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FORMATION OF NEW INNOVATIVE TECHNOLOGIES FOR THE DEVELOPMENT OF AGRICULTURE IN THE REPUBLIC OF KAZAKHSTAN

Abstract.

The aspects of using innovative technologies in the field of agriculture of the Republic of Kazakhstan have been studied. The importance of digitalization in agro-industrial sectors is justified. Tasks of introduction of technological innovations in domestic agricultural sector were identified: improving regulatory support, effective technical support, growth in innovation activity, a sufficient degree of financial support, implementation of environmental legislation, conservation of natural resources, increasing the scale of situational analysis, training and upgrading of personnel on issues digital economy and smart technologies in agricultural sector. The experience of countries where advanced agricultural technologies are applied is studied.

The potential of accumulated information on digital technologies, as well as factors and conditions for their implementation in Kazakhstan, is considered. The pace and plans of introduction of SMART farms in the republic are analyzed, specific regional examples are presented. The spheres of application of numbering methods in agricultural production are shown. It was revealed that digitalization is not only the use of information content across the entire spectrum of agricultural activity, but also the need to create a comprehensive electronic automated system in each region of the country, its integration with other information databases. The authors note that nanotechnology in agriculture will facilitate the simplification of relations between agricultural producers and the State (facilitating workflow, soft loans), improving the situation in supervision and certification of agricultural products, environmental control, increasing productivity in digital agricultural enterprises, and developing educational sphere.

Key words: Agro-industrial complex, agricultural producers, innovative potential, digital technologies, electronic automation systems, agricultural products, investments, markets.

Introduction.

Digitalization and innovative development are strategic directions for the development of the entire economy, it is known that the agro-industrial complex is also one of the industries that should not remain outside this trend. The need for digitalization of the agricultural sector of the Republic of Kazakhstan is largely due to many factors that determine its results, the number and territorial separation of economic entities; intensive and multilateral intersectoral ties within the branches of the agro-industrial complex, etc. A feature of digitalization of agriculture is the frequent unavailability of information and communication technologies to the population of small towns and rural areas due to the lack of broadband Internet in this country.

According to the results of measurements in recent years, 47% of the world's population has access to the Internet, in developed countries the number of regular users reaches 89%, And in Kazakhstan this figure is 80.3%. According to statistics, in 35 countries, Internet use in rural and sparsely populated localities is significantly lower than in urban areas. It depends on the level of

knowledge, income, a high proportion of elderly people, communication interests, lack of skills in obtaining information services, etc.

Possession of important information at the right time, in the right format and through the right communication channels at the stage of digitalization will also increase the incomes of the rural population, increasing the productivity of agricultural sectors. The availability, accessibility and application of agricultural research and development, the effectiveness of rural consulting services are key to solving a number of tasks in the agricultural sector.

The process of technology transfer makes it possible to develop cooperation between the public and private sectors, strengthen ties between science and industry and establish ties with other States. Many authors have made significant contributions to the study of sustainable development, principles and problems of technology transfer. Of these, foreign scientists should be noted: Schumpeter J., Rogers E.M., Backer T.E., David S.L., Soucy G., Markert L.R., Tenkasi R.V., Wright M., Link A.N., Audretsch D.B., Scott D.J., Elizabeth F.G., Don H., Mohrman S.A., Bessant J., Howard R., Hee J.Ch ., James A., Matthias M., Chris Y., Pererva P.G., Kocziszky G., Szakaly D., SomosiVeres M., John H., Barton G.E., Barry Bozeman, Lindqvist S., Reisman A., Keller R., China R.R.

The scientific attention of domestic researchers is focused on the innovative development of the country, such researchers include: Baymuratov U.B., Kerimova U.K., Mynbaeva D., Kenzheguzin M., Bakirbekova A.M., Dnishev F., Alzhanova F., Smirnova E.V., Temirbekova Zh.A., Alibekova G.Zh.

Materials and methods of research.

In order to study this problem, the authors extensively relied on the scholarly works of both foreign and Russian economists and scientists. They also considered the unique aspects of the formation of agricultural production capabilities and the utilization of numerical technologies in this field. Methodological difficulties were justified and determined based on contemporary financial theory principles, while a comparative and comprehensive approach was employed to examine the implementation of numerical technologies.

Innovative development, technology transfer and commercialization of innovative activities of organizations are one of the most pressing problems in the modern economy. Inventions and scientific discoveries are the only drivers of economic growth. But how advances in science have reached relevant industries or individuals remain unspecified in innovative research. Therefore, first of all, it is necessary to define the concepts of" innovation"," technology transfer"," commercialization".

Most often, innovations are interpreted as new equipment and technology developed and designed within the framework of the scientific and technical activities of certain enterprises. At the beginning of the XXI century, the American economist Schumpeter first formulated that the competitive development of innovations is the main condition for the development of society.

Schumpeter pointed to innovation as a new combination of resource use as a change in technology and management method, and also emphasized the role of the businessman in the innovation process. In his opinion, a businessman is a link between invention and innovation.

Comparing the work of "the theory of economic development" with later published books, Schumpeter's researchers found that its main the theme is the concept of a businessman and is considered a key element of the innovation process. In the concepts of research scientists, the concepts of innovation and Transference are considered separately. These concepts relate to the two interdisciplinary fields of study:

(1) technology transfer;

(2) is expressed as diffusion of innovation.

Markert L. R., Backer P. R. in his study, the concept of technology transfer was said to be "provided for the development of technology in one environment and then for use in another", while Rogers in his study said that diffusion is used to "disseminate" in a society, organization, or

among people. According to the researchers, technology transfer is a broad concept that occurs between several individuals. Thus, it can be seen that technology transfer is a broad concept that is not limited to the process of transmitting information.

In the notes of the council for Scientific and Industrial Research, Technology Transfer Technologies as a process of transferring new knowledge and innovations developed by third parties, to be able to make available to the market and society, as well as to realize commercial benefits and public benefits it is shown. There are many different points of view and criticisms related to the concept of technology transfer.

In general, the opinions of foreign researchers related to technology transfer were systematized in the table below (table 1).

Table 1 – systematization of the concept of technology transfer

Year	Authors	Concept
1978	Van Gigch J.P., Churchman C.W	Technology transfer - the use of an invention by a second buyer
1981	Gee S.	Technology transfer is the process by which a technology developed for one purpose is used by another program or by a new user.
1983	Derakhshani S.	Use, apply and develop technology transfer knowledge about technology from the countries where the technology originated.
1985	Kaynak E.	Technology transfer is both within the country in accordance with local conditions, and the transition from one country to another to know-how on the basis of efficient use and diffusion.
1987	Stewart Jr C.T., Nihei Y	Technology transfer is the use of existing equipment that has not been used before.
1992	Madu C.N.	Technology transfer does not always mean technology or physical equipment transfer. It can be given as knowledge based on training and teaching about technological changes and effective management.
2001	Rogers E.M. Shiro Takegami Jing Yin	The technology transfer process usually involves the transfer of technological innovations from a research organization to a recipient organization (for example, a private company).
2014	Chelnokova O.Yu., Firsova A.A.	Technology transfer is the transfer of information about innovation using any information channels that carry out industrial development and do not necessarily benefit it.
2019	Da Silva V.L., Kovaleski J.L., Pagani R.N.	Technology transfer (TT) is the process of disseminating and storing technologies of a different nature, such as the result of their implementation, which creates the knowledge used (intangible assets) or productive (tangible assets) and another infinity of elements used between two or more involved persons, industries, institutions or organizations
Note: compiled by the authors		

As can be seen from table 1, the concept of technology transfer is the last over the years, it has become more complex and large-scale. The number of participants in the process will increase, showing that along with technology, science and information will be transferred. Although the definition of technology transfer has been written by many research scientists, many scientists express their opinions regarding the movement of technology from one place to another. Since technology transfer is carried out on the basis of a bilateral or trilateral agreement, this understanding must also be considered from a legal point of view. Within the framework of technology transfer technology, a wide range of various legal relations is also considered, the main components of which are the totality of rights and the transfer of the results of intellectual activity to other interested parties.

Results and its discussion.

For more than two decades, the introduction of the knowledge economy has begun in advanced countries, and the United Nations Economic Commission for Europe (UN) has developed and introduced e-business standards for the agricultural feed sector. There are already electrical phytosanitary certificates, electrical exchange of laboratory test results, trade management and exchange of certificates, electrical notification on food and feed safety issues, and so on.

The food and Agriculture Organization at the UN pays close attention to the issues of electronic agriculture (e-agriculture) and digital agriculture (digital agriculture). Every year, forums and web-seminars on e-agriculture are held. In recent years, a guide has been published to develop an electronic agriculture strategy for the countries of the Asia-Pacific region (E-agriculture Strategy Guide, Pilotedin Asia-Pacific countries). Since digital technologies are considered in Kazakhstan as the main path to the diversification of the national economy, for the rapid introduction of digitalization, the state program "Digital Kazakhstan" was adopted, the implementation of which is scheduled for 2022-2026, however, its effectiveness is expected in the coming periods [1].

When launching processes of mass digitalization of Russian agricultural production, it is necessary to solve a number of interrelated problems: regulatory support; techno support; mass innovation; financial support, implementation of environmental legislation and resource conservation; conducting mass situational analysis; training and retraining of personnel on issues of the digital economy and smart technologies in agriculture.

The tasks set are aimed at reducing the costs of agricultural production and ensuring the country's food security. Opportunities for the modernization of this industry open up prospects for the transformation of agriculture from a traditional to a high-tech sphere. This contributes to management decision-making, provides not only the domestic market, but also provides an opportunity to supply high-quality and safe products to world markets. This approach also creates new opportunities for the introduction of innovative solutions and developments, stimulating the development of the industry [2].

The launch of digitalization processes in the agro-industrial complex involves an integrated approach covering various technologies and aspects. The frequency and scope of digitalization processes will depend on specific conditions, available resources and desired results. Regular assessments and adjustments are needed to ensure that digitalization efforts remain aligned with the changing needs of the agricultural sector and rural communities.

Countries that have introduced advanced agricultural technologies show stable growth rates, for example, Israel's agrosector is the most effective in the world, low natural potential is successfully compensated by the efficiency of introducing technologies [3].

The regulatory and legal support for the digitalization of domestic agriculture, unfortunately, is still fragmentary, and conceptual provisions are only being discussed to solve this task. The tasks of technical support for agricultural digitalization are several. The first of them is the compatibility of the work of various instruments and computer programs that are of an applied nature for their subsequent coordination during the management of all processes in agriculture. To solve this task, a technical innovation is used in the countries of the European Union – the Internet of things.

These are indicators of counters, sensors, special devices the process of providing information to the general system for the formation of information content using various types of tools. The implementation of the digital economy is carried out through the connection of information technologies with real economic processes [4].

The second task of technical support is to create conditions for accelerating the modernization of rural areas, when solving which for each region the complexity and planning of

measures is required, which equally applies to the availability of fast or high – speed broadband internet and even simple mobile communications.

Agricultural productivity is directly related to the growth of technologies and innovative ideas. Innovative development of agriculture has an impact on the population of small towns and rural areas due to the lack of broadband Internet, the unavailability of information and communication technologies. Possession of the necessary information at the stage of digitalization will increase the productivity of agriculture. Especially modern technologies that are transferred from developed countries are equipped with a digitalization system. Such technologies are aimed at reducing costs in the agricultural sector and creating conditions for the country's food security. For agriculture, it is necessary to place a navigation system and remote control of equipment on all equipment, which will allow the widespread introduction of digital precision agriculture, robotic combines and tractors, unmanned introduction of mineral fertilizers, chemical plant protection products. Such farms are called SMART farms of foreign countries. SMART farms cost analysis is carried out in an online form, which allows you to track, monitor animals or greenhouses in order to increase productivity [5].

The pace of implementation of SMART farms in the Republic of Kazakhstan can be seen in table 2.

Table 2 – Smart farms in the Republic of Kazakhstan

Regions	advanced farms		digital farms	
	2022	2026	2022	2026
Kostanay region	2	152	5	1
Almaty region	3	171	1	1
Karaganda region	2	166	3	1
Turkestan region	5	157	4	1
Akmola region	6	164	3	1
Pavlodar region	11	157	0	1
Kyzylorda region	1	141	0	1
Aktobe region	4	175	0	1
North Kazakhstan region	12	156	0	1
West Kazakhstan region	7	154	0	1
East Kazakhstan region	1	166	0	1
Dzhambul region	2	165	0	1
Atyrau region	2	41	0	1
Mangystau region	0	35	0	1
Republic of Kazakhstan	58	2000	16	14
Note: compiled by the authors				

As can be seen from table 2, in 2022 the number of advanced farms in the country will be 58, digital farms-16, in 2026 it is planned to increase the number of advanced farms by 200 farms. Advanced farms are aimed not only at the introduction of digital technologies, but also at the introduction of "smart" technologies. Currently, an example of the creation of advanced farms is the robotic dairy farm of Bobrovka+ LLP, opened in the East Kazakhstan region. This farm is equipped according to the European standard, in the Swedish herd "DeLaval" an automated and robotic control system allows you to carry out the milking process, monitor the health of cattle and monitor other trends in animal care. Here the farm serves about 360 heads of cattle. At the same time, the agricultural holding "Bayserke-Agro", which opened in the south-east of the country, increased productivity in the agricultural sector on the basis of the transfer of domestic and foreign technologies [6].

The innovative potential of an agricultural enterprise is associated with all components of economic potential, the potential of innovative agricultural enterprises is the components of all economic potential [7].

World experience shows that even the best regions usually need to raise innovative potential, as this provides good opportunities to maintain or increase the competitiveness of enterprises located in it, create additional jobs (due to increasing and creating the volume of activities of new enterprises), attract branches of large companies, including foreign ones [8].

Digital technologies have a huge innovative potential, which includes a digital base for management decision support systems for agriculture; digitalization of production; analytical computer platforms at all levels of management of the agricultural sector, etc. The idea of the "Internet of Things" is an innovative concept that aims to expand the geography of the application of technical innovations. This concept allows you to automatically receive data collected from satellites, unmanned vehicles, various instruments and devices. Leading agricultural holdings have already successfully applied this diversification of technological transformation for several years. In addition, the development of the inter-network nomenclature provides opportunities for the formation of integrated logistics in production and sales, including end consumers.

Agriculture covers many areas of application of innovations. It uses data from satellites and transactional systems, uses analytical systems for in-depth analysis, and improves financial and commercial operations management. In addition, agriculture includes monitoring of crops, microclimate, livestock, mineral and organic fertilizers, agricultural facilities, robotic equipment, as well as various unmanned aerial vehicles, vehicles, navigators and intelligent seeders and tractors. An important component is also the use of sensor systems for monitoring the condition of plants, animals and the environment. An integral part of digitalization in agriculture is the formation of an electronic sales database and the use of electronic exchanges. And, of course, innovative activity in agriculture includes the creation of new or improvement of existing agricultural products. This may occur due to the wear and tear or obsolescence of agricultural machinery, the emergence of new plant varieties or livestock breeds, as well as during the development and implementation of new technological solutions within the framework of the development of the information society. These innovations may also include highly effective management reforms aimed at increasing productivity and product quality.

One of the new directions of production organization in the agricultural sector of the economy of Kazakhstan is the formation of innovative clusters. The process of creating and developing agroclusters of an innovative type can contribute to the emergence of their own brands on the World Market [9].

In addition, in our opinion, mass innovation is the creation of products, goods or services that have unique or improved properties. Such products open up new markets in the information society, form new needs and influence consumer behavior. It is important to note that investing in mass innovation is an important contribution to the future. In agriculture, the main investments are still aimed at restoring fixed assets due to natural wear and tear. However, it is necessary to understand that digitalization includes not only the use of information content in all aspects of agricultural activity, but also requires the creation of a comprehensive electronic automated system in each region of the country and its integration with other information bases".

The mass introduction of innovative technologies is the competitiveness of the fuel product, since the potential of traditional resources for increasing efficiency is small [10].

Public administration of the Internet sphere is one of the key problems of modern society. The Chinese government views the Internet as an information warfare tool capable of undermining state security. In this regard, China is fully regulating the information sphere using various tools. These include: censorship system, Internet development rules, directives for Internet service providers, licensing of Internet service providers, monitoring of user activity and its reporting to government agencies, accounting for information posted on websites by providers, legislative regulation of Internet users, control over social networks (including the formation of the "army of five Mao"), banning access to popular platforms (Facebook, Twitter, Gmail, etc.), blocking sites

that do not comply with license requirements, identification of real or fake registration data, as well as blocking of Internet resources by special services and other measures.

Modern society and the economy are facing the growing influence of digital goods markets. The necessity of studying the processes of formation of such markets, their parameters and boundaries, interests and interactions of all stakeholders, competition and monopoly, pricing and profitability, as well as shadow turnover and internal and external effects for the transformation of regulation in this area is very obvious.

Performing complex tasks of situational analysis of agricultural land and pasture degradation using the digital capabilities of satellites and unmanned aerial vehicles presents a certain difficulty. However, the solution of these tasks contributes to the beginning of the functioning of the geoinformation system and modern digital mapping, forming digital geobotanical maps. This, in turn, allows the introduction of point farming technologies, forecasting and planning the development of agricultural production, expanding the number of experimental areas and creating "health maps" of crops representing environmentally friendly products. In addition, modeling the productivity of cultivated crops is also becoming possible.

Management functions include not only the organization of processes, but also the development of personnel who are engaged in the transition to digital transformation. This requires not only the systematization of large amounts of data, but also the creation of new artificial intelligence tools, bots and robots. Given that our country is lagging behind in the penetration of information technology in agriculture, we face a difficult task that requires proper funding. All agronomists, animal technicians and managers should improve their skills, as well as attract new specialists and scientists. There are problems associated with a conservative approach and mentality that slow down the transition to digital development. However, digitalization and innovative implementation mean a new standard of living, new products, new delivery methods. Agriculture is likely to change over the next 5-10 years. This is an important factor of competitiveness and an incentive for professional growth in the agricultural sector.

At the same time, new threats cannot be named as indirect results of upcoming changes. Digitalization of Agriculture will reduce the participation of citizens in real economic life. Many unskilled employees lose wages, and at the same time the material well-being of the family is also reduced, the possibility of insurance of social risks, access to the social security system is reduced.

When certain successes are achieved, the accelerated digitalization of agriculture also faces a number of specific problems. Firstly, there is a problem of confidentiality of data related to aerial photography, as well as the lack of relevant regulatory legal acts regulating the use of unmanned aerial vehicles and UAVs in agriculture.

Further, there is no mechanism for subsidizing the introduction of digital technologies in agriculture, especially when solving precision farming problems. This may become an obstacle to the accelerated digitalization of this industry [11].

In addition, the introduction of "smart" technologies will lead to increased competition in agriculture or outsourcing. Drone support will be provided only if at least 10,000 hectares of land are serviced. However, when spraying unmanned fertilizers, each farm must have accurate wind direction data and pressure calculations to avoid collisions and other problems. In addition, it is necessary to develop a flight schedule for such devices.

In conclusion, it is worth noting that digitalization and the digital economy are interrelated phenomena and will remain promising for many years. This process includes not only the volumes of knowledge transmitted in digital format, but also a huge database, digital information processing tools, data transmission tools, as well as new methods of processing and systematization of information.

Conclusion.

1. The introduction of innovative technologies, digitalization in agriculture makes it a high-tech industry capable of providing many countries of the world with high-quality and safe products, capable of stimulating management decision-making.

2. The mass introduction of innovative technologies is the competitiveness of domestic products, since the potential of traditional resources to increase efficiency is small.

3. For agriculture, it is necessary to install a navigation system and remote control of equipment on all equipment, which will allow the widespread introduction of digital precision farming, robotic combines and tractors, unmanned introduction of mineral fertilizers, chemical plant protection products.

4. Digitalization of agriculture can have the following consequences, reduce the participation of citizens in real economic life, many unskilled workers lose wages, as well as the material well-being of the family is reduced, the possibilities of social risk insurance and access to the social security system are reduced.

5. Digitalization and the digital economy are not only the amount of knowledge transmitted digitally, they are large databases, digital information processing facilities (computing equipment), data transmission facilities (communication channels), new ways of processing generated information, its systematization and storage.

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ҚАЗАҚСТАН РЕСПУБЛИКАСЫНДА АУЫЛ ШАРУАШЫЛЫҒЫНЫҢ ДАМУЫНА АРНАЛҒАН ЖАҢА ИННОВАЦИЯЛЫҚ ТЕХНОЛОГИЯЛАРДЫ ҚАЛЫПТАСТЫРУ

Андатпа.

Мақалада Қазақстан Республикасының ауыл шаруашылығы саласында инновациялық технологияларды пайдалану аспектілері зерттелген. Агроөнеркәсіптік кешен салаларында цифрландырудың мәні негізделген. Отандық аграрлық секторға технологиялық инновацияларды енгізу бойынша міндеттер айқындалды: нормативтік-құқықтық қамтамасыз етуді жетілдіру, тиімді техникалық қолдау, инновациялық белсенділіктің өсуі, қаржылық қолдаудың жеткілікті деңгейі, табиғат қорғау заңнамасын орындау, табиғи ресурстарды сақтау, жағдайлық талдау жүргізу ауқымын ұлғайту, сандық экономика және АӨК-не «ақылды» технологиялар мәселелері бойынша кадрларды даярлау және қайта даярлау. Алдыңғы қатарлы агротехнологиялар қолданылатын елдердің тәжірибесі зерттелді.

Цифрлық технологиялар, сондай-ақ оларды Қазақстанда жүзеге асыру факторлары мен шарттары туралы жинақталған ақпараттың әлеуеті қарастырылды. Республикада SMART-фермаларды енгізу қарқыны мен жоспарлары талданды, аймақтар бойынша нақты мысалдар келтірілген. Агроөнеркәсіптік өндірісте нумерациялық әдістерді қолдану салалары көрсетілген. Цифрландыру – бұл ауыл шаруашылығы қызметінің барлық спектрі бойынша ақпараттық контентті қолдану ғана емес, елдің әрбір өңірінде кешенді электрондық автоматтандырылған жүйе құру, оны басқа ақпараттық базалармен біріктіру қажеттілігі де анықталған. Авторлар ауыл шаруашылығындағы нанотехнологиялар ауыл шаруашылығы тауарын өндірушілердің мемлекетпен өзара қарым-қатынасын жеңілдетуге (құжат айналымын жеңілдету, жеңілдетілген несие беру), аграрлық өнімді қадағалау мен сертификаттаудағы жағдайды жақсартуға, экологиялық бақылауға, «сандық» ауыл шаруашылығы кәсіпорындарында өнімділіктің өсуіне, білім беру саласын дамытуға ықпал ететіндігін айтады.

Негізгі сөздер: агроөнеркәсіптік кешен, ауыл шаруашылығы тауарын өндірушілер, инновациялық әлеует, цифрлық технологиялар, электрондық автоматтандыру жүйелері, ауыл шаруашылығы өнімдері, инвестициялар, нарықтар.

ФОРМИРОВАНИЕ НОВЫХ ИННОВАЦИОННЫХ ТЕХНОЛОГИЙ ДЛЯ РАЗВИТИЯ СЕЛЬСКОГО ХОЗЯЙСТВА В РЕСПУБЛИКЕ КАЗАХСТАН

Аннотация.

В статье изучены аспекты использования инновационных технологий в сфере сельского хозяйства Республики Казахстан. Обосновано значение цифровизации в отраслях агропромышленного комплекса. Определены задачи по внедрению технологических инноваций в отечественный аграрный сектор: совершенствование нормативно-правового обеспечения, эффективная техническая поддержка, рост инновационной активности, достаточная степень финансовой поддержки, выполнение природоохранного законодательства, сохранение природных ресурсов, увеличение масштабов проведения ситуационного анализа, подготовка и переподготовка кадров по вопросам цифровой экономики и «умных» технологий в АПК.

Исследован опыт стран, где применяются передовые агротехнологии. Рассмотрен потенциал накопленной информации о цифровых технологиях, а также факторах и условиях их осуществления в Казахстане. Проанализированы темпы и планы внедрения SMART-ферм в республике, приведены конкретные примеры по регионам. Показаны сферы применения нумерационных методов в агропромышленном производстве. Выявлено, что цифровизация – это не только употребление информационного контента по всему спектру сельскохозяйственной деятельности, но и необходимость создания комплексной электронной автоматизированной системы в каждом регионе страны, ее интеграции с другими информационными базами. Авторы отмечают, что нанотехнологии в сельском хозяйстве будут способствовать упрощению взаимоотношений сельхозтоваропроизводителей с государством (облегчение документооборота, льготного кредитования), улучшению ситуации в надзоре и сертификации аграрной продукции, экологическом контроле, росту производительности на «цифровых» сельскохозяйственных предприятиях, развитию образовательной сферы.

Ключевые слова: агропромышленный комплекс, сельскохозяйственные товаропроизводители, инновационный потенциал, цифровые технологии, электронные системы автоматизации, сельскохозяйственная продукция, инвестиции, рынки.

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МОТИВАЦИЯ ПЕРСОНАЛА IT ОРГАНИЗАЦИИ

Аннотация.

Проблемы мотивации сотрудников организации всех форм собственности остаются актуальными независимо от политического строя.