

Justification of promising areas of development of agricultural organizations

Fayaz Avkhadiev*, Nail Asadullin, Ilgizar Gainutdinov, and Liliya Mikhailova

Kazan State Agrarian University, Kazan 420015, Russia

Abstract. The relevance of the article topic is connected with the need to study the issues of increasing efficiency of agricultural enterprises at the regional level. The research goal is to develop proposals for improving the functioning of agricultural enterprises. The novelty of the research lies in the justification of proposals in order to improve the efficiency of agricultural organizations. The article presents results of the analysis of state indicators and development of the main agricultural branches in the Pre-Kama zone of the Republic of Tatarstan. The research results can be used to justify promising areas for the development of agricultural organizations.

1 Introduction

The main goal of any production is to generate income and meet the growing needs of the population in basic food products. Specifically for a commodity producer, the goal of economic activity is to obtain a large volume of high-quality products and reduce the cost of their production.

Product manufacturers, supplying products to the market, begin to compete for buyers, who lose this competition. Those who lose incur losses and leave this market. Under such conditions, each commodity producer thinks about such a level of enterprise performance that will allow the company to withstand competition and occupy a stable niche in the market. First of all, the main reason for the unstable situation of agricultural enterprises is the low economic efficiency of their functioning [1, 2].

Basic foodstuffs for the population are supplied by agriculture. Improving the functioning of enterprises and agriculture is currently the main problem of the domestic economy. It requires the development of various measures, starting with study of this concept, study of assessment methods and development of various scenarios for increasing efficiency of agricultural enterprises [3, 4].

2 Materials and Methods

The theoretical and methodological basis of the study were works of foreign and domestic agricultural economists on the topic under study: legislative acts, methodological foundations of modern theories on the effectiveness of methods for assessing it, state development programs and regulatory acts of the Russian Federation on the regulation of agri-food policy, materials from international and all-Russian scientific

and practical conferences. During the research, we used data of the Federal State Statistics Service of the Russian Federation, the Ministry of Agriculture of the Russian Federation, the Ministry of Agriculture and Food of the Republic of Tatarstan, and planning or reporting documents of agricultural organizations.

When performing the research, the following methods were used: monographic, abstract-logical, economic-statistical, economic-mathematical and etc.

3 Results and discussion

The basic principle of management is to ensure a steady increase in production based on the rational use of all resources.

The essence of management is not simply profit-making, but ensuring high growth rates with decreasing costs per unit of output. This can only be achieved by using a rational agricultural system.

Each individual element of the management mechanism represents a whole major problem.

All levers of the management mechanism should be aimed at solving the following problems: the most efficient and economical use of resources, increasing output per unit of expenditure of these resources and a steady increase in labor productivity. Almost all of this comes down to increasing the efficiency of production.

As an object of study, we selected enterprises of the Pre-Kama economic zone, since this zone reflects the general trends in the development of agricultural production in the Republic of Tatarstan. Natural and climatic conditions affect the specialization of economic zones. Agricultural enterprises of Pre-Kama economic zone have a livestock sector. [5]

Pre-Kama economic zone occupies 16.3 % of the territory of the northern part of the Republic of Tatarstan. This zone includes the following municipal

* Corresponding author: fn1973@mail.ru

areas – Baltasinsky, Sabinsky, Kukmorsky, Tyulyachinsky, Mamadyshsky, Rybno-Slobodsky.

The article studies climatic conditions and the condition of agricultural industries in the areas included in the Pre-Kama economic zone of the Republic of Tatarstan.

The areas of Predkamsk economic zone are located in the northern part of the Republic of Tatarstan. It specializes in dairy and beef cattle breeding, production of grain and fodder crops, potatoes [5–7].

Table 1. Presence of farmland and arable land at the beginning of the year for agricultural enterprises, including peasant farms at the beginning of the year in the areas of Pre-Kama zone of the Republic of Tatarstan in 2015–2018, (thousand hectares)

Name of a district	2015		2016		2017		2018	
	Area of agricultural land	Including arable land	Area of agricultural land	Including arable land	Area of agricultural land	Including arable land	Area of agricultural land	Including arable land
Baltasinsky	77.1	69.9	77.7	70.6	77.8	70.7	76.9	69.9
Kukmorsky	90.6	76.2	90.6	76.2	90.6	76.2	90.6	76.2
Mamadyshsky	130.5	88.4	130.5	88.4	130.5	89.7	130.5	89.7
Rybno-Slobodsky	104.8	84.6	104.8	84.6	104.8	84.6	104.8	84.6
Sabinsky	63.5	58.3	63.5	58.3	63.5	58.3	63.2	58.0
Tyulyachinsky	58.1	48.7	58.1	48.7	58.1	48.7	58.1	48.7
Total for the RT	3973	3246	3941	3227	3939	3231	3943	3232

In order to assess efficiency of land resources in the regions of the Republic of Tatarstan, we start with the production output of main types of agricultural products per 100 hectares of land (tables 2, 3).

Table 2. Milk production per 100 ha of farmland c

Name of a district	2013	2014	2015	2016	2017	2017 %	
						2016	2013
Baltasinsky	784	811	869	922	992	108	134
Kukmorsky	577	640	751	858	973	113	192
Mamadyshsky	339	403	383	409	444	109	169
Rybno-Slobodsky	132	137	145	159	160	101	121
Sabinsky	693	724	805	842	914	108	139
Tyulyachinsky	358	368	346	375	393	105	127
Total for the RT	283	295	305	322	328	102	122

As can be seen from table 2, in all areas of Pre-Kama economic zone, there is an increase in milk production per 100 hectares of farmland. The greatest growth is observed in Kukmorsky area. In 2017, compared with 2013, the growth was 92 %, and compared to 2016 – 13 %. There is also a high increase in milk production in Mamadyshsky district – 69 %. The smallest growth among the regions of Pre-Kama zone of the Republic of Tatarstan occurred in Rybno-Slobodsky district. The highest milk production per 100 hectares of farmland in Baltasinsky district of the Republic of Tatarstan is 992 lb. The smallest milk production is observed in Rybno-Sloboda district – 160 centners per 100 hectares of farmland, which is 6.2 times less than in Baltasinsky and

Next, we consider the main indicators of the state and development of agricultural sectors in the areas of Pre-Kama zone of the Republic of Tatarstan.

As can be seen from table 1, the area of farmland and arable land in the areas of Pre-Kama economic zone has not changed much. Only in Baltasinsky, Mamadyshsky and Sabinsky districts there was an insignificant reduction in the area of farmland and arable land.

2 times compared with the average for the Republic of Tatarstan.

As can be seen from table 3, there is an increase in grain production per 100 hectares of arable land in Mamadysh and Rybno-Slobodsky districts of the Republic of Tatarstan. It is especially pronounced in Mamadysh district. Compared to 2013, the increase was 118 %. In other areas, there is a decrease in production. And the highest grain production per 100 hectares of arable land in 2017 in Rybno-Slobodsky district, which is 1284 lb. The smallest grain production per 100 hectares of arable land is observed in Tyulyachinsky district – 1009 lb. [5]

As can be seen from table 4, grain production in the areas of Pre-Kama zone is efficient. It is profitable in all areas of Pre-Kama zone in 2017–2018. The largest profitability of grain production is observed in Mamadyshsky district, in 2018 it is higher than the national average by 35 percentage points. The smallest profitability of grain production in 2018 in Tyulyachinsky district was 8.3 %. [5]

Table 3. Grain production per 100 ha of arable land, lb

Name of a district	2013	2014	2015	2016	2017	2017 %	
						2016	2013
Baltasinsky	1606	1478	1455	1504	1259	84	78
Kukmorsky	1175	1142	1253	1398	1127	81	96
Mamadyshsky	996	830	1174	1347	1173	87	118
Rybno-Slobodsky	1230	1275	1412	1674	1284	77	104
Sabinsky	1167	1060	1207	1495	1149	77	99
Tyulyachinsky	1065	898	1128	1242	1009	81	95
Total for the RT	1035	1037	1265	1506	1132	75	109

Table 4. Efficiency of grain production in the areas of Pre-Kama zone of the Republic of Tatarstan in 2017–2018

Name of adistrict	cost of 1 c. real. prod., rubles		Real price for1 lb., rubles		Profit (+), loss (-), thousand rubles		Profitability, %	
	2017	2018	2017	2018	2017	2018	2017	2018
Baltasinsky	592	640	687	695	29472	17568	16.0	8.6
Kukmorsky	550	573	630	698	29460	38370	14.6	22.0
Mamadyshtsky	352	426	587	626	97177	93663	66.9	46.9
Rybno-Slobodsky	552	718	672	818	50588	77936	21.6	13.9
Sabinsky	545	540	639	721	36187	59674	17.3	33.4
Tyulyachinsky	561	677	613	734	13669	13743	9.3	8.3
Total for the RT	577	715	627	800	1019022	1881168	8.7	11.9

Table 5. Potato production efficiency in the areas of Pre-Kama zone of the Republic of Tatarstan in 2017–2018

Name of a district	cost of 1 c. real. prod., rubles		Real price 1 lb., rubles		Profit (+), loss (-), thousand rubles		Profitability, %	
	2017	2018	2017	2018	2017	2018	2017	2018
Baltasinsky	732	625	1260	1045	6905	6776	72.1	67.1
Kukmorsky	727	513	1203	799	11096	8033	65.4	55.7
Mamadyshtsky	347	615	307	667	-739	251	-11.6	8.3
Rybno-Slobodsky	–	–	–	–	–	–	–	–
Sabinsky	878	658	1022	697	4191	525	16.3	5.9
Tyulyachinsky	705	–	717	–	44	–	1.8	–
Total for the RT	786	797	949	927	68102	51801	20.8	16.3

As can be seen from table 5, potato production is not effective in all areas of Pre-Kama zone. Mamadyshtsky district in 2017 suffered losses in the production of potatoes. In Rybno-Slobodsky district, potatoes are not cultivated on farms. The highest profitability of potato production in 2018 is observed in Baltasinsky district of

67.1 % and Kukmorsky district of 55.7 %, which is 50.8 and 39.4 percentage points higher than the national average, respectively. The lowest profitability of potato production in 2018 in Sabinsky district was 5.9 %. In Tyulyachinsky district potatoes were not cultivated in 2018.

Table 6. Efficiency of milk production in the areas of Pre-Kama zone of the Republic of Tatarstan in 2017–2018

Name of a district	cost of 1 c. real. prod., rubles		Real price 1 lb., rubles		Profit (+), loss (-), thousand rubles		Profitability, %	
	2017	2018	2017	2018	2017	2018	2017	2018
Baltasinsky	1604	1622	2296	1966	457700	243140	43.1	21.2
Kukmorsky	1547	1531	2207	1922	447700	296683	42.7	25.5
Mamadyshtsky	1677	1856	2344	1947	309777	44115	39.8	4.9
Rybno-Slobodsky	2093	1807	2340	1989	20021	13646	11.8	10.1
Sabinsky	1827	1794	2369	2003	264449	109815	29.7	11.6
Tyulyachinsky	1926	1715	2269	1873	59017	27340	17.8	9.2
Total for the RT	1776	1770	2228	1943	4499580.7	1812258	25.4	9.8

As can be seen from table 6, milk production in the areas of Pre-Kama zone is effective. It is profitable in all areas of Pre-Kama zone in 2017–2018. The highest profitability of milk production in 2018 is observed in Kukmorsky District, 25.5 %, and Baltasinsky District, 21.2 %, which is 15.7 and 11.4 percentage points higher

than the national average, respectively. At the same time, the profitability of milk production is reduced in all areas in 2018, compared with 2017. The lowest profitability of milk production in 2018 is observed in Mamadyshtsky district of 4.9 %.

Table 7. Efficiency of cattle meat production in the areas of the Pre-Kama zone of the Republic of Tatarstan in 2017–2018

Name of a district	cost of 1 c. real. prod., rubles		Real price 1 c., rubles		Profit (+), loss (-), thousand rubles		Profitability, %	
	2017	2018	2017	2018	2017	2018	2017	2018
Baltasinsky	11782	12081	10678	10678	-52632	-73791	-9.4	-11.6
Kukmorsky	10494	11547	9340	10168	-55441	-67446	-11.0	-11.9
Mamadyshtsky	10882	13351	8368	11344	-138620	-98652	-23.1	-15.0
Rybno-Slobodsky	13191	14399	12014	12291	-11698	-15798	-8.9	-14.6
Sabinsky	14156	13990	10556	10702	-132649	-139747	-25.4	-23.5
Tyulyachinsky	11057	11382	10161	10632	-13871.3	-12857.5	-8.1	-6.6
Total for the RT	13611	13919	10441	10813	-2990050	-2878247	-23.3	-22.3

As can be seen from table 7, cattle meat production is unprofitable in all areas of Pre-Kama zone. All areas suffered losses in cattle meat production in 2017–2018. The largest loss-making cattle meat production in 2018 is observed in Sabinsky and Mamadyshsky districts. The smallest loss ratio in 2018 in Tyulyachinsky district accounts for 6.6 %.

As can be seen from tables 8 and 9, crop and livestock production in areas of Pre-Kama zone of the Republic of

Tatarstan in 2017–2018 is efficient, except for livestock production in Mamadysh and Rybno-Slobodsky districts in 2018. The highest profitability of crop production in 2018 was observed in Mamadyshsky district – 34.9 %, livestock breeding in Baltasinsky and Kukmorsky districts. The least profitability of crop production in 2017 was observed in the Tyulyachinsky district, and Rybno-Slobodsky and Mamadyshsky districts of the Republic of Tatarstan have suffered losses.

Table 8. Efficiency of crop production in the areas of Pre-Kama zone of the Republic of Tatarstan in 2017–2018

Name of a district	Realized product cost, million rubles		Revenues from sales, thousand rubles		Profit (+), loss (-), thousand rubles		Profitability, %	
	2017	2018	2017	2018	2017	2018	2017	2018
Baltasinsky	1736.8	1858.3	2136.4	2026.0	399.6	167.8	23.0	9.0
Kukmorsky	1666.7	1771.0	2052.7	2002.1	386.0	231.0	23.2	13.0
Mamadyshsky	1452.5	1644.0	1617.9	1572.2	165.4	-71.8	11.4	-4.4
Rybno-Slobodsky	423.9	354.1	432.0	353.2	8.0	-1.0	1.9	-0.3
Sabinsky	2202.1	2287.6	2441.7	2429.6	239.5	141.9	10.9	6.2
Tyulyachinsky	559.0	552.0	605.6	567.9	46.6	15.9	8.3	2.9
Total for the RT	53719.7	55920.4	59102.3	59476.1	5382.6	3555.7	10.0	6.3

Table 9. Profit (loss) and profitability in agriculture in the areas of Pre-Kama zone of the Republic of Tatarstan for 2017–2018

Name of a district	Number of households				Profit +, loss – (before tax), thousand rubles		Profitability, %	
	Total		Including profitable ones		2017	2018	2017	2018
	2017	2018	2017	2018				
Baltasinsky	22	22	22	22	522746	373197	25.6	17.0
Kukmorsky	15	15	15	14	277274	533130	12.9	24.7
Mamadyshsky	14	11	11	10	592467	241577	32.9	11.4
Rybno-Slobodsky	14	13	12	11	143932	203593	16.3	17.3
Sabinsky	19	19	19	18	481033	586072	17.9	22.0
Tyulyachinsky	14	12	13	10	118316	77104	15.2	10.1
Total for the RT	486	463	443	425	7933933	8826528	9.6	10.1

As can be seen from table 10, there were 4 unprofitable farms in Mamadyshsky district, 3 of them in Rybno-Slobodsky district, 4 in Tyulyachinsky district, 1 in Kukmorsky district, and 1 in Sabinsky district.

In general, agricultural production in the areas of Pre-Kama zone in 2017–2018 was efficient.

The highest profitability of agricultural production in 2018 is observed in Kukmorsky district – 24.7 % and in Sabinsky district – 22.0 %. The lowest profitability of production in 2018 is observed in Tyulyachinsky district – 10.1 %.

Based on the analysis of the effectiveness of the functioning of agricultural enterprises in the areas of Pre-Kama zone of the Republic of Tatarstan, it can be concluded that the state and effectiveness of agricultural sectors are very high.

Analysis of the results of the branches' state and the efficiency of agricultural enterprises' functioning allows us to determine the limiting factors and reserves for its increase. For the full use of existing reserves, it is necessary to develop a set of organizational and economic measures aimed at improving the functioning of agricultural organizations.

4 Conclusion

Improving the economic efficiency of agricultural production is associated with solving a whole range of

problems. The solution to these problems is determined by both subjective and objective factors. First of all, improving the efficiency of the crop and livestock industry [7–10].

The main ways to increase economic efficiency are:

- development of additional types of entrepreneurship;
- maximum participation in state support programs for agriculture;
- conducting market research to develop new segments and channels of the market;
- use of own resources and reducing the share of borrowed funds in the implementation of investment activities;
- development of measures to reduce the cost of production;
- creation of a reserve fund to ensure unforeseen expenses;
- transition to high-tech equipment and introduction of low-cost energy-saving technologies in crop and livestock production;
- modernization of existing equipment, the exchange of old equipment for new;
- uniform income generation due to an increase in the share of livestock production;
- the use of new high-yielding plant varieties and early productive animal breeds;

- development of organic agriculture;
- development of the feed base, providing livestock mainly with their own feed;
- use of advanced technologies in animal husbandry;
- disease prevention and proper treatment of animals;
- further reclamation and chemicalization of agricultural land;
- improving the structure of sown areas and crop rotation systems;
- reduction of product losses during their storage, transportation, processing;
- selection of effective ways and channels of product sales;
- advanced training and currentity of personnel in agriculture;
- improving planning and forecasting;
- increasing the motivation of workers to highly productive labor;
- improvement of the economic mechanism of managing.

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