

Global challenges for the agrarian sector of russian economy and its human resources

Desafíos globales para el sector económico agrario ruso y sus recursos humanos

Aygul Zufarovna IBATOVA [1](#); Farida T. NEZHMETDINOVA [2](#); Farit Foatovich SITDIKOV [3](#)

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ABSTRACT:

The article analyzes the results of a scientific study on the consequences of global challenges for the agrarian sector of the Russian economy that joined the World Trade Organization (WTO). The main goal of the study is to determine the key role of the staffing of the competitiveness of Russia's agrarian economy in the face of large-scale challenges. The methodological basis of the study includes a comprehensive and systemic approach, analysis and foresight method that explore the globalization of agricultural production. Such factors as the acceleration of the practical introduction of new principles and technological approaches to agriculture, the development of bioeconomics and the problem of import substitution, and the reduction of the share of rural territories and the population are considered. A list of factors limiting the development of agrarian education in Russia is given. The paper gives recommendations on overcoming the growing gap between the content of agrarian vocational education and the needs of the agro-industrial complex in the new conditions.

Keywords: economy, agro-industrial complex (AC) of Russia, agrarian vocational education, agrobusiness, agrobioethics

RESUMEN:

El artículo analiza los resultados de un estudio científico sobre las consecuencias de los desafíos globales para el sector agrario de la economía rusa que se unió a la Organización Mundial del Comercio (OMC). El objetivo principal del estudio es determinar el papel clave de la dotación de personal de la competitividad de la economía agraria de Rusia frente a los desafíos a gran escala. La base metodológica del estudio incluye un enfoque integral y sistémico, un método de análisis y prospectiva que explora la globalización de la producción agrícola. Se consideran factores tales como la aceleración de la introducción práctica de nuevos principios y enfoques tecnológicos para la agricultura, el desarrollo de la bioeconomía y el problema de la sustitución de importaciones, y la reducción de la participación de los territorios rurales y la población. Se proporciona una lista de factores que limitan el desarrollo de la educación agraria en Rusia. El documento ofrece recomendaciones para superar la brecha creciente entre el contenido de la educación profesional agraria y las necesidades del complejo agroindustrial en las nuevas condiciones.

Palabras clave: economía, complejo agroindustrial (AIC) de Rusia, educación profesional agraria, agroindustria, agrobioética.

1. Introduction

At present, the Russian economy and agriculture, as its backbone, have faced long-term systemic challenges, reflecting both world trends and internal barriers to development. Today, the agrarian sector of the Russian economy has faced the growing processes of globalization of agricultural production and the food market. The XXI century is becoming the century of high technologies and standards of quality of life. A single global economic, legal and information system is being formed purposefully. There is an increase in global competition, involving not only traditional markets for goods, capital, technology and labor, but also a system of national governance, support for innovation, human development [1; 2].

In carrying out this study, analysis and review of international and Russian sources were used, including scientific articles, surveys and reports of international organizations, monographs. The following methods were used: complex and system analysis, foresight, comparative comparison.

The need to ensure food security in conditions of population growth - today we are on the planet of 7 billion people - poses new challenges to agriculture. The production of sufficient and safe agricultural products requires harmonization of the productive and ecological functions of the agricultural landscape, combating diseases and protecting human, animal and plant health, ensuring sustainable development of rural areas and the desire of the population to achieve a new quality of life [3]. Of particular concern is the widespread production and use of genetically modified organisms (GMOs), which carry serious risks to human and animal health, and the conservation of biological diversity on the planet [4]. This requires special prevention and prevention mechanisms, such as humanitarian expertise and agrobioethics [5;9].

Experts of Food and Agriculture Organization of the United Nations say that the deficit of food can cause social conflicts. They have developed a special index. It means the food price dependence on the level of social tension. If its value exceeds 215 units (indicator 100 - the level of 2002-2004), the country begins an uprising. So it was during the Great French Revolution, so it was in Egypt, so it may be in the near future. In 2008, for example, popular unrest swept Haiti, Burkina Faso and Malaysia. "Arab Spring" also coincided with the peak of food prices in 2011 [10;13].

The growth of prosperity in the developed and developing countries of the world and the process of urbanization led to the exceeding of the industrial sector in 2008. People are increasingly moving from villages to cities, and therefore the demand for food exceeds supply. Russia occupies 1 / 9th of the land area. Its territory exceeds in many times the territory of many other countries and is 17.075.400 km², ranking first among countries with large territories. At the same time, there are very few water bodies in the country and 16.995.800 km² - is land.

Consequently, 12.5% of the Earth's land area falls only on Russia. There are about 180.000 settlements in Russia, more than 150.000 of them are rural settlements, about 20.000 of settlements are empty, no one lives there, almost a quarter of all rural settlements have a population of less than 10 people . In Russia, almost 2.400 cities and towns are urban type, in 164 of them the population is more than 100.000 people. The population of Russia is more than 143. 030.106 people - the ninth place in the world. The urban population is 73%, rural - 27%. A large territory and a growing population, require food and work, the responsibility for which lies with the state. Reducing the proportion of rural residents with a general increase in the world population entails an increasing consumption of food and increases the technological burden on the environment [1; 2].

The inclusion of the Russian agro-food market in the world market system, after Russia's accession to the World Trade Organization (WTO), with the current state of the agro-industrial production of our country, can make it dependent on transnational corporations and lead to a loss of food sovereignty. The ban and sanctions on the export of agricultural products in Russia actualized the problem of import substitution. Russia has a significant natural and resource potential for the implementation of effective agricultural production:

agricultural land in farms of all categories make up more than 190 million hectares, incl. arable land - more than 115 million hectares, fodder land - more than 70 million hectares. The organization of new agricultural production will serve as a catalyst for the development of rural areas and the growth of the rural economy as a whole, will create jobs and increase the attractiveness of life in the countryside, and credit for the introduction of additional capacities in crop production, livestock production and the relevant processing sub-sectors of the agroindustrial complex will increase the country's food security and ensure the import substitution of food [1; 19; 23].

2. Methodology

The methodological base of the study includes a comprehensive and systemic approach, analysis and foresight method, exploring global challenges for the agrarian sector of the Russian economy and its staffing.

In work with the help of such general scientific methods as system approach, comparison, method of systematization and generalization of data, the essence, content, principles of formation and structure of food industry are studied.

3. Results

The main strategic threat, from the point of view of implementing the scenario of Russia's innovative development, is a possible loss in the competitive race for the formation of the reproductive nucleus of the new technological order. In turn, the timely formation of such a reproductive nucleus is a necessary condition for the transition of our country to an innovative development path. The world economy shows that in recent decades almost two thirds of the increase in agricultural production is due to the implementation of scientific and technological progress. Features of modern intensification of agricultural production is the qualitative change in resources, which makes it possible to significantly improve the efficiency of their use. Today, developed countries speak not just about agriculture or the agro-industrial complex, but set strategic goals for creating a high-tech and profitable sector of bioeconomics as a serious alternative to traditional industries and economies [3, 11, 12, 14].

Preservation of competitiveness of the Russian agroindustrial complex in the conditions of the WTO and transition to the Vith technological order of the developed countries, decreasing of the innovation cycle terms become an urgent necessity. The aforementioned actualizes the need to update the scientific, information, technical and technological base of the agro-industrial complex on a qualitatively new basis, and requires to expand the market for exports and to improve the conditions for the penetration of domestic goods into this market, and significantly increase their competitiveness [18; 19; 24].

At the same time, it is obvious that the role of human capital as the main factor of economic development is growing. The level of competitiveness of modern innovative economy is largely determined by the quality of professional staff, the level of their socialization and cooperation. Russia will not be able to maintain competitive positions in the world economy at the expense of cheap labor and savings on education and science development [1; 18; 19; 23].

One of the important conditions for solving a number of problems facing Russia's agriculture today is the modernization of agrarian vocational education associated with the formation of an appropriate scientific, scientific, educational and scientific-production platform. Prominent development of the human resources potential of the agricultural sector has a special role in achieving the indicated high results as the main vehicle of innovative knowledge and skills, without which the introduction of modern methods and technologies into the production and management of enterprises of the agro-industrial complex is simply impossible. The issues of staffing of the agro-industrial complex are of great social and economic importance and are the most important priorities of state policy, not only now, but also in the future [1, 18; 7].

At the same time, to ensure Russia's competitiveness in the face of large-scale challenges, it

is necessary to urgently overcome the growing gap between the content of agrarian vocational education and science, all educational technologies, the structure and infrastructure of the educational sphere, the level of human resources and the needs of the agro-industrial complex in the new conditions.

There are a number of problems related to the implementation of educational and scientific innovation activities in agrarian universities and research institutes in Russia. They are:

- lack of financial resources for effective and comprehensive implementation of strategic directions for the development of the system of agricultural education;
- territorial and departmental disunity of research and educational institutions of the agricultural profile, which impedes the full integration of science and education, the effective use of research and development results in the training of personnel;
- Weakening the ties between educational and scientific institutions with employers, professional agrarian associations and unions, agricultural producers;
- natural aging of staff, due to the unjustifiably low level of prestige of the profession of a scientist and teacher in modern society;
- lag in the pace of renovation and strengthening of the material and technical base of the educational, educational, research, information and social space from the requirements of the modern society of the knowledge economy;
- Inadequate level of preparation of entrants due to their place of residence in rural areas, traditionally lagging behind the level of school education in the city;
- the absence in some regions of Russia of a truly functioning innovation infrastructure that facilitates the commercialization of scientific research results, the transfer of scientific knowledge to the sphere of agricultural production;
- the growing gap in the content of agrarian vocational education programs and modern trends in the technologies of production and management of agro-industrial enterprises, between available resources (mainly scientific and intellectual potential) and the effect of their use - convergence and coordination of activities;
- lag in the pace of providing information technology and technology needs of modern forms and methods of teaching, training and methodological support, corresponding to the qualification requirements of the future market of professions of the agrosphere;
- low level of involvement of management bodies, the real sector of the agrarian economy and business in the order for training and retraining of personnel, innovative developments and technologies, the formation of the content of educational programs;
- insufficient number of programs, academic exchanges and scientific research, in conjunction with major domestic and foreign research and educational centers;
- the lack of professional competencies and organizational and economic capabilities necessary for the conduct of an innovative agricultural business to advance the skills of existing personnel for the introduction of innovative technologies for conducting agricultural production [18].

Problems of staffing of the agroindustrial complex slow down the pace of practical implementation of state projects and significantly reduce the effectiveness of state policy in relation to the agricultural sector of the economy. Meanwhile, experience shows that direct investments in the village do not give a full return without highly qualified personnel capable of constantly initiating the use of modern technologies. The existing gap between education and the economy, between education and science, lack of mutual integration of science, higher education and agrarian business hampers the process of effective and timely updating of the content of educational programs. The obsolete material and technical base of agrarian universities and the high cost of its modernization do not allow them to create a modern base of innovative educational technologies at their own expense. In these conditions, a major problem is the lag in the level of training of specialists from the pace of production development.

In the agricultural sector there is a controversial situation with staffing. On the one hand,

unemployment is aggravated in the village, an acute shortage of jobs is recorded. On the other hand, there is an acute lack of skilled workers and specialists able to manage advanced high-tech projects that have a progressive style of thinking and doing business.

The foregoing requires solving a wide range of problems. First of all, the problems that are associated with the improvement of the base and training mechanisms for the village.

It is impossible not to mention the serious problems experienced by agriculture, related to attracting or returning youth to the countryside. At present, the share of graduates with higher agrarian education returning to their places of residence does not exceed 30-40% for Russia in general (even for targeted training). Lack of social infrastructure, low wages, lack of prestige of work in rural areas reduce the motivation of young people to work in agriculture.

Inaccessibility of obtaining vocational education and in-service training at the place of residence, high dependence of work in agriculture on climatic conditions, significant financial costs (travel to a place of study, residence in a hostel, etc.) lead to outflow of young people and qualified personnel to the city, and undermining the agricultural system as a whole [1; 18; 23].

4. Conclusions

Economic growth and modernization of the agro-industrial complex of Russia in a short time are possible if the rate of development of high-tech innovations increases. The most effective mechanism for the development of high-tech industries is the integration of science, production and innovation. International experience shows that it is successfully implemented on the basis or in alliance with the higher school including the creation of technology parks and training and demonstration centers in the field of high technologies for the production of high-tech products and services. At the same time, we have to state that there is insufficient scientific and regulatory support for the training of specialists and specialists for the agro-industrial complex.

There is no any monitoring of the identification of needs for specific specialists. There are no predictive and advanced models for changing the cluster of specialties for the AC. There is no systematic approach linking the needs of agricultural production on the one hand and the social infrastructure in the countryside on the other. A weak regulatory framework is being fixed to create new forms of interaction between all levels of education, taking into account the specifics of the industry, etc. All of the above hinders the adequate reproduction of qualified personnel for the agroindustrial complex and requires the development of regulatory and public mechanisms for improving the system of agricultural education.

Actual strategic directions for the growth of agriculture and the entire agro-industrial complex are scientific and research progress and innovative processes, improvement and support of agrarian vocational education. As a result, they will allow for a permanent update of production on the basis of mastering the achievements of science and technology. The growth of investments in the agro-industrial complex, the development of innovative infrastructure and its staffing, the creation of "breakthrough" centers for the introduction of high technologies in agricultural production and their commercialization, the formation of rural development institutions - this should be the basis for the country's technological breakthrough in the agrarian sector and food security in conditions of the world economic and food crisis. The dynamic growth of agriculture and forestry, as well as the processing industries of the agro-industrial complex in these conditions, is one of the most important sources not only for providing high-quality food products, for solving the food security of the region and the country, but also for increasing employment, maintaining the traditional way of life and addressing the issue of social protection of the indigenous population.

Bibliographic references

1. Nezhmetdinova, F.T. (in the co-author). (2017). The strategy of development of an agrarian university as a leading agricultural university. Under the Society. Ed. DI. Fayzrakhmanov. Kazan: Publishing house of the Kazan State Agrarian University, 2017. -

- 130 p.
2. Garcilazo, E. (2014). Modern Rural Development Policies in OECD Countries "Urban Rural Partnerships for Sustainable Development: Experience of the Baltic Sea Region" October 27th. Retrieved from: <http://forumstrategov.ru/>
 3. Reports OECD (2012). "Looking to 2060: Long term growth prospects world". Retrieved from: <https://www.oecd.org/eco/outlook/2060%20policy%20paper%20FINAL.pdf>
 4. Nezhmetdinova, F.T. (2013). Humanitarian expertise of risks of introduction of modern technical and technological achievements of NBIC - technologies on the basis of bioethics: methodological approach. // "Innovation and Scientific Expertise" Scientific works of the federal state budget scientific institution "Research Institute - Republican Scientific and Consulting Center of Expertise" (FGBICU SRI RINKCE). FBGNU Research Institute of RINKCE, 2013. - Issue 1 (8). - 237 pp., P.132-139.
 5. Nezhmetdinova, F. (2010). Agrobioethics and new types of life viability. VI-th National Congress on bioethics September 20-23, 2010, Kyiv, Ukraine // Materials and research work. Kiev -2010. p.88-89.
 6. Nezhmetdinova, F. (2013). Bioethics: theory and practice of moral choice in modern science. The 10th Conference of the International Society for Clinical Bioethics. (ISCB) 30-31 August 2013. Main Theme: Reconstructing Bioethics. -Kushiro, Hokkaido, JAPAN. 2014.
 7. Nezhmetdinova, F. (2014). Agrobioethics as mediation technology in the conflict between supporters and opponents of food products with GMO. Bioethics and medical ethics: a discussion of the 21st century. Collection of scientific works on materials of the international scientific conference 10-11 October 2014, Kazan, Russia. -Program and abstracts / Tsuyoshi A., Yudin BG, Nezhmetdinova FT, Tishchenko PD, Guryleva ME, Sedov NN, Mushiake S., Borgia L., Griffo, D., Mima, T., Kubar OI, Kawahara N., Obasi M., Pelicic G., Shimoda M., Morimoto S., Maksimov IL, Tomashevich, L., Haas M. and others - Scientific publication - Kazan: Publishing house of KSMU, 2014.-P. 48-49.
 8. Nezhmetdinova, F. (2013). Global challenges and globalization of bioethics. Croat Med J. 2013 Feb; 54 (1): 83-85. doi: 10.3325 / cmj.2013.54.83
 9. Nezhmetdinova, F.T. (2010) Bioethical expertise as a basis for biosafety // Hazards - detection and management. Book of abstracts / 6-th Dresden Symposium. September 20-24, 2010 Dresden, Germany, SARAD, Dresden University Of Technology ,. -p. 27-34.
 12. FAO. (2017). The future of food and agriculture - Trends and challenges. Rome. Retrieved from: <http://www.fao.org/3/a-i6583e.pdf>.
 13. Commission of the European Communities (EC). (2000) White paper on food safety (COM (1999) 719 final) Brussels: European Commission, 2000. Retrieved from: <http://ec.europa.eu/transparency/regdoc/rep/1/2001/EN/1-2001-493-EN-F1-1.Pdf>
 14. Schwab, K. (2015). The Fourth Industrial Revolution: what it means, how to respond. (2015). K. Schwab Foreign Affairs. 2015. December. Retrieved from: www.foreignaffairs.com/authors/klaus-schwab
 15. Breakthrough technologies: achievements that will change life, business and the world economy. (2013) McKinsey Global Institute [Electronic resource]. - Access mode: URL: http://www.mckinsey.com/insights/business_technology/disruptive_technologies (Date of circulation 23.05.2017).
 16. EU Framework Program "Horizon 2020" [Electronic resource] - Access mode: URL: http://eeas.europa.eu/delegations/russia/press_corner/all_news/news/2013/20131213_en.htm (Date of circulation 23.05. 2017).
 17. The goals of sustainable development. The final document of the UN Summit on Sustainable Development 2015. (2015), [Electronic resource]. - Access mode: URL <http://www.un.org/sustainabledevelopment/ru/summit/> (Date of access 26.09.2017).
 18. Staffing of the AIC: problems and prospects. (2011). / Kozlov AV, Yakovleva OA- M .: Publishing FGOU DPOS - 2011 - 108 p.
 19. Nezhmetdinova, FT, Shagivaliev, LR (2014). Life and professional strategies of graduates

of the scientific and educational cluster of the agro-industrial complex of the Republic of Tatarstan (scientific edition) / Pod.obsch.red. D.I.Fayzrakhmanova. - Kazan: Publishing house of the Kazan State Agrarian University, 2014. 247p.

20. Staffing is the basis for sustainable development of rural areas. (2009). / Gorbunova I.I, Shashlova NM // Journal of the News of Tula State University. Economic and legal sciences -2009.- № 2-1 p.160-167.

21. Ibatova, A.Z. (2017) The Impact of the Economy on Teachers' Workin the Russian Federation. International Journal of Applied Business and Economic Research. Volume 15, • Number 21, Pages 67-73.

1. Industrial University of Tyumen, Russia. Contact e-mail: aigoul@rambler.ru

2. Kazan State Agrarian University, Kazan Institute of Economics, Russia Contact e-mail: aigoul@rambler.ru

3. Kazan Federal University, Kazan, 420008, Russia. Contact e-mail: azshar2017@mail.ru

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