CONCEPTUAL BASIS FOR INNOVATIVE POTENTIAL OF AGRICULTURAL PRODUCTION IMPLEMENTATION

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ABSTRACT

The article deals with institutional components and conceptual provision of implementation of agribusiness innovative capacity. It has been argued that the main problem in implementing innovative potential of agribusiness and low innovative activity of commodity producers consists in lack of consistent institutional support of innovative process. It has been established that for implementation of innovative development of agribusiness it is necessary to introduce an institutional mechanism with its inherent objectives, methods, tools and activity channels. Offered to determine an overall performance of food security as basis of strategy generation of agribusiness innovation development. It has been proved that prospects of innovative development of agribusiness are determined through the ability of institutional regulation to assure an outcome based on implementation of agro-innovations at different levels of organization as well as through the ability of institutional mechanisms to adapt regulatiory impacts.

Keywords: Agrarian Business, Innovation, Innovative Development, Innovation Policy, Strategy.

INTRODUCTION

Development of innovations in the sphere of agribusiness is a key factor of food security formation, economic growth of the national economy and increasing competitiveness of agriculture and quality of life of the rural population.

Food and Agriculture Organization of the United Nations (FAO) contemplates necessity of project financing in the area of agro industrial sector from the perspective of food security of countries worldwide.

Effective organizational forms of innovation activities in agrarian field are absent (agro-industrial science parks, agro-tehnological parks, agribusiness incubators, agro-industrial

territorial innovation centers, etc.) and that reduces or even completely eliminates the possibility of introducing domestic innovations there. Due to the lack of systemic foundations of agro-industrial production there are undetermined and inconsistent priorities faced by the industry; there are no results of innovative and structural reforms of agro-industrial sector. For activation of the innovative process and implementation of innovative potential of agribusiness it is necessary to change the conceptual approaches to perception of its nature as well as to development of effective institutional mechanisms needed for innovative development.

During the researchers of innovation development it is necessary to analyze views of scientists at this question. On the opinion of Schumpeter (2008), business processes have to be in existence by creation "*new combination of factors*" of manufacture and variety of innovation. We agree with opinion of outstanding scholar, in this way in agribusiness first of all is consist in recombination of conceptual physical material: implementation of new cultivars and hybrids of agricultural crops, broods of animals, veterinary medicines in agribusiness, starter material in food facility, etc. Foster (1987) determined that innovation-is a fight at the market between innovators or assaulters-that who try to make money changing the order of things and who that defend protecting their own present incomes. Although, agribusiness has millenary history, today in particular innovation in this area can provide a food security for almost 7 milliards person in the world. R. Solow, Nobel Prize laureate, came to conclude (1956) that rise in labor productivity due to scientific and technical progress is provided to 87%, while because of adaptation of reinvestment-only for 13%, so to an enterprise is necessary to activate innovation activity using its own resources. Santo (1990) thought, that innovation-is such social, technique or economic process, which through the practical use of ideas and inventions, leads to the creation of best-in-class products and technologies, and in the event that it is in the market, it can bring additional income. Hamel & Prahalad (2002) agree with him-innovations bring maximum profit if they are ahead of others on a global scale. Therefore, the motivation for obtaining additional income is the main material incentive for financing agro-industrial production in the private capital sector. While the state invests in this area of social production from the point of ensuring food security of the country's population. Drucker (2009) considered innovation as a special means of entrepreneurs, with the help of which they explore the changes taking place in the economy and society, for the purpose of using them in business or in various area of service. It was Drucker (2009) in his researches began to view innovation as a socio-economic occurrence. Innovation (pioneer work) is not so much a technical as an economic or social term.

ANALYSIS OF ACTUAL SCIENTIFIC RESEARCHES AND ISSUES

Theoretical and methodological aspects of state regulation and institutional impact on the economic dynamics have been developed in works of leading scientists: Dementyev (2011); Maievskyi (2003); Makarov (1997); Polterovych (1999); Nelson & Uinter (2002). Methodological aspects of institutional regulation of innovative development in agro-industrial field were studied by Kostyrko (2014); Sabluk (2010); Malik (2013); Fedulova (2013); Shpykuliak (2010); Scientific works of famous domesic scientists: Balian & Datsiy (2011); Kurylo & Shchubravska (2013); were devoted to problems of innovative development, institutional influence on the process of innovation in agro-industrial sector.

At the same time, all such issues as lack of significant progress on the path of innovative development, low innovative activity of manufacturers, necessity of conceptual supporting development, priority realization of innovative development contribute to further study of

problems regarding theoretical and methodological foundations and instruments of institutional regulation and formation of conceptual bases of the innovation policy in agro-industrial sector.

The purpose of this article consists in justification of conceptual basis of agribusiness innovative development.

RESEARCH TECHNIQUES

Theoretical and methodological basis of the study is a systematic approach to the conceptual basis of innovative development of agribusiness.

STATEMENT OF BASIC MATERIAL

Laying the groungwork of innovative development of the agro-industrial sector has been defined as one of the strategic priorities that must be implemented in a focused public policy with defined specification imperatives (Khmarskyi & Pavlov, 2016). However, an effective mechanism of innovative development activation in agro-industrial sector has not been formed. Decisions on certain measures concerning stimulation of innovative economic development in overwhelming majority has not been carried out despite the fact that there are numerous discussions proposed by the expert community, and financing measures, concessional taxation or direct lending have been often canceled.

The abovementioned problems require development of appropriate regulatory tools and consideration of priority actions on the basis of a target strategy of agricultural production innovative development. The priority measures to be considered when developing strategies should include: providing conditions for the functioning of the basic economic institutions, affecting the institutional environment of innovative development; development of program measures concerning the state innovation policy tools and optimization of branch and regional management; ensuring cooperation between the state, business structure, innovation policy formation and implementation; using tools to support and encourage innovation development, creation and support of innovative infrastructure, communications and information support. The main tasks to be solved in the process of transition to the innovative development of agricultural production consist in reproduction of scientific potential, promotion of agro-innovations development, enabling innovative environment backing, formation of activities aimed at development of innovative infrastructure of regional innovation policy.

The analysis of investment and innovative process in agricultural production allows us to create targeted development priorities that can be incorporated in a concept and strategy of innovative development of agricultural production. Taking into account the defined target priorities and strategic aims of innovative development we have developed a conceptual issue of institutional regulation of agricultural production innovation development. According to the defined issue strategic objectives of innovation development and its institutional regulation can be carried out in three stages:

1) Institutional support of innovative development, during which the agro-innovative institute will (through activation of inherent functions) facilitate adaptation of agricultural producers to formal rules that determine innovative development; institutional efficiency of the established infrastructure will be provided, motivational tools for innovation policy will work; innovation process will acquire integrity; innovative activity of agricultural producers will be provided with the help of financial resources from different sources.

2) Implementation of priorities of innovation development at the sector and in regions. At this stage the crucial role belongs to innovation infrastructure that will ensure the continuity of the stages of the innovation

process. At the same time regulating impulses and active government support aimed at promoting innovation in the context of regional and zonal level and strategic industries should enhance investment support of agricultural production innovative development.

3) Moving to the innovative development of the industry, a massive increase in innovative activity of agricultural producers. At this stage, in achieving all previous assignments, institutional regulation impact should be focused only on supporting and stabilizing institute's adaptive functions towards the promotion of the most needed agro-innovations.

The main ways of implementing the concept of institutional regulation in agricultural sector should include transformation of innovative model of behavior of agricultural producers in the dominant, stimulating competition as the main motive for spreading innovation, personnel and investment support of innovative development, creating conditions and the introduction of tools to stimulate innovative transformation, in particular, in fiscal, monetary, tariff and customs areas. Comprehensive institutional support of innovative development should implement incentives for innovation and diffusion of innovation, which in its turn will promote an innovative modernization of agricultural production.

Innovations in the area of agribusiness should contribute to improving food security as a component of the security of every country. At the same time, our view is that the calculation of the integrated indicator of food security will allow determining the "*narrow"* places of state regulation of this area, recognizing the directions of support from the state, private investors (Hilorme et al., 2018). Integral assessment should be carried out with the help of expert judgment. The experts were interviewed in the form of a standardized interview. The information obtained as a result of the enquiry allows in the course of further analysis to use the average expert estimates characterizing the importance of each indicator of the integral indicator for generalized objects and structures or influential interrelated factors in complex systems.

Calculation of weight coefficients for each subindex is carried out according to the following formula:

$$d_i = \frac{\bar{a}_i}{\sum_{i=1}^{n} \bar{a}_i} \quad (1)$$

where *i*-is the indicator that determines the state of the aggregated dimension/food security subindex, where *i*=(1, 2, 3 ... n).

a_i-an expert evaluation characterizing the importance of the i- indicator for generalized food security sub-indices/subindices.

d_i-is the weighting factor determining the degree of contribution of the *i*-index to the integral index of the component of food security.

The conducted research involving 30 experts in the field of APA development made it possible to determine such *i*-indicators of food security: the ratio of production and consumption of meat and meat products per person, per cent; ratio of production and consumption of milk and dairy products per person, per cent; ratio of egg production and consumption per person, per cent; per capita grain production per person, per tons; share of sales of imported food products through the trade network of enterprises, percent; the ratio of production and consumption of vegetables and melons and gourds per person, per cent; ratio of environmentally clean agricultural products per person; ratio without GMO-containing agricultural products per person; ratio of potato production and consumption per person, per cent; the ratio of production and consumption of oil per person, per cent.

Of course, the list of selected indicators depends on the specific consumption of the population of a particular country, the traditional culture of consumption of agricultural products, climatic conditions, etc.

But the very definition of the integral indicator allows to assess the country's food security and determine the strategies for innovative development of agro-industrial production. At the same time, the characteristic of the integral indicator is determined by the Harrington function, which allows determining the levels of the calculated integral indicator with the aim of forming an appropriate innovation development strategy.

Development and implementation of the concept and strategy of agricultural production innovative development must come from the key methodological imperatives that ensure their compliance with the conditions and evolutionary capacity. These imperatives include the following: 1) primacy of institutional innovations that form conditions for implementation of innovative development priorities; 2) institutional consistency in implementation of policy objectives that will provide vertical integration structure of regulatory measures and infrastructure development, which will be focused on horizontal interaction of the innovation process; 3) optimal combination of economic, social and environmental effects of introduction of regulatory influences; 4) ensured phasing in of innovative development program goals; 5) supporting integration associations and cooperative associations in agro-industrial sector; 6) primacy of competitive agricultural production development.

So, it is important that innovations will be considered not only as a goal but also as a means of ensuring competitiveness of regional agricultural production, which is essential for ensuring integrity of the institutional regulation of innovative development as well as for including a territorial component. This will require instruments combining sectoral and territorial stimulation of agricultural production innovative development and change of its application emphasis.

CONCLUSIONS

Worldwide globalization and increased competition cause development of an appropriate paradigm of agricultural production, which will be focused on provision of its innovative development.

From the point of view of system approach institutional regulation provides introduction of elements stimulating the process of innovation and these elements are aimed at growth of innovative activity of producers and development of the institutional environment. For this purpose, reasonable components and phases using program-based approach (implemented through national, sectoral and regional programs of innovation development) have been proved.

In order to ensure integrity of institutional regulation of innovative development tools we have proved instruments of innovation development at the regional level. At the stage of innovative production, the most appropriate tools are tools of innovation process direct influencing and supporting (targeted funding, infrastructure, information, staffing). At the stage of implementation and use of innovation there might be more effective instruments of indirect action (soft loans, subsidies, tax incentives). The given tool should be used systematically on the basis of the state innovation development programs and agricultural sector policies and programs of agricultural production innovative development in each region, taking into account its existing advantages and innovative potential.

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