

## EFFICIENCY INNOVATION MANAGEMENT IN AGRICULTURE

**Berdimurodov A.A.<sup>1</sup>**

<sup>1</sup>*Berdimurodov Akmaljon Azamat o'g'li - PhD Student, Department of Economics,  
Tashkent Institute of Irrigation and Agricultural Mechanization Engineers  
Tashkent, Uzbekistan*

**Abstract:** *the purpose of the work is the development of theoretical and methodological provisions for improving the management of innovation in agriculture. In this regard, in this work, the author sets himself the solution of the following tasks: to analyze the types, forms, functions and methods of assessing the effectiveness of innovation management in agriculture, used in Uzbekistan and abroad; analyze the state of agricultural production and the organization of innovation in the industry, assess the effectiveness of innovation management, assess the impact of innovation management on the efficiency of agricultural production; analyze the experience of successful innovation in the main sectors of agriculture and regions; taking into account the changing external and internal environment, propose new directions of innovation management, show their approbation and effectiveness.*

**Keywords:** *agriculture, innovation, management, development.*

## ЭФФЕКТИВНОСТЬ УПРАВЛЕНИЯ ИННОВАЦИЯМИ В СЕЛЬСКОМ ХОЗЯЙСТВЕ

**Бердимуродов А.А.<sup>1</sup>**

<sup>1</sup>*Бердимуродов Акмалжон Азамат углы - студент магистратуры факультета экономики Ташкентского института инженеров ирригации и механизации сельского хозяйства  
г. Ташкент, Узбекистан*

**Аннотация:** *целью работы является разработка теоретических и методологических положений по совершенствованию управления инновациями в сельском хозяйстве. В связи с этим в данной работе автор ставит перед собой решение следующих задач: проанализировать виды, формы, функции и методы оценки эффективности управления инновациями в сельском хозяйстве, применяемые в Узбекистане и за рубежом; проанализировать состояние*

*сельскохозяйственного производства и организации инноваций в отрасли, оценить эффективность управления инновациями, оценить влияние управления инновациями на эффективность сельскохозяйственного производства; проанализировать опыт успешных инноваций в основных отраслях сельского хозяйства и регионах; с учетом меняющейся внешней и внутренней среды предложить новые направления управления инновациями, показать их апробацию и эффективность.*

**Ключевые слова:** *сельское хозяйство, инновации, менеджмент, развитие.*

**УДК 631.6:631.8:628.179 (999.1)**

An innovative economy should become not only an independent sector of the national economy as a whole, but also a condition for successful socio-economic development; in the context of Uzbekistan's accession to the WTO and the globalization of agri-food markets, the rise of the domestic agricultural sector is impossible without a transition to an innovative path of development, primarily through the implementation of a set of legislative and organizational measures, creating favorable conditions for the development of various kinds of innovations [1, 2].

Further economic development of the agro-industrial complex, incl. agriculture, provides for this type when innovation becomes the main factor, and agricultural organizations rationally use available resources and technologies, timely create flexible organizational structures and effective organizational and economic mechanisms, ensuring the reduction of the cycle of creating innovations and their commercialization, use and develop the creative initiative of the personnel, form competitiveness strategies based on innovations [3].

In modern conditions of aggravated competition, Uzbekistan's accession to the WTO, the need to fulfill the tasks of the Food Security Doctrine, further theoretical and methodological study and substantiation of the mechanism of innovative development, determination of the efficiency of innovation management, improvement of management, contributing to the growth of production efficiency and the increase of the competitiveness of economic entities are required, which determines relevance of ongoing research [4].

Under the innovative susceptibility of an agro-industrial complex organization to the development and implementation of innovations, we will understand its ability to rationally use available resources and technologies; timely create flexible organizational structures and effective organizational and economic mechanisms to ensure a reduction in the cycle of creating innovations and their commercialization; use and develop the creative initiative of personnel, experience and potential of highly qualified specialists; form competitiveness strategies based on ensuring receptivity to innovation [5, 6, 7].

The complexity of agricultural production and its features predetermine the uniqueness of approaches and methods of forming a management system for innovation processes, a combination of various types of innovations, strengthening the role of the state in stimulating innovations [8].

The innovation management system should be integrated into the overall management system of the organization. To harmonize the goals of innovation management and the goals of the general management system, it is necessary to ensure that the results of innovation activities are consistent with the main parameters of the organization's performance.

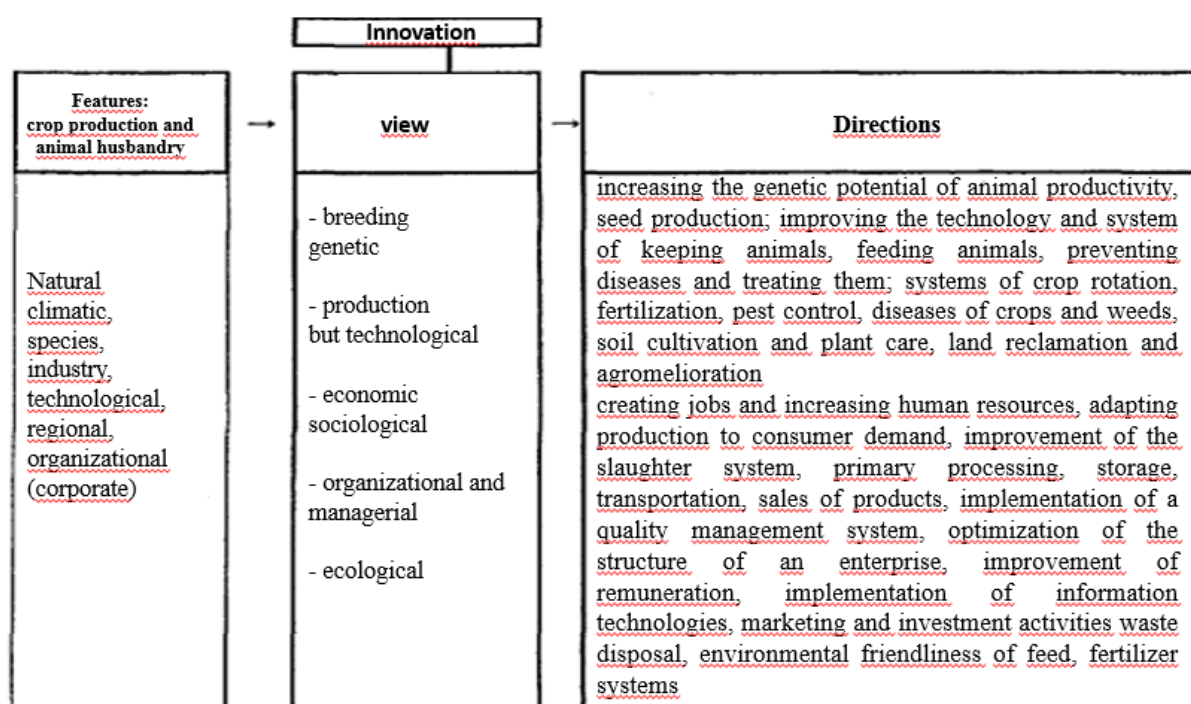


Figure: 1. Directions of innovative development of crop and livestock production

Innovations in agriculture are associated with the technology of cultivating crops and keeping animals, primary and deep processing of crop and livestock products, processing of by-products, waste, waste from the main production, production of feed, storage of products, its logistics and sale.

Based on the analysis of foreign experience, we will single out the current directions for the development of innovative activities in agriculture: scientific and production services for agricultural producers through the agricultural consulting system at the expense of budgetary funds; financing and stimulating entrepreneurial activity in the scientific field at the expense of budgetary funds through the funds of government bodies; the use of public procurement as a tool for innovation policy; using innovative projects to introduce innovations into the industry; formation of motivation for demand for innovation in the framework of public-private partnerships; application of the indicator “amount of R&D funding per researcher” to assess the innovative potential of the industry [9].

The innovative development of regions is extremely uneven. For the leading region, the value of the generalized index exceeds the value of the last region by a factor of 3.7. Regions differ in the level of support for innovative activities, the level of development of the innovation infrastructure, and the financial results obtained.

We propose to implement a typology of regions according to the level and possibilities of implementing the innovation process; unable to innovate; providing conditions for development; providing innovative development. This approach necessitates a differentiated approach to the development of an innovation system for different types of regions and agricultural organizations [10].

In the agrarian sphere, there is a gap between scientific potential and the effectiveness of its use, there is significant differentiation in terms of work performance, the topic of scientific research does not correspond to the demand for their results from business and the state, is ambiguous and equivalent in terms of the number and quality of the performers, the importance of the problems being solved, their scientific and practical significance, as well as in terms of their completeness and

costs, the issues of introducing the results of scientific research, their full information support, aging and attracting young scientific personnel have not been resolved [11].

In accordance with the Strategy for the innovative development of the agro-industrial complex of Uzbekistan for the period until 2020, the main links in the transfer of innovations should be agricultural consulting centers, united into a single system and having an extensive network close to a rural producer.

The dynamics of indicators of the efficiency of agriculture and innovation activities of organizations is shown in Fig. 2. In the future, innovative activity will increase, and the change in the ratio of production rates and the number of people employed in the industry will slow down.

Table 2 - Indicators of economic efficiency

Macroeconomic indicators	Agriculture
Labor productivity change index	The ratio of the rate of change in agricultural production (in comparable prices) and the rate of change in the number of people employed in agriculture
Share of high-tech and knowledge-intensive economy in GDP, in GRP	Production of livestock products per 100 hectares of agricultural land (arable land, sown area of grain crops)
Share of investments in fixed assets in gross domestic product, in gross regional product	Productivity of agricultural crops in agricultural organizations
Indexes of changes in the Armament Fund and the Recoil Fund	Productivity of farm animals
Fixed assets renewal ratio (in comparable prices)	Energy-to-labor ratio - the availability of energy capacities in agricultural organizations per 1 employee
Contribution rate of fixed assets at the end of the year	Energy supply of agriculture - the availability of energy capacities in agricultural organizations per 100 hectares of sown area
Increase in the number of high-performing jobs	
Innovative activity of organizations (the share of organizations that carried out technological, organizational, marketing innovations, in the total number of organizations)	
Share of domestic expenditures on research and development in GDP and in GRP	
Inventive activity ratio (the number of domestic patent applications for inventions filed in Uzbekistan, per 10 thousand people)	
Energy intensity of GDP (GRP)	

To improve the functions of innovation management in the work, the use of innovative crowdsourcing is justified; indicators for assessing the effectiveness of management functions, stages of the innovation process and participants in the innovation infrastructure (Table 3); improving the structure of the range of agricultural

products, the priority of innovative development in meat and dairy cattle breeding, open field vegetable growing, since despite the implementation of innovative projects, in the analyzed period of the implementation of the State Program 2020-2030 for these types of products, the gap between costs and profitability has increased; the assessment of the effectiveness of motivational measures was carried out and the forecast indicators of motivation and efficiency of agricultural production were determined To strengthen the motivation of business to demand for innovation, it is proposed in the framework of public-private partnerships: to organize funding for innovation through the real sector of the economy; every ruble allocated by the state should be “tied” to innovation; it is necessary at any cost, including economic compulsion, to create a business demand for innovation [12].

We offer the following structure of the mechanism for managing innovation processes (Fig. 2). In accordance with the structure of innovation policy, the process of forming a management mechanism is presented in the form of a certain sequence: determination of specific management objects and goals; identification of management factors subject to management influence; establishing methods of influencing management factors; determination of specific objects of management and goals of transformation of their state.

### *References*

1. On measures for the further development of horticulture and greenhouse facilities in the Republic of Uzbekistan. (201 The Decree of the President of the Republic of Uzbekistan No. UP-4246 as of Mar 20, 2019. [Electronic resource] – URL: <https://lex.uz/docs/4249836> (Date of the application: 07.03.2020).
2. Umarov, S. R., Durmanov, A. S., Kilicheva, F.B., Murodov S.M. and Sattorov O.B. // Greenhouse Vegetable Market Development Based on the Supply Chain Strategy in the Republic of Uzbekistan, International Journal of Supply Chain Management (IJSCM), 2019. №8 (5) p. 10.
3. Бахретдинова Х.А., Хасанов Б.У., Умаров С.Р «Экологический менеджмент» учебное пособие. ТИИМ. 2014 г.
4. Umarov, S.R. (2017). Features of innovative water management. / S.R. Umarov. TRANS Asian Journal of Marketing & Management Research (TAJMMR). Vol. 6, Issue 1, 2017, 45-53.20.

5. Umarov, S.R. (2010). Increasing investment activity portfolio in Uzbekistan. "Water management –prospects of development" / S.R. Umarov, U.P. Umurzakov // Collected articles of young scientists. Rivne, 2010. 128-130 p.
6. Umarov, S.R. (2019). Methodological bases definition of innovation for water development and investment efficiency in the system. International journal of research culture society. Volume -3, Issue -10, 117-123 p.
7. Durmanov, A., Kalinin, N., Drobyazko, S., Yanishevskaya, K., Shapovalova, I. (2019). Strategic support of innovative activity of modern enterprises. 34th IBIMA Conference: 13-14 November 2019, Spain.
8. Atakhanova N., Almuradova D., Khakimov G., Usmonova S., & Durmanov A. (2020). Values of a mathematical model for predicting the survival of patients with triple negative breast cancer depending on androgen receptors. International Journal of Pharmaceutical Research, 12(3), 695-704. [Electronic resource] – URL: <https://doi.org/10.31838/ijpr/2020.12.03.104> (Date of the application: 07.03.2020).
9. Durmanov, A., Kalinin N., Stoyka, A., Yanishevskaya, K., & Shapovalova, I. (2020). Features of application of innovative development strategies in international enterprise. International Journal of Entrepreneurship Issues, 1(24), 1-9.
10. Aliev Y.E., Kasimov, S.S., Ruzieva, D.I., Nigmatullaeva G.N., Abdurakhmanov P.M. Durmanov A.S. (2020). Agriculture provides sustainability issues of agricultural market development. International Journal of Psychosocial Rehabilitation, 24 (8), 7508-7529. [Electronic resource] – URL: <https://doi:10.37200/ijpr/v24i8/pr280764> (Date of the application: 07.03.2020).
11. Ubaydillayev A.N., Kholmuratova G.M., Umarov S.R., Muradov R.A., Durmanov A.S. (2020). Heat and Energy-Economic Analysis for Greenhouses of the Republic of Uzbekistan. International Journal of Advanced Science and Technology Vol. 29, No. 8, (2020), pp.3285-3298.
12. Durmanov, A., Bayjanov, S., Khodjimukhamedova, S., Nurimbetov, T., Eshev, A., Shanasirova, N. (2020). Issues of accounting for organizational and economic mechanisms in greenhouse activities. Journal of Advanced Research in Dynamical and Control Systems, Vol. 12, No 07-Special Issue pp. 114-126. [Electronic resource] – URL: <https://doi:10.5373/jardcs/v12sp7/20202089> (Date of the application: 07.03.2020).