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ВЕСТНИК

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**THE INNOVATIVE POSSIBILITIES IN THE AGRO-INDUSTRIAL
COMPLEX IN TERMS OF ECONOMIC SECURITY**

Abstract. In terms of integration in the agricultural production of the Republic of Kazakhstan, it is necessary to consider the peculiarities of socio-economic development, natural conditions, seasonality of production and traditions of the regions. Integration processes occurring in the industries aimed at ensuring economic and food security. The formation of the agri-food market requires the use of new forms of integration, which have an effective impact on its development and formation. The article discusses the main factors affecting the effective development of the agricultural sector.

Key words: agribusiness sector, factors, innovation, economic security.

Introduction. In modern conditions of globalization and integration, the development of the agro-industrial sector of Kazakhstan, improvement of product quality, competitiveness and promotion in the international market is becoming important. The formation of the agro-industrial sector of the republic is significantly influenced by factors and characteristics of the development of the country's regions, which are closely related to the improvement of management, marketing and innovation, and the development of entrepreneurship in the countryside and the provision of economic security. Much attention should be paid to the socio-economic development of regions and the formation of human resources. There are many factors that have not only a positive, but also a negative impact on the development of the agro-industrial complex.

Material and research methods. When writing the article, the authors applied various general scientific methods: the analysis of the collected material was carried out using inductive and deductive methods, the accumulated information was analyzed, detailed, generalized. The work used logical and systemic approaches.

Study. The author's vision of modern factors of positive and negative impact on the development of agriculture in the Republic of Kazakhstan is presented in table.

The formation of a new paradigm for the development of the agrarian sector should be based on the existing models of the socio-economic development of the regions and the country. The basis for managing the sustainable development of agricultural production should be based on the principles of state regulation of socio-economic processes, “combinations” of administrative influence and market mechanisms, actively supporting the development of small business and social protection of the poor. The integrated implementation of such principles, along with the correctly chosen management tools, can ensure the effective satisfaction of the economic interests of the population, together with an increase in the efficiency of the economic entities of the agrarian production.

The implementation of the objectives of improving the efficiency of the agricultural sector is impossible without the development and implementation of social measures to adapt to the new realities of the competitive environment of rural society. These tasks require the development of modern conceptual approaches in terms of identifying relevant indicators that allow comparing quantitative and qualitative changes in the level of vital activity of the population, including in such areas as participation in agrarian processes, provision of social services, psychological resistance to change.

The main factors of development of agricultural production in Kazakhstan

Positive factors	Negative factors
Territorial diversity of climatic conditions for the development of agricultural production	The high cost of material and technical resources, electricity and fuel for agricultural producers
Available organizational and economic prerequisites for the development of agrocomplex	Lack of labor to enable the introduction of new technologies in agricultural production
Innovative openness of agricultural production, the emergence of agricultural technology parks and business incubators	Low technical and technological level of agricultural production, stagnation of rural engineering and the scope of production services of the agricultural complex
State policy to support the socio-economic development of rural areas and direct agricultural producers, restricting the import of agricultural products, raw materials and food	Differentiation of agricultural producers to leaders and outsiders, due to different profitability of economic activity, the continuing trend of liquidation of agricultural enterprises
Availability of potential foreign markets for competitive domestic agricultural products	The growing gap between rural and urban incomes, the provision of social benefits and infrastructure
Integration of agricultural production in the global global markets for raw materials and food	Undeveloped infrastructure of the agrarian market, increasing monopolization of large retail chains
<i>Note:</i> Compiled by the author's.	

Further research into the development of the agrarian sector will form a new economic vision for the organization of agricultural production and determine the directions for improving the management of agricultural development, including in matters of structural transformation and modernization of agricultural management at the regional and local levels.

The main factors contributing to the effective development of agriculture are:

- improving product quality and focusing on international markets;
- government subsidies;
- marketing promotion;
- improvement of veterinary services;
- logistics development;
- improvement of planning the structure of production of agricultural products;
- use of innovative projects;
- ensuring economic security.

The formation of the above factors contributes to the effective development of the agro-industrial sector. Proper use of various forms of integration in the agricultural production will reduce costs, ensure stability, improve the quality of products, increase competitive advantages in the market of agricultural production. Factors affecting the motivation for the development of agro-industrial integration include:

- interaction of agriculture and processing enterprises;
- profitable product promotion;
- highly efficient management;
- competent integrated formation.

In modern conditions, the development of integration processes forms new various integration formations of the agrarian sphere. To deepen integration in economic policy, it becomes important to study these issues. In the agricultural sector, the process of producing raw materials and finished products takes place, entrepreneurial structures are being formed, the potential for integration changes is developing. traditions of national traditions.

It is necessary to consider internal differences of regions, seasonality, dependence on natural features, population density and lack of human resources. The integration policy of the regions of Kazakhstan should consider the peculiarities of the relationship of traditional industries in agriculture. Integration of agricultural production sectors requires ensuring food security, national values, traditions of the population of the regions. At the same time, the main tasks are environmental safety and protection of natural resources.

According to international experience, it is necessary to note the forms of vertical agro-industrial integration, as multinational associations, consisting of enterprises that are located in different countries, but have one leadership. Currently, in the context of globalization and integration, the food agrarian market requires the development of modern forms of integration that affect the development of the world economy.

In the context of integration, the economic development of Kazakhstan is associated with individual problems, among them are the raw materials orientation, outdated production and social infrastructure, low spending on research and a low level of economic integration into the global economy. One feature for post-Soviet innovation systems is a high share of public sector research and development, a low level of small innovative business. In this regard, it is important to create an effective system of innovation management in the agricultural sector.

Innovative development requires a special organizational structure or the creation of centers for technological support of innovation. For the country's economy, it is important to develop innovative entrepreneurship aimed at the development of rural regions. Among the directions of development of the agricultural sector are the creation and introduction of innovations in food security. This requires marketing research, experimental work and results. Also, the objectives of the scientific sector in the agricultural sector include the creation of new types of products, their implementation, promotion of agricultural production in the market and improving the competitiveness of products.

In the agricultural sector, small business development, in our opinion, should play an important role in innovative development. Given the global experience, you can use the dynamism, a relatively small investment in innovative business. About half of all innovations are provided by developed countries through the development of small enterprises. Thus, in small organizations the number of innovations is 4 times higher per unit of costs than on average, and 24 times more than on large ones. They master 2 times more innovations than in large companies. The economic environment in our country is still unfavorable for innovation: the interrelationships of the state and university sectors of science with agrarian associations are underdeveloped, private capital is innovatively inactive, the market for intermediary services for the development of the agrarian business needs improvement. Innovation activity should be based on a perfect tax system, state and market participation in innovation processes, ensuring openness and transparency of development institutions.

To deepen this process, a more thorough study of this issue is required, since certain elements of the integration of the agrarian sector are contained in the regional economic policy. Due to the fact that the basis and potential of integration processes are formed in the regions, therefore, there are processes for the production of raw materials, finished products, are promoted in the market, carrying out and developing business structures in agricultural production.

Conclusion. In order to integrate with agrarian production, the agricultural economy must necessarily consider the peculiarities of the regions, their social and economic development, the use and introduction of innovations, and the development of small business. These features determine the uniqueness of natural and geographical conditions, history, traditions and national values of the population. The pronounced seasonality of production, a strong dependence on natural factors, a large territorial concentration of the population, a shortage of personnel, especially qualified ones, distinguish agriculture from other branches of the national economy – one of the most important derivatives of the agricultural sector.

The integration of traditional economic sectors in the agribusiness sector is a new quality of relations between entities based on the factors of the concept of sustainable development and dynamic growth. This helps to ensure economic food security, the formation of the traditions of the population of the regions, as well as compliance with the requirements of environmental safety and environmental protection for effective agricultural production.

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ЭКОНОМИКАЛЫҚ ҚАУІПСІЗДІК ШАРТЫНДАҒЫ АГГРАЛЫҚ ӨНЕРКӘСІП КЕШЕНІНІҢ ИННОВАЦИЯЛЫҚ МҮМКІНДІКТЕРІ

Аннотация. Мақалада аграрлық сектордың тиімді дамуына ықпал ететін негізгі факторлар қарастырылған.

Қазақстан Республикасының ауыл шаруашылық өндірісінде, жаһандану және интеграция тұрғысында элеуметтік-экономикалық дамудың ерекшеліктерін, табиғи жағдайларын, өндірістің маусымдылығын және аймақтардың дәстүрлерін ескеру қажет. Ауыл шаруашылығында болып жатқан интеграциялық үдерістер елдің экономикалық және азық-түлік қауіпсіздігін қамтамасыз етуге бағытталған. Аграрлық азық-түлік нарығының қалыптасуы оның қалыптастыру мен дамытуға тиімді әсер ететін интеграцияның жаңа формаларын пайдалануды талап етеді.

Түйін сөздер: аграрлық өнеркәсіп секторы, факторлар, инновациялар, экономикалық қауіпсіздік.

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ИННОВАЦИОННЫЕ ВОЗМОЖНОСТИ АГРОПРОМЫШЛЕННОГО КОМПЛЕКСА В УСЛОВИЯХ ЭКОНОМИЧЕСКОЙ БЕЗОПАСНОСТИ

Аннотация. В статье рассматриваются основные факторы, влияющие на эффективное развитие аграрного сектора. В условиях глобализации и интеграции в аграрном производстве Республики Казахстан необходимо учитывать особенности социально-экономического развития, природные условия, сезонность производства и традиции регионов. Интеграционные процессы, происходящие в сельском хозяйстве направлены на обеспечение экономической и продовольственной безопасности страны. Формирование агропродовольственного рынка требует использования новых форм интеграции, которые оказывают эффективное влияние на его формирование и развитие.

Ключевые слова: агропромышленный сектор, факторы, инновации, экономическая безопасность.

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REFERENCES

- [1] Vinokurov G.M., Trenchenkov P.V., Mongush Yu.D. 2014. State support of agricultural enterprises in Russia and abroad. Management of economic systems: electronic scientific journal, 6. Available at: <http://www.uecs.ru/uecs66-662014> (accessed: 09.02.2019) (in Rus.) .
- [2] Kurdyumov A.V., Bushina Yu.O. 2015. Innovations in the agro-industrial complex of Russia: problems and solutions. Modern scientific research and innovations, 7. Part 3. [Electronic resource]. Available at: <http://web.snauka.ru/issues/2015/07/56341> (accessed: 10.02.2019) (in Rus.) .
- [3] Latysheva A.I., Razumov A.I. 2012. Economic efficiency of innovative technologies in the agro- industrial complex // Economic Bulletin of Dombas, 1 (27): 227-230 (in Rus.) .
- [4] Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan. [Electronic resource]. Available at: <http://stat.gov.kz> (accessed: 29.01.2019) (in Rus.) .
- [5] Ministry of Agriculture of the Republic of Kazakhstan. [Electronic resource]. Available at: <http://mgov.kz/ru/> (accessed: 29.01.2019) (in Rus.) .
- [6] Science, technology and innovation in Europe. European Commission. Luxembourg, Publications Office of the European Union. 2013, 141.
- [7] WCED – The World Commission on Environment and Development: Our common future (Brundtland - Report). Oxford University Press, 1987.
- [8] Trushin Yu.V. 2010. About the role of the credit system in the economic regulation of agriculture. Moscow, Voshod-A, 211 (in Rus.) .
- [9] Kiselev S.V. Sel'skaja ekonomika. M.: Infra-M, 2010. 572 p.
- [10] Marks K., Jengel's F. Sochinenija. Vol. 25, ch. II. M.: Gos. izd-vo polit. lit., 1962. 551 p.
- [11] Pytkin A.N., Balandin D.A. Harakternye osobennosti razvitija regional'nogo agroproma v uslovijah VTO // Vestn. Perm. un-ta. Ser.: Jekono- mika. 2014. Vyp. 2. P. 87-97.
- [12] Ushachev I.G. Vnutrennie i vneshnie aspekty konku- rentosposobnosti produkcii APK v uslovijah regional'noi integracii i globalizacii. M., 2013.
- [13] Popcov A.G., Prohorenko O.S. Agrarnyj sektor Ukrainy v uslovijah globalizacii. M., 2012.
- [14] Borhunov N.A., Rodionova O.A. Metodicheskie rekomendacii po ocenke vlijanija poshlin VTO na ceny agroproduktov'stvennogo sektora jekonomiki Rossii. M., 2012.
- [15] Shapouri S. Food security assessment, 2010-20. DIANE Publishing, 2010.
- [16] Rhoe V., Babu S., Reidhead W. An analysis of food security and poverty in Central Asia – case study from Kazakhstan // Journal of International Development. 2008. Vol. 20, N 4. P. 452-465.
- [17] Yu B., et al. Toward a typology of food security in developing countries // International Food Policy Research Institute (IFPRI), 2010. N 945.
- [18] Alekseev G.V., Leu A.G., Derkanosova A.A., Kharitonov D.V. Features of innovative transformation of the enterprise for processing of food raw materials // Russian journal of agricultural and socio-economic sciences. 2017. Vol. 64, N 4. P. 94-99. <https://doi.org/10.18551/rjoas.2017-04.12>.
- [19] Golubeva L.V., Dolmatova O. I., Ivantsova M. I. Development of composition and technology of milk dessert with carrot fiber // Vestnik VGUI [Proceedings of VSUET]. 2016. N 2. P. 148-152 (in Rus.) .
- [20] Klimova N.V. Food security is the basis of economic security of the region // Fundamental'nye issledovaniya [Fundamental research]. 2012. N 9. P. 214-219 (in Rus.) .
- [21] Duisen G., Aitzhanova D. Formation of unified area of Kazakhstan and Central Asia: Issues and opportunities // Bulletin of National academy of sciences of the Republic of Kazakhstan. 2018. Vol. 6, N 376. P. 192-199. <https://doi.org/10.32014/2018.2518-1467.45>. ISSN 2518-1467 (Online). ISSN 1991-3494 (Print).
- [22] Kassymova G.K., Arpentieva M.R., Kosherbayeva A.N., Triyono M.B., Sangilbayev S.O., Kenzhaliyev B.K. (2019). Science, education & cognitive competence based on e-learning // Bulletin of the National academy of sciences of the Republic of Kazakhstan. 2019, (1). P. 269-278. <https://doi.org/10.32014/2019.2518-1467.31>.

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