The significance of the introduction of digitalization in the agro-industrial complex for the economy of the Russian Federation and regulatory legal acts regulating this activity

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Abstract. The article discusses the process of digitalization in different industries. In particular, what is the digitalization of the agro-industrial complex and the advantages of introducing innovative technologies into agricultural activities. We also studied the factors that slow down the introduction of "figures" into domestic production and the possibility of overcoming them as soon as possible. An analysis of the legal regulations of the digital economy was carried out, which gave us an understanding of the shortcomings of legislative and law-making activities. Key words: the agro-industrial complex; regulatory legal acts; agricultural production; without state support; the consideration of legislation regulating.

1 Introduction

Recently, it can be noted that the introduction of IT technologies into the agricultural industry gives a good result for increasing the quantity and quality of products. This is due to the study and implementation of various programs aimed at improving the digital economy in the Russian Federation.

The main purpose of the study is to study the methods of legal regulation in the field of digitalization of the agro-industrial complex, as well as the analysis of positive and negative aspects in the legislation.

The subject of the study is the consideration of legislation regulating the digital economy in the agro-industrial complex.

2 Methodology

When writing a research paper, regulatory legal acts and draft laws regulating the digital economy and digital agriculture in the agro-industrial complex of our country are analyzed.

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3 Results of the research

The development of the digital economy plays a huge role in the development of the economy of the Russian Federation as a whole, and also makes our country competitive in the field of the agricultural and industrial complex.

Agricultural production is one of the most technologically conservative industries. In order for our country to become competitive, it is necessary to study the quality of various programs aimed at improving the agro-industrial complex by introducing "figures". After choosing the best program, it should be distributed in all areas that are engaged in the cultivation of agricultural products. It is also impossible to give the last role to financing from the state. Without state support, it will not be possible to apply these programs in the amount in which it is necessary, and it will also take more time. In this case, our country will lag behind other countries in growing a large number of high-quality agricultural products. [1]

Every day agriculture becomes more and more high-tech. All the necessary information is collected in one database, with the help of which you can easily find errors in the application of agricultural technologies. This data will help to minimize risks and increase the profitability of agricultural production.

The digitalization of the agro-industrial complex has enormous potential and the DigitalAgriculture project is quite feasible. [2]

![Fig. 1. The economy of material resources after the introduction of digital technologies in the agro-industrial complex.](https://example.com/fig1.png)

Conducting an economy based on digital technologies carries out the same economic activity, but this activity is carried out with the help of innovative technologies that work on the basis of data recorded and processed in digital form. This method of introducing farming significantly increases the efficiency of various types of production. The digital economy also makes it possible to significantly improve technologies, equipment, storage, processing and delivery of goods and services, which significantly makes the production of products better and more profitable.

Digital agriculture for 2021 is at the initial stage of its development and has not fully received its recognition from the agro-industrialists. Not all manufacturers have the necessary education and financial resources to apply such an innovation. This problem
significantly hinders the development of our country's economy. Digital agriculture is characterized by a modern way of producing products using digital technologies. They provide an increase in labor productivity and a reduction in production costs. [3]

Technical and technological solutions for the digitalization of agriculture include:

- Monitoring of vehicles and agricultural machinery (It is possible to continuously monitor agricultural machinery in real time.)
- Precision farming (Real-time monitoring of humidity and light levels is carried out. Planning of application of fertilizers and special chemicals is carried out.)
- Storage and processing of agricultural products (Reducing financial costs for personnel and improving the quality of crop storage, as well as continuous monitoring and management of storage temperature)
- Animal husbandry management (Implementation of continuous monitoring of livestock farming: location of livestock, determination of the most rational time of milking, feeding and diet)

Digitalization is considered a global process that is being implemented every day in all areas around the world. The basis of this process is the Internet. It simplifies the work of both state and non-state organizations, and it is also being implemented in various institutions. I use it to create specialized databases that contain all the necessary information. Digital technologies are becoming a part of our lives. Now they are in any modern home, in hospitals, schools, factories and enterprises. [4]

In the modern world, there is an indicator that indirectly assesses the level of digitalization. These indicators include NRI (Networked Readiness Index) - the network readiness index and GII-the global innovation index.

The NRI Network Readiness Index was developed in 2001, it is considered a comprehensive indicator that characterizes the level of technology development in different countries. NRI measures the level of technology development by 53 parameters divided into 3 groups. All the information collected goes to the World Economic Forum and is delivered in the form of a report.

Another indicator is the GII global Innovation Index, developed in 2007. It is used to process information and characterize the potential of innovative activity. Having calculated the NRI network readiness index for 2020, the experts assessed the Russian Federation. Russia is in 48th place out of 134 countries. And according to the GII global innovation index, as of 2020, it is in 38th place out of 115 countries, between Thailand and Cyprus. Experts have found that countries with more developed digitalization proved to be more resilient in the economic shock caused by the COVID-19 pandemic. It can be concluded that in countries where conditions contributed to the digitalization of companies, they were able to react faster to the crisis by providing comprehensive digitalization in all industries. [5]

As we can see, our country still lags behind others in terms of the use of digital technologies. [6] To increase the level of production quality, the Ministry of Agriculture has compiled a project "Digital Agriculture". After the introduction of all the necessary measures in all areas of production, agriculture will be transformed and all data will be transferred to a common digital platform. This program will double the growth of labor productivity in agricultural areas by 2024. Within the framework of the Digital Agriculture program, digital platforms are being created: CIAS CX (central informative and analytical system of agriculture), EFIS ZSN (unified federal information system for agricultural purposes), SMART Contacts Intelligent system.
Table 1. Financial support for the implementation of the departmental project.

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<tr>
<td>Federal budget</td>
<td>17 200</td>
<td>28 300</td>
<td>21 600</td>
<td>38 000</td>
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<td>25 800</td>
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<td>Budget of the subjects of the Russian Federation</td>
<td>450</td>
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<td>Extra-budgetary sources</td>
<td>6 500</td>
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<td>17 050</td>
<td>21 600</td>
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Within the framework of the Digital Agriculture project, there are a number of other programs necessary to increase the efficiency of the growth and improve the quality of work processes. Digitalization of the agro-industrial complex should also affect dairy cattle breeding. [7] It is believed that the dairy industry was one of the first in the livestock sector to use innovative technologies in its production. Research shows that there are a number of problems in this industry. Therefore, the introduction of digital technologies in dairy cattle breeding will help significantly increase the scale of production, as well as raise our economy to a new level. Already at the beginning of 2021, many projects were planned to digitalize dairy cattle breeding. Some projects should perform the function of building functional technologies, while others should modernize existing production. [8] The regions in which these projects should be implemented include: Yaroslavl, Voronezh and Ivanovo regions, as well as the Republic of Tatarstan falls into the top five, and the Moscow region closes it. For example, 9 large dairy investment projects are being implemented in the Kirov region. The investments amount to more than 100 million. The total planned volume is 5.3 billion rubles. Thus, by 2023, it is planned to create about 4,700 cattle places for dairy cows. [9]

The innovations that are being implemented in the "Agrosil" in the Republic of Tatarstan, namely in such a vector of the direction as "animal husbandry", in their main aspects relate to genetic issues, veterinary science, feeding, the progression of the comfortable component of keeping animal livestock, and, directly, the management of the enterprise itself. In 2010, one of their holding companies began implementing an action plan for the project: "Artificial Intelligence on a dairy farm". As for the program itself: it allows you to ensure the availability of the most up-to-date data online, in addition, the program also provides for the analysis and monitoring of key indicators, quickly receive notification of failures and accurate forecasts. Thus, thanks to the painstaking work of the employees of the enterprises, as well as with the help of innovative technologies, in 2020, Agrosila received 77 thousand tons of raw milk with an average milk yield per cow of 5973 kg, which is 298 kg more than in 2019. [10, 11]

4 Discussion of results

At this stage, no more than 10-15% of farmers use digital platforms. Turning to the «digitalization» of the fundamental agricultural processes, including the arrangement of special equipment for obtaining weather data, the operation of these drones and satellite machines for careful monitoring of the crop, a control meter of the equipment, the percentage of coverage is much higher here. A limiting factor in the use of the latest technologies is that there are problems in bringing information about digitalization to farmers. [12, 13] They are so immersed in traditional work that they often do not understand how IT technologies work. For them, it is not yet clear what the transition to digital technologies will give them, how the process of software implementation itself takes place, as well as how much production costs will decrease. Another problem is the lack of infrastructure. It is impossible to carry out digitalization without communication and the
Internet. However, this problem is already being solved by the state authorities, and after some time this will no longer be a deterrent for our producers. [14]

Despite all the listed advantages of digitalization of production, there are also disadvantages. Digital equipment is often imported, so the exchange rate makes this product very expensive. Also, in order to manage the production process, specialists who are versed in modern technologies are needed. Not all employees and managers are psychologically ready to change the existing production system. Digital technologies have appeared relatively recently, and often their developers do not have an in-depth basis about agriculture. It is for this reason, despite the extremely active evolution, not all solutions have real working efficiency, and the process of involvement in the existing production takes a certain amount of time and requires the intervention of some internal resources. The collision with certain problems happens precisely in innovative innovation. In order to increase the speed of the process and involve employees to master new systems, Damate conducts basic courses of lecture material on innovations for different levels of management, while inviting well-known people from the largest organizations, such as: Mail.ru, IBM, Microsoft, etc.

Analyzing the information and legal framework that gives the development of private public partnerships in the field of information communications and technologies, it becomes clear that without the development of new legal solutions that ensure a legally significant document flow, it will not be possible to fully implement the departmental project. [15]

It can be noted that the implementation of state programs is already making progress. The Federal Law «On Public-Private Partnership» can serve as a clear example model. It is this regulatory legal act that confirms the existence of an element on public-private partnership. The object of the agreement is considered to be information technology objects and technical means. They guarantee the operability of objects of innovative information technologies, in which it is possible to specify partner publicity.

This is how government projects on modifications of the information layer turn into a more interesting space for involving investors in this area. The main element of the regulatory and legal stabilization of agriculture, as one of the main elements of the agro-industrial complex, is intersectoral regulation. Regulation in the legal system is carried out in relation to one of the labor-intensive objects of real estate-natural resources and land. It is when a legislative initiative arises that the issues of property liability, transactions and property become urgent, which is the subject of regulation of the branch of civil law. An indicative example of the legal regulation of the process of involving ICT is the basic program: "Transformation of Agriculture", which should give ground to participants in the use of liquid, broadband LPWAN communications.

There are no clear distinctions of the problem associated with the responsibility for making an absolutely illegal decision. An illegal decision can be made due to certain causal circumstances, such as: a banal failure with the correct algorithm, and the algorithm is exactly what is subject to state officials of the authorities. A failure in the program can occur due to, for example, hacker attacks or imperfections in the code of the program itself, which regulates all existing software algorithms.

There is also a problem in information and communication technologies in insurance business entities. The existing regulatory legal acts in agricultural insurance need to be improved and put into practice new "digital" tools for confirming an insured event. We should also not forget about the need to modernize Part 4 of the Civil Code of the Russian Federation to regulate the introduction of digitalization in the agricultural and industrial complex.
5 Conclusions

Analyzing the legal regulation in the field of digitalization of the agro-industrial complex, we can conclude that the legal framework is not developed in our country and there are many aspects that need to be finalized. In particular, digitalization itself has not yet been implemented in all regions, which slows down the development of the digital economy as a whole. It should be noted that the development of the agricultural and industrial complex is an integral task of each country. It is impossible to simply increase the volume of production, since the resources of the land are limited. Therefore, it is necessary to improve the efficiency and quality of production. Analyzing the statistics of the NRI network readiness index, it becomes clear that the Russian Federation is still lagging behind in terms of digitalization. Based on the experience of other countries, it can be noted that in countries where digital technologies were developed, they could cope with the crisis faster and more effectively.

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