Problems and prospects of agro-industrial complex in the Krasnoyarsk region

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Abstract. Improving the efficiency of agriculture requires a balanced state program for the development of the agricultural sector. Based on the state program, similar programs are being developed for the regions. Regions differ in climate conditions, human resources, availability of equipment, structure of the agricultural sector, financing, organization of the agricultural sector, introduction of advanced technologies, and a number of other factors. All these factors should be studied, their dynamics should be analyzed, and options for optimizing these factors should be considered. It should be noted that a number of factors are typical for the Russian agriculture as a whole, and some are typical for the Krasnoyarsk region. All these factors reduce the efficiency of the industry and are an obstacle to its development. Without analysis and monitoring of these and other factors, it will be impossible to improve the efficiency of agriculture.

1. Introduction
The agro – industrial complex is a very complex concept. This is one of the main subsystems of the Russian economy, which includes a number of industries, each of which has its own distinctive features and specifics. During the crisis, each of the agribusiness sectors is experiencing additional difficulties and problems. Since food security depends on their successful solution, special attention should be paid to solving these problems. Among the global problems that affect the development of agriculture, it is worth noting climate change, which we all notice. Climate change has a direct impact on agricultural production, so we cannot ignore this factor. I. Savchenko, a vice-president of the Russian academy of agricultural sciences, noted that according to research conducted in the late 70s, there were 150-170 cases of negative climate impacts per year (such as frosts, droughts, excessive precipitation), and in recent years there have been 300-400 cases per year. Since this situation cannot be changed, it is necessary to adapt to it and strengthen forecasting. But in addition to such global factors, there are those that are amenable to change and can be changed for the better [1-3].

There are obvious problems in the industry that supply the means of production for agriculture. Used agricultural machinery does not meet the requirements of the time, is outdated, and is being updated at an insufficient pace. In addition, machinery is expensive and inaccessible to many agricultural producers. K. Babkin, a president of the union of agricultural machinery manufacturers "Rosagromash", notes a decrease in production of agricultural machinery: tractors – 3.2 times, combine harvesters – 3.8 times, forage harvesters – 4 times [4]. Many enterprises that produce agricultural machinery during the crisis curtailed production; there is a drop in the production of combines and tractors. Currently, the Altai tractor plant, the Volgograd tractor plant, the Rostov combine plant are practically standing, and
"RusAgroMash" has significantly reduced production volumes and is loaded by one-third, although the products of this plant are highly evaluated by experts and are considered competitive.

Among the most urgent problems of the agro-industrial complex, we can also note shortcomings in the management of the industry. Currently, not enough attention is paid to logistics and storage of products. There is no coherent export policy (especially for grain). Grain production is developing quite successfully in Russia, but there are problems with its implementation on international markets that prevent farmers from getting the expected profit [5-7].

Many problems are associated with insufficient processing of agricultural products, which reduces the efficiency of the enterprise.

It should also be noted that there is no comprehensive insurance system for agricultural enterprises against risks, the number of which is constantly increasing. Agriculture is highly dependent on climate conditions, and the climate is becoming increasingly unstable. Another problem is the insufficiently effective work of information and consulting centers, whose main task should be the development, adaptation and implementation of new technologies at specific enterprises, testing of new equipment and developing recommendations for its using. As we can see, the agricultural sector has accumulated a large number of unresolved problems that hinder the development of this important industry for the country.

2. Purpose of the research
The task of the study is to identify the main factors that hinder the development of the agro-industrial complex, create problems in its activities and reduce the efficiency of its work. There are a lot of such factors; we analyzed the most relevant factors that need to be addressed as soon as possible.

The purpose of the study is to analyze the factors listed above and search for possible solutions to the problems that have arisen, despite the difficult crisis period. Achieving this goal involves analyzing the experience of advanced farms, analyzing foreign experience in solving similar problems, analyzing the opinions of leading industry experts, and monitoring the situation in industries and markets, both Russian and foreign [8-10].

After a thorough analysis, it is necessary to develop possible options for eliminating or reducing the negative impact of these factors on the activities of agricultural enterprises. Reducing the influence of inhibitory factors will provide incentives for accelerated development of the agro-industrial complex, if they are correctly identified.

3. Materials and methods researches
To solve the research tasks, a set of economic methods was applied: analytical, economic and statistical, content analysis, and causal research. The identification of factors affecting the situation in the agro-industrial complex was based on the study of static material and conceptual documents for the development of the agricultural sector. Confirmation of the conclusions and results of the study was based on the study of Russian and foreign scientists’ works on the problems of agricultural development. As a result of the study, a set of measures for the further development of the agro-industrial complex in the Krasnoyarsk region was proposed [11-13].

Many experts in agriculture and agricultural engineering note that the equipment available on farms is excessively outdated. Equipping farms with more modern equipment is difficult during the crisis. First, there is not enough money to buy equipment from farms, and loans to small and medium-sized enterprises are not very readily issued, banks prefer to deal with large agricultural holdings. Second, agricultural machinery production has declined in recent years.

G. Simonikhin, a general director of JSC “Kirov Plant”, Saint Petersburg, notes the difficult situation at his company (6,500 employees) and at the St. Petersburg tractor plant (1,200 employees), where they are struggling to save people from being fired. These enterprises introduce a system of stimulating sales of agricultural machinery by accepting old equipment and reducing the amount of the first payment for the new one. The same situation is also difficult at the Krasnoyarsk combine plant, which intends to use the St. Petersburg experience to stimulate demand and sales.
Right organization of information and consulting centers can significantly contribute to the introduction acceleration of new equipment and new technologies. In order for advanced technologies to be implemented faster, it is necessary that someone try them out, understand them, adapt them to the existing conditions, give qualified advice, and develop recommendations. This should be the main goal of such centers.

Russia produces more grain than it consumes, so it is necessary to pay more serious attention to the formation of the country's export policy [14,15]. Currently, there is no state support for exports. N. Krichevsky, a doctor of economics, professor, believes that Russia's share in the world grain market can be 25%, and at the moment it is 15%. Plentiful grain harvests in recent years have led to lower grain prices and overstocking of warehouses. Therefore, the need to develop a balanced export policy comes to the first place. While grain is in warehouses without movement, producers cannot return the funds invested in production, which they need so much during the crisis. The current situation is a hindrance to the development of production and hinders the welfare improvement of rural citizens and therefore needs to be resolved as soon as possible.

Many experts, especially I. Obolentsev, a chairman of the agro-industrial union of Russia, believe that now the development of a state program for loss insurance is coming to the first place. Currently, losses of agricultural enterprises in the event of natural disasters are covered by the regional and federal budgets or by loans, although all over the world they are covered by insurance companies.

The current concern is the insufficiently high rate in development of animal husbandry. The situation is good in poultry farming [16,17]. Russia can meet its needs in poultry meat. The pace of industry development is quite stable. Pig farming is also developing quite successfully, but we would like to have a higher rate of development. For example, the number of pigs in Russia is about 19 million, and in Denmark, a small country comparable in area to the territory of the Moscow region, the number of pigs is 25 million.

Analyzing the problems of the agro-industrial complex, we cannot ignore social policy. Social policy is understood as a set of measures aimed at creating favorable living and working conditions, mitigating income inequality, and creating conditions for ensuring social justice. Social policy is responsible for creating social infrastructure, ensuring social justice, social protection of the population, and increasing motivation to work. The creation of social infrastructure involves increasing the level of development in medicine, education [18], culture, sports, etc. Social policy can be active (involves the creation of new jobs) and passive, which is focused on the payment of subsidies and grants.

One of the reasons for the emergence of empty villages and the mass movement of rural citizens to cities is an insufficiently effective social policy. With a properly developed social policy, the living conditions in the city and village should be similar, so that the village citizens do not feel deprived.

4. Results and discussions
One of the most effective ways to solve the problem with outdated equipment is the development of leasing trade [19]. The most significant and largest leasing company is “RusAgroLeasing”, but in recent years it has also reduced sales. The role of this and other leasing companies should be to track the demand for equipment and bring this equipment to farms. In a crisis situation, there may be periods when demand for equipment falls due to lack of money, and then it is advisable for them, together with the state, to buy equipment from its manufacturers.

Information and consulting centers can significantly contribute to the acceleration of the introduction of new equipment and advanced technologies, if they are properly organized. Great experience in organization of such centers is available in Canada. The main tasks of such centers should be: testing new equipment, adapting it to local conditions, developing crop rotations, developing recommendations on the use of this equipment, on the introduction of modern technologies for practical workers, testing these technologies.

The organization of product processing can significantly increase the company's income and increase employment, and at present this is a very significant moment. The introduction of recycling allows us to fully meet the needs of the population, to form their loyalty to the company.
Since Russia produces more grain than it consumes on the domestic market, there is a need to effectively sell it on foreign markets. V. Petrichenko, a general director of JSC “ProGrain” described the grain industry as a locomotive of the agro-industrial complex. He believes that this industry can pull out all other industries if there is a competent export policy. There are great prospects in this industry. If the number of cattle cannot be increased by 20-30% in a season, then in grain production, with a competent organization of the production process, such an increase in production is possible. But for this locomotive, exports are needed to get money and use it to develop other branches of the agro-industrial complex. Many countries have export support. Currently, there is no export support program in our country. The development of such a program is necessary in the near future. In addition, Russia needs a permanent presence in the world market, if it leaves the world market, then returning to this market will require significant funds. If Russia manages to increase its share in the world market to 25%, and experts believe that this is quite an achievable result, it will have a positive impact on our domestic market. It should be noted that the situation when there is a surplus of unsold grain in the country creates excellent starting opportunities for the development of animal husbandry, especially cattle. Currently, about 40% of meat is imported on Russian markets, but there is a real opportunity to significantly reduce this share by developing its own production [20-23].

The improvement of the insurance system should bring positive results, since it will make it possible to reduce the debt burden of agricultural producers, increase the profitability of farmers, help to increase the technical equipment level of production, and promote the development of agriculture. Currently, the losses insurance system of agricultural producers is not developed enough and covers only 10% of producers.

As noted above, one of the objectives of social policy is to ensure the similarity of living and working conditions for citizens of cities and rural settlements. Today, these conditions are very different, which makes rural citizens want to move to the city, and the villages are becoming desolate. Now there are many villages where there are only a few inhabited houses and citizens of retirement age who are physically unable to engage in agricultural work. In these villages, as a rule, there are no schools, medical centers, roads, libraries, shops. Young people try to leave the village and move to the city.

From the current situation, it is already obvious that if we do not manage to equalize the living standards of the village and city citizens in the near future, the villages will become completely empty. The villagers now have lower levels of income often do not have opportunities for interesting entertainment (especially for youth), a narrower list of available jobs, not enough skilled jobs, it is not always possible for sports, cultural development.

One way to change this situation is to develop social standards. The main goal of developing standards is to meet the needs of citizens for material goods and services, to provide state support for the social sphere, including providing support to poor citizens and people in difficult life situations.

The system of social standards application should become a priority area of social policy, which ensures the improvement of the life quality. The system of social standards should provide for the development of a standards system for all the most important areas of citizens activity. This includes paying the minimum wage, pensions, allowances, providing free social services, providing an appropriate workplace, providing opportunities for full-fledged education and comprehensive development, and providing pre-school and school institutions in the right number and level.

Minimum social standards should be defined in every area that is important for human life. Developing digital technologies help solve a number of these issues quite quickly, especially in the field of education and cultural leisure, but this is not enough. In addition not all villages have high quality and high speed Internet.

The lack of rural goods available to the urban population affects another very significant aspect that is not given due attention, but which can have the most serious consequences. Agriculture significantly helps to preserve the national identity, cultural and national traditions and peculiarities of the indigenous people of Russia. With an increase in the outflow of the population from the village, all these national values will inevitably be lost.
All these shortcomings were identified in order to improve and accelerate the development of the agro-industrial complex. Since the 2000s, the agricultural sector has been developing quite actively and successfully, which makes it possible to ensure the country's food security [24]. Export deliveries to the world market have significantly increased for many types of agricultural products. This is especially noticeable since the 2010s. In 2016, Russia ranked first in the world in wheat exports, surpassing the United States. In 2017, Russia ranked the third place in wheat production and the first in wheat exports. Russia is also a leader in the production of oats, rye, buckwheat, and barley. Russia ranks the third place in the world in flax production, but many leading experts agree that the country's potential is much higher. This production can also become a significant export item. Flax production is traditional for our country, climatic conditions allow us to successfully grow this crop and it is in ever-growing demand in the world. A faster increase in the production of this crop is hindered by factors such as modernization of production (which has not been fully implemented) and a decrease in the outflow of population from non-black earth regions. Since 2012, there is a state program for the development of flax production, which should change this situation for the better.

5. Conclusion
Despite the identified shortcomings, the agricultural sector can be considered stable and successfully developing. Vladimir Putin at a meeting in Voronezh called the agricultural sector the locomotive of the Russian economy and noted that great hopes are pinned on it and it has very good prospects. There are already serious successes and achievements in the industry. For example, Russia has been ranked first in the world in terms of grain production in recent years. Grain exports are growing: wheat, barley, rye, and oats. Poultry and pig farming are developing at a stable pace.

The analysis of the development of the Krasnoyarsk region agro-industrial complex made it possible to analyze the factors that hinder its development, outline ways to eliminate them, and identify the main directions for further development of the agro-industrial complex.

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