



THE INFLUENCE OF FARMS ON THE DEVELOPMENT OF THE AGRICULTURAL NETWORK AND ITS ECONOMIC-STATISTICAL ANALYSIS

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ABSTRACT

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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

Today, a number of important organizational, legal and economic measures regarding the implementation of economic reforms in the agricultural sector of our country are being implemented step by step. According to the decree of the President of the Republic of Uzbekistan "On approval of the strategy for the development of agriculture of the Republic of Uzbekistan for 2020-2030", it is necessary to ensure the safety of food products in our country, to improve the consumption ration, and to develop a state policy of food security, which provides for the cultivation of the required amount of food products. and introduction, development of quality control infrastructure, promotion of export, competitiveness in target international markets, increase of labor productivity in farms, improvement of product quality [3] is envisaged.

Agriculture has a special importance in the socio-economic development of our country, and the fields of agriculture and animal husbandry serve to generate

income and ensure the well-being of the population. The long history of the development of the network, the rich experience in the production of products, the fact that the current climate provides an advantage in the development of the sector, as well as the geographical location justify the need to form the development of agriculture as one of the promising sectors. On the other hand, the process of production of agricultural products has a centuries-old development trend, which has reached its current state under the influence of many factors (population growth, development of science, creation and development of techniques and technologies, socio-economic realities, etc.) development has not lost its relevance. As a result, about 26 percent of the country's gross domestic product is accounted for by agriculture, fisheries and forestry.

In the development strategy of New Uzbekistan for 2022-2026, "intensive development of agriculture on a scientific basis, increasing soil fertility, improving the system of providing agro-services based on

science and innovation, increasing the production volume of agro-industrial enterprises by 1.5 times, developing agro-logistic centers, modern laboratories tasks such as increasing their number, implementing a national program on seed and seedling cultivation, establishing an international agricultural university, and deepening the integration of science and practice in the field" [4].

Climate change, land degradation, water scarcity, pests and diseases, limitations in the market system, and existing shortages in the labor force are the major challenges facing the agricultural sector today, requiring the expansion of scientific research for the development of this sector. In this regard, our scientific research presented in this article shows its incomparable importance.

Normative legal documents on the management and conduct of agricultural activities include the Law of the Republic of Uzbekistan "On Farming" and other legal documents. The purpose of this Law is to regulate relations in the field of establishment, operation, reorganization and liquidation of farms.

ANALYSIS OF LITERATURE ON THE SUBJECT

Many local and foreign scientists and specialists have conducted extensive scientific research on increasing the efficiency of agricultural production and statistical evaluation of its structural structures. Statistical analysis of agricultural production at the macro and meso level has been studied by many scientists and researchers in individual countries and regions. For example, S.A. Ugumba[10] socio-economic factors affecting the activity of small farms, M. Winter, M. Lobley[11] development of small family farms in Great Britain, Sh.A. Jantemirov[12] entrepreneurship in the agricultural sector state of development, A.A. Chernov [13] highlighted the state and prospects of new measures of state support of small business in agriculture in scientific research works. Also, D.Parmakli[6] theoretically studied the specific aspects and laws of the agricultural economy, while V.Somov[7] analyzed the economic-statistical development of agriculture in a separate territorial unit.

Q statistics of agricultural products, the development of small business and private entrepreneurship in them, influencing factors have been studied by many local scientists and researchers. In particular, Yo.Abdullaev[14] and N.Soatovlar[15] theoretical aspects of economic-statistical analysis, T.Shodiev[5] theoretical and practical aspects of econometric

models of agricultural network development, Kh.D.Khojakulov., N.Kh. Rashitova., N.N. Askarov., S.N. Sayfullaev[8] and Kh.Shodiev[9] studied the methodological aspects of statistical analysis of structural changes in the agricultural sector.

RESEARCH METHODOLOGY

The works of a number of scientists who conducted scientific research in such directions as the development of small business in the agricultural sector, their role in the development of the agricultural products market, and the study of factors affecting it were theoretically analyzed. Based on the dialectical theory of scientific research, methods of analysis and synthesis have been extensively used as a research methodology.

Various methods of statistical analysis, such as statistical tables and graphs, induction and deduction, statistical grouping, expert evaluation, scientific abstraction, analysis and synthesis, dynamic series and economic indices, as well as scientific observation and summarizing indicators, were widely used in achieving the results of scientific research presented in this article.

ANALYSIS AND RESULTS

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 plots and other types of activities not prohibited by law ¹.

The socio-economic content and mode of operation of the farm are different in different countries and are determined by factors such as the level of development and characteristics of agricultural production relations, as well as the conditions of labor and land use, the level of industrialization and specialization of agricultural production, and the amount of investment.

A farm is an independent economic entity engaged in the production of agricultural goods using leased land plots. The head of the farm is the founder of this farm - the farmer. A citizen of the Republic of Uzbekistan who has reached the age of eighteen and has the appropriate qualification or work experience in agriculture can be a farmer. In relations with other legal entities and individuals, the head of the farm acts on behalf of the farm. As a result of the research, it was determined that the classification of crops plays an important role in agricultural statistics, and we will study them by dividing them into technical crops, poly crops and vegetable crops (Table 1).

¹ " Uzbekistan Republic of law about" Farm economy " August 26, 2004, No. 662-II.

Table 1
Statistics of agricultural crops classification²

Agricultural crops groups i	Agricultural crops list
I. Technical crops: - in closed areas	cotton, grain
- in open spaces	cotton, grain
II . Poly z crops	watermelon , watermelon and cantaloupe
III. Vegetable crops: - in closed areas	cucumbers, tomatoes, vegetables, greens, seedlings
- in open spaces	cabbage, cucumbers, beets, carrots, radishes, turnips, radishes, onions, peppers, dill, pole beans, green peas, etc.
IV. Fruit - berries, fruit crops, fruits:	
- fruits with seeds	apple, pear, quince
- grain fruits	plum, cherry, cherry, apricot, peach
- nuts	almonds, walnuts, pistachios, hazelnuts
- berries	strawberry, raspberry, currant, gooseberry
- grapes	grapes of all kinds and varieties

These crops play an important role in satisfying the population's needs for quality food and agricultural products, in the consumption of vitamin-rich products, and are the main source of ensuring public health, especially in the conditions of global food shortage and competition.

46% by livestock. In terms of net profit, this figure is 62 and 38 percent, respectively. This is explained by the high profitability of farms specializing in vegetables and horticulture. In this case, it will be possible to assess the share of farmers in the production of agricultural and livestock products from the structure of agricultural production (Table 2).

54% of the country's gross income from agriculture is accounted for by farms specializing in agriculture, and

Table 2
Composition of agricultural production, %

Indicators	2015	2016	2017	2018	2019	2020	2021	202 2
Total - All category economy	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Jami is a farmer farm	30.7	29.7	29.3	26.0	27.9	28.2	29.3	31.4
Total - farmer (personal auxiliary) farm	66.9	68.0	68.4	71.2	68.3	67.4	65.5	61.7
Total village farm activities done increasing organization	2.4	2.3	2.3	2.8	3.8	4.4	5.2	6.9
Farming - farmer farm	52.0	52.0	49.2	45.3	49.2	52.0	53.1	55.3
Farming - farmer (personal auxiliary) farm	46.2	46.4	49.1	52.2	46.8	42.3	40.0	35.7
Farming is rural farm activities done increasing organization	1.8	1.6	1.7	2.5	4.0	5.7	6.9	9.0
Animal husbandry - farmer farm	4.0	3.9	3.7	4.6	5.1	4.9	5.3	6.1
Livestock - farmer (personal auxiliary) farm	92.9	92.9	93.1	92.3	91.2	92.0	91.1	89.3
Animal husbandry is a village farm activities done increasing organization	3.1	3.2	3.2	3.1	3.7	3.1	3.6	4.6

The above table shows the shares of all categories of farms in the total cultivated and produced products in 2015-2022. From it, we can observe that the share of farms has grown over the years (31.4%). We can see that the share of livestock breeding farms has also

grown during the analyzed periods (from 4.0% to 6.1%).

It can be seen that the cultivation of agricultural products in our country has had an increasing trend over the years (Table 3).

²Developed by The Author.

Table 3
Volume of agricultural products grown in Uzbekistan ³, thousand tons

Product type	2000	2005	2010	2015	2020	2021	202 2	Absolute change in 2022 compared to 2000, +,-	Relative change in 2022 compared to 2000, %
Don and legumes crops	4 101.4	6 540.9	7 504.3	8 173.5	7 636.0	7 634.6	7990.5	3889.1	194.8
Potatoes	731.1	924.2	1 694.8	2 586.8	3 14 3.8	3 285.6	3443.2	2712.1	4.7 m.
Vegetables - total	2 644.7	3 517.5	6 262.4	9 390.0	10 431.4	10,850.2	11162.9	8518.2	4.2 m.
Nutritious policy	451.4	615.3	1 182.4	1 853.6	2 134.4	2 285.3	2420.7	1969.3	5.3 m.
Fruit and berries	790.9	949.3	1 676.3	2 467.9	2 812.6	2 852.6	2999.3	2208.4	3.8 m.
Grapes	624.2	641.6	979.3	1 518.2	1 606.9	1 695.3	1760.6	1136.4	2.8 m.
Slaughter goods for and poultry (live in weight)	841.8	1 061.5	1 461.4	2 033.4	2 519.6	2 635.1	2 725.9	1884.1	3.2 m.
Milk	3 632.5	4 554.9	6 169.0	9,027.8	10,976.9	11 274.2	11,627.2	7994.7	3.2 m.
Received eggs , million piece	1 254.4	1 966.7	3 061.2	5 535.4	7 781.2	7 788.4	8 129.2	6874.8	6.5 m.
Honey , tons	2 685.0	2 115.7	3 171.9	10 157.0	13 357.8	14,066.9	14,700.4	12015.4	5.5 m.
Cocoon , ton	16 479.0	16 211.0	25 151.8	26 293.0	20,941.9	22,769.9	24 300.2	7821.2	147.4

According to our analysis, significant changes were observed in the volume of agricultural products grown in 2022 compared to 2000. In particular, egg production increased by 6.5 times, honey by 5.5 times, sugar products by 5.3 times, potatoes by 4.7 times, and meat and dairy products by 3.2 times. Only in the

cocoons, the change was not so significant, it was 147.4 percent in the studied years.

The growth dynamics of agricultural products on the scale of the regions of Uzbekistan compared to last year are given:

Table 4
Growth dynamics of agricultural products compared to last year, ⁴in percent

Areas	2000	2005	2010	2015	2020	2021	202 2
Total	103.1	105.4	106.3	106.1	102.7	103.9	103.6
Republic of Karakalpakstan	65.6	104.6	121.3	109.8	102.3	104.2	103.7
Andijan region	110.2	104.7	108.0	106.3	101.1	104.5	102.3
Bukhara region	106.3	109.2	107.6	107.1	101.9	104.7	103.9
Jizzakh region	100.1	104.0	106.4	106.7	102.7	104.2	101.8
Kashkadarya region	89.4	109.6	107.0	106.1	103.7	101.3	104.9
Navoi region	105.0	107.5	105.9	106.6	103.3	104.4	103.8
Namangan region	111.5	103.1	105.8	106.3	104.0	107.0	105.7
Samarkand region	104.8	103.9	107.0	107.1	102.5	103.1	102.3
Surkhandarya region	106.7	100.5	105.2	106.3	105.3	104.2	101.7
Syrdarya region	101.9	112.9	105.6	105.5	101.8	103.8	103.9
Tashkent region	114.9	103.8	102.9	103.3	100.1	104.1	104.2
Fergana region	113.5	107.2	106.1	105.7	104.9	103.2	104.9
Khorezm region	82.8	103.2	102.5	105.5	101.7	102.9	103.9

In the studied years in our country, a positive trend was observed in the dynamics of growth of agricultural products compared to the previous year. Between 2000 and 2022, an increase of 3.0-6.0 percent was

observed in the growth dynamics of agricultural products in the Republic of Uzbekistan.

According to our analysis, in recent years, farming has accounted for 49.9 percent of agricultural production

³Compiled on the basis of information from the official website of the State Statistics Committee of the Republic of Uzbekistan.

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in our country, and cattle breeding has accounted for 50.1 percent. We can see that while Andijan region had the highest share (61.9%, 38.1%), Navoi region had the lowest share (34.2%, 65.8%).

In our country, during the years 2000-2022, the dynamics of changes in the volume of agricultural

arable land and general products, and the volume of products produced in the fields of farming and livestock breeding were analyzed statistically using the time series method based on the base and chain methods. (Table 5).

Table 5
Dynamics of agricultural arable land in Uzbekistan in 2000-2022⁵

Year	Cultivated area , thousand ha	Absolute increase i (decrease i), thousand g a		Relative growth (decrease) rate, %		Additional growth (decrease) rate, %	
		basic	chained	basic	with a chain	basic	chained
2000	3778.3	-	-	100	100	-	-
2001	3444.5	-333.8	-333.8	91.2	91.2	-8.8	-8.8
2002	3540.8	-237.5	96.3	93.7	102.8	-6.3	2.8
2003	3790.1	11.8	249.3	100.3	107.0	0.3	7.0
2004	3695.7	-82.6	-94.4	97.8	97.5	-2.2	-2.5
2005	3647.5	-130.8	-48.2	96.5	98.7	-3.5	-1.3
2006	3637.4	-140.9	-10.1	96.3	99.7	-3.7	-0.3
2007	3560.3	-218.0	-77.1	94.2	97.9	-5.8	-2.1
2008	3609.7	-168.6	49.4	95.5	101.4	-4.5	1.4
2009	3608.6	-169.7	-1.1	95.5	100.0	-4.5	0.0
2010	3708.4	-69.9	99.8	98.1	102.8	-1.9	2.8
2011	3601.6	-176.7	-106.8	95.3	97.1	-4.7	-2.9
2012	3628.1	-150.2	26.5	96.0	100.7	-4.0	0.7
2013	3658.6	-119.7	30.5	96.8	100.8	-3.2	0.8
2014	3678.2	-100.1	19.6	97.4	100.5	-2.6	0.5
2015	3694.2	-84.1	16.0	97.8	100.4	-2.2	0.4
2016	3706.7	-71.6	12.5	98.1	100.3	-1.9	0.3
2017	3474.5	-303.8	-232.2	92.0	93.7	-8.0	-6.3
2018	3396.0	-382.3	-78.5	89.9	97.7	-10.1	-2.3
2019	3309.4	-468.9	-86.6	87.6	97.4	-12.4	-2.6
2020	3396.1	-382.2	86.7	89.9	102.6	-10.1	2.6
2021	3340.6	-437.7	-55.5	88.4	98.4	-11.6	-1.6
2022	3353.3	-425.0	12.7	88.8	100.4	-11.2	0.4

we can see that in 2022, the available agricultural land decreased by 425,000 hectares compared to 2000, i.e. -11.2%, and compared to 2021, it increased by 12.7 thousand hectares, i.e. 0.4% . .

CONCLUSIONS AND SUGGESTIONS

In conclusion, the social, economic, legal, technological, financial and organizational factors of modernization of the agricultural sector have been evaluated. In our opinion, the correct identification, statistical evaluation and accounting of the factors listed above will serve to increase the efficiency of agricultural production at the farm in the future.

We offer the following for the further development of the agricultural network:

- it is necessary to increase the productivity of agricultural products . The average productivity of cotton, wheat, tomatoes, potatoes, milk and other products in Uzbekistan is much lower than their real potential. Increasing this indicator not only increases the profit and export potential of farms and agro-organizations, but also creates an opportunity to use the areas currently occupied by wheat and cotton for more profitable crops;
- it is necessary to balance the use of agricultural land. For this, in order to increase productivity in the development of agriculture, the additional areas currently used for planting these two products should be used for planting other more useful crops, in particular, fruits and vegetables ;
- village export opportunities of the farm maximum use need The integration of the above-

⁵The table was compiled based on the author's calculations using data from the official www.stat.uz website.

mentioned producers into these chains with the help of government programs to promote the cooperation and cooperation of agricultural cooperatives with agribusinesses and exporters would help to develop production capabilities and increase the profitability of small farmers' and private owners' businesses.

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