

KAZAKHSTAN – THE LARGEST CENTER FOR INNOVATIONS AND AGROTECHNOLOGIES IN CENTRAL ASIA

***Abstract:** В статье рассмотрены проблемы, связанные с внедрением инновационных технологий в РК. Дан анализ инновационной деятельности предприятий Казахстана. Предложены дальнейшие пути развития инноваций и агротехнологий.*

***Keywords:** innovation, investment, infrastructure, the global economy, innovation activity*

Statement of the problem. The state leadership in the global agricultural market, such as the U.S., Western Europe, Canada, and China constantly is increasing the volume of investment in R & D. The innovative financing in these countries is a program of national importance. According to experts, the introduction of innovative technologies is estimated in average of 35-50%.

President of Kazakhstan in his message: "Strategy "Kazakhstan-2050" states that "... we can actively participate in large-scale international R & D projects. This will enable us to integrate the efforts of our scientists with Foreign R & D specialists on strategic innovative directions. Our aim is to become a part of the global technological revolution"[1].

In order to become an important center of innovation, using its intellectual potential, it is necessary to increase the annual investment in innovation to ten times or from 8 million to 80 million U.S. dollars to develop regional cooperation in research and development. Republic will have to establish farms, meeting the world standards. Agricultural innovative infrastructure of Kazakhstan should be integrated with these enterprises [2].

Against the background of economic globalization Kazakhstan faces with a number of challenges: raw material orientation of the economy, a weak integration with the global economy, poor industrial infrastructure, general technical and technological backwardness and lack of effective communication between science and production, the lack of funding for research and development work [3].

Despite the fact that the reforms carried out in Kazakhstan for quite a long time, there has been no measurable progress towards the formation of an innovative economy. For example, according to an index level of knowledge in the economy (KEI) for 2009 Kazakhstan lags behind such countries with similar levels of GDP per capita, such as Chile, Malaysia and Turkey. In other words, the level of competitiveness of Kazakhstan's economy is not high enough [4].

According to the index KEI (level of knowledge in economy), the country can be compared with countries such as Jamaica and Mongolia, where incomes are much lower. Moreover, the index Innovation System Kazakhstan can be compared with countries in Africa, such as Angola, Zimbabwe, where GDP per capita is for 18 times lower than in Kazakhstan [2].

In general, the assessment of the prevailing situation in Kazakhstan suggests that a national system of support and innovation is weak because there is no effective system of conversion of domestic and foreign knowledge in national wealth.

Analysis of the latest research and publications. In modern conditions, the innovative way of development of the agrarian sector of economy has three interrelated and interdependent directions: innovation in the human factor, which is possible only in the priority development of education, basic and applied research organizations that develop the innovations, as well as information and consultation system serving agricultural products manufacturers; innovations in biological factor associated with the development and the development of innovations that provide soil fertility, increase in crop yields and livestock productivity, and technological innovations which improve the technical and technological capacity of the industry through the use of energy-and resource-saving technology, high technology . It is important to the develop industries, which provide agriculture with the main means of production [5, 6, 7].

Theoretical and practical issues of innovation were investigated in following works of: B.Z.Milner [5], A. Zvereva [6] A. Petrikova [7] and many other academic economists.

The purpose of work. The main purposes of research on the development of innovation are:

- substantiation of need and an offer of practical ways of targets revision, mechanisms and rules relating to the creation and dissemination of intellectual resources, attracting investment, the use of creativity training, the formation of systems of motivation and incentives for learning and real innovation;
- disclosure of approaches to improve knowledge management technologies with the integration mechanism of strategic management and innovation.

Presentation of the basic material.

The analysis of innovative enterprises in Kazakhstan is characterized by low rates. As it is shown in Table 1, only 614 of the 10 723 enterprises of the country business entities have the technological innovation, and 467 companies in 2010 (table 1).

Table 1

Key indicators of innovative activity of enterprises in Kazakhstan in 2007-2011

Indicators	2007	2008	2009	2010	2011
The number of respondents, total	10889	11172	10096	10937	10723
Among them: with innovation	526	447	399	467	614
The level of activity in the field of innovation,%	4,8	4,0	4,0	4,3	5,7
Having no innovation	10363	10725	9682	10470	10109
Level of passive in innovation,%	95,2	96,0	96,0	95,7	94,3
The share of innovative products in GDP,%	1,19	0,69	0,51	0,66	0,85
Note - The data of the RK Statistics Agency [8]					

According to estimates of the susceptibility of industrial enterprises to the innovation process, which is characterized by the share of active enterprises, innovative activity of enterprises of Kazakhstan in 2011 amounted to 5.7% (figure 1).

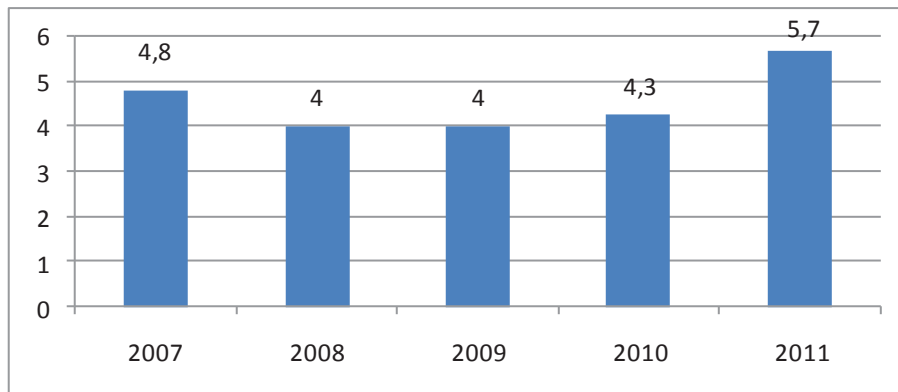


Figure 1 - Level of innovation activity of enterprises in Kazakhstan in 2007-2011, %

Note - The data of the RK Statistics Agency [8]

For comparison: the share of innovative enterprises in Germany is 80% in the U.S., Sweden, Italy, France about - 50% , in Russian Federation - 9.1%.

In 2011, the volume of innovative products in Kazakhstan increased significantly in comparison with 2010 to 65.5% and made \$ 1573 million (figure 2).

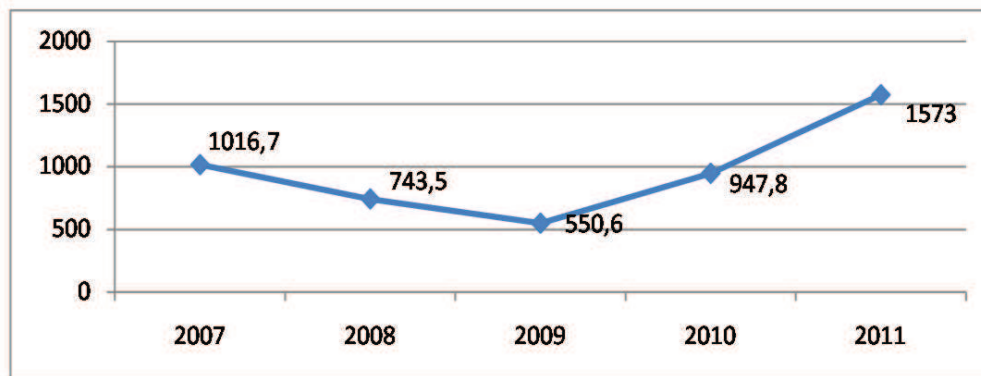


Figure 2 - The amount of product innovation, mln.USD

Note - The data of the RK Statistics Agency [8]

In this case, the innovative nature of services rendered by 95.5 million, which is 1.6 times more than in the previous year (table 2). This would suggest that Kazakhstan is heavily dependent on international developments and the implemented technologies to manage and upgrade the industrial base.

The volume of provided services of innovative feature, mln.USD

Indicators	2007	2008	2009	2010	2011
Provided services of innovative feature, total	50,0	121,6	92,4	59,0	95,5
Out of Kazakhstan	13,3	12,0	...	1,4	4,5
Of those into the CIS	0,9	1,8	...	0,06	0,05

Note - The data of the RK Statistics Agency [8]

The product among the innovative products industries the largest share of innovative products that was newly introduced or had been technologically changed to 83.2%, other 10.3% of innovative products and production which had been improved of 6.5% (figure 3).

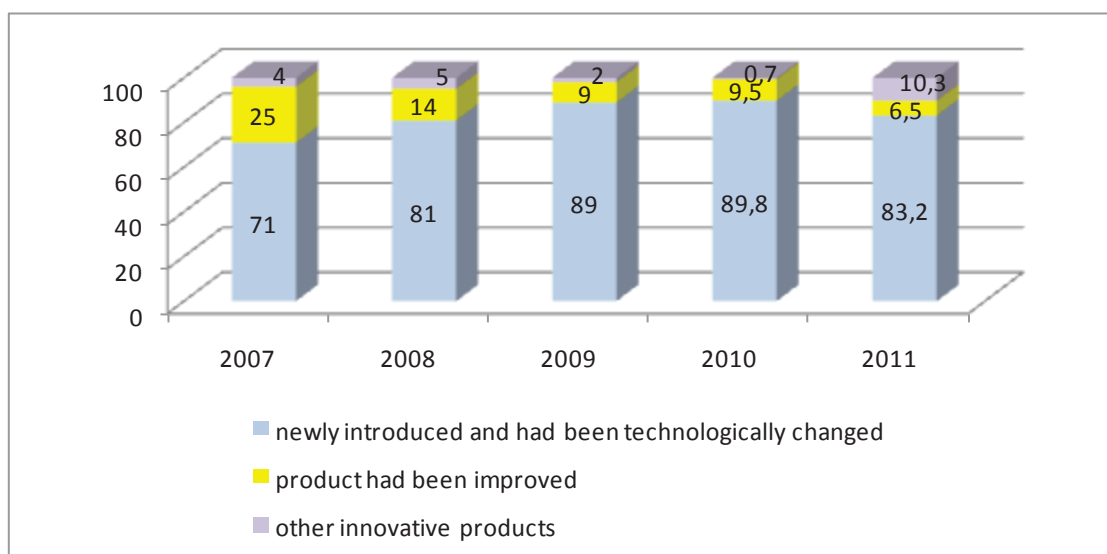


Figure 3 - Structure of innovative products in Kazakhstan in 2007-2011, %

Note - The data of the RK Statistics Agency [8]

In this regard, the current directions of innovative and agricultural technologies in Kazakhstan should be:

- development of the State program for the introduction of updated technologies in agricultural regions.
- the formation of innovative substructure.

- reforming of agricultural science.
- deepening the ties between science and production.
- the training of qualified staff for the innovation sphere.

Conclusions. Thus, today, Kazakhstan has the following objectives: saturation of the domestic consumer market and competitive domestic products and the gradual replacement of imports by domestic as well as ranking and maintaining a leading position in the global agricultural market.

On the other hand, the Kazakh agriculture must adapt to the global market and to make a qualitative leap in the development of the industrial system to occupy a leading position in the production and export of agricultural products.

On the other hand, in the agricultural sector it's necessary to develop the most relevant innovations by focusing on the priorities of agricultural policy.

Thus, at the present stage, a public support is a key factor in the transition to an innovative model of management in the agricultural department. The steady development of the agricultural department and agricultural science, as well as the legislative strengthening mechanisms to support domestic producers are able to create conditions for improving the competitiveness of agriculture and, thus, to improve the macroeconomic development of the country.

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***Аннотація.** В статті розглянуті проблеми, пов'язані з впровадженням інноваційних агротехнологій в РК. Дано аналіз інноваційної діяльності підприємств Казахстану. Предложено далішні шляхи розвитку інновацій і агротехнологій.*

***Summary.** The issues associated with the introduction of innovative agrotechnologies in Kazakhstan were considered in article. The analysis of innovation in enterprises in Kazakhstan was given. Further ways of development of innovation and agrotechnologies were offered.*

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РЕСУРСНЕ ЗАБЕЗПЕЧЕННЯ РОЗВИТКУ ВИРОБНИЦТВА СВИНИНИ

***Анотація.** В статті розглянуто проблеми ресурсного забезпечення розвитку виробництва свинини.*

***Ключові слова:** стратегія інвестування, джерела фінансування, ресурсний потенціал, ефективність використання ресурсів.*