Issues of agriculture digitalization in the Russian Federation (legal aspect)

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Abstract. The President of the Russian Federation has set the task of achieving "digital maturity" of the key economic sectors, including agriculture, by 2030. At the same time, the digitalization of the agro-industrial complex is clearly lagging behind the pace of digital transformation in other sectors of the national economy. There are several reasons for this: the regulatory standards of the agricultural crops cultivation and the farm animals breeding are not perfect; the legal regulation of digitalization in the field of both production and agriculture is fragmented; the use of digital tools and information technologies in agricultural activities appears to be quite complicated. The article not only analyzes modern acts affecting the digital transformation of agriculture in the Russian Federation (including acts of the Ministry of Agriculture of the Russian Federation) and the problems of their application, but also suggests measures aimed to stimulate agricultural producers and food-processing companies, introducing innovative digital technologies, as well as provides recommendations for the use of special legal regimes that entered into force in 2021.

1 Introduction

The President of the Russian Federation, in Decree No. 474 dated July 21, 2020 "On the National Development Goals of the Russian Federation for the period up to 2030", set the task to "ensure digital transformation" by 2030, an integral part of which is to achieve the "digital maturity" of agriculture as one of the key sectors of the domestic economy. The stated national development goal of Russia has replaced the previously established goal of "ensuring the accelerated introduction of digital technologies in the economy" (Decree of the President of the Russian Federation dated 07.05.2018 No. 204 "On national goals and strategic objectives of the development of the Russian Federation for the period up to 2024"). It is obvious that only the digitalization course outlined in the Message of the President of the Russian Federation to the Federal Assembly of the Russian Federation in 2018 has now not only transformed into a national goal, but also continues to expand and be filled with new components, covering virtually all spheres of life. At the same time, a special emphasis on the digitalization of economic relations remains, as clearly evidenced by the number of program documents and achievements in the digitalization of the economic sphere. At the same time, an analysis of the acts and statistics of the authorities shows that the digitalization of the agro-industrial complex in the Russian Federation is

significantly lagging behind the pace of digital transformation of other sectors of the economy.

Digitalization of all areas of modern life is a natural and inevitable process, but the process is developing largely spontaneously, under the influence of market laws and the achievements of the scientific and technical process. Given the insufficient pace of the introduction of digital technologies in agriculture and assuming prospects from their use, the Russian state in recent years has been actively trying to regulate the relevant sphere of public relations, first of all defining the status, rights and obligations of participants in special relations arising on the Internet and to direct the process of digitalization of agriculture in a certain direction, and in some cases accelerate it.

In such conditions, agricultural producers and processors of agricultural products are involved in this process. At the same time, digitalization may entail for them both additional responsibilities, related to the introduction of appropriate technologies or requirements, and new opportunities, due to the favorable, primarily infrastructural conditions created by the Russian Federation (for example, the expansion of the zone of sustainable mobile Internet coverage outside settlements).

At the same time, the modern legal regulation of digitalization of agriculture in Russia faces several problems at once. The current regulatory regulation of the agro-industrial complex is extremely fragmented and does not have sufficient depth, i.e. it does not take into account the specifics of agricultural producers and processors of agricultural products (in comparison with other types of production and processing), which in turn significantly complicates the development of acts in the field of digitalization of agriculture.

Today, the main acts ensuring the digitalization of agriculture are the Decree of the President of the Russian Federation dated 21.07.2016 No. 350 "On measures to implement the state scientific and Technical policy in the interests of agricultural development" and the Food Security Doctrine (approved by the President of the Russian Federation on January 21, 2020). At the same time, the legal regulation of the agriculture digitalization is actual entrusted to the Government of the Russian Federation, which, as an executive authority, is called upon to implement the agricultural policy carried out in the country, rather than generate it.

This is clearly evident from the abundance and content of the acts of the Government of the Russian Federation in the area we are analyzing, and above all, from the materials of the State Program for the Development of Agriculture and Regulation of Agricultural Products, Raw Materials and Food Markets (approved by the Decree of the Government of the Russian Federation No. 717 of July 14, 2012), the Development Strategy of the agro-industrial and fisheries complexes of the Russian Federation for the period up to 2030 (approved by the Government of the Russian Federation on April 12, 2020), Strategies for the Development of the Food and Processing Industry of the Russian Federation for the period up to 2020 (approved by the Government of the Russian Federation on April 17, 2012), Strategies for Sustainable Development of Rural Territories of the Russian Federation for the period up to 2030 (approved by the Government of the Russian Federation on February 2, 2015), a long-term strategy for the development of the grain complex of the Russian Federation until 2035 (approved by the Government of the Russian Federation on August 10, 2019), etc. It is noteworthy that many program documents were adopted in the form of orders of the Government of the Russian Federation, i.e. they are not normative legal acts, which directly contradicts their purpose and content as program acts, which can negatively affect the introduction of innovative information technologies in agroecosystems.

The acts of the Ministry of Agriculture of the Russian Federation are at the next level of legal regulation. The attention is drawn to the fact that among the acts of the Federal Ministry there are practically no documents on digitalization in particular. The only

significant exception is the departmental project "Digital Agriculture" with the implementation period of 2019 - 2024.

The analysis shows that documents in the field of digitalization of agriculture in the Russian Federation are accepted not only by state authorities, but also by various committees, councils or bureaus attached to them, which are not among the power institutions, which raises a big question about the legal force of the documents approved by them and their ability to have a regulatory impact and ensure the digital transformation of agriculture.

2 Materials and Methods

The publication is based on the analysis of regulations of the President of the Russian Federation, the Government of the Russian Federation, the Ministry of Agriculture of the Russian Federation and official statistical data (including reports of authorities and reports of scientific organizations prepared by orders of authorities), presented on the website of the Ministry of Agriculture of the Russian Federation (https://mcx.gov.ru), the official website of the Federal Scientific and Technical Program for the Development of Agriculture for 2017 - 2025 (https://fntp-mcx.ru/documents.html), as well as on materials from open data of federal executive bodies posted in accordance with the Federal Law "On providing access to information on the activities of state bodies and local self-government bodies."

The article proposes a model of legal regulation of the digitalization of agriculture in the Russian Federation on the basis of the dialectical unity of its legal security and general scientific methods (analysis, synthesis, deduction and induction, abstraction, structural and functional method) and special (formal legal, method of legal design, formally -logical, systemic, technical and legal analysis, statistical method). After that, the optimal variant of legal regulation of digitalization of enterprises of the agro-industrial complex in Russia is proposed.

3 Results and Discussion

The first, and from a formal legal point of view, the key problem of legal regulation of the digitalization of agriculture in the Russian Federation is the problem of the lack of a generally recognized conceptual apparatus. The word "digitalization" has become firmly established in the scientific and normative circulation, but it is understood in completely different ways. As the normative acts have instilled and most researchers use this term, describing the modern conditions of social development, without explaining or specifying its content [1, 12]. The same authors who reveal the content of the term digitalization sometimes take opposite positions. For example, S.V. Lipen. combines digitalization with informatization [3], and, for example, in a collective monograph edited by Yu.A. Tikhomirov and S. B. Nanba the concepts of "digitalization", "informatization" and "robotization" are differentiated [11].

Another problem of legal regulation of digitalization of agriculture is its cross-sectoral nature. According to the apt remark of O.V. Tanimova digitalization is a natural phenomenon that has arisen on the path of development of the legal system, since it erases the boundaries between branches of law, because information and technologies are already present in every branch [6]. Digitization, penetrating into all spheres of human life, society, business and the state, cannot always be regulated within the framework of codified documents, but rather, on the contrary, is dispersed across various acts that refer not only to different branches of law, but also to different levels of legal regulation. At the same time,

the norms on digitalization are gradually becoming a common denominator and, in the future, are able to determine a single logic of law.

Actual digitalization inevitably involves new and new social relations into the sphere of law, which previously either did not exist in principle, or did not require legal regulation, or could not be regulated by law. Researchers refer to these relationships as relationships, the subjects of which are virtual "personalities", relationships associated with legally significant identification of a person in virtual space, as well as relationships arising in connection with the implementation of human rights in virtual space (for example, the right to access the Internet) , relationships focused on the application of robotics [9] and many others.

At the same time, Russia does not have a comprehensive federal law that would determine the directions of digitalization in the Russian Federation, its stages, responsible persons, sources of funding, or at least consolidate the conceptual framework used. On the contrary, digitalization issues today are regulated by an extremely large number of disparate acts, many of which are not at all included in the traditional system of sources of law for Russia. For example, a very large array of provisions related to the digitalization of agriculture is contained in the national program "Digital Economy of the Russian Federation". This document was approved by the minutes of the meeting of the Presidium of the Council under the President of the Russian Federation for Strategic Development and National Projects No. 7 dated June 4, 2019.

Taking into account that the term "digitalization" is one of the key ones for this study and in recent years it has been used not only in special literature, but also in regulations of the Government of the Russian Federation and the Ministry of Agriculture of the Russian Federation, it is extremely important to determine its content. Moreover, its technical interpretation is at odds with the existing regulatory framework.

In a purely technical sense, digitization is the conversion of information into digital form, that is, digital transmission of data encoded into discrete signal pulses [7]. Apparently this is why, for example, A.A. Saurin, interpreting the term digitalization, defines it as a complex of relations for the generation, processing and transmission of information on the principles of a binary code [4]. This approach is directly based on the normative definition of informatization as relations associated with the search, receipt, transmission, production and dissemination of information using information technology, given in subparagraph 1 of paragraph 1 of Art. 12 Federal Law of July 27, 2006 No. 149-FZ "On Information, Information Technologies and Information Protection".

It is obvious that digitalization is associated with the use of digital technologies, where the term "digital" is used to denote a special way of storing and (or) transmitting data using a binary code, where the binary code implies use of pulses (value 1) or their absence (value 0). The translation of analog and other information into digital form constitutes the technical basis for digitalization [2].

At the same time, modern digitalization of agriculture is clearly not limited to the use of only digital technologies, but presupposes a much broader approach, namely the active introduction of information technologies, which in their content encompass digital technologies. In other words, when speaking of digitalization (or digital transformation), regulatory acts imply the introduction of a whole range of the latest information technologies.

This approach is not accidental, since the essence of technical means and the content of technologies that form the basis of these processes are the starting points for understanding the term digitalization. If we turn to recent history, then the mechanization processes were launched first (through the introduction of mechanical devices and aggregates). Then, with the advent of computers, the era of automation began. These processes have largely become the basis of modern transformations. The emergence of the Internet and the massive

introduction of computer technology gave rise to the emergence of information and communication technologies that launched the processes of informatization. That is why, while agreeing with the position of S.M. Zubarev believe that "informatization has not only become the initial stage of digitalization, but also continues to be its integral part, since the information sphere and information technologies are immanently linked to the digital sphere and digital technologies "[2]. At the same time, like any later phenomenon, based on the achievements of earlier ones, digitalization allows solving more voluminous and complex problems that are not available at the level of informatization alone.

In this context, V.G. Khalina and G.V. Chernov in their statement that "digitalization is the main modern trend in the development of the economy and society, based on the transition to a digital format for presenting information, which is aimed at increasing the efficiency of the economy and improving the quality of life" [10].

The difficulty of establishing the content of the term "digitalization" and its subsequent clear normative consolidation are predetermined by the fact that it is not strictly legal from the outset. On the contrary, initially digitalization is of a socio-economic and technical nature, which in turn actively influences the sphere of public administration and the development of legislation.

In this respect, we should quote the latest statements of legal scholars on the subject. Thus, O.V. Tanimov defines the concept of digitalization as the process of transforming a certain sphere of life through the introduction of digital technologies or innovative technological solutions [5]. A.A. Kapina reveals the essence of economy digitalization through the emergence of new digital means and their active implementation in economic relations [8]. S.M. Zubarev defines digitalization as "the process of applying digital technologies in various fields" [2], V.G. Khalin and G.V. Chernova call digitalization a transition to a digital format of presenting information, aimed at improving the quality of life and increasing the efficiency of the economy [10].

As we have mentioned above, an important problem of agriculture digitalization is the lack and inconsistency of legal regulation. Therefore, one of the goals of this paper is to clarify the legal field of digital transformation of the agro-industrial complex, that is, those legal acts that determine the field of digital transformation of agriculture.

The first of the six projects of the "Digital Economy of the Russian Federation" national program, namely the "Normative Regulation of Digital Environment" project, is aimed to solve this problem and improve the legal field of digitalization. The key objective of this project is to create a flexible and differentiated system of legal regulation of the digital economy for each industry. The federal project "Normative Regulation of Digital Environment" provides for the development and adoption of a number of regulatory legal acts aimed at removing the priority barriers that hinder the development of digitalization in the economy, and primarily in the areas of civil turnover, financial technologies, telecommunications, identification, intellectual property, standardization and others. Also, work is underway on conceptual acts, which are to create opportunities for developing a new, more effective change management system, including through the development of platforms for technological and organizational piloting of new digital technologies. It is this very path - the path of creating digital platforms – that those few projects regulating the digitalization of agriculture choose to follow.

A digital platform is a comprehensive solution that provides automation of the most important processes in the agricultural sector. It enables to monitor the fields' development and condition on an interactive map by means of satellite images; receive reliable information from reference books about soils, fertilizers, crops, diseases and pests; receive the most accurate weather data from the autonomous weather stations; keep electronic journals about the activities carried out in the fields.

Digital platforms enable to analyze satellite DVI images in real time. The data from the images are processed given the expected development phases of each crop, calculated by the sum of the accumulated temperatures and the entered sowing dates. The platform takes into account what phase of development is expected from a given crop, and reflects in color those areas where the actual level differs from the calculated or average.

In a word, a digital platform provides sustainable farm management and informed decision-making based on operational data and forecasts. And alas, it is the only measure to be taken for agriculture digitalization, planned by the acts of the Minister of Agriculture of the Russian Federation.

4 Conclusions

The current regulatory acts, as well as digital information products presented on the market, do not guarantee the digitalization of agriculture, especially in the situation of a rather passive role of the Federal Ministry of Agriculture.

The Federal Law of July 31, 2020 No. 258-FZ "On Experimental Legal Regimes in the Sphere of Digital Innovations in the Russian Federation" is intended to stimulate this process, allowing enterprises involved in the implementation of digital innovations to practically apply them while the restrictions established by regulatory legal acts are being removed.

According to the forecasts of the Ministry of Economic Development and Trade, in 2021 it is planned to launch 9 experiments that will provide citizens and organizations with better and cheaper services, 4 projects related to the introduction of artificial intelligence. At the same time, the field of agriculture is not represented by any of these projects. More important, the Ministry of Agriculture did not react in any way not only to the adoption of this law in 2020, but also to its entry into force in February 2021. This all happens despite the law explicitly states its applicability in the field of agriculture.

In connection with the abovementioned, it is the activity of agricultural producers and agricultural products processors, introducing innovative digital solutions, that comes to the fore, since the law “On Experimental Legal Regimes in the Sphere of Digital Innovations in the Russian Federation” does not yet contain benefits for agricultural enterprises. It specifically assumes the possibility of introducing a special (respectively, preferential) legal regime and will determine the conditions for its introduction, while the regimes already enable enterprises to reduce the time and costs for the development, testing and implementation of new technologies, as well as reduce legal risks.

The experimental legal regime implies the temporary application of a special regulation instead of a general one. This is about those cases where the latter significantly complicates the implementation of digital innovations or makes it impossible. The regime is applied only to its participants in the areas of development, testing and implementation of digital innovations.

Given the jurisdiction of the Russian Federation and the subjects of the Russian Federation, it is permissible to establish experimental legal regimes both at the federal and regional levels, which enables to take into account the interests of not only federal companies, but also regional enterprises, which is especially important for the agricultural sector, that traditionally focuses on the level of the subjects of the Russian Federation.

The introduction of an experimental legal regime is not an automatic process and implies a declarative procedure for its development and establishment. For this, an enterprise (or a group of initiating enterprises) has the right to submit an initiative proposal to the authorized body. The proposal should describe the planned special regulation, measures to reduce the risks of harm to human life, health or property, etc., attach a draft program of the experimental legal regime and a package of accompanying documents.

Naturally, most agricultural enterprises will not be able to independently develop the entire package of documents. Therefore, it is extremely important to empower the regional ministries of agriculture with the authority to provide methodological and other legal support to agricultural enterprises in order to accompany the latter's initiatives to introduce special legal regimes.

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