

Қазақстан Республикасы Тәуелсіздігінің 30 жылдығына арналған «Сейфуллин оқулары – 17: «Қазіргі аграрлық ғылым: цифрлық трансформация» атты халықаралық ғылыми – тәжірибелік конференцияға материалдар = Материалы международной научно – теоретической конференции «Сейфуллинские чтения – 17: «Современная аграрная наука: цифровая трансформация», посвященной 30 – летию Независимости Республики Казахстан.- 2021.- Т.2, Ч.1 - С. 123-126

INNOVATIVE STRATEGY OF AGRICULTURAL INDUSTRY DEVELOPMENT OF THE REPUBLIC OF KAZAKHSTAN

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In the Message to the people of Kazakhstan named «Strategy Kazakhstan-2050» the President of the Republic of Kazakhstan N.A. Nazarbaev, noted that, in the conditions of the growing global demand for agricultural production large-scale modernization of agricultural industry is necessary. In this regard, one of important problems of the Kazakhstan economy is the problem of development of agricultural production and entry of its production into the world food market. To become the leader in the world food market of agricultural production to Kazakhstan it is necessary to increase, first of all, acreage, and also to provide considerable rise in productivity that can achieve, first of all, due to introduction of new technologies. Kazakhstan is the perspective, actively developing state which has high potential for creation of a food supply of world-class livestock production today. Therefore we need to create national competitive brands with emphasis on environmental friendliness. And, therefore, before agro-industrial complex the task to become the global player in the field of environmentally friendly production rises Kazakhstan. Kazakhstan needs to develop measures which will allow to increase by 5 times a share of agricultural production in GDP of the country by 2050 [1].

The agricultural industry of the Republic of Kazakhstan is in great need in modernization and inflow of new modern technologies that is confirmed by rather low performance level. Especially the branch crop production seriously lags behind in the majority of the main technological directions – the greatest lag in use of fertilizers and application of irrigation systems. Also in livestock production of Kazakhstan modern technologies spheres of use of systems of maintenance of the cattle and application of feed additives are practically not used [2].

Peculiarities of innovations in agriculture lie in the fact that they represent the implementation into economic practice the following: results of research and new plant varieties, breeds and species of animals and poultry, new or improved food products, new technologies in crop farming, cattle breeding and processing industries, new fertilizers and plant and animal protection products, new methods of prevention and treatment of animals and birds, new forms of organization and

management of various sectors of economy, new approaches to social services that improve the efficiency of production [3].

The main characteristic feature of the new innovation control system in agriculture should be an orientation toward the long term fundamental and applied research, diversification of operations, innovative activity, and maximum use of the creative activity of people. The most important factors in achieving a high level of innovative competitiveness is the concentration of production, development of new types of products, every possible improvement of the quality of products (services) and stimulation of new needs.

Possibilities of commercialization of domestic technologies for agricultural industry in the short term will be significantly limited to undeveloped system of institutes and innovative infrastructure, a limited stream of the new ideas for commercialization, the need for considerable volumes of risky investments, problems in the field of protection of intellectual property. Also there is no system of dissemination of knowledge which is obligatory the instrument of introduction of innovations in farms [4].

In world practice there is a numerous experience of successful modernization of branches in the absence of the developed national innovative system by means of localization of already approved foreign technologies. Therefore the transfer of the advanced foreign technologies is the most powerful instrument of economic development in developing states.

In processing of production of agricultural industry the greatest gain of release in 2015–2020 is expected in production of flour, cheese and cottage cheese, and also processing of meat. Production of sausages can grow by 2,5 times to 102 thousand tons by 2020 at the expense of an expansion in consumption and reduction of import. Production of cheeses and cottage cheese can grow to 66 thousand tons by 2020 at the expense of an expansion in consumption and import substitution. Production of compound feeds can grow to 632 thousand tons by 2020 due to growth of a livestock of the cattle. Production of pasta can grow to 161 thousand tons by 2020 due to export growth and import substitution. Production of flour can grow to 4,04 million tons by 2020 due to increase in export. Consumption of the prepared and tinned fish in Kazakhstan can increase to 80 thousand tons by 2020 due to growth of internal consumption and reduction of a share of import. Production of mineral waters can grow to 710 million liters by 2020 at the expense of an expansion in consumption. Production of juice can grow twice to 273 million liters by 2020 due to increase in internal consumption, reduction of a share of import and increase in export. Production of the processed and tinned vegetables can grow three times to 55 thousand tons by 2020 [5].

The agro-industrial complex of Kazakhstan is characterized by low labor productivity and small depth of processing of agricultural production. As the low level of the used technologies in livestock production leads to serious lag of Kazakhstan on the main indicators of efficiency. Though production of seed wheat can grow to 2,6 million tons to 2020 due to increase in acreage and import substitution. Production of seed potatoes can grow by 80 % to 196 thousand tons by 2020 due to growth of a share of the CX enterprises and farms. The market of

seed sugar beet – by nine times to 0,9 billion tenges by 2020 due to increase in acreage will grow most quicker. The market of means of protection of plants can grow to 46 billion tenges by 2020 due to transition to more intensive use of chemical means. In plans for development of a segment of mineral fertilizers – repeated increase in production, first of all, phosphoric and nitrogen fertilizers which production will lean on own resource base. As a result, production of mineral fertilizers in Kazakhstan can grow by 12,5 times to 137 billion tenges to 2020 at the expense of satisfaction of domestic demand and export growth to India, China and the European countries. The market of biological fertilizers can grow by 18 times to 13,9 billion tenges by 2020. The market of breeding livestock production can grow to 29 billion tenges by 2020 due to increase in a share of breeding herd. The market of veterinary medicines can grow to 13,5 billion tenges by 2020 due to growth of a livestock of the cattle and increase in costs of veterinary service. Production of the hinged agricultural equipment can grow to 20 billion tenges by 2020 due to import substitution [6].

Average annual costs of investments into irrigation systems in 2016-2020 will make 33-54 billion tenges. Annual investments into construction of livestock complexes can average 4 billion tenges a year by 2020. Annual investments into acquisition of the equipment for transportation and construction of logistic complexes for livestock production can average 1,2 billion tenges by 2020. Investments into acquisition of the equipment and construction of logistic complexes for crop production can average 1,2 billion tenges by 2020. The market of engineering services can make 21,6 billion tenges by 2020. The main gain by 2020 have to be in productions: mineral fertilizer, seed farming, biotechnologies, hinged equipment, combines and irrigation systems [7].

For development of production of means of protection of plants it is necessary to be focused on involvement of large foreign producers to Kazakhstan. There is a successful experience of functioning of models of adaptation of the technologies approved in the world: Korea Technology Transfer Center (KTTC) together with the state successfully supports a technological condition of the Korean industry at world level, the Agro-union – an example of the successful model «distributor of technologies», the company managed to adapt hi-tech foreign technologies for the domestic market and to earn on sale of technological production [8].

Use of the adapted foreign technologies would allow to create an available and effective innovative product for the market of the CIS. Localization of the technologies which are successfully approved in the world in the republic considerably reduces risks of projects, increases «a dry release» of successful projects, reduces realization terms in comparison with creation of spin-off: The centers of commercialization give advisory support during all cycle, financing usually happens only on pre seed-stage. Because of absence in the republic of necessary financial infrastructure, support of businesses at later stages is necessary for effective functioning. Expansion of financing up to a stage of industrial start will demand significant increase in financial means. Depending on opportunities on the basis of the Centers it is possible to develop in parallel some other the

directions on the basis of national researches and developments which will have the postponed effect: contract researches for the industry, licensing and creation of spin-off [9].

In world practice the Centers render the whole range of services and have two essentially different categories of clients: the research establishments wishing to earn on knowledge and opening and the companies wishing to order research and development. The Business model basis of «service of the industry» granting scientific infrastructure maternal research establishments, for carrying out the applied research and development necessary for the industry, and consulting support. The successful model of work of the center of a transfer of technologies on the industry, is realized in Germany, however Kazakhstan in the next years has no possibility of introduction of such model [10].

Also the «licensing and sale of technologies» model successfully works in the countries with the developed innovative infrastructure and great demand on technologies from the industry. Creation and support of backs-off of the companies – one of the most widespread tools of the center of a transfer of technologies, especially at early stages of existence of the centers.

Investments into ready foreign technologies the most powerful instrument of economic development in the developing and technologically lagging behind countries. Process of localization of technology does not demand the developed scientific base and can be introduced with assistance of the state. Many major technological directions in the republic cannot be realized on the basis of domestic scientific developments, but at the same time can be borrowed from abroad. Localization of the technologies which are successfully approved in the world in our republic considerably reduces risks of projects, increases «a dry release» of successful projects, reduces production conclusion terms [11].

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