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THE ESTABLISHMENT OF INNOVATION CLUSTERS, BRINGING TOGETHER SCIENCE AND INDUSTRY

In 2004, Kazakhstan launched the project "Diversification of Kazakhstan's economy through the development of clusters in the non-extractive sectors of the economy", which will lead to an increase in productivity, competitiveness and sustainable economic development of individual regions and the country as a whole. Clusters serve as points of growth of the domestic market and contribute to the increase in the international competitiveness of goods.

The main segments of the food industry are: the production of beverages, flour and cereal products, vegetable and animal oils and fats, meat and meat products, dairy products, fruit and vegetable processing. Cluster integration processes are successfully starting to work in them all over the world.

In the Republic of Kazakhstan, in particular in the food industry, there are certain prerequisites for the formation of similar clusters, which in their scale and potential would be able to significantly exceed Russian and even foreign in the future.

Integration relations in the food industry are aimed at effective use of the potential of enterprises, including information, production, scientific, trade, financial component, aimed at increasing the overall economic effect of the successful development of a particular branch of the food industry.

The use of resource-saving technologies has one important advantage - the cost of the manufactured product, as well as transport and operating costs are reduced. In addition, the savings accumulated funds can be used for the development of an activity.

Improving the competitiveness of production through cluster initiatives is currently a basic element of Kazakhstan's development strategy. Cluster initiatives implemented in recent years show that the high competitiveness of the country, based on the strong positions of individual clusters, is the engine of advanced technologies competing in the world market. In clusters, the close relationship between science and production reduces the time of introduction of scientific innovative technologies, contributes to the rapid solution of not only financial issues, but also to the provision of market demand products aimed at improving the population. The cluster model of the organization of innovative activity leads to the creation of an innovative product of joint activity and allows to accelerate its spread not only in the domestic but also in the international space. It should be noted that due to the unification of stakeholders in the innovation cluster formed not a spontaneous concentration of a variety of technological solutions or inventions, and creates a certain system of dissemination of technologies aimed at the formation of a sustainable consumer, including all the mechanisms of marketing promotion of goods in the market.

Taking into account the advantages of cluster technologies, a good example was the creation of clusters that combine advanced scientific developments of scientists of the Kazakh Academy of food and food producers (LLP «Ордабасы кус», «Амиран» factory, LLP «Племенное хозяйство Зеренда», LLP «FoodExco», LLP «Евразия Инвест ЛТД» etc.), that allowed to provide effective introduction of new innovative developments of scientists in production.

It should be noted that Kazakhstan has rich sources of raw materials, including milk of various farm animals (cow, goat, mare), dietary turkey meat, bee products, fruit, vegetable and cereal crops.

From the position of national and ethnic characteristics of food, the mare's milk is of particular interest, although previously mainly used for the production of saumal and koumiss. Taking into account the uniqueness of the chemical composition of mare's milk, its high therapeutic properties, specialists of the Kazakh Academy of Nutrition have developed children's and therapeutic-prophylactic products based on

it, which have been successfully introduced into production thanks to the established clusters that unite science and production.

For the first time in Kazakhstan, the production of dry mare's milk is put on an industrial basis with the use of new technologies that allow not only to improve its taste characteristics, but also to preserve its unique medicinal properties, while increasing its shelf life.

Thanks to the close union of scientists and producers of goat milk, for the first time in Kazakhstan new liquid and pasty products of children's and dietary food on its basis are developed and prepared for industrial production.

Along with the milk of various farm animals, of particular interest is turkey meat as a dietary raw material for the production of children's products and therapeutic-preventive nutrition.

Taking into account the high nutritional and biological value of turkey meat, the development of new products has allowed not only to expand the range of meat products with national content, but also to create products with targeted preventive properties, dietary orientation, easy digestibility for mass consumption, as well as for children and therapeutic-preventive purposes.

In recent years, interest in natural biologically active products of beekeeping has increased significantly. Bee products (honey, propolis, flower pollen, royal jelly) have extremely valuable healing properties; they are essential nutritional factors; they are aimed at the normalization of metabolic processes, improving the protective functions of the body and the quality of life in general. Honey has been successfully introduced into schools and is included in the diet of schoolchildren as a product of high nutritional and biological value, and bee products are successfully used in the prevention of a number of non-infectious and infectious diseases, as well as to increase the body's resistance to adverse environmental factors.

Bee products are one of the ideal means to create on their basis specialized products that carry not only nutritional functions, but also are unique means of prevention and body's defense increase.

Thus, the creation of innovative clusters, combining science and production, allowed for the first time in Kazakhstan to introduce scientific developments and organize the industrial production of children's and specialized food products, as well as products of mass consumption of dietary orientation with national content. The development of cluster associations and the creation on their basis of a wide range of children's and dietary food products is in unison with the long-term priority of the strategy of socio-economic development of the Republic – "Kazakhstan-2030", in which much attention is paid to the formation of a healthy lifestyle, namely proper, rational nutrition of the population. The solution of these issues can be successful in the active development and implementation of new products with increased nutritional and biological value, taking into account regional, national and ethnic characteristics of nutrition of both children and adults on dairy, meat, fruits and vegetables, food and other bases using modern science and production with their close mutually beneficial cooperation.

Thus, the management of food industry enterprises on the basis of the cluster approach is an actual and necessary process aimed at improving the competitiveness of enterprises in this industry, their transition to a new qualitative level, including international, while developing the national economy with the maximization of their own profits.

Creation and effective functioning of the enterprises of the food industry on the basis of the cluster approach assumes existence of the modern hi-tech industrial zone for placement of agricultural and processing productions in the territory of infrastructure of the cluster with a task of release of competitive modern production not only for internal, but also for the external market.

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Қазақ тағамтану академиясы, Қазақстан

ҒЫЛЫМ ЖӘНЕ ӨНДІРІС АРҚЫЛЫ ИННОВАЦИЯЛЫҚ КЛАСТЕРЛЕРДІ ЖАСАУ

Аннотация. Бұл жұмыс балалар мен мамандандырылған азық-түлік өнімдерін, сондай-ақ тұтыну тауарларын ғылыми тұрғыда дамытуға және оларды сүт, ет және азық-түлік концентраттары өндірістерінде кеңінен енгізуге арналған.

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ТОО «ОО Казахская Академия питания», Казахстан

ПЕРСПЕКТИВНОСТЬ СОЗДАНИЯ ИННОВАЦИОННЫХ КЛАСТЕРОВ, ОБЪЕДИНЯЮЩИХ НАУКУ И ПРОИЗВОДСТВО

Аннотация. В статье излагается значение кластерного подхода, объединяющего научные разработки и организацию промышленного выпуска продуктов, что позволяет достаточно эффективно решать вопросы не только производства, но и внедрения новых технологий. Работа посвящена научным разработкам детского и специализированного питания, а также продуктов массового потребления и их широкому внедрению на предприятиях молочной, мясной и пищеконцентратной отраслях промышленности.

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