Republic of Uzbekistan in 2010-2021 (Table 1).

Table 1

ANALYSIS OF THE MAIN INDICATORS OF AGRICULTURAL DEVELOPMENT IN THE REPUBLIC OF UZBEKISTAN⁹

Indicators	Years						Change in 2010-2021, (+;-)
	2010	2015	2016	2019	2020	2021	
Acreage of agricultural crops, thousand hectares	3708,4	3694,2	3706,7	3309,4	3396,1	3260,7	-447,7
Agricultural products, bln. soum	30856,7	99604,6	115599,2	216283,1	250250,6	302524,9	271 668,2
including in farming	18119,0	55429,2	61755,1	111904,8	123858,8	151083,4	132 964,4
in animal husbandry	12737,7	44175,4	53844,1	104378,3	126391,8	151441,5	138 703,8
Growth rate of agricultural production, in %	106,3	106,1	106,3	103,3	102,7	103,6	-2,7
including in farming	105,9	105,5	105,7	104,8	103,2	103,1	-2,8
in animal husbandry	106,9	106,9	107,0	101,6	102,1	104,1	-2,8

From the data of Table 1, it can be seen that during the years 2010-2021, the rate of production of agricultural products decreased sharply, that is, the arrival of unfavorable weather during these years reduced the volume of production of agricultural products and sur had a negative effect on the horse.

Now let's consider the changes in the agricultural production of Kashkadarya region, one of the southern regions of Uzbekistan, in 2010-2021. According to the data, the volume of the gross regional product (GDP) produced in 2021 at current prices is 43,833.3 billion. amounted to soums and increased by 7.6% compared to 2020.

Among the main sectors of the region's economy, the growth rate of agriculture, forestry and fisheries is 102.2%, (the share of GDP - 41.4%), industry - 115.3% (18.0%), construction - 112.7%

⁸ LexUZ, online legal information search system.

⁹ It was analyzed based on the information of the State Statistics Committee of the Republic of Uzbekistan.



(6.2%), trade, accommodation and catering services - 109.8% (6.5%), transportation and storage, information and communication - 122.3% (5,1 %) and other service sectors - 106.7 % (22.8 %).

GNP per capita amounted to 12,999.6 thousand soums, and the growth rate was 105.6% compared to the same period last year.

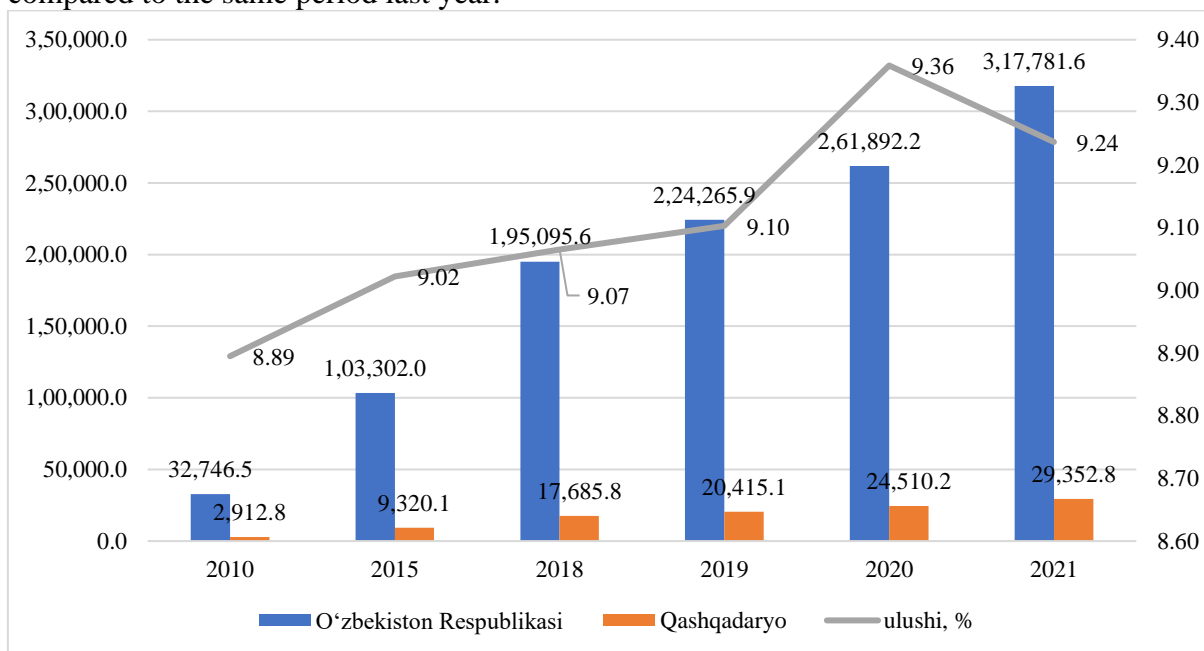


Figure 1. The place of Kashkadarya region in the production of agricultural products (billion soums at current prices)¹⁰

According to the analysis, the share of Kashkadarya region in the production of agricultural products in the republic is increasing in the following years, in particular, in 2021, the volume of production of agricultural products in Kashkadarya region will be 29352.8 billion soums, and the agricultural products of the republic will produce made 9.24 percent.

**Table 2
AGRICULTURAL PRODUCTS IN KASHKADARYA REGION
PRODUCTION INDICATORS¹¹**

Indicators	Unit of measure	2018 year	2019 year	2020 year	2021 year	Change %
The gross product of agriculture, forestry and fisheries is at current prices	billion soum	17685,8	20415,1	24510,3	29352,8	166,0
<i>From this:</i>						

¹⁰It was compiled by the author based on the data of the Statistics Department of Kashkadarya Region.

¹¹ It was compiled by the author based on the data of the Statistics Department of Kashkadarya Region.



Agricultural products	billion soum	6956,4	7978,9	9236,3	11117,7	159,8
Share of agricultural products in the Gross Agricultural Product	%	39,3	39,1	37,7	37,9	1,04 decreased by a point
livestock products	billion soum	10250,1	11955,0	14541,5	17224,9	168,0
The share of livestock products in the Gross Agricultural Product	%	58,0	58,6	59,3	58,7	1,01 increased by a point
Compared to the previous year (in comparative terms)	%	96,6	101,2	104,0	102,2	1,06 increased by a point

As a result of the measures implemented in Kashkadarya region, the main results of agricultural development in 2018-2021 were achieved. Changes in the quality of agricultural production and its diversification, further development of farms, creation of mechanisms for the sale of cattle to the population and farms through auctions, allocation of preferential targeted loans, expansion of the scope and quality of veterinary services, necessary is related to the supply of fodder.

In the conditions of modernization and diversification of the country, by improving the organizational and economic mechanisms of the innovative development of agriculture, it is necessary to provide services to the producers of agricultural products at the level of demand and fully satisfy their needs.

This problem is explained by the following number of cases.

Firstly, it is possible to develop specific organizational and economic mechanisms of innovative development, including the acceleration of the production of high-quality products and the implementation of systematic measures for the activation of innovative processes in all areas of the agricultural sector, and the successful implementation of innovative policy only when appropriate conditions are created.

At the same time, solving the problems of creating comfortable working and living conditions for the population in rural areas is one of the most important issues of today.

Secondly, In the development of agriculture, the material and technical supply system, scientific and technical progress and intensive technologies are the decisive factor in increasing the economic efficiency of agricultural production.

Agricultural intensification requires the improvement of production tools, the development of service industries and their effective use in exchange for reducing the contribution of live labor.

As a result of the implementation of complex measures carried out within the framework of the strategic development of agriculture to diversify production and ensure food independence, high speeds have been achieved in the field in recent years.



Table 3

GROWTH RATES OF AGRICULTURAL PRODUCTION IN KASHKADARYA REGION, IN %¹²

Year	Including:			Including:			Including:					
	Farms of all categories	Farmer farms	Peasant (personal assistant) farms	Farmer farms	Farms of all categories	Farmer farms	Dehqon (shaxsiy yordamchi) xo'jalik lari	O'ishloq xo'jaligi faoliyatini amalga oshiruvchi tashkilot lar	Farms of all categories	Fermer xo'jalik lari	Dehqon (shaxsiy yordamchi) xo'jalik lari	O'ishloq xo'jaligi faoliyatini amalga oshiruvchi tashkilot lar
2015	106,1	102,5	107,4	114,9	105,2	102,5	109,6	128,3	106,7	101,7	106,8	109,7
2016	106,5	103,0	107,6	122,7	105,0	102,8	108,4	108,3	107,7	107,3	107,4	129,5
2017	103,3	97,8	105,4	106,8	99,7	97,8	102,9	109,8	105,9	98,1	106,1	105,6
2018	96,5	84,5	101,3	126,1	88,9	83,2	98,5	124,4	103,0	119,4	102,1	126,9
2019	101,4	102,4	101,0	103,7	101,7	101,9	98,6	167,9	101,2	110,0	101,6	72,2
2020	103,2	105,2	101,4	137,4	106,0	105,4	103,1	147,6	101,4	103,2	101,0	123,0
2021	103,4	111,7	101,7	96,8	99,1	109,4	101,4	86,4	107,7	114,0	102,0	107,1
Total												
Agricultural products						Livestock products						

¹² It was compiled by the author based on the data of the Statistics Department of Kashkadarya Region.

In order to provide food products to the population of the country, which is growing at a high rate, cotton cultivation areas were reduced due to the expansion of food crops. It is explained by the fact that the reduction of the fodder crops area, the provision of livestock and poultry with a solid feed base is covered by the planting of repeated, intermediate, inter-row crops.

In the irrigated farming region of Kashkadarya region, comprehensive measures are being implemented to ensure the sustainable development of all sectors of the agricultural sector and to improve the methods of efficient use of water. In this regard, taking into account the negative complications of the situation in the lower reaches of Amudarya during the last 40 years, it is considered necessary to improve the ecological and meliorational condition of the irrigated lands and to improve the effective use of water.

In 2017-2021, the action strategy for further development of the Republic of Uzbekistan states, among other things, "...further improvement of land reclamation, development of networks of reclamation and irrigation facilities." It is becoming important to carry out scientific research work on increasing the productivity of land based on the implementation of this task, including the development of resource-efficient irrigation of crops and water use methods.

Farmers have a special place and influence in the formation of socio-economic reforms. In particular, agriculture is the main producer of agricultural products in the Kashkadarya region that we are analyzing. Compared to farms, peasant farms are the main producers of agricultural and food products.

In Figure 2 below, farms produced 9,239 tons of meat (147.5 percent compared to 2020), 42,557 tons of milk (125.8 percent), and 23,303 thousand eggs (127.4 percent) in 2021 by live weight. Also, as of 2021, there are 76,500 head of large horned cattle on farms, including 27,300 head of cows, 291,800 head of sheep and goats, 3,800 head of horses, 329,700 head of cattle. there are birds.

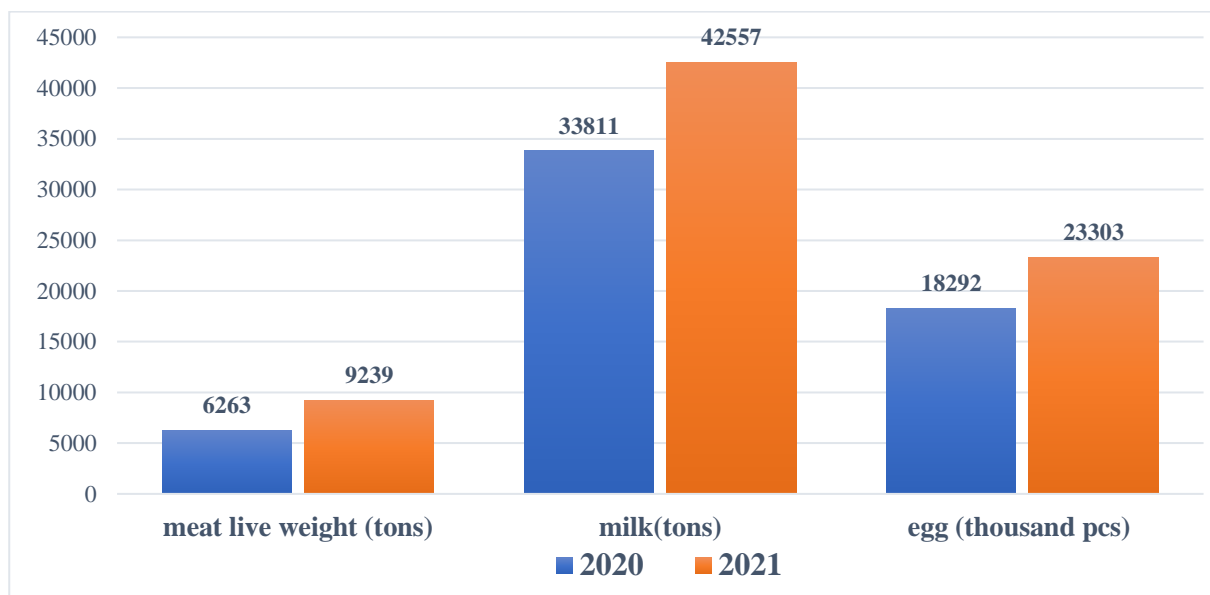


Figure 2. The main types of livestock products produced by farms of Kashkadarya region¹²

Therefore, the agricultural products grown by farmers and peasant farms operating in regional agriculture are increasing year by year. Therefore, in our country, the development of farms is considered as an important direction of the economic reforms implemented in the agrarian sector, and

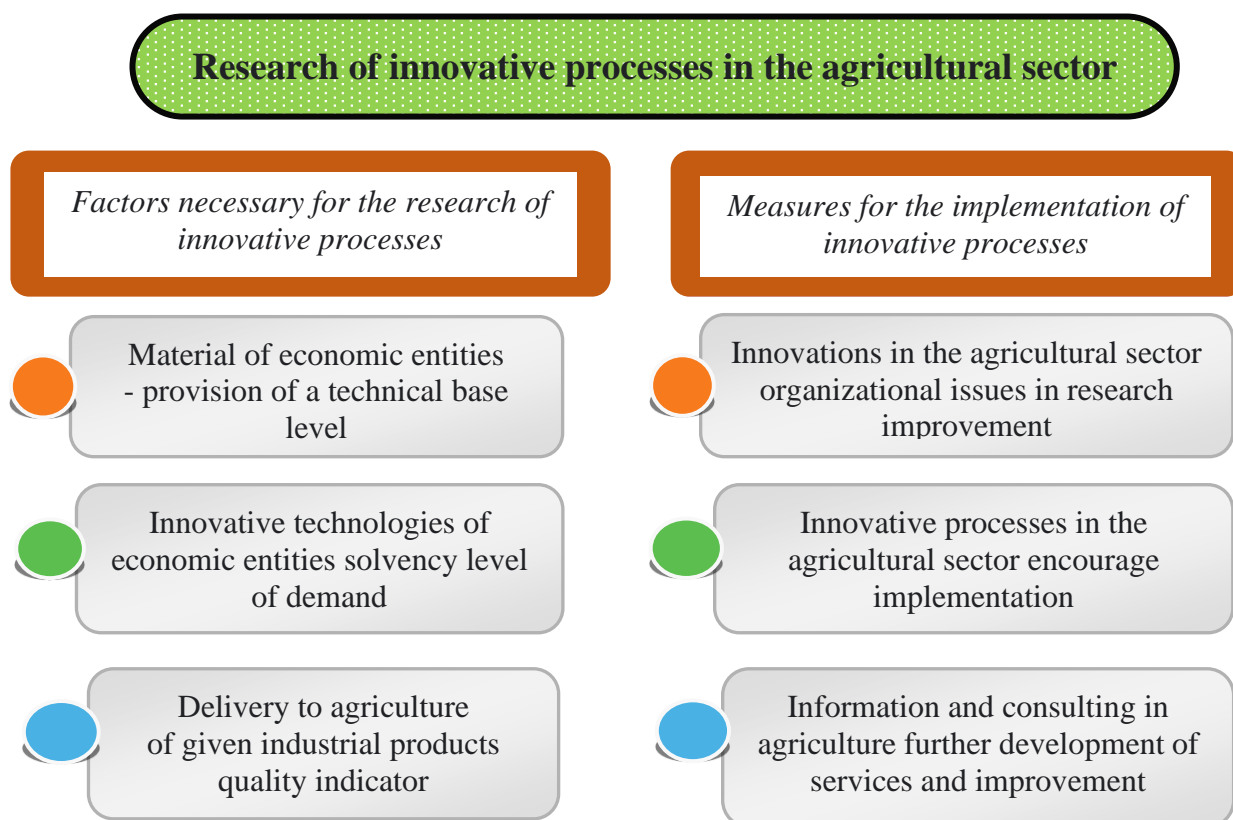
¹² It was compiled by the author based on the data of the Statistics Department of Kashkadarya Region.



as a result, we are witnessing that the position of farms among the forms of economic management is increasing year by year.

It should be noted that the increase in the number of farms does not give a complete picture of the level of efficiency of their activity. The level of specialization of farms is important for increasing the efficiency of their activities, improving the quality of products and increasing labor productivity. Great attention is being paid to the organization and development of the farm, which was tested in the world agricultural experience in the first years of the independence of our republic and has proven itself as a form of effective management of agriculture in developed countries.

When introducing innovations and scientific and technical achievements to agriculture, on the one hand, we consider what conditions exist for introducing these innovations, and on the other hand, what measures are developed to introduce innovations to agriculture. it is necessary to determine whether it is necessary to exit (picture 3).



3 – picture. System of measures to improve the research of innovative processes in the agricultural sector¹³

The reason is that the growth of the gross product can now be achieved primarily through the development of small and large innovative businesses. If we take into account the great role and importance of agriculture in the republic, the innovative development of production will allow to bring the sector to a new qualitative level.

Currently, there are many directions in the development of agriculture, based on the influence of various conditions and factors, the main of which is the innovative development of the sector. Innovative development is associated with the acceleration of economic growth, increase in the

¹³Source: Developed by the author



efficiency of the industry, expanded reproduction and improvement of the quality of life of the population.

CONCLUSION. To conclude, the modernization of the country's agriculture not only creates the ground for the development of agriculture, but also provides an opportunity to ensure the country's food security.

Working with innovative programs is of great importance in financing the innovative development of agriculture. This type of funding should remain the main funding direction for applied scientific research in the future. It is expedient to finance innovative programs in two directions.

In the first direction, scientific research works are carried out with the direct participation or order of the consumer of the scientific product or consumers of the innovative program. In this case, the consumer of the scientific product is known in advance, he finances the scientific research work from the beginning, and the finished scientific product becomes his intellectual property. The contract should state that the scientific institution cannot sell the scientific product to another organization without the customer's permission.

In the second direction, the scientific institution can take a loan from the bank for its scientific research work and sell the completed scientific product freely. The problems of innovative development are of particular importance for Uzbekistan, because only innovative development with the wide and effective use of new resource-efficient, advanced technologies ensures the rapid growth of the economy, taking into account the preservation of the environment.

The uniqueness of the innovation process in the agricultural industry is that when analyzing the development of investment activity, it is necessary to take into account the factors affecting the quantity and quality of service. Although these factors are different, they can be divided into the following groups: external factors (positive and negative) and internal factors (favorable and unfavorable).

Rapid and stable development of the agricultural sector, guaranteeing the country's food security, increasing the export potential and competitiveness of the sector depend on many factors. In particular, in the rapid and stable development of the agricultural network, the role and importance of infrastructure entities serving it is great. Because the stable and effective development of the agricultural network requires its liberation from non-specific functions. That is, due to the fact that the farms of farmers and peasants (personal assistants) do not have all the material and technical resources necessary for their activities, it is appropriate to provide these services by specially specialized infrastructure entities.

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