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Development of innovative processes in the field of agriculture of the Republic of Kazakhstan

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Received: 05.02.2024 Revised: 01.05.2024 Accepted: 29.05.2024 **Abstract**. Agriculture remains an important component of Kazakhstan's development, creating a significant part of the country's GDP. However, it still requires finding new opportunities to increase the efficiency of its functioning. Thus, the purpose of the work was to analyse the possibility of developing agriculture in the Republic of Kazakhstan, namely, with the help of innovations. The main method used in writing the article can be considered modelling, taking into account the number of models of functioning of

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state regulation in the country built in the work to improve innovation processes in the country. Other methods include analysis, induction, comparison, and others. This paper substantiates the need to improve state regulation in the field of innovation in agriculture of the Republic of Kazakhstan, and also describes the likely directions of development in this direction. In connection with the existing shortcomings in the management system, models of state support for enterprises in the agricultural sector were developed and proposed for the development of innovation in the industry. The presented models provide the possibility of using modern tools for regulating processes, taking into account a systematic approach, which ensures the coordination of actions of the relevant authorities to ensure both private and national interests. The main difference between the models proposed in the work and those existing in the Republic of Kazakhstan is the presence of a single centre that is fully responsible for the development of agriculture at the local and national levels, and ensures the achievement of an increase in innovation in it. Thus, the work allows re-evaluating the existing methods of agricultural development, and also brings new knowledge to the formation of the principles of public administration

Keywords: economy of Kazakhstan; state regulation; management; entrepreneurship; agricultural sector

INTRODUCTION

The development of innovative processes in the field of agriculture in the Republic of Kazakhstan is of paramount importance due to the country's vast arable lands and its significant potential for agricultural production. Innovations in agricultural practices, including the adoption of advanced technologies for crop cultivation, livestock breeding, and efficient water management, have the potential to substantially increase productivity, sustainability, and competitiveness in both domestic and international markets. Furthermore, given Kazakhstan's strategic position as a major player in the Eurasian food market, the advancement of agricultural innovation not only supports food security within the nation but also contributes to global food supply chains. This emphasis on innovation is crucial for addressing the challenges posed by climate change, resource scarcity, and the need for environmentally sustainable farming practices, ensuring that Kazakhstan can achieve long-term economic growth and maintain its natural resources for future generations.

The effective functioning of state institutions that carry out regulation is one of the components of sustainable economic and social development. In general, state regulation is the activity of the state in managing processes in any industry or component of the economy with the help of specialized executive authorities and local governments (Lowatcharin, 2021). The methods used by the authorities in this regard may be direct or indirect. In fact, this activity is the formation of influence on the part of the state through the organization of the implementation of laws for the implementation of a managerial function; it must ensure the comprehensive cultural and socio-economic development of the state. In turn, public administration in the field of innovation is the implementation of the management and control function for innovative activities in a country, industry, within a corporation, company, etc. (Rocha & Zavale, 2021).

State regulation of the agricultural sector in terms of innovation is an important component of the devel-

opment of the industry, since without the introduction of the latest technologies it is impossible to achieve a sufficient level of competitiveness when selling the asset in foreign markets (Bjerke & Johansson, 2022). However, this component of the agricultural sector in many countries, including Kazakhstan, is in limbo, which is caused both by the instability of macroeconomic indicators, the general political and economic instability in the world, as well as the frequent change of priorities in public administration (Gallardo & Sauer, 2018). The modern complication of the agricultural sector in the Republic of Kazakhstan creates an urgent need for a comprehensive analysis of modern management and control in the sector by the state apparatus. Thus, in this paper, it was decided to consider what methods to improve the level of state regulation in the field of innovation in agriculture can be applied in Kazakhstan.

A significant number of scientists have been studying this and similar topics. G.U. Akimbekova and C.U. Akimbekova (2019) not only studied the prospects for the development of agriculture in Kazakhstan, particularly its condition in rural areas, but also highlighted the critical role of government support and policy in enhancing agricultural productivity and sustainability. G.K. Kurmanova et al. (2019) assessed and considered the current state of modernization of the agricultural sector in Kazakhstan, describing future promotion possibilities, and emphasized the importance of integrating digital technologies and smart farming techniques to boost efficiency and output. G. Lukhmanova et al. (2019), while advising on the introduction of innovative technologies in the agricultural sector, also pointed out the need for educational programs to equip farmers with the necessary skills and knowledge for adopting these technologies. R.N. Zhangirova (2020), in studying the existing problems in agriculture and focusing on micromanagement, underscored the significance of creating a more robust legal and economic framework to facilitate better cooperation between agricultural producers and technology developers. Thus, the purpose of the work was to consider and evaluate the most relevant and effective methods for the development of state regulation in the field of innovation in the agricultural sector.

MATERIALS AND METHODS

Modelling can be considered the most important method when writing a paper, in view of a number of models built on the basis of advice and recommendations to describe some of the components of state regulation processes in the Republic of Kazakhstan. They offer methods for changing some of the processes that exist in the public sector of the country in the context of management in general, and in particular in agriculture. For the display of the models written in the work, a graphical method was used. Thus, the models in the work are depicted as blocks (which depict objects that function and act within the system) and direct links connecting them to each other. For building models, the forecasting method has also become important, to assess the impact of the described and proposed methods on the subsequent development of agriculture in Kazakhstan, as well as abstraction, to more clearly build models without taking into account insignificant factors. An important role was also played by abstract-logical methods of research; in particular, the formalization method made it possible to identify the complex structures responsible for state regulation in agriculture using separate blogs and relationships within the model (this was partially already mentioned above when describing the graphical method, but in a different context). For the same purposes, an analogy was used, which made it possible to level out some differences within the model objects, thereby simplifying it. In addition, an important method is analysis, given the significant amount of processed information from various sources. Also, the induction method was used in the work, with the help of which a general opinion was formed about the country's agriculture and its innovative sector based on certain available facts about

it; deduction, in turn, was used to a much lesser extent.

Thus, the entire research process can be divided into several stages. First, the general state of the agricultural sector in Kazakhstan was assessed, and in particular, its innovative and investment components, as well as the methods of public administration operating in the country. Subsequently, a study was conducted on the effectiveness of the existing regulatory system. In addition, it was considered how the control and management of the processes existing in agriculture is carried out, what methods of supporting enterprises in the agricultural sector are used. It was also important to analyse the thoughts of other scientists about the possibilities of modernizing agriculture in general and Kazakhstan in particular, which is displayed towards the end of the article. Subsequently, on the basis of the analysed information, methods were developed to change the existing system of public administration; Note that this stage of the study can be considered the most important for the work. Also, based on theoretically substantiated hypotheses on how to increase the efficiency of the existing public administration system in agriculture, 5 different models were built that describe different components of this process. In addition, the reasons for their effectiveness in comparison with existing ones were described and proved. The paper was based on relevant government publications and reports, including the documents from the Ministry of Agriculture of the Republic of Kazakhstan (n.d.), Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan (n.d.), Food and Agriculture Organization of the United Nations (FAO) (n.d.), The World Bank (n.d.).

RESULTS

In order to determine further directions for the development of innovations in agriculture, an institutional and organizational framework was formed. model of state regulation of innovation activity based on the studied experience (Xu *et al.*, 2020). It is shown in Figure 1.

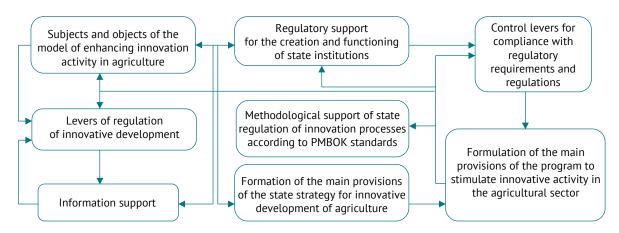


Figure 1. Institutional and organizational model of state regulation of innovation activities in agriculture **Source:** compiled by the authors

Note that the model shown in Figure 1 is depicted taking into account the realities of the regulatory framework in Kazakhstan. In addition, it takes into account possible prospects for its development in the future. Although in the classical thought about the formation of mechanisms of state regulation, it is based only on the creation of a legal component that regulates the procedure and principles of functioning of subjects of state regulation and directly participants in the innovation and investment process, in the model above we take into account the peculiarities of the functioning of state bodies as separate important components of the innovation mechanism. politicians. Thus, the main components of the model are its subjects (bodies of state regulation and control over innovation processes in agriculture) and objects (processes of state influence on the part of authorities on innovation activity and the development of entrepreneurial initiatives in the agricultural sector of the country). The main links between the elements of this system are depicted by solid lines, depicting hierarchical links between them. In turn, the subjects of

a single mechanism of public administration can only act in connection with the existing legal framework.

Justification of the state regulation process requires the development of standards and approaches to the introduction of investment incentives, since investments are the main driving force behind the development of innovations. Although this component is present in the existing model of state regulation, the standards themselves are at the stage of formation. In modern world practice, PMBOK (Project Management Body of Knowledge) project management standards developed by the international organization Project Management Institute (2022) have received recognition. It is worth noting that although this system is the most common, it has a significant number of disadvantages and shortcomings in its structure, which still need to be corrected (Elhameed, 2017). The qualitative functioning of the innovative component of the country and each of its sectors of the economy is impossible without the establishment of an investment system in the country. Its main components are shown below in Figure 2.

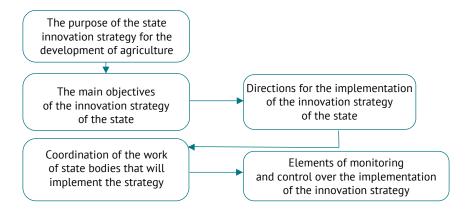


Figure 2. Components of the state investment strategy in agriculture and the interaction between them **Source:** compiled by the authors

As can be seen from Figure 2, the main goal of the state investment strategy in the development of agriculture should be the formation of an effective policy for attracting financing to the sector by increasing its attractiveness. In turn, the overall created strategy for the development of the investment climate should be based on the above goal and its objectives. Among the main methods of increasing the attractiveness of the industry for investment, one can note the liberalization of the activities of enterprises, the reduction of regulatory influence, the maximum simplification of business processes (especially for small and medium-sized enterprises), the reduction of tax burdens both on companies and investors, etc. After determination of these methods (tasks), the determination and justification of the application of the most effective mechanisms for their implementation is carried out. It should be noted that this kind of body (responsible for investment development) existed until 2013, and its disbandment

brought negative consequences for the subsequent development of agriculture and its competitiveness. Given this, it is worthwhile to provide the specifics of the functioning of the organizational and information mechanisms for the formation of state support based on the provision of consulting services. The algorithm for providing such services is provided below, in Figure 3.

An important role is played by the way in which the administrative mechanism of the system for regulating innovation activity in agriculture functions. In general, the situation that has developed in the Republic of Kazakhstan in terms of the organization of state activities is not sufficiently effective. The main reason for this is its fragmentation. Thus, the organization of state activity consists of state and regional government bodies, executive power and local self-government, having the authority to regulate innovation activities. Thus, their activities in the industry are not controlled in any way, which is

why they cannot achieve their goals in terms of the development of innovation in agriculture. Moreover, due to their fragmented activities and inconsistency in achieving goals, they can harm the achievement of the final result through the use of diverse economic and regulatory methods. Thus, it would be useful to

create one management centre that regulates the activities of all existing power lines in terms of achieving success in innovative development. This will simplify the process of negotiating many uncertain aspects of future agreements and reduce some administrative costs (Ravazzoli *et al.*, 2021).

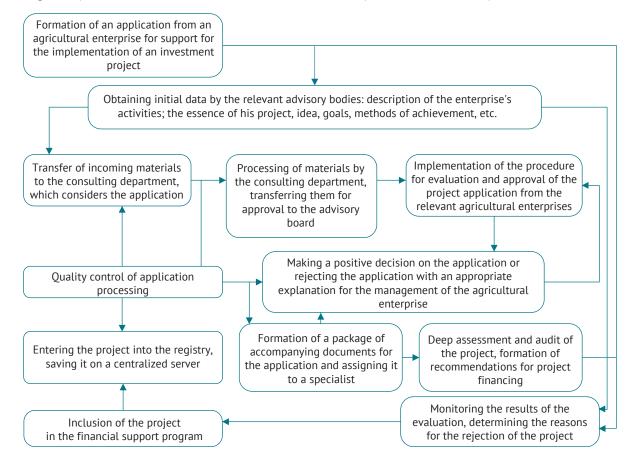


Figure 3. Models of functioning of organizational

and information support for enterprises of the agricultural sector based on the provision of consulting services **Source:** compiled by the authors

The algorithm presented in Figure 3 describes how the organizational and consulting support of agricultural projects should take place, following the example of the existing methodology of the Eurasian Bank for Reconstruction and Development (2022). It has modern methods and functionality for reviewing and implementing projects in 9 stages. In this case, the subject of the provision of services is the state body, and the object is the project itself. It should be noted that it is possible to entrust some consulting functions to credit institutions that carry out the project financing

procedure (most often banks). Consulting services for the implementation of projects will be requested by the enterprises themselves or individual citizens. Proper handling of their requests is also important in order to increase the efficiency of the body. Thus, it is possible to provide some framework for conducting initial investment advice for clients, executed by the executive bodies. They are provided below in Table 1; authors note that these recommendations are the author's and can be changed in case of demand in this: nevertheless, they are quite basic and effective.

	Table 1 . Proposed framework for the work of the state office for advising agricultural enterprises		
No.	Basic organizational foundations	Necessary steps for the implementation of institutional frameworks	
1	Formed principles of the structure	Development of the structure of positions, instructions for their work, the formation of tasks for each of them, setting goals, the development of procedures for document turnover, reporting, performance evaluation and other components of the workflow	

Table 1. Continued

No.	Basic organizational foundations	Necessary steps for the implementation of institutional frameworks
2	Subordination to the leadership of the state body for investment and development	Development of the work plan of the office and the resolution of the nature of its subordination to the state body for investment and development
3	Availability of information support for the possibility of high-quality and timely reporting	Development and implementation of information support for creating reports, conducting research, building analytical databases and connecting to state statistical databases to access even more information
4	Make it possible to create an electronic user account, as well as streamlining and creating an electronic document management system	Ensuring the systematization of the processes of functioning of the relevant body, developing a website and the possibility of creating electronic cabinets on it, connecting the created cabinet to the centralized database of the relevant leading state body
5	Free opportunity to use the created recommendations for the preparation of nationwide investment programs	Within the framework of the newly created regulations for the work of the relevant state body, provide for the possibility of making proposals for the subsequent state investment policy of the country
6	Establishing direct links and relationships with financial and credit institutions (primarily banks) to attract resources for investment projects	Establish links with financial institutions and create funds to finance selected projects of agricultural producers

Source: compiled by the authors

The organizational bases for the functioning of the state body for consulting agricultural enterprises given in Table 1 will make it possible to implement the above-described organizational and information model of state support for agricultural producers. The procedure for support and provision of consulting services should be formed on the basis of processing an application submitted by an enterprise or a citizen. One of the main components of its consideration should be an audit. Thus, after the applicant provides all the necessary data, the advisory board must select a specialist responsible for it, who will conduct an in-depth and high-quality analysis and provide recommendations regarding its financing. In this case, a certain level of riskiness may arise, since there is always a human factor that allows making mistakes when analysing the project, and hence providing low-quality recommendations. Thus, any data provided by the responsible person must be re-evaluated by other participants in the created state body. However, it is worth remembering when the ability of the state to influence the development of the project should be limited, in particular, to directly regulate the nature of their activities, the achievement of goals, etc. (Grovermann et al., 2019).

The main methods of financing such projects can be: subsidies for financing agricultural enterprises, VAT refunds, purchases of products from the manufacturer, the formation of funds to ensure the development of agriculture; ensuring personnel development of agricultural workers. The subsequent development of the project may depend on which of the methods will be proposed by the appointed experts, since they can have a different impact on the project depending on the situation. The same applies to how competently these methods will be implemented. Note that the peculiarity of public management and management as a whole is not able to fully show the effectiveness of these meth-

ods and their potential; nevertheless, their rational use will still make it possible to have a positive impact on the country's agriculture as a whole.

Another effective tool for supporting agriculture and its innovation is the formation of special funds, the funds from which will be directed to the development of the industry. The system of functioning of such funds should provide for the main parameters of the system for stimulating investment activity, the main among which is simplified access to relatively inexpensive credit resources. This form of agricultural support is already functioning in Kazakhstan, but it has significant drawbacks and depends on the procedures for financing the state budget. In order to partially neutralize them, we can offer to combine private (bank) financing and state regulation. This system becomes more understandable after considering the proposed model for financing innovation, shown in Figure 4.

The model described in Figure 4 is a logical continuation of the model of support for agricultural enterprises described above. In it, a certain state body forms the preparation of an application submitted by an enterprise or a citizen of the project and, if it meets all the requirements, includes it in the state support program. Already from the beginning of the new budget year for the country, the company will be able to receive appropriate assistance from the state (in the form of tax incentives, loan financing, direct subsidies or other methods). In this case, there should be close ties between the relevant authority and banking institutions (a cooperation agreement has been signed and regulations have been approved within the framework of the state support program). It should be noted that the developed system of financing agriculture with the help of not only the state budget, but also private institutions, leads to budget savings. It can be seen if we consider the model in Figure 5 below.

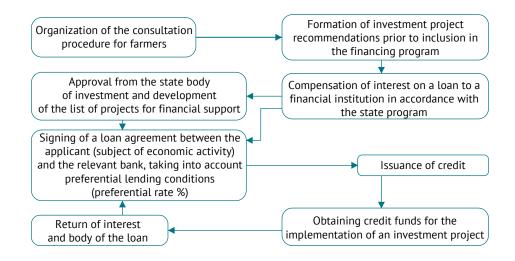


Figure 4. Model of financing innovative activities based on attracting private (bank) capital **Source:** compiled by the authors

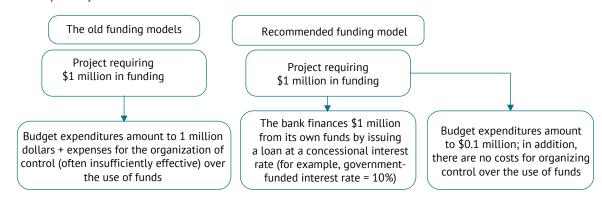


Figure 5. Description of the benefits from the introduction of the recommended model of financial support for agricultural enterprises

Source: compiled by the authors

Note that the model in Figure 5 of providing financial support is essentially Keynesian (Keynes, 2017), taking into account the newly formed principles of neo-Keynesianism and institutional theory. In particular, this concept is based on the principles of saving private capital in the economic system and an extensive system of state institutions and mechanisms for controlling public spending.

DISCUSSION

Agriculture in Kazakhstan plays an important role for the subsequent development of the country (Akimbekova & Akimbekova, 2019). Therefore, many scientists have considered methods for developing its innovativeness, including those that are different from those related to legal regulation and public administration. In particular, G.K. Kurmanova *et al.* (2019) studied the possibilities for modernizing the agrarian economy in the Republic of Kazakhstan and noted that, although the first steps to achieve certain success in innovation has already been achieved and modernization is the main priority of the state policy of the country, yet the

optimization of agricultural production systems of the agrarian sector is at the formation stage. In other words, although the conditions for the development of innovation in agriculture exist, however, significant progress in this area has not been achieved. The authors also note that the development of innovation in agriculture will entail some positive effects in all sectors (for example, the level of development of logistics, transport, wholesale infrastructure will improve; some other industries will also experience a positive impact), as well as a decrease in the influence of negative externalities (reduction of negative externalities, the digital divide between urban and rural areas, improves the quality of life outside the city, ensuring a more rational use of natural resources, and others). Thus, the scientist comes to the conclusion that the subsequent increase in the innovativeness of the agricultural sector is the only possible option for the development of the sector.

Other scientists, in particular G. Lukhmanova *et al.* (2019) conclude that the modern process of modernization of the agricultural sector in Kazakhstan should be carried out taking into account the specific features

of the industry. In particular, for the development of agriculture in Kazakhstan, the authors recommend using an integrated approach to innovative modernization. In addition, it is worth developing a clear plan for its implementation, consisting of a certain number of stages. In turn, R.N. Zhangirova (2020) considers the development of agriculture at a smaller level in her work. She notes that one of the main existing problems for the development of agriculture is the processes of interaction between institutions (individual entrepreneurs or scientists, laboratories, educational institutions, etc.) that produce innovative technologies and directly use them in production (directly agricultural companies). Indeed, the process of transferring the rights to use technology can be problematic, especially in the context of existing technologies in the legal framework of the country, its excessive volume and complexity.

Probably, another promising method for improving state regulation methods is the introduction of training programs for specialists in this field, who are sufficiently versed in both the creation of innovative projects and public management (Kryukova et al., 2023). They would be able to provide high-quality qualified consulting support to agricultural companies wishing to increase the efficiency of using their own resources. It should be noted that a similar program was partially implemented in Kazakhstan (and many other developing countries) in 2019 together with the Eurasian Bank for Reconstruction and Development (2022): an outsourcing platform was created that can give advice and support to small and medium-sized businesses for their subsequent development. One of the options for improving this methodology is the creation of regional centres to support agricultural enterprises, in particular, in the application, creation and implementation of innovative projects (Taishykov et al., 2023). In addition, together with the technologies of public administration in the field of innovation policy described in the paper, such training would help to achieve even better results. As noted by L. Biber-Freudenberger et al. (2018), due to the existing difficulties in implementing the optimization of investment policy in agriculture in Kazakhstan, there are the need to change the current direction of agricultural development to a larger and longer-term one. One of the main components of this direction should be the introduction of innovative technologies in the industry, the development of domestic and the purchase of foreign latest agricultural technologies (Amanova et al., 2020).

Speaking about state regulation in principle, it is worth noting D. Gashu *et al.* (2019). They wrote that the principles of state regulation of the state are usually reflected in the current legal system in this or that legislation; certain acts. One of the important principles that should be followed when displaying the rules of functioning within the framework of innovation activity is the formation of the same conditions for the development of all property norms (Stepanenko *et al.*, 2023).

As G. Gebremariam and V. Tesfaye (2018) write in their work, absolutely all agricultural producers should have the right to conduct activities related to profit and innovative development, while defining their rights in the conduct of this activity and be aware of their obligations. Without creating such basic conditions that quarantee equal conditions for doing business, investment and innovation processes, all attempts to revive agriculture, even with the help of direct state intervention through financing, will not have the desired effect (Luchechko & Gordiichuk, 2023). Note that probably the only exception to the rule regarding the provision of certain types of privileges are small and medium-sized enterprises. The reason for this is their importance for maintaining a high level of efficiency in the functioning of the national economy in any industry, including the innovation aspect, as N.A. Adam and G. Alarifi (2021) wrote about this in their work. Sometimes, as noted by E. Appolloni et al. (2020), and in the formation of the principles and laws of innovation activity, the peculiarities of territorial and sectoral development, their combinations can also play.

M. Carroll (2017) wrote about the components of the regulatory legal legislation of the Republic of Kazakhstan in his work. He noted that in the Republic of Kazakhstan it is necessary to improve the regulatory and legal conditions for regulating investment flows; in addition, an important goal is to ensure the balance of relations between the state and the private investor in the system of public-private partnership, to increase the attractiveness of the Republic of Kazakhstan for investments of national and foreign capital in the development of agriculture. The creation of stable legislation could provide state guarantees for the protection of investors over long periods of time, which would improve the investment climate in the country and attract new funds to it, including in the field of investment technologies (Taishykov et al., 2024).

Thus, the main problems hindering the process of development of innovative activity, which were partially mentioned in the work of L.P. Steblyakova (2009), can be noted: the lack of a specific strategy for the development of agriculture, which would be combined with the general economic policy of the state, a low level legal support of innovation, poor coordination of the activities of state administration and local government in terms of supporting and ensuring the development of agriculture, the use of improper sources to raise funds to finance agricultural manufacturing companies and the lack of a system to stimulate entrepreneurial initiatives in agriculture. In turn, based on the recommendations described in the paper and the described models and methods, it is possible to describe the following likely benefits from their use: an increase in innovative activity in agriculture and an increase in financial and investment inflows (both external and internal) into the industry, the creation of a new motivation for agricultural producers, the formation of clear goals and objectives in achieving the modernization of the agricultural sector in the country, the simplification of procedures for obtaining state support for business and changing the methods of its financing, an increase in the number of small and medium-sized enterprises in the country, the establishment of tighter control over banking activities, in particular, in terms of the volume of loans issued and the levels of interest rates, an increase in long-term financing of the industry. And although the methods described in the work do satisfy many of the existing problems described, nevertheless, not all of them can be solved only by changing some of the components of the legislation.

CONCLUSIONS

The paper examined the general state of the agricultural sector in Kazakhstan as a whole, and in particular — in its innovative component. It was noted that although the industry has prospects for the introduction of the latest technologies, and the state is taking appropriate steps in this direction, however, so far one should not expect any quick success. In any case, the state authorities of Kazakhstan will have to carry out significant work in terms of state support, investment attractiveness, legal system and others in order to ensure the innovative development of the agricultural sector in the future.

Thus, in this paper, methods for improving the state of development of agriculture in the Republic of Kazakhstan, namely one of its components, namely innovation, were described and evaluated. It was proposed to create a separate centre for the development of agriculture and its innovative component, which would regulate the relevant processes in the industry at all levels, including local ones. In addition, an effective solution may be the creation of advisory groups that allow the implementation of projects proposed by agricultural companies or individuals, and, if proven to be effective, seek funding for them. In particular, it was proposed to change the main financing model in the Republic of Kazakhstan at the moment: in particular, it is more efficient to use private (primarily bank) capital to support projects of agricultural enterprises. It has been proven that this significantly reduces government costs, as well as increases the effectiveness of the support offered to enterprises, including by reducing the role of management and control by government bodies, which often turns out to be ineffective. It may be promising in further research to find new opportunities for the development of innovation in the agriculture of the Republic of Kazakhstan, as well as to improve or offer one's vision of the models shown in the work for increasing the efficiency of public administration in the country's agricultural sector.

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None.

CONFLICT OF INTEREST

None.

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Розвиток інноваційних процесів у сільському господарстві Республіки Казахстан

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Анотація. Сільське господарство залишається важливою складовою розвитку Казахстану, створюючи значну частину ВВП країни. Однак воно все ще потребує пошуку нових можливостей для підвищення ефективності свого функціонування. Таким чином, метою роботи було проаналізувати можливості розвитку сільського господарства в Республіці Казахстан, зокрема, за допомогою інновацій. Основним методом, використаним при написанні статті, можна вважати моделювання, враховуючи кількість побудованих в роботі моделей функціонування державного регулювання в країні для вдосконалення інноваційних процесів в країні. Серед інших методів - аналіз, індукція, порівняння та інші. У даній роботі обґрунтовано необхідність вдосконалення державного регулювання у сфері інноваційної діяльності в сільському господарстві Республіки Казахстан, а також описані ймовірні напрямки розвитку в даному напрямку. У зв'язку з існуючими недоліками в системі управління розроблено та запропоновано моделі державної підтримки підприємств аграрного сектору для розвитку інноваційної діяльності в галузі. Представлені моделі передбачають можливість використання сучасних інструментів регулювання процесів з урахуванням системного підходу, що забезпечує координацію дій відповідних органів влади для забезпечення як приватних, так і національних інтересів. Основною відмінністю запропонованих в роботі моделей від існуючих в Республіці Казахстан є наявність єдиного центру, який несе повну відповідальність за розвиток сільського господарства на місцевому та національному рівнях, а також забезпечує досягнення підвищення рівня інноваційності в ньому. Таким чином, робота дозволяє переоцінити існуючі методи розвитку сільського господарства, а також привносить нові знання у формування принципів державного управління

Ключові слова: економіка Казахстану; державне регулювання; управління; підприємництво; аграрний сектор