

Factors Affecting Production Costs in Grain Farming

Azimova Khurshida Mirsamadovna

Independent researcher, Tashkent State Economic University,
Tashkent, Uzbekistan

E-mail: hurshidazimova@gmail.com

Abstract: In this article highlights the factors that affect production costs in grain production, and focuses on the factors that reduce costs in wheat production. Analysis of wheat growing conditions in all farms of Uzbekistan and suggestions for reducing production costs in grain production are given.

Keywords: Grain, production, costs, cost reduction, wheat cultivation.

1. INTRODUCTION

One of the main goals of grain farming in the context of globalization is to get the maximum possible profit. The possibilities of achieving this strategic goal are limited by production and marketing costs, as well as market demand for the products of grain growers. Therefore, costs are the determinants of supply and profit. Therefore, it is impossible to make management decisions without analyzing the current costs of production and sale of products and the costs incurred in the implementation of newly developed projects.

At present, the price of equipment, fertilizers, and plant protection products is increasing worldwide, and agricultural producers are focused on reducing production costs, and this issue is urgent.

It is stated that "it is necessary to expand the assistance provided to farmers in mechanization services, to provide them with mineral fertilizers, quality seeds and small technologies, to improve the provision of relevant information services, and to resolve issues related to leasing services." [1]

In the decision of the President of the Republic of Uzbekistan dated 05.04.2023 No. PQ113 "On additional measures to expand and support the production and processing of agricultural products in 2023", the tasks defined in the strategy for the development of agriculture of the Republic of Uzbekistan for 2020-2030 will be implemented in 2023 the goal is to increase the volume of food production through the effective use of available resources, to ensure the demand of the population in the domestic market and to maintain price stability, and to provide economic and financial support to the producers of agricultural products. [4]

2. LITERATURE REVIEW

It is necessary to analyze the factors affecting production costs in grain production, complex research of factors affecting their development, development of scientific proposals and recommendations based on medium-term forecasting of development prospects.

According to A. Artikov, "Taking into account the network characteristics of production, economic analysis of the cost structure and production costs, allows to study the main technical and economic processes occurring in production, to determine the main ways to reduce production costs." [3]

Seeking reserves to reduce costs helps many farms avoid bankruptcy and survive in a market economy. Cost analysis helps to increase the economic appropriateness of product prices, because socially necessary costs for the production and sale of products, works, services are taken as a basis, along with the consumer price of goods.

The main tasks of analyzing the costs of production of cereal products (including wheat) are as follows:

- assessment of the reasonableness of plan (estimate) expenses, identification and measurement of the impact of factors that have a positive and negative effect on certain types of expenses;
- implementation of systematic control over the implementation of the cost reduction plan;
- identify reserves and develop measures to use these reserves to further reduce costs. [6]

The following analysis aims to identify the reasons or factors that caused these changes. Given that all types of indirect costs do not have the same relationship with the volume of production, they are divided into conditional fixed and conditional variable costs in the analysis.[7]

Given the large number and variety of types of costs that are part of indirect costs, the reasons for their deviation from the plan are just as diverse. To determine them, not only reporting and budget data, but also analytical accounting data, primary accounting documents, calculations, cases, standards and other data sources are used.

3. ANALYSIS AND RESULTS

Republic's agriculture in expanding the production of consumer goods in the country and improving the living standards of the population is increasing year by year.

After our country gained independence, great importance was attached to the production of consumer goods, which is the main direction of ensuring the well-being of the population. The development of the agriculture and animal husbandry sector is especially important in providing the population with food products, especially the indicators of the production of agricultural products for the cultivation of wheat can be seen in the following table (Table 1).

Table 1: Cultivation of wheat in all farms of Uzbekistan in 2018-2022

Indicators	2018	2019	2020	2021	2022	Total in 2018-2022
Wheat field area, thousand ha.	1386.3	1316.1	1359.1	1312.9	1259.4	6633.8
Gross yield, thousand tons	5410.8	6093.5	6157.8	5984.8	5726.1	29373.0
5-year average yield, quintal/ha	41.0	46.3	45.4	46.1	46.4	44.3

Based on the data of Table 1, it can be said that in 2018-2022, wheat was planted on 6633.8 hectares in all farms of Uzbekistan, and 29373 tons were harvested. The average weighted yield for 5 years was 44.3 centners.

Table 2: Cultivation of wheat in the farms of Uzbekistan in 2018-2022

Indicators	2018	2019	2020	2021	2022	Total in 2018-2022
Wheat field area, thousand ha.	1212.4	1143.1	1114.7	1041.0	985.0	5494.2
Gross yield, thousand tons	4602.0	5394.4	5844.8	5005.9	4679.0	24926.1
5-year average yield, quintal/ha	40.0	47.3	44.3	49.0	48.7	45.4

In 2018-2022, wheat was planted on 5,494.2 hectares of farms in Uzbekistan and 24,926.1 tons were harvested. The 5-year average weighted yield was 45.4 centners.

Table 3: Cultivation of wheat in 2018-2022 in all farms of Tashkent region

Indicators	2018	2019	2020	2021	2022	Total in 2018-2022
Wheat field area, thousand ha.	125.1	104.7	120.7	119.5	114.5	534.5
Gross yield, thousand tons	426.7	485.7	446.1	418.1	437.7	2214.3
5-year average yield, quintal/ha	34.2	46.7	37.2	35.2	38.3	37.9

As can be seen from the table, in 2018-2022, wheat was planted on a total of 584.5 hectares in all farms of Tashkent region, and 2214.3 tons were harvested, and the 5-year average weighted yield was 37.9 centners. Below, the costs of growing wheat on 1 hectare in the farms "Sunnat Abdugarim" F.H., "Amirkhan agrobiznes" F.H., Tashkent district Tashkent region are given.

Table 4: Costs of growing wheat on 1 hectare in farms of Tashkent district of Tashkent region

Expenses	"Sunnat Abdukarim" F.Kh.					"Amirkhan Agrobusiness" F.Kh.					" Karomat Muruvvat Faiz" F.Kh				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Right to work	1350	1450	1650	1750	1950	1100.0	1100.0	1166.3	1616.3	3000.0	1130.0	1270.0	1290.0	1450.0	2800,
seed production	625.0	684.5	725.0	722.5	812.5	575.0	612.5	625.0	725.0	812.5	575.0	612.0	625.0	725.0	812, 0
Chemical means of plant protection	72.5	82.5	85.0	97.5	100.0	105.0	110.0	150.0	162.5	240.0	90.0	105.0	110.0	200.0	240.0
petroleum products	795	850	953.7	1122	1320	550.0	715.0	770.0	935.0	1210.0	550.0	715.0	770.0	935.0	1320.9
electric power	-	-	-	-	-	1000.0	1200.0	13500	1350.0	15600	-	-	-	-	-
mineral fertilizers	750.0	875.0	1250.0	1450,	1650.0	718.0	825.0	1087.5	1200.0	1650.0	825.0	900.0	1125.0	1270.0	1875.0
local fertilizers	972.8	995.4	1119.6	1119.6	2580	642.0	625.0	666.7	666.7	833.3	550.0	600.0	620.0	750.0	1000.0
Total:	4565.3	4937.4	5783.3	6261.6	8412	4684	5187.5	5815.9	6655.5	9305.40	3720.0	4202	4540	5330	8047

The analysis of the data presented in the table shows that the composition of wheat cultivation costs is the same in "Sunnat Abdukarim" and "Karomat Muruvvat Faiz" farms, only in "Amirkhan Agrobiznes" farm there are different electricity bills. The reason for this is that the Amirkhan Agrobusiness farm is located on a hill. Water is pumped out of the ditch to irrigate wheat.

Table 5: Cost of local fertilizer for 1 hectare of wheat field in farms of Tashkent district of Tashkent region

Expenses	"Sunnat Abdukarim" F.Kh.					"Amirkhan Agrobusiness" F.Kh.					" Karomat Muruvvat Faiz" F.Kh				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
1 ha of fertilizer, tons	9.1	8.5	9.0	9.0	20.0	9.2	8.3	8.3	8.3	10.0	10.0	10.0	10.0	10.0	10.0
1 ton of fertilizer, thousand sum	106.9	117.1	124.4	124.4	129.0	69.8	75.3	80.3	80.3	83.3	55.0	60.0	68.0	75.0	100.0
Amount of applied fertilizer, thousand sums	972.8	995.4	1119.6	1119.6	2580	642.0	625.0	666.7	666.7	833.3	550.0	600.0	620.0	750.0	990.0

According to the table, the average price of 1 ton of local fertilizer applied to 1 hectare of land for 5 years was 120.6 thousand soums at the "Sunnat Abdukarim" farm, 77.8 thousand soums at the "Amirkhan Agrobiznes" farm, and 70.4 thousand soums at the "Karomat Muruvvat Fayz" farm. .

"It is known that the composition of the product cost is constantly changing, it is affected by a number of factors:

1. Features of production. There are labor-intensive industries (a large share of labor costs in the cost of production); a lot of material (a large share of material costs); capital intensive (large share of depreciation); energy-intensive (a large share of fuel and energy).
2. Scientific and technical progress. This factor affects the composition of costs in many ways. Mainly, under the influence of this factor, the share of living labor decreases, and the share of manufactured labor in the cost of production increases.
3. The degree of specialization, concentration, cooperation of production.
4. Geographical location of the enterprise;
5. Inflation, bank loan interest rate changes." [2]

The composition of production costs is characterized by the following indicators:

- ratio of live and materialized labor;
- the share of individual elements or items in the cost amount;
- fixed and variable costs at full cost, basic and additional costs, direct and indirect, the ratio between production and commercial (non-production) costs, etc.[5]

In our opinion, the analysis of the cost structure allows to identify the main reserves for its reduction. It is necessary to analyze the composition of costs both by elements and by substances.

It is known that in recent years, the structure of expenses in agriculture and its branches has been changing significantly. With allowances for social needs, the share of wages decreased by more than 2 times, the share of material costs and depreciation increased significantly; similar trends were observed in the composition of costs for cereal products (including wheat).

The composition of expenses in the analyzed period was influenced by the inflation process. The value of material resources, fixed assets, labor force did not change adequately relative to each other.

Note that the unit cost of a product is the result of the ratio of production costs and product quantity.

An important condition for the efficiency of the agricultural enterprise is the constant reduction of the cost of the product.

4. CONCLUSIONS

Scientific studies show that now there are all opportunities to turn the agricultural sector into a profitable one in the republic's territories. The main factors for reducing the costs of grain production in the republic are the introduction of high-yielding varieties and hybrids of grain crops, reducing the capital capacity of production, material consumption, reducing the costs of organizing and managing production and energy-saving technologies, the development of mechanization and increasing the concentration of production, the introduction of complex mechanization and automation of the main production processes, improvement of the quality of agricultural products and reduction of losses, as well as improvement of labor organization and material incentives are required.

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