

THE NOVELTY OF AGRICULTURAL SECTOR INVESTMENT PROJECTS

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Introduction

One of the major factors of agriculture competitiveness is innovations. The lack of support for science and the implementation of innovations can determine enduring technological backwardness of agriculture and food sector and herewith general technological backwardness of the country. Presently it is essential to integrate the innovations of agricultural and food sector and rural development sphere into general EU innovational strategy. While commenting on the meeting of Ministers of Economy of EU countries that took place in Austria, Krems, May 28–30, 2006, was titled “Village. Life. Future” and the main topic was “Innovations and Diversification: Main Factors of European Agriculture Competitiveness”, Minister of Economy of the Republic of Lithuania K. D. Prunskienė stated that EU innovation strategies that were being prepared had to be oriented towards not just advancement of separate sectors, but also they had to be directed towards agricultural, food sector and rural multifunctional development processes that would secure the rise of life standard (Prunskienė, 2006).

Agricultural, food sector and rural trades have to be as competitive as possible in markets, hence qualitative and quantitative innovational improvement became more significant.

Aim of the research: to analyze the processes of innovation development according to separate branches of Lithuanian Single Programming Document (SPD) 4 priority means.

Goals of the research: to determine the conception of novelty in agricultural sector; to analyze and estimate the condition of innovation development of agricultural companies according to separate branches of Lithuanian SPD 4 priority means.

Object of the research: legal, methodical and economical literature on innovations and their evaluation of impact and investment projects of separate economy modernizations according to Special Accession Programme for Agriculture and Rural Development (SAPARD) and Lithuanian SPD means.

Methodology of the research: analysis of economic literature, legal documents (Dėl ..., 2007; Įmonės..., 2006; Inovacijų..., 2006; Kulviecas, 1991; Lietuvos..., 2007; Žemės..., 2007) planned and factual all property forms of country companies' innovation development according to 2001–2006 separate SPD 4 priority means branch.

Methodological approach

Economic entities that wish to utilize EU support have to implement projects, which main goals would be directed towards the solution of problems that are characteristic to all EU countries: food protection and improvement of its quality, development of environment protection, more rational use of resources (energy), the increase of consolidation and integration with food and chemical industry to country and international extent, and to make innovations more active. It is necessary to determine criteria according to which one could distinguish usual daily operations of economic entities from their activities that are related to innovations.

This would allow evaluating multistage innovation influence aspects in a more qualitative way, determining underlying directions of innovation implementations, would help to increase clearness of EU and state support distribution and effectiveness of financing. When one establishes clear criteria, some projects could be reasonably compared to others and organizers of projects would be encouraged to strive for general and clearly defined results.

Innovation researches of agriculture companies were performed according to the most important regulations:

1. At the moment they accept widely used term that includes all innovation types: “Innovations are a successful commercial application of new technologies, ideas and methods providing new products to the market or improving existing products and processes”.¹

2. A statement that a project and economic entity are innovative is acceptable if during the predictive period of time an economic entity would produce a product or management process that, looking for technological point of view, are new or essentially improved comparing them to the new products of that sphere.

In order to distinguish purposeful underlying innovation promotion directions, first of all it is necessary to analyze and estimate existing innovation level of agriculture companies and developmental processes. Because agriculture production companies do not produce innovative products, but use innovative technologies and production means that were created, to evaluate their innovation one accepted assessment of their innovative elements (innovation influence product, technological processes, organizational reconstruction and for the implementation of scientific results).

In order to evaluate existing innovative level of agriculture companies and to describe processes of innovation development, they were analyzed according to separate means branches of SPD 4 priority and prepared projects for modernization of companies (to evaluate the innovation one also analyzed projects prepared for SAPARD program). 143 farmers and other business entities were objects of the research and respondents that provided applications according to state support

¹ RIS/RITTS Guide, European Commission; OECD; Program of innovation business

means: modernization of agricultural domain, processing of agricultural products and increase of value added, increase of economic value of forests in which one foresaw modernization of farm activities. The innovation level of analyzed investment projects of entities was estimated according to evaluation methodology of complex innovation on the system of 100 points. The base of which is the calculation of integrated innovative level rate (Inovaciju..., 2007).

Results of research

In order to withstand increasing competitive pressure and to enter new markets successfully, innovation processes and advanced technologies, hence economic entities that are innovative and oriented towards changes and usage of new knowledge are the base of economic increase and economy of the country. Unfortunately, as was stated in Increase of Innovation and Competitive Program that was prepared by Ministry of Economy, the activeness of Lithuanian companies in the development of innovations and advanced technologies is rather low. The same could be stated about agricultural entities. From more that twenty rates used by the European Commission to estimate innovation level of the states, merely some rates of Lithuania reach the average of EU countries. Compared to average expenses of EU countries for scientific research and development of technologies, Lithuanian business provides resources that are 10 times lower (in 2003 EU – 1.27%, Lithuania – 0.14% of GDP).

In conditions of economy market, innovations are an important factor in competitive work of economic entities. Economic entities that are not engaged into any innovative activities become, so to speak, armless in front of dynamic competitors. Agricultural sector is one of the most problematic economic sectors in Lithuania. The main problem of its economic entities is a lack of modern technologies. In the future merely those will remain who quickly and in an effective way master results of scientific-technological progress and will be oriented towards permanent innovative activities.

When Lithuania became a member of EU, it gained excellent possibilities to use support of EU structural funds for rural development and fishery, and encourage the implementation of innovative and technological transfer projects of economic entities.

With the purpose of an effective utilization of means of structural funds of the European Union has been developed, coordinated and on June 2004 it is approved Lithuanian Single Programing Document (SPD). The present document is the strategic document, in which the purposes and problems of structural funds and actions of the countries of members of EU are presented, strategy of development, specifies payments of financial assets. In to Lithuanian Single Programing Document (SPD) strategy is specified is presented by 5 priorities and carried out on one or several actions.

The state support 2004–2006 has made more than 660 million Litas received from structural funds of EU and means of the national budget of the Lithuanian Republic. Support of structural funds of EU for an agriculture and fisheries has

been directed on purchases of modern agricultural machinery, development of rural tourism, for modernization of processing of agricultural products, for preservation of forest, for creation modern, competitive and profitable fishing fleet and other purposes.

Applications on mentioned support on actions SPD started to accept in August, 2004 and up to the present term 2305 applications are received.

While analyzing the processes of innovative development of previous business entities that applied for state support according to various means (modernization of agriculture domains, processing of agriculture products, increase of value added, and increase of forest economical value) in investment projects and one determined innovation level of every project (table).

Table. Innovations of companies of agricultural sector according to the means of priority 4 of separate Lithuanian Single Programming Document (SPD), 2004–2006

SPD 4 priority means	Activity sectors	Number of projects	Limits of innovation values	Average score of innovation
Investment into agricultural domains	Dairy animal husbandry	26	2–16,4	9,6
	Beef cattle husbandry	4	2–17,6	13,2
	Cereal, flax, colza growing	43	2–12,4	6,8
	Gardening	7	2–12,4	6,8
	Vegetable-growing	4	2–12,4	6,8
	Mushroom growing	1	20	20
	Potato growing	3	2–12,4	6,8
Processing of agricultural products and improvement of marketing	Meat	3	2–26,4	16,3
	Milk	1	14,6	14,6
	Cereal	1	6,4	6,4
	Fish	1	21,5	21,5
Forestry	Investment for the improvement of forest cutting, to improve wood preparation and rationalization.	2	1,6-10	5,8
Encouragement of rural tourism activities	Encouragement of rural tourism activities	13	2–16,2	9,2
Settlement of young farmers	Settlement of young farmers	26	2–24,3	19,3
	Settlement of young farmers + investments into agricultural domains	8	2–30	26,0
In total / average		143	–	12,7

Results of the research showed that many economic entities that participated in SPD 4 priority means are innovating according to minimal terms for innovations, depending on which organizational method of technologies or process has to be new for a farmer or other economic entity (Frascati..., 2002; Inovaciju plëtra..., 2007). Many of them just acquire and apply in their work an innovation that was produced by other companies (for instance, technical means), but they do not produce new products (and do not modernize them), do not participate on technological platforms (clusters), almost do not use scientific research that was gained from other companies, state or private scientific research organizations, do not use resources for personnel training that is related to new or important improved products or development and implementation of technological processes, do not employ high qualification people, do not participate in cooperation formation (machine rounds, cooperatives).

According to the results of the research, one may state that many of economic entities that participated in the research are ascribed to the category of technological successor, however in analyzed projects there were no usage of alternative energy sources and accurate (precise) usage of a farming system.

Consultations of research workers included the explanation of scientific research results of aforesaid institutions. Mentioned recommendations and implementation of scientific research results requires corresponding advanced technical equipment, hence in the projects of young farmers they in advance intended to obtain technologies that meet high quality and all technological and environment requirements.

When analysis of separate projects was performed in order to determine their innovation level, the following tendencies were revealed:

1) according to complex evaluation methodology that was prepared to determine the level of innovation, all analyzed projects were evaluated up to 20 points, i.e. low innovative;

2) innovation features can be seen in projects that used means to reduce deleterious influence on people and environment and in projects that used modern more economic technical means (tractors, combines, etc) and hence there they had an opportunity to use energy resources more rationally;

3) on the level of means the conception of innovation was the most thoroughly fulfilled by projects of agricultural product processing and marketing improvement; meanwhile in projects of agricultural production modernization, innovation was seen merely in bigger farm projects (in both agricultural companies and farms). The hypothesis was partly proved stating that big farms and companies and especially young farmers, who participated in means of investment into agricultural domains too, have a bigger potential of innovation. During the analysis one revealed a tendency that projects of bigger farms are more complex (and herewith innovative): they purchase several new cars and some of them, combined together and including essential manufacturing technological processes of a product;

4) it was stated that choosing a process ray, many applicants of big projects consulted scientific institutions (in crop production projects they consulted

scientists from Lithuanian Institute of Agriculture and Lithuanian University of Agriculture and discussed choices of new outdoor culture breeds, zero-tillage technologies, usage of liquid manure; in animal husbandry projects they consulted scientists from Lithuanian Institute of Animal Science, Veterinary Institute and Lithuanian Veterinary Academy about forage preparation and advanced technologies, high quality beef cattle breeding and milk quality improvement. Consultations of research workers mainly included the results of scientific researches of aforesaid institutions. Mentioned recommendations and implementation of scientific research results requires corresponding advanced technical equipment, hence in the projects of young farmers they intended to acquire high quality technology that meets all technological and environment protection requirements. Hence it can be stated that projects of young farmers completely meet all the requirements of innovations and should be promoted;

5) in other (smaller) project groups of investment means (smaller extent, related to specific aims), the representation of innovation criterion was episodic, however it promised a lot.

During the research they also found out what problems economic entities faced while implementing innovative activities. Respondents mentioned that the biggest disadvantage of new production and technology production was insufficient MTEP funding and that science was not oriented enough towards a particular user.

The certain problems are created also with ambiguous treatment of innovative activity in agricultural sector and its estimation besides only for investment projects of 2007–2013 the novelty projects is an obligatory condition for reception of the state support with a view of modernization of facilities and increase of their competitiveness.

Conclusions

1) In agricultural sector innovations signify a lot, however their implementation and estimation have specific features:

a) the modernization of agricultural production requires to apply produced innovations, hence their evaluation criteria are more directed into rational and effective usage of innovations;

b) there is much space for manufacturing of new products and effective implementation of produced innovations and their usage (technical production means) in projects of agriculture product processing and marketing improvement, therefore here more attention must be paid to evaluation of innovations and their implementation promotion.

2) One suggests evaluating projects that claim to EU support according to financial rates and the level of innovations.

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Summary

The article presenting the social – economical researches, accomplished of the purpose to determine the conception of novelty in agricultural sector; to analyze and estimate the condition of innovation development of agricultural companies according to separate branches of Lithuanian SPD 4 priority means. It been indicated, that when analysis of separate projects was performed in order to determine their innovation level, all analyzed projects were evaluated as low innovative. During the research they also found out what problems economic entities faced while implementing innovative activities. Respondents mentioned that the biggest disadvantage of new production and technology production was insufficient MTEP funding and that science was not oriented enough towards a particular user.

In agricultural sector innovations signify a lot, so one suggests evaluating projects that claim to EU support according to financial rates and the level of innovations.

Innovations, novelty, agricultural sector, investment projects.