

Assessment of State Management of Agriculture in Russia

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Abstract: Agriculture is a particularly important strategic sector of the country's economy. Over the course of Russia's historical development, the methods of managing the economy and its individual sectors have changed. Today, the formation of governing structures and their functions in state management is directed vertically downwards. The main objectives of state regulation of agriculture in the country are: the attracting young specialists to the agricultural sector and improving the standard of living in rural areas; ensuring the country's domestic market; and digitalizing agriculture; improvement of scientific and technological level. The authors consider the methods of state regulation from the position of strategic planning, which is based on the established goals. An analytical vision of the current situation characterizing the achievement of strategic objectives through the methods of public administration is presented. And also formulated the directions of interaction between the state and other institutional units in order to improve the state of the agricultural industry.

1 INTRODUCTION

In Soviet Russia, an agricultural directive could pass 30 management levels on its way from the central government to the farm (Griewald, 2018). The current socio-economic situation in the world precedes the need for accelerated development of agricultural production in Russia (Volkova, Smolyaninova, 2022). Today, the goals of state regulation of agriculture are to encourage young people to live in rural areas and to improve the quality of life in rural areas. The government is taking measures to regulate the agricultural sector because agriculture is becoming very capital-intensive. In order to identify ways to improve the efficiency of development and state regulation of small-scale farming, the systematization of their features is of great importance (Moiseenko, 2021).

In public administration, the formation of governing structures and their functions goes vertically from top to bottom: from the federal (highest level) to the enterprise. In market conditions,

effective public administration is unthinkable without the use of economic management methods along with administrative ones.

The methods of influence are direct and indirect. Direct methods include: state subsidies, state entrepreneurship, the system of state management of the economy. Indirect methods include: taxes, fines, preferences, quotas, customs duties, information support.

Administrative methods can be in the form of:

- defining strategic objectives in the agricultural sector;
- development of targeted programs aimed at achieving strategic goals;
- state orders for the supply of agricultural products;
- regulatory requirements for the quality of agricultural products;
- legal and administrative restrictions;
- licensing of exports and imports of agricultural products.

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Economic methods of management are represented by the following types of measures:

- taxation and redistribution of income;
- various state payments, benefits;
- public procurement;
- protection of the national producer;
- creation of conditions for job creation;
- stimulation of foreign economic activity.

2 MATERIALS AND METHODS

In this article, the authors used statistical data from the Federal State Statistics Service. The data was interpreted using the following methods: generalization, comparison, and classification. The authors also employed forecasting methods in their research.

3 RESULTS AND DISCUSSION

The Russian Federation has approved the “Strategy for the development of the agro-industrial and fishery complexes of the Russian Federation for the period until 2030”, the text of which provides for the following objectives:

- Digital transformation of the agro-industrial complex.

- Effective involvement of agricultural land into turnover.

Increasing the volume of exports of agro-industrial complex products (in comparable prices) and ensuring food security.

- Increase in value added.

- Increase in the physical volume of investments in the agro-industrial and fishery complexes.

- Increasing the level of scientific and technological development in various areas of agriculture.

- Maintaining the share of the rural population in the total population of the Russian Federation.

The amount of state support for agriculture in 2024 will amount to 558.6 billion rubles under the main sectoral programs. Priority areas for reimbursement of costs to agrarians have been identified and changes have been made to preferential lending.

The possibilities for inclusion in the number of agricultural consumer cooperatives have been expanded. They will include consumer societies where at least 70% of the revenue is generated by the procurement, storage, processing and marketing of

agricultural products. An additional grant of up to 10 million rubles is provided for newly established consumer cooperatives.

The National Union of Aggroinsurers has recommended that farmers can start insuring agricultural crops before the spring sowing season.

The multi-risk program provides:

- indemnification for crop loss resulting from a negative natural phenomenon;

- the insured event is determined by individual inspection;

- state support is 50% of the insurance premium.

Insurance under the emergency program provides for the following conditions:

- insurance payment is made for each hectare of land in case of emergency declaration;

- the amount of the insurance payment is calculated to compensate the direct costs of the farm for cultivation of the lost area (the sum insured may be from 35 to 50% of the insured value);

- payments are significantly accelerated;

- the volume of state support is: 70% for small enterprises and 60% for all others.

«Agrostartup» grant was organized as part of the development of grant activities. The amount of a startup whose goal is to organize agriculture is 1.5 million rubles, for cattle breeding - 7 million rubles, for the rest - 5 million rubles.

From 2024, the family farm grant is divided into two parts. One of them is a grant for capital expenditures. A family farm can receive it in the amount of up to 30 million rubles with an advance payment covering up to 60% of the costs. Capital expenditures include: construction, purchase and reconstruction of premises for production and processing of farm products. The grant also covers a comprehensive project to provide facilities with equipment and machinery.

The second option of a grant for the development of a family farm is a grant for the implementation of complex projects, which amounts to up to 20 million rubles and covers up to 60% of the costs. It is provided for the purchase of individual units of machinery, equipment or only farm animals and poultry. Creation of workplaces and implementation of activities within 5 years is not a prerequisite.

From 2024, Russian milk producers can receive subsidies for farm equipment, and exporters can receive increased compensation for the cost of transportation of products.

Russia has a single agricultural tax rate of 6% of income. A 0% tax rate is allowed in the following oblasts: Moscow Oblast, Bashkortostan, the Republic of Mari El and the Jewish Autonomous Oblast.

The study considers statistical data on the indicator «agricultural production index» (Table 1.).

Table 1: Indices of agricultural production.

Households of all categories	2010	2020	2021	2022	2023	2024	2025
Agricultural productions	97,9	97,1	108,4	111,1	106,9	102,0	101,6
Plant production	98,4	96,6	110,0	108,6	109,5	-	-
Livestock production	97,2	98,8	102,2	121,2	99,1	-	-

According to the above data, agricultural production in Russia is characterized by constant fluctuations. The highest growth of agricultural production falls on 2022. During the next 3 years there is a decline in agricultural production.

The highest growth of production in the «plant production» sector is observed in 2021. In 2023, there is an increase in production compared to the previous year.

In the «Livestock production» sector, the highest production rate is observed in 2022. However, already in the following year there is a significant decrease in livestock production.

In addition to the indicators characterizing the volume of production in the assessment of public administration, data on the number of people employed in agriculture should be considered (Table 2.).

Table 2. Statistics on the number of people employed in agriculture.

Indicator	2019	2020	2021	2022
Average annual number of people employed in agriculture, thousand people.	4212	4011	3947	3931
Number of jobs in agriculture, th. units.	21415	22686	21981	21322
Average monthly nominal salary, rub.	28396	31058	35460	41994

In the process of analysis, a negative trend characterizing the decrease in the number of employed in agriculture was revealed. The largest number of employed in agriculture is observed in 2019. The reduction in the number of employees in this industry in 2020 amounted to 201 thousand people, in 2021 - 41 thousand people, in 2022 - 16 thousand people. The turning point was the year 2020. Subsequently, the state tried to stabilize the situation with the help of various public administration measures. Agriculture accounted for 6.00% of all employment population (Salimova, 2024). In order to attract labor force to rural areas, the Departmental Target Program «Sustainable Development of Rural Areas» was developed and approved. The implementation of the program is designed for 2019-2025. This program contains 3 main objectives:

1. creating comfortable conditions in rural areas through the construction (acquisition) of housing equipped with all types of amenities for citizens living in rural areas Acquisition of housing for citizens living in rural areas;
2. promoting the creation of high-productive jobs in rural areas;
3. activation of participation of citizens living in rural areas in the implementation of socially significant projects and formation of positive attitudes towards rural areas and rural lifestyle.

In accordance with the developed program, there were 21415 jobs in Russia in 2019. In 2020, jobs in rural areas were increased by 1271 thousand units and amounted to 22686. But, despite the positive initial results, in the next period there is a decrease in the achieved indicators: in 2021 - by 705 thousand units of jobs, in 2022 - 659 thousand units. In general, for the period under consideration, the reduction of jobs in the agriculture industry amounted to 0.43%.

The average monthly nominal salary in 2020 compared to 2019 increased by 9.3% and amounted to 31058 rubles. The increase of this indicator in 2021 amounted to 14%, and in 2022 - 18.42%.

The figure shows the ratio of the average monthly wage of a worker in the agricultural sector to the national average level (Fig. 1).

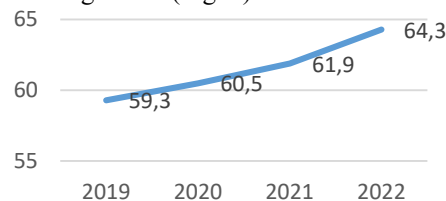


Figure 1: Ratio of average monthly wages of agricultural worker to the national average level.

The ratio of the average monthly wage of an agricultural worker to the national average in 2022 amounted to 64.3%, which is 2.4% higher than in the same period.

Summarizing the results of the analysis of statistical data on the number of people employed in agriculture, it should be noted that, despite the annual growth of the average monthly nominal wage, the average annual number of people employed in agriculture is decreasing. The active part of the population does not seek to realize its labor potential on the territories of rural settlements. An important tool in achieving the goals of the program «Sustainable Development of Rural Areas» is to increase the level of wages and create comfortable living and working conditions, to expand agrarian specialties in higher education institutions, to encourage the employment of young specialists through subsidy programs.

Along with the formation of human resources potential of the agricultural sector, investment support is important in the state management.

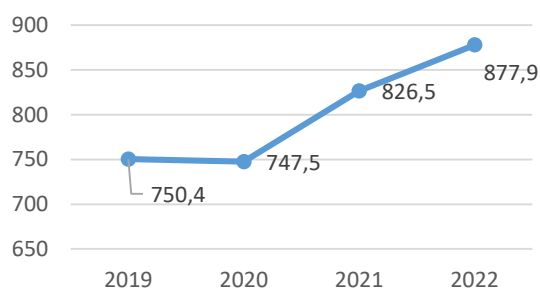


Figure 2: Investments in fixed capital aimed at the development of the agricultural sector.

The trend of investments in fixed capital aimed at the development of the agricultural sector steadily continues to grow. In 2022, the volume of investments reached 877.9 billion rubles, which is 6.2% more compared to the previous year. At the same time, the agrarians' own funds amounted to 66%, attracted funds 34%, budget funds amounted to 1.8%. The federal budget allocated 1.0% of investment funds, budgets of the subjects of the Russian Federation - 0.7%, local budgets - 0.1%. Based on the statistical data, it can be stated that the main decisions within the framework of investment activity are entrusted to farmers. The participation of the public sector in this area is minimal.

Large and medium-sized enterprises are more active in introducing innovations. Small and micro

enterprises do not have the opportunity to introduce modern innovative products. Their investment activity is limited to the renewal of the technical fleet of machinery and equipment. However, the latest developments in agriculture are aimed at improving the efficiency of production activities. Innovations in agriculture include: drones involved in fertilization, irrigation and soil treatment; technologies of precision farming and artificial intelligence.

The digitization of agricultural information is increasingly emerging as a prevalent trend in the digital transformation of agriculture (Wang, 2025). Industry 5.0-driven digital transformation (DT) can mitigate these challenges by enhancing food security, supply chain resilience, and environmental sustainability (Md. Zahidul Anam, 2025).

Agro-industrial complex development institutions, namely the joint-stock company «Russian Agricultural Bank» and the joint-stock company «Rosagroleasing», are active participants in increasing the volume of investment in fixed capital.

The presence of the resource component in the industry determines the obtained financial results of agricultural enterprises. Statistical data of the main economic indicators are presented in the table (Table 3.).

Table 3: Statistical data of main economic indicators.

Indicator	2019	2020	2021	2022
Gross value added, bln. rub.	3390,6	3811,0	4590,1	5317,3
Financial result, bln. rub.	118,9	399,5	574,6	525,4
Profitability, %	14	20,3	24,0	18,9

Gross value added is increasing during the period under review. So in 2019, this indicator amounted to 3390.6 billion rubles. In 2020, there is an increase in gross value added by 12.4% and in the nominal value is 3811.0 billion rubles, which is 420.4 billion rubles more than the previous year. In 2021, the numerical value of the indicator under consideration is 4590.1 billion rubles, which is by 779.1 billion rubles more than the same period. The growth rate for the indicator “gross value added” amounted to 15.8%, the numerical difference amounted to 727.2 billion rubles.

One of the main indicators of achieving the set goals is the financial result. During the period under review, this indicator has increased significantly. In 2020, the financial result amounted to 399.5 billion

rubles. The absolute value amounted to 280.6 billion rubles, growth rate - 399.5%. In 2021, the financial result increased by 175.1 billion rubles and amounted to 574.6 billion rubles. In the next year there is a decrease in the financial result. So in 2022, the financial result amounted to 525.4 billion rubles. The absolute change amounted in 2022 (-49.2 billion rubles), growth rate - 91.43%. The indicator “financial result” allowed to determine that by 2022 there were a number of negatively influencing factors that significantly slowed down the profit.

Analytical study of the indicator “financial result” confirms the numerical data on the indicator “profitability”. The highest level of profitability was recorded in 2021, which amounted to 24%. In 2022, there is a decrease in this indicator, which is an unfavorable fact for the industry and the economy of the country.

Another important goal of the country's strategic development is the effective involvement of agricultural land into turnover. The table 4 presents statistical data on sown areas of agricultural crops.

Table 4: Sown areas of agricultural crops.

Indicator	2019	2020	2021	2022	2023	2024
Sown area of all grain crops, thousand hectares	7988 8	7994 8	8038 3	8229 0	8146 2	8018 5
Potatoes and vegetable and melon crops	1906	1812	1708	1690	1662	1582
Technical crops	1589 6	1548 5	1781 1	1991 9	1890 5	2021 2
Forage crops	1542 5	1475 1	1385 7	1317 7	1300 1	1226 3
Cereals and leguminous crops	4666 0	4790 0	4700 7	4750 4	4789 4	4612 7

Sown area of grain crops in 2020 amounted to 79948 thousand hectares, which is 60 thousand hectares more than in 2019 (0.07%). In 2021, an increase in the indicator of sown area to the level of 80383 thousand hectares was noted. The absolute change in relation to the previous year of this indicator amounted to 435 thousand hectares. In the

next reporting period, an increase in the area under crops is again observed. In 2022, the sown area amounted to 82290 thousand hectares. The growth rate of 2022 is equal to 2.37%. In 2023, there is a slight change in this indicator in a smaller direction - 81462 thousand hectares. Absolute change in the numerical indicator of sown areas is equal to (-828) thousand hectares, relative - (-1%). The downward trend of sown areas continued in 2024 and the value of this indicator amounted to 80185 thousand hectares. In general, the analysis of sown areas of agricultural crops allowed us to conclude that public management within the framework of this indicator is effective. Since, subject to the presence of various factors of influence, sown areas remain at the same level, there is no global decline.

The main share, about 58%, in the sown areas is occupied by cereals and leguminous crops. Russia's grain production is the most important direction of national agriculture, which has the greatest potential for development in the near future (Syromyatnikov, 2024). Technical crops account for 25%, fodder crops 15%, potatoes and vegetable and melon crops 2%. Land is intertwined with politics: both as a sine qua non for the territorial state, as well as a spatially limited natural resource through which geopolitical power and advantage are articulated and enacted (Zhou, 2022). In 2022, the government again banned forestry on abandoned farmland, declaring the need to develop the agricultural sector and ensure national food sovereignty through recultivation (Dobrynin, 2024).

The main indicators adopted for comparison are: index of production output, area of agricultural land involved in the turnover, gross value added, preservation of the share of rural population in the total population. The indicators used as target indicators were those planned in the Strategy for the Development of Agro-Industrial and Fishery Complexes of the Russian Federation for the period up to 2030. The source of actual indicators is the Federal State Statistics Service. The obtained results of the analytical study are summarized in the form of Table 5.

Table 5: Assessment of strategic goals for the development of the agricultural sector.

Indicators	Target figures	Actual implementation	Deviation
Index of production of products	102	111,1	+9,1

Area of agricultural land involved in the turnover, thousand hectares	367,6	1907	1540
Gross value added, bln. rub.	3767,4	5317,3	1549
Maintaining the share of rural population in the total population of the Russian Federation	25,0	25,4	+0,4

On the basis of the conducted study of the assessment of the effectiveness of state management of the agro-industrial complex of Russia, it can be argued that the measures implemented by the state are effective. The deviation by the indicator «index of production output» is 9.1%. Also, we can note a significant increase in the area of agricultural land involved in the turnover. A positive trend is the fulfillment of the actual value of the indicator «Preservation of the share of rural population in the total population of the Russian Federation». With all the positive dynamics of the indicators under consideration, the branch of agriculture in Russia is developing, but there is no power of breakthrough development.

According to the statistical data presented in the table, the number of rural population and the total population of the country tends to decrease (Table 6.).

Table 6: Population of Russia.

Indicators	2015	2020	2022	2023	2024	2025
Population of the country, persons	145307616	146371299	145579899	145440500	144820423	143997393
Number of rural population, people	38758125	38885030	37817431	37563839	36844211	35935009

Forecasts are indispensable when developing demographic and social policy measures and

assessing their possible consequences (Lazat, 2024). Based on the statistical data, we will present the economic-mathematical model and forecast in the form of a trend.

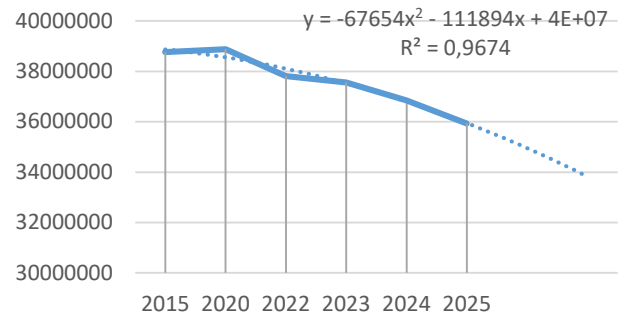


Figure 3: Forecast of development of the rural population, people.

The presented statistical data are more in line with the polynomial trend line, on the basis of which the forecast values of the rural population in Russia are assumed. The value of approximation reliability is equal to 0.9674, which corresponds to the highest level of model reliability. By the beginning of 2027, this indicator may reach the value of less than 34,000,000 people. Therefore, first of all, cardinal measures aimed at increasing the population of the country as a whole are needed. Further, an active government policy should be pursued to attract young specialists to rural areas.

4 CONCLUSIONS

Agriculture is an industry that is highly dependent on weather and climate conditions. As a result, the performance of entrepreneurs in this area of business is very risky. Agriculture is an industry that is highly dependent on weather and climate conditions. As a result, the performance of entrepreneurs in this area of business is very risky. Weather conditions cannot be controlled, but you can adapt to them to achieve the most comprehensive result. To do this, you need to select certain projects, strategic and tactical decisions from a variety of acceptable ones. At the same time, it is necessary to strive to obtain the maximum economic effect not only in a single weather situation, but also over a long period, so that this effect is as resistant as possible to random weather conditions in a certain climatic zone [Kuzubov, 2024].

In addition, the authors' research has identified two global problems that significantly hinder the

development of the agricultural industry: the demographic factor, in particular, the increase in the rural population and the training of its modern competencies, which are necessary for successful work in the industry.

In this regard, a thorough support of the state and reasoned management measures aimed at minimizing and eliminating the factors of negative impact are required. To this end, the state, within the framework of management, should support a number of initiatives:

- creating favorable conditions for the creation of new families;
- increasing benefits for women in maternity leave;
- continuing active work to attract young specialists in rural areas;
- use of preliminary technology with the assistance of educational institutions and rural enterprises;
- allocation of budgetary places in agricultural specialties for training in educational institutions.

Agricultural education and training are considered – and do represent – valuable knowledge-generating activities that can improve farmers' performance (in terms of produced quantities and quality of agrifood products), facilitating, in parallel, the development of sustainability-related skills (Charatsari, 2025).

In this regard, a thorough support of the state and reasoned management measures aimed at minimizing and eliminating the factors of negative impact are required. In the current conditions, in order to balance the environmental, social, and economic development of Russia's agriculture, it is necessary for the sector's innovation to develop as it leads to mutually supportive economic, ecological, and social growth in the agricultural sector (Semin, 2021). It also requires modernization, construction of new enterprises that meet the requirements of advanced industrial foreign technologies, which will create prerequisites for production growth and provide an opportunity to export products of the agro-industrial complex.

REFERENCES

- Griewald, Y., 2018 The Art of the State to Intervene: Insights Into Agricultural Land Management in Russia *Ecological Economics*, Vol. 151, pp 1-9.
- Volkova, E., Smolyaninova, N., 2022. Trends in Russian exports and imports of agricultural machinery, *Transportation Research Procedia*, Vol. 63, pp. 1131-1138.
- Moiseenko, J.N., 2021. Areas of state support for small business entities. *Persianovsky* : Donskoy GAU: 175 s
- Salimova, G., Nigmatullina, G., Habirov, G., Ableeva, A., Gusmanov, R., 2024. Employment and development levels in rural areas of the Russian Federation, *Regional Sustainability*, Vol. 5, Iss. 3.
- Wang, S, Wang, P, Cebula, R, Foley, M, Liang, C., 2025. Scientometric analysis of development and opportunities for research in digital agriculture innovation management *Environmental Modelling & Software*, Vol. 188.
- Md. Zahidul Anam, Md. Hasibul Islam, Md. Tamzidul Islam, A.B.M. Mainul Bari, Asif Raihan, A., 2025 Fermatean fuzzy approach to analyze the drivers of digital transformation in the agricultural production sector: A pathway to sustainability for emerging economies, *Green Technologies and Sustainability*, Vol. 3, Iss. 3.
- Syromyatnikov, D, Salimova, S, Kolpak, E, Mukhametov, A., 2024. Analyzing the impact of competitiveness factors on increasing grain production in Kazakhstan and Russia, *Heliyon*, Vol. 10, Iss. 23.
- Zhou, J., 2022. Naturalizing the state and symbolizing power in Russian agricultural land use, *Political Geography*, Vol. 93.
- Dobrynin, D., Vorbrugg., A, Hujala, T., 2024. Forestry on abandoned agricultural land: Future options for Russia, *Land Use Policy*, Vol. 150, 2025, 107435.
- Lazat, S., Spankulova, Zaure, K., Chulanova, 2024. Data on the demographic forecast of the Kazakhstan population, *Data in Brief*, Vol. 52.
- Kuzubov, A., Maksimenko, A., Sapozhnikova, E., Malinina, O., 2024. Features of modeling in agricultural production with risks // *BIO Web of Conferences*. - 2024. - Vol. 93. - Article 03021. - 10 p. - (International Scientific Forestry Forum 2023: Forest Ecosystems as Global Resource of the Biosphere: Calls, Threats, Solutions (Forestry Forum 2023).
- Charatsari, C., Fragkoulis, I., Lioutas, E.D., 2025. Farmers' motives, goals, values, and participation in agricultural training programs: Uncovering the links in short food supply chains, *Journal of Rural Studies*, Vol. 119.
- Semin, A., Betin, O., Namyatova, L., Kireeva, E., Vatutina, L., Vorontcov, A., Bagaeva, N., 2021. Sustainable Condition of the Agricultural Sector's Environmental, Economic, and Social Components from the Perspective of Open Innovation, *Journal of Open Innovation: Technology, Market, and Complexity*, Vol. 7, Iss. 1, 74.