Differentiation of Production of the Regional Agro-Industrial Complex as a Factor in Ensuring the Economic and Social Stability of a Territory

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Abstract. The article presents the results of a study of enterprises in the agro-industrial complex of the Novgorod region. A study of the structure of production of agricultural products was carried out, key directions of development were identified, problem areas were outlined, a number of recommendations were made to improve the processes of development of territorial industries in order to ensure the stability of the socio-economic development of the relevant areas of the region. A comprehensive approach to the development of branches of the regional agro-industrial complex is proposed, based on the differentiation of agricultural production and the improvement of processing and marketing processes. The need for a comprehensive application of advanced achievements of scientific and technological progress and elements of promoting the digital economy to ensure the progressive development of the regional agricultural sector is determined. Conclusions are formulated regarding the importance of the development of the agro-industrial complex as one of the main factors in ensuring not only food security, but also an element of ensuring the economic and social stability of the territory.

1. Introduction
In the context of the dynamically changing structure of world economic and territorial ties, the issues of ensuring the integrated development of local territorial complexes are becoming increasingly important [1].

The consequences of sanctions and post-pandemic restrictions have revealed the problem of ensuring progressive development and have made adjustments to the ongoing processes of globalization. Highlighting the integrated development of all types of production and, preferably, with the presence of all cycles/stages of processing of agricultural products, as a key element in ensuring economic and food security.

To date, taking into account the impact of the pandemic, the need to provide food from the local sectors of the agro-industrial complex has sharply increased.

2. Problem statement
After examining a number of data on the production of agricultural products in the region, one can come to the conclusion that with an increase in the rate of import substitution for the main groups of goods, representatives of agribusiness, with the support of the state, are actively introducing new technologies in the production and processing of products, and are beginning to master new approaches to production, by acquiring not only new technology, but also by using species (breeds) of animals.
adapted for a specific area. This gives a greater economic effect, and taking into account the developing infrastructure, it is possible to organize local mini-farms that provide employment for the local population, as well as provide an environmentally friendly product for the population of adjacent territories.

3. Research questions
The main issues of our research were the study and forecasting of the structure of regional agro-industrial complexes [2], both by the main participants and by the types of products produced, approaches to the implementation of forecasts of the development of the main indicators [3]. Study of the dynamics of key indicators of regional crop and livestock industries; the rate of development of the corresponding directions in specific territories of the Novgorod region.

4. Purpose of the study
The main purpose of the study was the processes of differentiation of the regional agro-industrial complex, as a factor in ensuring the economic and social stability of the territory in a dynamically changing external environment, the impact of economic sanctions and the consequences of the global pandemic.

5. Research methods
The study is carried out on the basis of official statistical data of the Internet site of the Federal Statistics Service of the Russian Federation [4] on key indicators of the regional agro-industrial complex over the past ten years, using methods of economic and mathematical modeling, forecasting methods based on time series, as well as combined expert methods.

6. Findings
To determine the main trends in the development of the branches of the regional agro-industrial complex, we study the main forecasts of the branches of the agro-industrial complex [5], as well as statistical indicators for the corresponding territorial industries. In particular, data on agricultural products by categories of farms (table 1), based on data from the Federal Statistics Service of the Russian Federation [4], for the Novgorod region.

From the data in the table it follows that in recent years, the development of farms has begun to intensify, which is associated with the implementation of a comprehensive program to support the agro-industrial complex, implemented in the Novgorod region, within the framework of the state program “Comprehensive development of rural areas of the Novgorod region until 2025” (hereinafter the Program), approved by the decree of the Government of the Novgorod region of December 16, 2019 no. 490: “The main objectives of the Program are: increasing the social significance of the integrated development of rural areas of the Novgorod region, the attractiveness of rural areas for living and working; increasing the civic activity of rural residents in solving local issues” [6].

As a result of the targeted policy for the development of small farms in the districts of the region, a clearly traceable socio-economic effect was obtained, expressed in an increase in employment of the population, a change in the structure of the food basket in favor of agricultural products of local producers.

The differentiation of production of agricultural products by districts of the region was recorded, which is a good indicator in the processes of ensuring the progressive development of agriculture, freedom of development of farming and small agricultural firms [7].
Table 1. Agricultural production by categories of farms in the Novgorod region (in actual prices, million rubles) (according to [4]).

| Year | Farms of all categories | Change, % |
|------|-------------------------|-----------|
| 2010 | 13931.2                 |           |
| 2015 | 24987.0                 | 192.7     |
| 2016 | 27067.7                 |           |
| 2017 | 24725.4                 |           |
| 2018 | 25982.4                 |           |
| 2019 | 26841.0                 |           |

| Year | Agricultural products | Change, % |
|------|-----------------------|-----------|
| 2010 | crop production       |           |
|      | 5466.1                |           |
|      | 8140.5                | 151.5     |
|      | 8717.3                |           |
|      | 7503.4                |           |
|      | 7932.2                |           |
|      | 8279.6                |           |
| 2019 | animal husbandry      |           |
|      | 8465.1                | 219.3     |
|      | 16846.5               |           |
|      | 18350.4               |           |
|      | 17222.1               |           |
|      | 18050.2               |           |
|      | 18561.4               |           |

| Year | Agricultural organizations | Change, % |
|------|----------------------------|-----------|
| 2010 | Agricultural products     |           |
|      | 7448.0                    |           |
|      | 17526.5                   | 261.1     |
|      | 19651.5                   |           |
|      | 18539.0                   |           |
|      | 18867.4                   |           |
|      | 19446.0                   |           |
| 2019 | crop production           |           |
|      | 818.1                     | 351.5     |
|      | 3055.3                    |           |
|      | 3646.4                    |           |
|      | 3589.2                    |           |
|      | 2904.1                    |           |
|      | 2875.5                    |           |
| 2019 | animal husbandry          |           |
|      | 6629.9                    | 249.9     |
|      | 14471.2                   |           |
|      | 16005.1                   |           |
|      | 14949.8                   |           |
|      | 15963.3                   |           |
|      | 16570.5                   |           |

| Year | Farms of the population | Change, % |
|------|-------------------------|-----------|
| 2010 | Agricultural products   |           |
|      | 5898.4                   |           |
|      | 5701.6                   | 82.3      |
|      | 5247.8                   |           |
|      | 4738.2                   |           |
|      | 4922.2                   |           |
|      | 4857.0                   |           |
| 2019 | crop production          |           |
|      | 4180.7                   | 76.3      |
|      | 3650.9                   |           |
|      | 3278.9                   |           |
|      | 2854.5                   |           |
|      | 3153.1                   |           |
|      | 3191.0                   |           |
| 2019 | animal husbandry         |           |
|      | 1717.7                   | 97.0      |
|      | 2050.7                   |           |
|      | 1968.9                   |           |
|      | 1883.7                   |           |
|      | 1769.1                   |           |
|      | 1665.9                   |           |

| Year | Peasant farms | Change, % |
|------|--------------|-----------|
| 2010 | Agricultural products |           |
|      | 584.8        |           |
|      | 1758.9       | 434.0     |
|      | 2168.4       |           |
|      | 1448.2       |           |
|      | 2192.8       |           |
|      | 2538.0       |           |
| 2019 | crop production |           |
|      | 467.3        |           |
|      | 1434.3       | 473.6     |
|      | 1792.0       |           |
|      | 1059.6       |           |
|      | 1875.0       |           |
|      | 2213.1       |           |
| 2019 | animal husbandry |           |
|      | 117.5        |           |
|      | 324.6        | 276.5     |
|      | 376.4        |           |
|      | 388.6        |           |
|      | 317.8        |           |
|      | 324.9        |           |

Let us analyze the structure of agricultural production by categories of farms based on data from the Federal Statistics Service [4]. Let us present the most probabilistic forecast for the change in these indicators for the medium term using economic and mathematical forecasting methods (figure 1).

![Figure 1](image-url)
small agricultural organizations. As the main most adaptive elements of the regional sectors of the agro-industrial complex. Since it is precisely on the development of small forms of business that the main elements of support are directed within the framework of state programs at both the federal and regional levels.

Having studied the detailing of the structure of demand and production by types of products by district of the region, we can conclude that the highest rates of development and adaptation of sectors of the regional agro-industrial complex are recorded in the most economically developed territories with a developed transport and information infrastructure [8]. But, the implemented support measures have already shown themselves in the opening of a number of small industrial complexes in certain districts of the Novgorod region, as well as in the creation and development of electronic information systems [9], as a factor in the development of industries selling agricultural products. This was reflected not only in the economic effect, but also improved social indicators, setting a vector for integrated development.

With regard to the issue of ensuring food security, it should be noted that the intensification of the development of the agro-industrial complex, the introduction of the achievements of scientific and technological progress in the production and marketing of products is mostly recorded for the period from 2018 to the present. Due to the active implementation of programs for the support and development of the agro-industrial complex on the territory of the Novgorod region [6]. This provides a basis for integrated development, as evidenced by statistics from the Ministry of Agriculture. Studies have shown that the greatest economic and social effect is achieved with the integrated development in the territories of small and medium-sized enterprises of the agro-industrial complex, which makes it possible to achieve great indicators to ensure not only food security, but also improves the economic and social background, creating jobs, ensures the utilization of production capacities and gives the market a much needed fresh, environmentally friendly product [10].

The development of technologies for processing agricultural products and the further use of compact processing plants in small agricultural enterprises will make local products competitive with those of other areas.

Having studied the factors of demand for agricultural products, we can conclude that over the past few years there have been significant changes in needs [11]. In particular, the population increasingly prefers to purchase fresh organic products produced by local producers. And the increased requirements provide an additional market niche for regional producers. That finds its realization in the processes of opening new agricultural and processing industries. In the development of not only industrial, but also the social infrastructure of the territories, improving the quality of life of the local population.

7. Conclusion
Summarizing the presented research results, we note that today the differentiation of regional production of agricultural products is one of the key factors in ensuring the competitiveness of local industries. It makes it possible to improve the economic performance of production through the use of an integrated approach in the processes of production, processing and marketing of products of the branches of the regional agro-industrial complex. The greater the number of stages of production and processing of products by an economic entity is carried out independently, the greater the economic effect.

Differentiation of production, obtaining new products due to the improvement of the processing and processing of products, the development of the information environment (information component of production [9]) create favorable conditions for further improvement and development of agribusiness. And also, they increase the standard of living of the population of the corresponding territories, not only by developing the territory and creating jobs, but also by increasing the availability of higher-quality agricultural products of local producers. This has a positive impact on both food security and the indicators of socio-economic development of the region.
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