STATE SUPPORT FOR AGRICULTURE IN THE REGION: ECONOMIC AND SOCIAL ASPECTS

APOIO ESTATAL À AGRICULTURA NA REGIÃO: ASPECTOS ECONÔMICOS E SOCIAIS

Vasily Kuts

ORCID 0000-0001-7104-8712

Altai State Technical University named after I.I. Polzunov, Russia Altai Krai, Russian Federation <u>kuc58@mail.ru</u>

Rustem Shichiyakh

ORCID 0000-0002-5159-4350

Kuban State Agrarian University named after I.T. Trubilin Krasnodar, Russian Federation. <u>shichiyakh.r.a@mail.ru</u>

Andrey Poltarykhin

ORCID 0000-0003-2272-2007

Plekhanov Russian University of Economics Moscow, Russian Federation poltarykhin@mail.ru **Ilyos Abdullayev** * ORCID 0000-0002-9601-7434

Urgench State University Urgench, Uzbekistan aem735@mail.ru

Marina Abushenkova ORCID 0000-0002-8632-1715

Southwest State University Kursk, Russian Federation <u>abushenkova.mv@yandex.ru</u>

Irina Vaslavskaya

ORCID 0000-0002-1363-3865

Kuban Kazan Federal University Kazan, Russian Federation vaslavskaya@yandex.ru

Abstract. The article is devoted to the development of scientific and methodological provisions for improving the human potential of the crop industry of the Altai Territory, formed based on the results of the assessment of state support for the agricultural sub-sector. The purpose of this work is to develop recommendations for improving the directions of state support for the agricultural sector in the Altai Territory. Materials and methods: the assessment of state support for the agricultural sub-sector is based on specific indicators and on the materials of specific enterprises. The theoretical and methodological foundations of the formation of state support in the field of agricultural production are considered. A study of state support of the agricultural sector on the example of a subject of the Russian Federation has been conducted. The main problems of the development of state support of the agricultural sector in the Altai Territory are outlined. Recommendations were formulated for state support of human capital in agriculture. The conducted research has shown that the methods of state support of the agricultural sector at the regional level are economic methods and administrative and legal methods.

Keywords: art-organizational and economic mechanism, agricultural sector, state support, human resources potential.

Resumo. O artigo é dedicado ao desenvolvimento de disposições científicas e metodológicas para melhorar o potencial humano da indústria agrícola do Território de Altai, formadas com base nos resultados da avaliação do apoio estatal ao subsector agrícola. O objetivo deste trabalho é desenvolver recomendações para melhorar as direções do apoio estatal ao setor agrícola no Território de Altai. Materiais e métodos: a avaliação do apoio estatal ao

 $(\mathbf{\hat{h}})$

subsector agrícola baseia-se em indicadores específicos e nos materiais de empresas específicas. São considerados os fundamentos teóricos e metodológicos da formação do apoio estatal no campo da produção agrícola. Foi realizado um estudo do apoio estatal ao setor agrícola no exemplo de um sujeito da Federação Russa. São descritos os principais problemas do desenvolvimento do apoio estatal ao setor agrícola no Território de Altai. Foram formuladas recomendações para o apoio estatal do capital humano na agricultura. A pesquisa realizada demonstrou que os métodos de apoio estatal ao setor agrícola a nível regional são métodos econômicos e métodos administrativos e legais.

Palavras-chave: mecanismo organizativo e econômico; setor agrícola; apoio estatal; potencial de recursos humanos.

1. INTRODUCTION

In view of the fact that at present the agro-industrial complex (AIC) of our country has begun to actively implement the strategy of import substitution and increasing the export of Russian agricultural products, the state needs to pay more attention to the development of agriculture in the Russian Federation and its problems. Agriculture has specific features that make it a vulnerable sector and at the same time extremely important for the national economy (Tokmurzayev et al., 2022; Siphukhanyo & Olawale, 2024; Pogosyan, 2021). State support creates favorable conditions in which domestic agricultural producers can function, stimulates the process of production of high-quality agricultural products, and also increases the competitiveness of goods and services. The process of adapting the system of state support for the agricultural sector makes it possible to create a unity of organizational, economic, social and labor, administrative and legal aspects, which in turn contributes to the formation of effective competitive production.

The purpose of this work is to develop recommendations for improving the areas of state support for the agricultural sector in the Altai Territory. The object of the research is the state support of agriculture and the agro-industrial complex. The subject of this research is the economic issues of state support for the agricultural sector in the Altai Territory. The scientific novelty of the work lies in the development of recommendations for improving the human resources of the crop production industry of the Altai Territory, formed based on the results of the assessment of state support for the agro-industrial complex sub-sector, based on specific indicators and on the materials of specific enterprises.

2. MATERIALS AND METHODS

In the course of the study, the author used the method of descriptive literature review, as well as the general scientific method of analysis and synthesis. The information base of the study was publications on the topic of state support for agriculture, included in the scientometric databases Scopus and Elibrary (RSCI). To present the results obtained, tabular and graphical methods were used.

The regional economy is based on the effective indicators achieved by each industry that contributes to the development of the region. One of these components is the AIC. The agroindustrial complex can be characterized as a certain community of enterprises engaged in the processes of growing and preserving agricultural products, their processing and transportation to the end consumer (Pavlushkina, 2019). M. D. Imamhuseynova notes that "at present, the

 $(\mathbf{\hat{n}})$

agro-industrial complex as a whole, as well as agriculture as its main branch, are the leading backbone spheres of the regional economy, which contribute to the formation of the food market, as well as create the food and economic security of the country, and affect the labor and settlement potential of rural areas" (Imamhuseynova, 2019).

3. RESULTS AND DISCUSSION

At present, the structure of the agro-industrial complex includes more than 80 branches of the national economy, which indicates that it has a complex structure. It should be noted that the agro-industrial complex is important for the socio-economic and political life of Russia. The agro-industrial complex and agriculture form the market for agricultural products, contribute to ensuring the economic security of the country (through food security (Plotnikov, 2021)), and also work for the development of rural areas.

At the same time, the creation of agro-industrial holdings is typical for enterprises and organizations operating in the agro-industrial complex of the Russian Federation (Kapitanova, 2021). Today, the agro-industrial complex in Russia is experiencing a period of active development caused by the COVID-19 pandemic, Western sanctions that affected the country's economy, and the corresponding measures of state support taken (Molchan, 2019; Korableva et al., 2020; Korableva & Kalimullina, 2023). The main branch of the agro-industrial complex is agriculture. The effectiveness of agricultural development depends on natural, climatic and socio-economic conditions. For many centuries, it was agriculture that was the main factor determining the socio-economic and political life of the country (Silina & Animitsy, 2020; Kokorina et al., 2023). Agriculture in Russia is a collection of interrelated industries, mainly specializing in the production of raw materials for the food and processing industries (Shagaida & Uzun, 2019).

The agro-industrial complex is part of the regional economy, while agriculture is part of the agro-industrial complex itself. In the case of favorable development of the agro-industrial complex and agriculture in the region, it is possible to observe an increase in tax revenues to budgets of different levels, the creation of jobs, and the receipt of high-quality farm products. Thus, agriculture and the agro-industrial complex are factors in the development of the regional economy.

It should be noted that in Western Europe, manufacturers of the industrial sector are provided with state subsidies, which allow them to produce products for agricultural enterprises at reduced prices. At the same time, in Russia, this model is used insignificantly, which is why we can state the high cost of agricultural equipment and implements, as well as fuel necessary for the functioning of agriculture. In addition, these resources are constantly becoming more expensive, which slows down the development of agriculture. This problem requires a comprehensive revision of the model of state support for agriculture. It should also be noted that a necessary condition for the formation of an agrarian business in Russia, which will be profitable, self-sufficient and sustainable, is the creation of a mechanism for all agricultural enterprises, which will contribute to the transition to adaptive biologized farming, which will increase the efficiency of agricultural production and minimize damage to the environment (Bakharev et al., 2023; Ikramov & Mityashin, 2021).

V. D. Ilyina says that "it is also important to consolidate the concept of "seeds of domestic selection" at the legislative level - this is the concept used in the Food Security Doctrine. The

 (\mathbf{i})

legislative consolidation of the definition will make it possible in the future to provide state support to producers of seeds of varieties (hybrids) of domestic selection and objectively judge the implementation of the parameters of the doctrine" (Ilyina, 2022). This will make it possible to overcome the dependence of domestic crop production on the supply of foreign seeds (such dependence in the current geopolitical situation can be a source of threats to national food security). It should be noted that the level of dependence of agricultural producers on foreign genetic material for livestock (poultry and pig farming) is also currently high (Dudukalov et al., 2022). In addition, in order to develop our own poultry farming, it is necessary to support at the state level the process of developing innovative solutions in terms of animal breeding and subsidizing genetic livestock, as well as the creation of joint ventures with breeding reproducers from foreign countries (Britik & Vladimirov, 2022). In order to solve the problem of pig breeding, it is necessary to develop a state program that will manage the quality and quantity of the available livestock, as well as monitor the breeding of animals that are weak in productivity and genetics (Filatova, 2021).

It is noteworthy that those projects on selection, genetics and production of equipment that operate in the current conditions are capital-intensive, have long terms of implementation and payback. The shortage of own financial resources of agricultural enterprises, as well as the difficulty of access to bank loans, significantly complicate investments in relevant projects, which in the medium term may pose a threat to the food security of our country. Therefore, it is necessary to revise the system state support in the field of agriculture to ensure that it meets the needs of agricultural producers (Naminova, 2021). In general, it can be concluded that Russian agricultural producers currently need state support due to the current sanctions (which significantly limit both access to the necessary production resources and export markets), the implementation of the import substitution strategy (which, among other things, requires the creation of the missing stages of production chains in our country, which is associated with significant risks), an increase in agricultural output and at the same time a decrease in aggregate demand (and the associated decline in prices), the need to use fertilizers, an increase in the cost of fuels and lubricants (POL), and in the face of price pressure from processing enterprises and food retail. According to the Federal State Statistics Service, every year, at the onset of a new agricultural season, an increase in prices for mineral fertilizers, seeds, fuel and lubricants, and plant protection products is recorded (Sharifzoda, 2019). When supporting agricultural enterprises, the state applies various methods and tools, using direct and indirect measures within the framework of state regulation (Svetlov et al., 2019; Schick et al., 2020).

In the process of providing state support to agricultural enterprises, various administrative, social, legal and economic measures are also applied. Those economic instruments that provide an opportunity to rationalize the factors of production in agriculture are called economic measures. Tools that improve the lives of vulnerable segments of the population through transfers and the provision of various payments are called social (Ushachev, 2021). The use of scientific and technical tools is associated with supporting the development, creation and implementation of advanced agricultural equipment, as well as the development of advanced technologies in the field of agriculture. Foreign economic measures to support the agricultural sector include measures aimed at promoting agricultural products in the international market (Semin, 2019). In order to form various forms of consolidation of enterprises aimed at

 $(\mathbf{\hat{n}})$

improving the efficiency of their activities (Kotliarov, 2022), state support measures of an organizational and economic nature are used.

The institutional directions of state support for agriculture and the agro-industrial complex are: the creation of a market infrastructure, the formation of a system of independent integrated organizations; development of the system of target markets.

Measures of state support in the field of agriculture include:

- 1. implementation of land mortgage lending to peasant farms and private plots;
- 2. implementation of the process of insuring risks in the agricultural business;
- 3. regulation of purchase prices for agricultural products (Dudareva, 2020).

It should be noted that state guarantees, risk insurance, public procurement, subsidies, as well as assistance to insolvent citizens are implemented through various financial and economic instruments and measures of state regulation (Ushachev, 2021; Razmara et al., 2022).

The legal regulation of the implementation of state support for agricultural enterprises in the Altai Territory is based on the Federal Law "On the Development of Agriculture" (Federal Law "On the Development of Agriculture", 2022), as well as other federal laws and regulations of the Russian Federation [State Program for the Development of Agriculture], laws and other regulatory legal acts of the Government of the Altai Territory. The list of priority national projects in the agro-industrial complex is shown Figure 1.



Figure 1. Structure of priority national projects in the agro-industrial complex

As Figure 1 shows, among the main directions of national projects in the agro-industrial complex are: a system of support for farmers and the development of cooperation, which will attract new small and medium-sized enterprises (SMEs) to agricultural production, as well as organize the export of agricultural products.

In addition, at the federal level, in accordance with Article 7 of the Federal Law "On the Development of Agriculture", support is provided for the development of the agricultural sector, coupled with the sustainable development of agrarian territories (On Agriculture: Federal

Law "On the Development of Agriculture", 2022). As part of organizational measures in the Altai Territory, various kinds of state and regional programs are being implemented in the field of improving and increasing the efficiency of the agricultural sector in the region on the basis of the principle of a program-targeted approach.

Within the framework of the State Program for the Development of Agriculture and Regulation of Markets for Agricultural Products, Raw Materials and Food in the Altai Territory, grants are provided for the development of agricultural production in the areas of "Family Farm" and "Agroprogress" (On approval of the forms of documents submitted by organizations to the Ministry of Agriculture of the Altai Territory for receiving the Agroprogress grant, 2021). Grants are provided in the following amounts: "Agroprogress" - up to 30 million rubles, but not more than 25% of the project cost, for the development of family farms - up to 30 million rubles, but not more than 60% of the project cost.

The form of the application, business plan and other documents are approved by the orders of the Ministry of Agriculture of the Altai Territory dated 07.06.2021 No 74 "On approval of the forms of documents submitted for recipients of a grant for the development of a family farm" (On approval of the forms of documents submitted for recipients of a grant for the development of a family farm, 2021) and dated 07.06.2021 No73 "On approval of the forms of documents submitted by organizations to the Ministry of Agriculture of the Altai Territory for receiving a grant "Agroprogress" (On approval of the forms of documents submitted by organizations to the Ministry of Agriculture of the Altai Territory to receive the "Agroprogress" grant, 2021). The conditions and requirements for the provision of grants are approved by the Decree of the Government of the Altai Territory dated 30.04.2019 No157 "On Approval of the Procedure for Providing Agrostartup Grants from the Regional Budget as Part of the Implementation of the Regional Project "Acceleration of Small and Medium-Sized Businesses" (On Approval of the Procedure for Providing Agrostartup Grants from the Regional Budget as Part of the Implementation of the Regional Project "Acceleration of Small and Medium-Sized Enterprises" Entrepreneurship", 2019). The Agrostartup grant can be provided to the head of a peasant farm in order to co-finance the costs of creating and developing his farm, creating new jobs on a permanent basis in rural areas (Ministry of Agriculture of the Altai Territory).

Thus, in the Altai Territory, the regulatory framework for the implementation of state support of the agricultural sector at the federal and regional levels has been historically formed. They regulate the process of obtaining grants, state subsidies and other methods of providing state support to the agricultural sector. Thanks to information and financial support, agricultural producers of the Altai Territory have the opportunity to replace old special equipment, purchase new inventory, machinery and vehicles, purchase working capital and more. Since 2017, in the Altai Territory, state support for the agro-industrial complex and agriculture began to take place under the mechanism of the "Single Subsidy".

 (\mathbf{i})

(cc)



Figure 2. Directions for the provision of a "single" subsidy in agriculture of the Altai Territory

As Figure 2 shows, in the Altai Territory, a single subsidy is distributed in such areas as the development of animal husbandry, the development of crop production, as well as the development of small forms of farming. As part of the implementation of the decree "On National Goals and Strategic Objectives of the Development of the Russian Federation for the Period up to 2024", the regional project "Export of Agricultural Products" and the national project "International Cooperation and Export" are being implemented in the Altai Territory. The passport of the regional project of the Altai Territory "Export of agricultural products" defines the target: the volume of exports of agricultural products (in comparable prices of 2020) in 2021 is \$ 274 million. USD, in 2022 – USD 307 million. USD, in 2023 – USD 258.5 million. USD, in 2024 – USD 389.3 million. United States. The decision made sets the task of creating a new exportoriented commodity mass and a physical increase in the volume of shipments (Table 1).

теппоту									
Name of the indicator	2017 G.	2018 G.	Plan 2019 G.	Fact 2019 G.	% of Plan Completion in Oct. 2019	2020 D. Plan	Oct. 2020 fact	% of plan completion in 2020	2024 plan
Agricultural products, to- tal	185,8	200,6	235,1	292,1	124,2	256,5	289,6	112,9	501
Fat-and-oil products	49,5	41,2	32	37,7	117,8	54,9	88	160,29	130
Cereals	7,6	22,3	43	56,7	131,9	24	44	183,33	28
Fish and seafood	2,4	1,9	2,1	2,9	109,5	2,1	2,4	114,29	2,5
Meat and dairy products	6,2	3,9	5,2	5,9	113,5	7,5	8,5	113,33	15

Table 1. Dynamics of production of export-oriented products of the agricultural sector of the Altai

 Territory

 \odot \odot

Food & Processing Prod-	58,7	59,1	64,7	73,1	113	90,8	112	123,35	205,5
ucts Industry	50,7	59,1	04,7	/3,1	115	90,8	112	125,55	205,5
Other agricultural	61,4	72	88,1	116,4	132,1	78,2	89	113,81	120
products	01,4	12	00,1	110,4	152,1	70,2	89	115,61	120

Table 1 shows that the export of agricultural products of the Altai Territory tended to grow throughout the entire period of the study. In 2020, compared to 2019, there was an over fulfillment of the plan for all indicators of agricultural production. The largest increase was recorded for other agricultural products, the smallest increase was recorded for fish products. By 2024, it is also planned to increase in all categories of agricultural products.

"Creation of a system of support for farmers and development of cooperation" is also a regional project of the Altai Territory within the framework of state support for the agricultural sector (Table 2). This project started in 2019. It is based on the association of heads of peasant (farmer) farms and individual entrepreneurs (formerly heads of private farms) engaged in the production of livestock products (milk, meat), with the subsequent sale of the products to a cooperative, which will ensure the concentration of large volumes of raw milk, its primary processing and sale to a dairy plant at a price comparable to the price of products of large farms. Data on the implementation of this project are presented in Table 2.

Index	2019-2024
1. Units of entrepreneurship, people	1032
2. Members of the SPK, people.	528
3. Newly created SMEs, people	376
4. Amount of the federal budget of the constituent entities of the Russian Federation, billion rubles	37,4
5. Financing of cooperation support, billion rubles	401,031
6. Prisoners of the CPMK, units	27
7. Export-oriented centers, units.	6
8. Holding various kinds of exhibitions and presentations,	18
9. Payment of compensation for transportation of agricultural products, million rubles	3834,3

Table 2. Indicators of the regional project "Creation of a support system for farmers and development of rural cooperation"

We systematize the data on the dynamics of state support for the development of agriculture in the Altai Territory using the data in Table 3.

Table 3. Volumes of state support for the agricultural sector in the Altai Territory for the period 2017-2022, million rubles

Areas of support	Oct. 2017	Oct. 2018	Oct. 2019	Oct. 2020	Oct. 2021	Oct. 2022
State support for agri- culture, total	3426,8	3717,5	3167,9	3554,8	3680,7	3685
including: the federal part of state support	2507,1	2693,6	2016,4	2505,8	2630,5	2628,6
Support at the expense	919,7	1023,9	1151,4	1049	1050,2	1056,4

 $(\mathbf{\hat{h}})$

|--|

As can be seen from Table 3, in 2017-2018, there was an increase in the volume of state support for the agricultural sector of the Altai Territory due to financing from budgets of various levels. The amount of financial support for the "compensatory" subsidy in the Altai Territory was distributed to support dairy production, livestock breeding, beef cattle breeding, agrotechnical work, elite seed production, etc. The least amount of money was allocated to support the purchase of fodder on irrigated plots. In addition, mainly preferential loans were issued in the Altai Territory in 2021 for crop production, while the least concessional loans were issued within the livestock industry.

Based on the above, it can be concluded that in the Altai Territory, through state support of agriculture, information, financial and other support is provided to local farmers and other agricultural producers engaged in animal husbandry, crop production, as well as other areas in the field of agriculture and agriculture. The study showed that every year representatives of the agricultural industry of the Altai Territory received state support throughout the entire period of the study. However, it is necessary to establish its effectiveness.

The Ministry of Agriculture of the Altai Territory notes that in 2017 the state program "Development of Agriculture of the Altai Territory" for 2013-2020 was implemented effectively, this indicator was observed at the level of 97.4%, which indicates that a high level of effectiveness of this program was recorded. The provided amounts of financing for state support of the agricultural sector made it possible to increase the volume of agricultural production (Table 4).

		Am	ount of state sub	osidies, rubles			
	total		including: the f	ederal part of	from the budget of a constituent en-		
Year			state su	ipport	tity of the Russian Federation		
	per 1 hectare of sown area	Support at the expense of the regional budget	per 1 hectare of sown area	per 1 rural in- habitant	per 1 hectare of sown area	per 1 rural in- habitant	
2017	556,30	2946,40	491,30	2602,20	65	344,20	
2018	563	2842,90	523,80	2644,70	39,30	198,20	
2019	618,60	3171,90	559,50	2868,40	59,10	303	
2020	581,70	3038,30	576,0	3008,40	5,70	29,90	
2021	685,40	3694,30	679,40	3661,80	6,0	32,60	
2022	606,40	3085,60	600,10	3108	5,80	30,90	

Table 4. State support for the agricultural sector of the Altai Territory for the period 2017-2022

The dynamics of state support for the agricultural sector for 2017-2022 is graphically traced in Figure 3.

 (\mathbf{i})



Figure 3. Ratio of the dynamics of state support for the agricultural sector of the Altai Territory in 2017-2022

It is noteworthy that the established requirements for the provision of subsidies from budgets of various levels create motivation for employers to increase the remuneration of employees.

Compared to 2017, the average monthly salary of an employee in the field of agriculture in the Altai Territory increased by 148.4%. In 2022, the salary of this category of workers was observed at the level of 27612 rubles. In 2017-2022, there was an increase in the effectiveness of state support for the agricultural sector of the Altai Territory, which indicates that the funds allocated from the federal and regional budgets were used effectively throughout the entire period of the study. In general, the study of state support for agriculture and agriculture in the Altai Territory showed that the region pays great attention to supporting agriculture and the agro-industrial complex as important elements of the region's economy.

However, despite the fact that the current policy in the field of state support for agricultural producers in the region is effective, it is necessary to develop a set of measures to form an effective system of state support for the agricultural sector at the regional level. In the period 2023-2025, the implementation of regional projects will continue in the region, in accordance with the decree of the President of the Russian Federation of 21.07.2020 No 474 "On the national development goals of the Russian Federation for the period up to 2030". Relatively favorable weather conditions in the spring and summer of 2023 will contribute to maintaining a high level of crop yields, including grain crops up to 24.5 c/ha. However, due to the high production indicators of the base year 2022, by the end of 2023, the index of the physical volume of agricultural production is expected to decrease to the level of 98.1%. In the forecast period of 2023-2025, the livestock industry provides for an annual increase in production in all categories of farms due to favorable weather conditions, reconstruction and construction of livestock buildings, re-equipment of livestock and crop production industries with new high-performance equipment, development of small forms of farming, improvement and development of cooperative ties. In 2022, agricultural enterprises were provided with state support in the form of subsidies to reimburse part of the cost of paying interest on loans, for the purchase of

٢

(cc)

original and elite seeds, per 1 kg of milk sold, untied support in crop production. In the forecast period of 2023-2025, further participation in state support programs is expected. We systematize the data on the planned target indicators of state support for the agricultural sector of the Altai Territory in 2023-2025 (Table 5).

	Amount of state subsidies, rubles, rubles							
Year	total from the federal b		leral budget	l budget from the budget of a const entity of the Russian Fede				
	per 1 hectare of sown area	per 1 rural in- habitant	per 1 hectare of sown area	per 1 rural in- habitant	per 1 hectare of sown area	per 1 rural in- habitant		
2023	656,1	3101,9	650,2	3070,8	5,9	31,1		
2024	661	3139	655,6	3144,4	6	32		
2025	676,5	3223,5	660	3240	6,2	33		

Table 5. State support for the agricultural sector of the Altai Territory for the planning period 2023-2025

The data in Table 5 show that the amount of state support for the agricultural sector of the Altai Territory in the planning period 2023-2025 will increase, which gives us reason to consider this support from the regional administration to be cost-effective. The planned indicators of the effectiveness of state support for agriculture in the Altai Territory in 2023-2025 show that within the framework of the social criterion, the annual increase in wages of agricultural workers is projected, while the planned increase in tax transfers of agricultural producers indicates the effectiveness of state support according to the economic criterion.

In this regard, we propose to introduce the concept of improving state support for human capital in the agricultural sector of the Altai Territory. The basic directions for the implementation of the proposed concept are as follows:

- 1. When providing state support for the development of human capital in the agricultural sector of the Altai Territory, take into account the current level of its development;
- 2. Take into account the level of staffing in the process of subsidizing agricultural producers.
- 3. Provide state support to those workers in the agricultural sector who have improved their skills in this field of activity or have undergone retraining, taking into account the level of their professional competencies.
- 4. To increase the volume of state support in the field of additional professional education in relation to the agro-industrial complex of the Altai Territory, while it is necessary to develop the material and technical base, use the contractual system for retraining employees, develop international cooperation, and create software products for the digital transformation of the agro-industrial complex (Bakharev et al., 2023, Stelmashonok & Stelmashonok, 2021).

Taking into account the above areas, we will determine the volume of forecast indicators of human capital of the agricultural sector of the Altai Krai (Table 6).

 $(\mathbf{\hat{n}})$

Directions	2023 г.	2024 г.	2025 г.
1. Staffing, %	94	96	97
2. Compliance with the position held according to the provided edu-	90	92	95
cation document, in %			
3. Number of employees who improved their qualifications during the	841	900	963
year, per person			
4. Number of employees who underwent professional retraining dur-	88	94	101
ing the year, in people			
5. Number of employees who completed an internship during the	147	156	161
year, people			
6. Availability of farms with high indicators of human capital devel-	10	12	15
opment, %			
7. Availability of farms with average indicators of human capital de-	7	9	10
velopment, %			
8. Average annual milk yield per cow, in kg	8000	9000	10000
9. Indicator of yield of grain and leguminous crops calculated in	24	25	26
weight after processing, in centners			
10. Total profitability of agricultural enterprises, %	24,1	29,7	33
11. Amount of monetary subsidy for educational services of agricul-			
tural sector employees depending on the achieved indicators of hu-			
man capital development, thousand rubles per person:			
-above the average;			
-average;	93	104	110
-below the average.	62	65	67
	16	17	20

Table 6. Planned indicators of human capital development in the agricultural sector of the Altai Territory

Thus, in order to improve state support for the agricultural sector in the Altai Territory, it is necessary to engage in the development of existing human capital through professional retraining, internships, advanced training in the field of agriculture, which will help motivate people to gain new knowledge, management experience and the desire to create a highly profitable business that can provide the consumer market with high-quality farm products, the budget – taxes, the labor market – labor force.

4. CONCLUSION

As noted, Russian agricultural producers currently need state support due to the current sanctions, import substitution, an increase in agricultural output and at the same time a decrease in aggregate demand, the need to use fertilizers, an increase in the cost of fuel and lubricants, and in the face of falling prices.

The study showed that measures to support the agro-industrial complex, implemented in the Altai Territory, not only contribute to the growth of agricultural production and increase the efficiency of agricultural enterprises, but also have a positive effect on social development, as they create conditions for increasing the incomes of people engaged in agriculture. In our opinion, it is advisable to take additional measures to develop human capital in agriculture in the region.

To solve this problem, we proposed a set of measures that involve linking state support for agricultural enterprises to their efforts to develop human capital. These measures will create conditions for the long-term sustainability of agriculture in the region and will help attract new workers and entrepreneurs to the agricultural sector.

REFERENCES

Bakharev V.V., Mityashin G.Yu., & Stepanova T.V. (2023). Food security, food waste and food sharing: The conceptual analysis. Food Systems, 6(3), 390-396. https://doi.org/10.21323/2618-9771-2023-6-3-390-396

Britik E.V., & Vladimirov V.V. (2022). Improvement of measures of state stimulation of investment activity in agriculture. Bulletin of the University. No. 1. - pp. 151-157.

Dudukalov, E. V., Zolochevskaya, E. Y., Sorokina, M. Y., & Mangusheva, L. S. (2022). Structuring the economic space for small business in the agro-industrial complex. Siberian Journal of Life Sciences and Agriculture, 14(2), 176-215. https://doi.org/10.12731/2658-6649-2022-14-2-176-215

Dudareva A.B. (2020). Improvement of state support for investment activities in agriculture. Bulletin of Agrarian Science. - № 2(83). – Pp.108-114.

Filatova S.V. (2021). Problems of forming the resource potential of agricultural enterprises. Patterns of development of regional agro-food systems. No. 1. – pp. 150-152.

Imamguseynova M.D. (2019). Trends and prospects of the agroindustrial complex of Russia at the present stage of economic development. Almanac of World Science. No. 4. – pp. 24-27.

Ilyina V.D. (2022). Development of support for agricultural producers in conditions of economic instability. Proceedings of the Velikiye Luki State Agricultural Academy. No. 3, pp. 36-42.

Ikramov, R., & Mityashin, G. (2021). Ecologization of retail: Russian experience. E3S Web of Conferences, 284, 11018. https://doi.org/10.1051/e3sconf/202128411018

Kapitanova O.G. (2021). Features of the functioning of agricultural holdings at the present stage. Fundamental research. – No. 12-4. – pp. 794-798.

Kotliarov, I. D. (2022). Heterogeneity of stakeholders as an obstacle to the development of agricultural cooperatives in Russia. Russian Peasant Studies. Vol. 7, No. 4. – P. 20-32. https://doi.org/10.22394/2500-1809-2022-7-4-20-32

Kokorina, Y.G., Khanbalaeva, S.N., Abdullayev, U.I., Vagabov, M.M. (2023). The Concept of Teaching Archaeology by I.E. Zabelin. Bylye Gody, 18 (2), 650-661. https://doi.org/10.13187/bg.2023.2.650

Korableva, O. N., Mityakova, V. N., & Kalimullina, O. V. (2020). Designing a decision support system for predicting innovation activity. Paper presented at the ICEIS 2020 - Proceedings of the 22nd International Conference on Enterprise Information Systems, 1 619-625

Korableva, O., & Kalimullina, O (2023). Digital currency as a tool for reducing information asymmetry (start-ups' financing example). International review. Issue 3-4, Page172-183. https://doi.org/10.5937/intrev2304169K

Molchan A.S. (2019). The development of the agro-industrial complex is a priority task of the

 $(\mathbf{\hat{h}})$

government in the sanctions period for Russia. Polythematic online electronic Journal of the Kuban State Agrarian University. No. 120. – pp. 1156-1165.

Ministry of Agriculture of the Altai Territory. – Access mode:https://www.altagro22.ru/activity/analyt-ics

Naminova K.A. (2021). Features and conditions of preferential lending to agricultural enterprises in Russia. National interests: priorities and security. Vol. 17. – №4 (397). – Pp. 649-650.

Plotnikov V., Nikitin Y., Maramygin M., & Ilyasov R. (2021). National food security under institutional challenges (Russian experience). International Journal of Sociology and Social Policy. Vol. 41. – No 1-2. – P. 139-153. https://doi.org/10.1108/IJSSP-03-2020-007

Pavlushkina O.I. (2019). Methodological provisions for the development of conceptual foundations for the management of socio-economic development of the agro-industrial complex under the influence of global processes. Academic Bulletin of the Rostov branch of the Russian Customs Academy. No. 3. – pp. 90-95.

Pogosyan, V. G. (2021). Problem of diffusion of innovations: a historical retrospective. Voprosy Istorii, 2021(5-2), 24-32. https://doi.org/10.31166/VoprosyIstorii202105Statyi30

Razmara, S., Barzamini, R., & AlirezaIzadi, N. J. (2022). A Hybrid Neural Network Approach for Congestion Control in TCP/IP Networks. Specialusis Ugdymas, 1(43), 8504-8518.

Silin Ya. P., & Animitsy E. G. (2020). Regional economics. - Yekaterinburg: Publishing House of the Ural State Economy. 417 p.

Semin A.N. (2019). On improving the mechanism of state support in related sectors of the regional agro-industrial complex. The economics of agricultural and processing enterprises. № 11. – Pp. 5–7.

Svetlov N. M., Yanbykh R. G., & Loginova D. A. (2019). On the heterogeneity of the effects of state support for agriculture. Economic issues. — № 4. – Pp. 59-73. https://doi.org/10.32609/0042-8736-2019-4-59-73

Shagaida N.I., & Uzun V.Ya. (2019). Drivers of growth and structural shifts in agriculture in Russia. – M.: Publishing House "Delo" RANEPA. – 98 p.

Sharifzoda M.M. (2019). On the issue of the study of methodological approaches to assessing the resource potential of regions. Bulletin of the Tajik State University of Law, Business and Politics. – Series of Social Sciences. No. 2. – pp. 5-13.

Stelmashonok, E., & Stelmashonok, V. (2021). Digital transformation of the agro-industrial complex: an analysis of prospects. Siberian Journal of Life Sciences and Agriculture, 13(2), 336-365.

Siphukhanyo, L., & Olawale, B. E. (2024). Chronicling the experiences of life sciences teachers and learners on the usage of enquiry-based learning in enhancing learners' academic performance. Journal of Culture and Values in Education, 7(1), 19-36. https://doi.org/10.46303/jcve.2024.2

Tokmurzayev, B.S., Churkin, M.K., Goncharov, Y.M., Abdullaev, U.I. (2022). Scenarios of Intercultural Communication of the Russian and Indigenous Population of Siberia in the Views of the Leaders of the Siberian Regionalism. Bylye Gody, 17 (3), pp. 1250-1259.

Ushachev I.G. (2021). State support and mechanisms of its implementation in the agro-industrial complex (theory, methodology, calculations). - M.: LLC NIPCC Voskhod-A, 224 p.

 $(\mathbf{\hat{H}})$