Leasing as a form of state support development in crop production

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Abstract. The article considers the need to develop leasing relations as a form of state support. The paper analyzes the state of grain production in the Krasnoyarsk region, in order to confirm the postulate about the importance of technical equipment in the industry to increase the intensity and efficiency of production. It was noted that the agricultural machinery fleet has significantly decreased, respectively, the load on the unit of equipment has increased, the degree of wear has increased. In the expansion of state support measures for commodity producers, not the least place should be given to leasing, as one of the most effective methods of purchasing agricultural equipment, especially for small and medium-sized businesses.

1. Introduction
“Almost all states understand the importance of the agro-industrial complex (AIC), despite its low efficiency, and invest significant funds in its development. Considering the importance of agricultural development, each country has developed theoretical foundations, regularities of complex regulation, which are then applied in the agricultural policy development of the state” [1].

The situation of agricultural production development “is aggravated by the accumulated problems of technical and technological backwardness, low profitability of agricultural producers, and weak competitiveness of Russian products. In this regard, it is necessary to consider ways to improve the agricultural sector that meet modern challenges” [2]. In previous studies, the authors noted that “agricultural producers can be competitive in the local market of agricultural products only by reducing the cost of production and increasing labor productivity, which characterizes the factors of stability of agricultural production” [3]. In recent years, due to grant support, all agricultural producers have become active participants in the agricultural business. However, the average level of state support for farms is 30% lower than for agricultural organizations, which means unequal conditions for the competitiveness of various categories enterprises [4].

The crop industry affects the state of food security in the country and serves as a raw material base for the development of most sub-complexes for the AIC. The current stage features for development of local crop production are insufficient satisfactory state of its material and technical base, high production and financial risks. “The targeted development of federal leasing for agricultural machinery, leasing with investment, organizational and legal support of the state, will help to improve the situation in the industry, since the current model of this form of leasing is not effective enough” [5].
2. Research methods

Progress in the agricultural sector directly depends on the degree and quality of agricultural machinery development, which provides mechanization of not only the main, but also auxiliary operations of agricultural production. Experts believe that the huge potential of the Russian AIC requires significant investment not only in the production of modern agricultural machinery and equipment, but also in the development of technical policies based on national and regional technical development programs. One of the priority directions of the strategy for the AIC development in Russia is the renewal of the agricultural machinery fleet from Russian and foreign production, as well as the modernization of technical service and repair. “The AIC of the Krasnoyarsk region is an important component of the regional economic complex” [6].

The most widely used technical potential of the agricultural sector is in crop production and, in particular, one of its main branches, grain production. This is one of the most important areas of agriculture development in the Krasnoyarsk region, which in modern conditions is experiencing serious qualitative changes, which is associated with a significant decline in production, a decrease in its intensity and efficiency, and a deterioration in the quality of grain. “The significant decrease in the level of intensity of grain farming, combined with inefficient use of its production potential, insufficient and incomplete material and technical support, and imperfect economic management mechanism significantly reduces the adaptation of the grain industry to adverse conditions” [7]. There is a fluctuation in the yield of grain crops in the region and, accordingly, a change in gross grain production (table 1).

Table 1. Main indicators of grain production development in farms of all categories of the Krasnoyarsk region.

| Indicators                                              | Years                  | 2014      | 2015      | 2016      | 2017      | 2018      | 2018 to 2014, % |
|---------------------------------------------------------|------------------------|-----------|-----------|-----------|-----------|-----------|-----------------|
| Area of grain and leguminous crops, thousand ha         |                        |           |           |           |           |           |                 |
| including in:                                           |                        |           |           |           |           |           |                 |
| - agriculture organization                              |                        | 1039.9    | 1043.4    | 1054.0    | 1048.3    | 951.2     | 91.5           |
| - households of the population                          |                        | 880.1     | 877.2     | 866.0     | 833.6     | 744.1     | 84.5           |
| - the peasant (farmer) farms                            |                        | 3.1       | 3.1       | 3.1       | 3.7       | 3.4       | 109.7          |
| Grain production in farms of all categories - total, thousand tons including in: | | 156.6     | 163.1     | 184.9     | 211.0     | 203.7     | 130.1          |
|                                                        |                        | 2208.2    | 2253.9    | 2353.5    | 1922.9    | 1890.0    | 85.6           |
|                                                        |                        |           |           |           |           |           |                 |
|                                                        | - agriculture organization | 1925.5    | 1950.3    | 1998.8    | 1601.3    | 1544.6    | 80.2           |
|                                                        | - households of the population | 6.7       | 6.8       | 6.8       | 7.0       | 6.5       | 97.0           |
|                                                        | - the peasant (farmer) farms | 275.0     | 295.8     | 347.9     | 314.5     | 339.0     | 123.3          |
| Grain yield (in weight after completion) in farms of all categories, с/ha including in: | | 21.3      | 22.0      | 22.5      | 20.4      | 20.5      | 96.2           |
|                                                        | - agriculture organization | 22.0      | 22.4      | 23.3      | 21.4      | 21.5      | 97.7           |
|                                                        | - households of the population | 21.9      | 22.1      | 22.2      | 19.0      | 19.3      | 88.1           |
|                                                        | - the peasant (farmer) farms | 17.6      | 18.1      | 18.8      | 16.6      | 16.8      | 95.7           |

Analyzing the data in table 1, we note that during the analyzed period, there is a decrease in all indicators that characterize the state of grain production in farms of all categories in the Krasnoyarsk region. Thus, the area of grain crops sowing in farms of all categories decreased by 8.5 %, the yield of grain and leguminous crops decreased by 3.8 %, and as a result, the gross grain harvest decreased by 14.4 %. There is also a decrease in these indicators in agricultural organizations of the region.
“The Krasnoyarsk region occupies 13.7% of the Russian Federation territory - it is the second largest territory in the Russian Federation and the 13th largest population” [8]. The largest areas under grain and leguminous crops in the Krasnoyarsk region in 2018 are occupied by agricultural organizations - 78.2 %, while the share of peasant (farm) farms accounts for 21.4 %, and personal subsidiary farms only 0.4 %.

The largest place among grain crops is given to spring wheat. Significant areas are occupied by oats (second place after wheat due to increased resistance to lack of heat and excess moisture), especially in the sub-taiga and taiga regions of the region.

As noted above, the state of the material and technical base in agricultural organizations is an important factor that reflects the degree of the AIC development, so “agricultural enterprises need to make optimal use of resources and improve the quality of business processes in the organization in order to adapt quickly to various changes” [9]. The availability and sufficiency of agricultural machinery affects the volume of gross agricultural output, crop yields, and possible crop losses that may occur during the harvesting campaign due to insufficient equipment of enterprises or an outdated fleet of agricultural machines. Table 2 shows data on the quantitative state of the agricultural machinery fleet in the Krasnoyarsk region.

Table 2. Agricultural machinery fleet in the Krasnoyarsk region., units.

| Indicators                        | Years       |
|----------------------------------|-------------|
|                                  | 2014  | 2015  | 2016  | 2017  | 2018  |
| Tractors                         | 6809  | 6517  | 5938  | 5599  | 5269  |
| Ploughs                          | 1583  | 1469  | 1347  | 1289  | 1265  |
| Cultivators                      | 1486  | 1346  | 1258  | 1150  | 1058  |
| Combines:                        |        |       |       |       |       |
| grain harvesters                 | 2506  | 2390  | 2239  | 2120  | 1979  |
| potato harvesters                | 52    | 40    | 35    | 42    | 47    |
| forage harvesters                | 585   | 530   | 492   | 452   | 433   |
| Spreaders for solid mineral fertilizers| 206  | 208   | 215   | 202   | 194   |
| Machines for applying organic fertilizers to the soil | 54   | 50    | 50    | 35    | 37    |
| Milking machines and units       | 773   | 722   | 688   | 665   | 648   |
| Total                            | 14054 | 13272 | 12262 | 11554 | 10930 |

In five years, the agricultural machinery fleet has decreased by more than 20 %. Equipment is off due to the end of its service life, and the low profitability of the sector leads to the fact that producers cannot cover this reduction by purchasing new units. Information about the availability of certain types of fixed assets in agricultural organizations confirms the fact that commodity producers do not have sufficient opportunities to update the agricultural machinery fleet. As a result, in agricultural organizations there is a decrease in the availability of agricultural machinery, which is shown in the table 3.

Table 3. Sufficiency of agricultural organizations with tractors and combines.

| Indicators                                      | Years       |
|------------------------------------------------|-------------|
|                                                | 2010  | 2015  | 2016  | 2017  | 2018  |
| Number of tractors per 1000 ha of arable land, units | 3     | 3     | 3     | 2     | 2     |
| Load of arable land per 1 tractor, ha           | 319   | 354   | 386   | 407   | 424   |
| Number of harvesters per 1000 ha of planting, units: | 4       | 3     | 3     | 3     | 3     |
| - grain harvesters                              | 27    | 21    | 16    | 19    | 18    |
| - potato harvesters                             | 273   | 321   | 343   | 356   | 369   |
| Landing load per 1 harvester, ha                | 38    | 48    | 62    | 54    | 56    |
With the reduction in the number of machines and equipment, the problem of technical backwardness of the crop production industry is increasing. “Manufacturers of agricultural tractors need state support; otherwise they will leave the agricultural market” [10]. The agricultural machinery fleet is reduced, which leads to an increase in the load of arable land per 1 tractor or combine among the remaining farms on the balance sheet, as a result, the depreciation of these fixed assets is also accelerated. The purchase of new equipment for farmers is impossible due to insufficient own financial resources.

Poor technical equipment of agricultural machinery is the main issue hindering the development of agriculture, since the presence of major agricultural machinery (tractors, combines, plows and cultivators, etc.) that meets modern requirements, has an impact on the productivity of workers employed in this technique – the lower the wear rate, the less downtime working time, the greater the area of processed arable land, higher the value of the crop per unit of time. Also, the availability of new equipment reduces additional production costs associated with its operation (fuel, repairs, etc.). Thus, the industry lagging behind in terms of technological equipment leads to losses of the grown crop in the course of field work.

3. Results

"The reasons for the objective need for state support for farmers are the features of agriculture associated with dependence on natural and biological factors that complicate the work of market mechanisms" [11]. State support will be provided for a considerable time, and it is planned to update the agricultural machinery fleet at both the federal and regional levels. The use of leasing in modern conditions allows us to solve some of the problems that arise for agricultural producers regarding maintenance, current and capital repairs of agricultural machinery. At the same time, within the framework of state support, there is an increase in expenditures directed to the AIC, data on which are presented in the table 4.

**Table 4. Budget expenditures of the Krasnoyarsk region for the AIC.**

| Indicators                                      | 2015    | 2016    | 2017    | 2018    |
|------------------------------------------------|---------|---------|---------|---------|
| Consolidated budget expenditures on agriculture, million rubles | 5738.6  | 5200.0  | 6045.4  | 6387.7  |
| Share of local regional product, %            | 0.46    | 0.37    | 0.37    | 0.30    |
| Share of total budget expenditures, %         | 2.8     | 2.4     | 2.6     | 2.7     |
| Over-indebtedness in revenue, %               | 92.6    | 82.2    | 84.0    | 84.7    |

Over three years, expenses on agriculture has increased by more than 1 billion rubles. Most of the expenditures are carried out within the framework of the state program to support agriculture. “Modern industrial enterprise of the AIC is a complex multi-functional system, the successful functioning of which is determined by a variety of factors” [12].

In order to increase the manufacture of crop production in the region, agricultural entities are provided with state support in the form of:

- compensation of cost part for original and elite seeds entered in the state register of breeding achievements allowed for use in the territory of the Russian Federation;
- providing unrelated support;
- compensation of cost part for investment objects construction, etc. [13].

"One of the most important measures to support agricultural producers is the provision of machinery and equipment for leasing. Leasing expands the access of agricultural producers to accelerated rates of material and technical renewal and is accompanied by servicing" [14]. This can be done on the basis of leasing technologies as part of state support for agricultural producers in the region's crop production industry.
Leasing is a relatively new form of economic relations for the Russian AIC. There leasing is widely used as an alternative to buying and selling. Leasing allows you to purchase the necessary goods in installments. Long-term lease is the most rational tool for updating agricultural equipment and machinery. Practice shows that the majority of consumers have a need to attract machinery, equipment and other fleet on lease terms.

A significant portion of the leasing financing provided by independent leasing companies is intended for small and medium-sized enterprises, a part of the Russian economy that still has significant potential for growth. Today, leasing is the main way to provide practical assistance in purchasing machinery and equipment in the agricultural sector, in raising and strengthening the material and technical base of the village. The practice of leasing in our country has confirmed its high economic efficiency.

"Due to the shortage in necessary amounts of own funds from agricultural producers in the near future, providing agricultural machinery on a leasing basis remains one of the most effective mechanisms for financing the agricultural sector. Practice shows that in modern conditions, due to the imperfection of the current mechanism of leasing relations, financial leasing is more attractive and available to large grain companies" [15].

"Issues of leasing activity development are extremely important in the current conditions, when the main tasks of the Russian economy are structural restructuring, updating of the production apparatus, introduction of new technologies, and increasing the competitiveness of Russian products" [16].

"In the world practice, leasing has a prominent place among financial support tools. In the context of business development, it is used as an additional sales scheme, as an economic mechanism aimed at investing in the renewal of fixed assets of the enterprise, as a convenient element of strategic planning of the company's development" [17].

4. Conclusion
The issue of the leasing relations development in Russian agriculture in modern conditions is particularly relevant. The development of leasing technologies allows agricultural organizations to purchase equipment without large one-time costs. Leasing companies combine the interests of producers and consumers and assume certain property and financial risks associated with the implementation of the leasing agreement.

Leasing is a common method of tax optimization. "With the help of the leasing system, it is possible to overcome the shortage of agricultural machines, purchase new equipment, and restore an already worn-out agricultural fleet" [18]. Leasing allows you to expand access to expensive machinery and equipment. The development of the agro-leasing system contributes to:

- overcoming the spread of prices for agricultural machinery and equipment;
- expanding sales and increasing demand for agricultural machinery and equipment.

"Positive experience of the state participation in all developed countries in regulatory activities for the development of the agricultural sector must be developed in Russia, otherwise the AIC will remain at the bottom of the economy, unable to provide the country with what is necessary for citizens in the first place - high-quality and affordable food" [1].

In general, it can be noted that leasing for agricultural producers simultaneously solves two important problems: the acquisition of machinery and its financing. The problem of the economic mechanism of leasing development in the agricultural sector requires further research and study. Special attention should be paid to improving state support for leasing in agriculture and relations between leasers and leaseholders.

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