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Conference on Land Economy and Rural Studies Essentials**STRATEGIC MANAGEMENT OF GRAIN DEVELOPMENT:
CHALLENGES AND SOLUTIONS**

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Abstract

From an organizational point of view, strategic grain management is a complex system that involves participants in the complete technological cycle of production of the final product, building economic relations on the basis of market pricing principles. In this regard, the maintenance of proportional growth of structural elements, the development of rural territories, the modernization of production and the implementation of institutional changes aimed at improving the sustainability of development become crucial conditions for accelerating the economic potential of grain industries. In the Tambov region, they are the dynamically developing sectors of the region's economy. A feature of the strategic management of the development of the grain economy has been established, consisting in the predominant self-organization of sectoral businesses to obtain additional effects from the coordination of joint actions with the limited use of indirect (maintaining an equilibrium market position) and direct (resource and infrastructure support) methods of state intervention in their activities. A study of the effectiveness of strategic grain management showed high instability in obtaining the results of implementing the established strategic parameters in the areas of financial organization, market, business processes and innovative development. The main strategic problems of the grain economy development and possible ways to solve them in the future have been established.

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Keywords: Grain farming, modern agricultural technologies, pricing for grain raw materials, problems, strategic management



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1. Introduction

Grain farming is of strategic importance for the country's national economy. Its products - from grain to products of its deep processing, are in demand on the part of consumers in both the global and domestic markets (Chekmarev & Lukin, 2017). The stability of such demand is explained by the basic nature of grain products in the nutrition of people, farm animals and the production of intermediate products for the confectionery, chemical, pharmaceutical industries (Grekova & Myagkova, 2010).

2. Problem Statement

A grain farm or a grain production sub-complex of the agro-industrial complex represents a set of technologically connected types of production of the final product. They include, in addition to agriculture and grain processing industry, specialized engineering for them, objects of production, technical and technological infrastructure and trade. This also involves ensuring production, safety, spatial movement, specialized maintenance, material and technical supply, procurement, scientific support, communication and reimbursable transfer to the consumer (figure 1). It forms the material basis of the grain and grain products market.

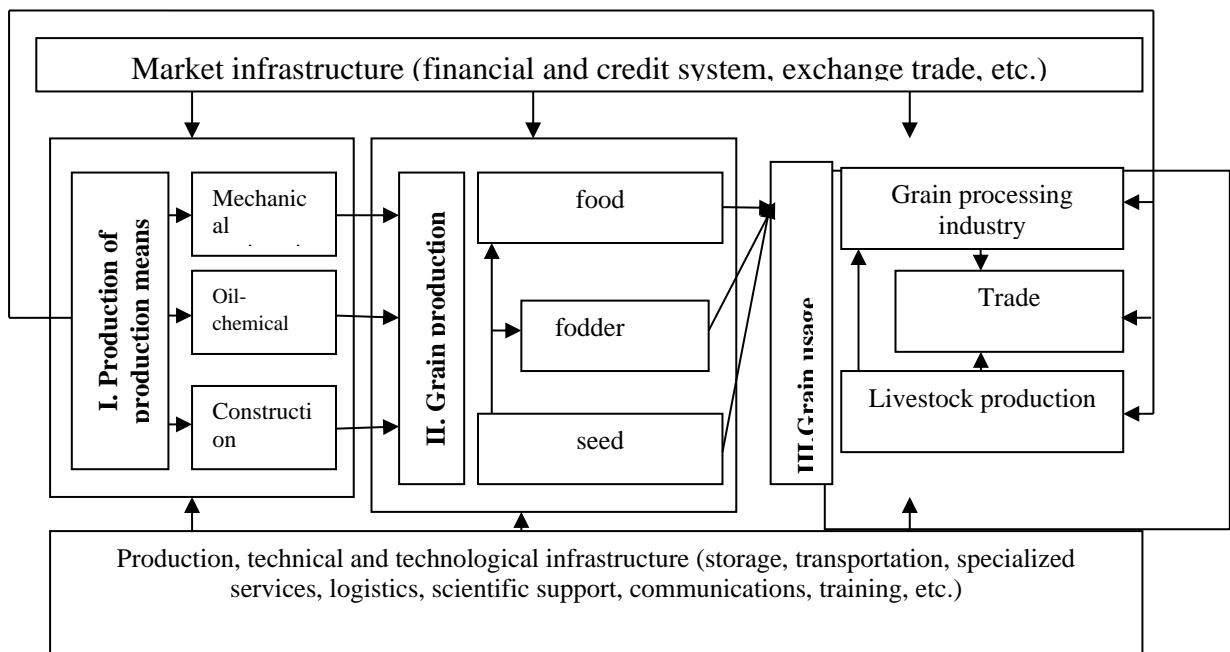


Figure 1. Industrial structure of the sub-complex of agro-industrial complex

Forming the basis of one of the largest production and economic systems of the country, the grain production sub-complex of the agro-industrial complex can receive accelerated development only under the following conditions:

- proportional growth of all structural elements on the basis of the transition to a reproductive model of management (involving the development on the basis of the principles of self-financing and self-

return, stabilization of the reproductive process throughout the production chain of the final product of grain farming);

- rural development as a basis for increasing the human potential of the village;
- implementation of institutional changes that increase the sustainability of development (improvement of land relations, development of agricultural cooperation and agro-industrial integration, improvement of functional filling of different levels of agro-industrial sector management);
- modernization and transition to innovative development of commodity producers of all links of grain products sub-complex (Gureev & Klimov, 2014).

In its turn, the creation of such conditions for strengthening market positions in the domestic and foreign markets and achieving targets for the development of grain farming should be carried out within the framework of the methodological approach of strategic management of economic space processes (Kuzicheva et al., 2019).

3. Research Questions

The issues this work is devoted to directly stem from the hypothesis of the study, considering the fact that the effectiveness of the strategic development of the grain economy largely depends on the coherence of actions to manage the general situation, regulate the internal market space and the sustainability of transformational processes taking place at the level of organizations.

Accordingly, in our view, the following issues should be considered:

- to conduct a comprehensive analysis of the effectiveness of strategic management in the grain sub-complex of the agro-industrial complex of the Tambov region;
- to identify the problems of strategic development of the sub-complex of agro-industrial complex of the region;
- to substantiate possible directions of strategic management of grain production sub-complex of agro-industrial complex of Tambov region.

4. Purpose of the Study

The purpose of the work is to determine the problems of strategic management of the development of the grain production sub-complex of the agro-industrial complex of the Tambov region and justify ways to solve them.

5. Research Methods

The research is based on data from Rosstat, the Ministry of Agriculture of the Russian Federation, the Consolidated Annual Report of Agricultural Organizations of the Tambov Region for 2015-2019. During the study, monographic, abstract-logical, calculation-constructive, economic-statistical methods, and the PEST analysis method were used. The reliability of the raw materials and the application of a set of methods of economic research, mutually confirming the results, ensure the credibility and provability of

the conclusions.

6. Findings

The development of grain farming in the Tambov region is progressive, which is expressed not only in the increasing saturation of the structure of sown areas as a source of agricultural raw materials production for all participants in the technological chain of grain production, but also in an increase in their economic potential. So, in 2015-2019, the increase in gross grain harvest amounted to 21.6%, the production of compound feed - 73.6%, flour - 59.3%, alcohol from food raw materials - 13.2%, starch - 4.2%. Almost all the grain industries studied (with the exception of the flourmill industry) during these years provided a high level of profitability, which made it possible to carry out expanded reproduction and modernization of industry businesses. Despite a decrease in the values of this indicator for the grain production sub-complex of the agro-industrial complex of the region by 9.8%, in 2019 for every 1000 rubles involved in the economic turnover 388 rubles of profit were received in agriculture (grain production), 225 rubles - in starch production, 258 rubles - in feed processing, 560 rubles - in alcohol production.

Positive changes affecting the grain economy of the Tambov region were the result of improving the internal environment of agribusiness and positive changes in the factors of the external business environment. So, in 2019, 19 large integrated formations specialized in the production and storage of grain with a total land bank of 889 thousand hectares, an elevator farm of 1750 thousand tons of one-time grain storage functioned in the region. It is this form of organization of intersectoral relations that makes it possible to most effectively form the grain resources of the region, minimizing their loss.

The effectiveness of the strategic development of the grain economy depends to a large extent on the coherence of actions to manage the general situation, regulate the internal market space and the sustainability of transformational processes taking place at the level of organizations (Market summaries, 2019).

A feature of the strategic management of the development of the grain economy should be called the predominant application of the principles of self-organization of independent industry businesses as a coordinating beginning to obtain additional effects from joint activities in the face of challenges of uncertainty in the external environment. This happens with limited state intervention in the aspects of maintaining the equilibrium position of demand and supply for grain, resource support for agriculture, organizational and infrastructure support for the logistics of the movement of goods masses from production centers to consumption and export centers. Its systematic implementation made it possible to increase the economic potential of the participants in the grain production sub-complex of the agro-industrial complex.

An assessment of the effectiveness of strategic management of the development of agriculture and the flour industry of the Tambov region in 2015-2019, conducted according to the Norton-Kaplan methodology, showed that more dynamically the effectiveness of increasing economic potential for the implementation of targeted development targets was ensured in factories in the production of grain flour compared to regional grain production in agricultural organizations (figure 2). Thus, in 2015, the deviation in the values of the comprehensive indicator of the effectiveness of strategic management in the flourmill industry and agriculture amounted to 2.6 times, and in 2019 - only 1.4 times. It should be noted that in the

conditions of improving the distribution channels of grain, the change in the values of this indicator in agriculture seems to be the most stable.

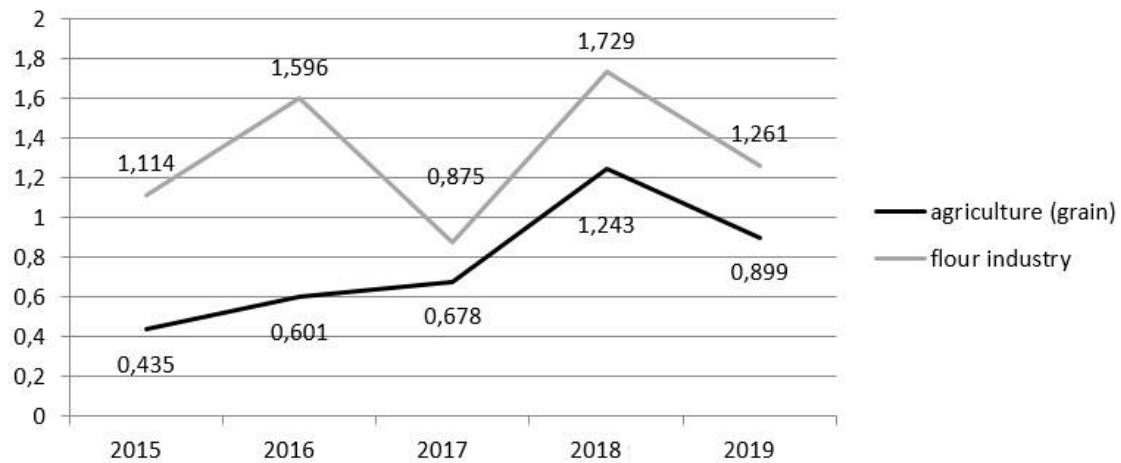


Figure 2. Comprehensive indicator of the effectiveness of strategic management in the grain economy of the Tambov region in 2015-2019

Against the background of such trends, there are difficulties in ensuring a systematic increase in the effectiveness of the strategic management of the grain economy of the region.

Among the problems of the strategic development of the grain production sub-complex of the agro-industrial complex of the Tambov region are:

- 1) production imbalance at the intra-industry and inter-industry levels;
- 2) non-uniformity of reproduction along the production chain of grain processing products;
- 3) instability of raw material zones of grain processing plants, increasing against the background of opposite trends in sales prices for grain processing products and agricultural raw materials;
- 4) high volatility of grain prices;
- 5) high dependence of domestic grain prices on the world level;
- 6) declining soil fertility;
- 7) need for scientific support for agrochemical monitoring of lands involved in agricultural production;
- 8) lack of material and technical base of agriculture.

The solution of existing problems of a strategic nature lies in the plane of organic interaction between the state and the business community of grain producers and grain processing products.

The elimination of the production imbalance in grain production becomes possible when determining the optimal structure of grain production by types. At the same time, the profitability of production of various types of grain should be ensured at the level not lower than the level of profitability of wheat grain production. Only under these conditions can economic "indifference" of choice be ensured.

Smoothing of non-uniformity of reproduction in related branches of grain production sub-complex of agro-industrial complex can be achieved with improvement of distribution of total profit received by its

participants. The most important condition for the additional distribution of income among the participants in the process chain is to maintain the profitability of grain raw material production at a minimum level that ensures extended reproduction. At the same time, a two-pronged task of ensuring the stability of raw material zones of grain processing plants and reducing market volatility of grain prices can be achieved.

The level of correlation between domestic and world grain prices is 96.2%, which is largely dictated by the great openness of the Russian grain market to international trade. Thus, the share of exports in the structure of the use of grain resources in Russia in 2019 was 20.2% against 18.2% in 2015. About the same situation in terms of grain export for the period 2015-2019 has developed in the Tambov region. In 2019, the share of grain raw materials exported amounted to 26.1% of the total volume of grain resources, which is 3.4% less than in 2015. In the region, the problem of acute competition between grain processing plants and grain traders is acute. The difference in export and regional sales of grain in 2015-2019 averaged 144.7%.

The current favorable price situation is limited by the productive capabilities of regional agricultural producers, which arises against the background of a decrease in the fertility of the soils of arable land. Despite the full compensation for the removal of nutrients from the crop (2017-2019), the problems of restoring soil fertility lost in 1993-2016, the imbalance of the resumption of humus and the mineral part of the soil composition, and the activation of soil acidification processes remain unresolved. According to Chekmarev and Lukin (2017) in 2016 in the Tambov region, the share of acidified soils was 76.0%, of which 49.9% are slightly acidic, having a pH of 5.1-5.5 (Market summaries (2019)). Losses of potential profits in the industry annually average in 2017-2019 up to 1.7 billion rubles of profits.

The application of biological farming is an option to ensure the strategic development of grain agribusiness based on sustainable economic growth of the industry (Strategy of socio-economic development).

The restoration of the strategic potential for the development of grain production in the region should be carried out against the background of bringing the machine and tractor fleet to a rational structure, assuming the presence of technical means that do not allow overpopulation of soils (Zhidkov, 2018).

Opportunities for solving strategic problems of grain development should be provided by the parameters of strategic plans and implemented by the state within the framework of targeted development programs by economic entities within the framework of adopted development strategies.

7. Conclusion

Thus, an integrated approach to solving the strategic problems of the development of the grain economy of the Tambov region should be implemented. This involves regulating the aspects of resource support for the use of modern agricultural technologies for growing grain crops, pricing for grain raw materials, balanced grain production by types, taking into account the needs of related grain processing industries.

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