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TRANSFER AND INTERNAL GENERATION OF INNOVATIONS AS A FORM OF CORE ACTIVITY OF THE SCIENTIFIC INSTITUTIONS OF AGRI-FOOD SPECIALIZATION

The legislation of Ukraine determines that innovation activity is aimed at the use and commercialization of scientific research and development and leads to the release of new competitive goods and services to the market. Innovations, in particular, are considered newly created (applied) and (or) improved competitive technologies, products or services, and an innovative product is the result of research and (or) experimental design that meets the requirements established by the standards [1].

The formation of a competitive agri-food complex requires the intensification of investment and innovation activities, the introduction of economic incentives to encourage the modernization of national production, investment in the latest technologies, the formation of a national innovation infrastructure and industrial modernization programs [2]. As a concept, the ability to innovate is significant in agriculture, as well as in the business world and in relation to the national innovation system [3-6].

The innovative nature of the development of the national economy in modern conditions is the defining trend of economic life, an important factor in sustainable development and a necessary prerequisite for achieving the competitiveness of domestic products in the national and foreign markets. Comparing the innovative potential of different types of economic activity in real production, they evaluate the

ability of enterprises of various profiles to implement the results of scientific research and the latest design developments in order to establish the production of highly profitable industrial products that are in demand by consumers. In this sense, it can be stated that the innovative potential of the food and processing industry is growing more dynamically than for industrial enterprises in other areas of economic activity [7].

The innovations carried out by agricultural scientists are important for the proper provision of the agri-food complex with the necessary technologies, genetic material, fertilizers, plant protection products, feed, veterinary preparations, agricultural machinery and technological equipment for food production in order to avoid dangerous dependence on foreign supplies of these materials and appliances. The creation and implementation of progressive technologies for the processing of food raw materials, methods of its storage and transportation are also among the fundamental tasks of branch science. Conducting relevant scientific research, on the one hand, will contribute to the observance of the fundamental principles of food safety and quality, on the other hand, to scientifically substantiate the possibility and expediency, the introduction of modern innovative technologies, the achievements of food chemistry to significantly increase the productivity of food production – while fully ensuring existing quality indicators and food safety [8].

The activity of scientific institutions of the agri-food specialization in generating innovations and their practical implementation, first of all, the successful promotion of domestic agricultural products to foreign markets, the growth of profitability of agri-food production; gradual increase in the level of science intensity of agriculture and processing industry; reduction of energy costs; ensuring objective prospects and competitive advantages for the development of the Ukrainian economy [9]. Focusing the efforts of scientists and their research topics on solving urgent issues of food safety and quality improvement, as well as health care, welfare and consumer satisfaction is a global trend [10]. A variety of breakthrough discoveries in biotechnology, nanotechnology and storage technology, their operational implementation in practical developments, together with other inherent factors,

constitute a well-defined paradigm for the development of the agri-food complex [11].

An important feature of the innovative work of scientific institutions of agri-food specialization, in particular, subordinate to the National Academy of Agrarian Sciences of Ukraine, is the activity of numerous experimental stations and enterprises that manufacture products from crop and livestock raw materials, food products deriving from the said ones, the specialized technological equipment for agriculture, food and processing industry. In particular, the production facilities of the Institute of Food Resources of the National Academy of Sciences of Ukraine and the State Research Enterprise subordinate to it produce a wide range of bacterial starter cultures and concentrates, starter cultures for direct introduction, as well as nutrient media for microbiological research, modern technological equipment for dairy, meat and others. Most of the products belong to innovative developments, the novelty of which is confirmed by Ukrainian patents.

It can be stated that the innovative activity of scientific institutions of the agri-food profile of the NAAS is not limited only to the external transfer of open innovations inherent in all scientific and educational institutions to business structures and enterprises of all forms of ownership, but also acts as an internal generator of innovations for their own production capacities. This makes it possible to objectively assess the full life cycle of the creation and implementation of innovation within a single scientific and economic complex, reasonable adjustment of the actions of the participants in this process, as well as the proper refinement of the innovative product based on the real situation in the domestic market of agricultural and food products, as well as specialized technological equipment. Unique opportunities for the introduction of innovations – complexes consisting of innovation generators, namely the scientific institutions of the agri-food specialization and acceptors of innovative products included in their structure, allow you to successfully promote innovative competitive products to the domestic and international markets.

Thus, the innovative activity of scientific institutions of the agri-food profile is not limited only to the external transfer of open innovations, but also acts as an internal generator of innovations for production facilities. Consequently, there is the possibility of an objective assessment of the entire life cycle of the creation and implementation of innovation within a single scientific and economic complex, a reasonable adjustment of the actions of the participants in this process, as well as the proper refinement of an innovative product based on the real market situation.

References

1. Law of Ukraine "On Innovative Activity" No. 40-IV of July 4, 2014. *Bulletin of the Verkhovna Rada of Ukraine (VVR).* 2002. № 36, Article 266.

2. Kuts, O. I. Conceptual principles of the formation of economic policy, forecasting and scientific support of the food industry development. *Food Resources*. 2020. № 8(15). P. 238-252.

3. Hult, G. T. M., Hurey, R. F., & Knight, G. A. Innovativeness: its antecedents and impact on business performance. *Industrial Marketing Management*. 2004. V. 33, № 2004. P. 429- 438.

4. Schut, M., Klerkx, L., Rodenburg, J., Kayeke, J., Hinnou, L. C., Raboanarielina, C. M., ... & Bastiaans, L. RAAIS: Rapid Appraisal of Agricultural Innovation Systems (Part I). A diagnostic tool for integrated analysis of complex problems and innovation capacity. *Agricultural Systems*. 2015. № 132. P. 1-11.

5. Wonglimpiyarat, J. Innovation index and the innovative capacity of nations. Futures. 2010. V. 42, №. 3. P. 247-253.

6. Faure, G., Toillier, A., Audouin, S., Mathe, S., Triomphe, B., & Temple, L. Evaluación de los sistemas de innovación agropecuaria para el diseño de políticas públicas: una revisión de la literatura. 2019.

7. Kopylova, K. V. Generating and transfer of innovations are high-priority directions in activity of Food resources institute of NAAS. *Food Resources.* 2016. № 7. P. 15-21.

8. Kovalenko, O. V., Kopylova, K. V., & Verbytskyi, S. B. Relevant innovative activity of agroindustrial scientific institutions on implementation of food security fundamentals of the state. *Taurida Scientific Herald. Series: Economics*. 2017. № 98. P. 17-24.

9. Shpykuliak, O. H., Tyvonchuk, S. O., & Tyvonchuk, S. V. Formation of a system for assessing innovation activity in the agricultural sector of the Ukrainian economy. *Ekonomika APK*. 2013. № 12. P. 79-84.

10. Aguilera, J. M. Seligman Lecture 2005: food product engineering: building the right structures. *Journal of the Science of Food and Agriculture*. 2006. № 86. P. 1147-1155.

11. Bigliardi, B., & Galati, F. Innovation trends in the food industry: the case of functional foods. *Trends in Food Science & Technology*. 2013. № 31.2. P. 118-129.

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ІННОВАЦІЇ В ПТАХІВНИЦТВІ: РЕАЛІЇ ТА ПЕРСПЕКТИВИ

Птахівництво стало однією з передових підгалузей вітчизняного сільського господарства, що демонструє економічне зростання. Можливість організації виробництва яєць і м'яса птиці на промисловій основі при доволі швидкій окупності витрат обумовила високу інвестиційну привабливість птахівничих підприємств в Україні, забезпечила їх стрімкий розвиток. Виробництво птиці за 2000-2015 рр. збільшилось на 69,2%, яєць – 90,5%. Водночас поступово стало помітно, що стрімкий розвиток птахівничих підприємств поступово змінився стабілізацією основних показників, а для деяких із них характерне зниження рентабельності діяльності. Так, за 2015-2021 рр. виробництво птиці зменшилось на 5,2%, яєць – 16,2% [1].