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The agro-industrial complex of Kazakhstan: its main disadvantages and priorities

In the article the main shortcomings and priorities in the agro-industrial complex of Kazakhstan are discussed. In the conditions of a new global reality, priority is given to the accelerated development of the agrarian sector. In the next five years, the production and processing of agricultural products should become the main source of diversification and a driver of economic growth. The implementation of a new role of the agro-industrial complex will balance the country's sustainable development, increase labor productivity and ensure the improvement of the standard of living of the majority of the population. Rural inhabitants, leading subsidiary farms, will receive new opportunities for involvement in commodity production through large-scale cooperation and target state support. As a result of the research the main trends determining the further development of the agro-industrial complex of Kazakhstan are revealed. The results of the research can be used in predicting the development of the country's agro-industrial complex.

Keywords: agro-industrial complex, food products, agriculture, crop production, animal husbandry, food security, branch, industry.

Agriculture is one of the most important sectors of the economy of Kazakhstan. The agro-industrial complex of the Republic of Kazakhstan includes industries that have close economic and industrial relations, specializing in the production of agricultural products, their processing and storage, as well as providing agriculture and the processing industry with the means of production.

The agro-industrial complex (AIC) is an important component of the economy of our country, which includes branches for the production of agricultural products and their processing and delivery to the consumer, as well as provides agriculture and the processing industry with the means of production.

In the structure of the agro-industrial complex there are three main areas, or groups of branches and industries:

– agriculture (farming and animal husbandry), forestry and fisheries;

– industries processing agricultural raw materials, food processing, light industry, cotton and wool;

– industries that produce means of production for agriculture and agricultural processing industries (agricultural engineering, engineering, equipment for food and light industry, mineral fertilizers, etc.). This area includes servicing production, providing procurement, storage, transportation and sale of agricultural products from point A to B.

The current state of the agro-industrial complex depends on many factors — the state development strategy, the level of financing, the technical capabilities of production, the historical conditions of development.

The agro-industrial complex of developed countries is, as a rule, large commodity farms (plantations, farms, hacienda, etc.), using modern means of production to the maximum extent at all stages of economic activity — from field to storage, processing and packaging ready for consumption products. The productivity of agricultural farms in developed countries is determined by significant investments per unit area, as well as the widespread use of scientific and technological progress.

The basic sector of the domestic agro-industrial complex is an agriculture, which belongs to one of the main vital sectors of the national economy, which has the maximum production and labor potential of the complex. It creates the necessary conditions for the reproduction of labor power, which are the only factors of production capable of creating surplus value. Agricultural products are the main source of life benefits of the population; A distinctive feature of this product is that it cannot be replaced with other types of products, reproduced in other areas of the agro-industrial complex, it has a limited shelf life.

The agro-industrial complex, being a complex socio-economic system, should be recognized as an essential element of the national economy, the main objectives of which, in our opinion, will be:

– meeting the needs of the population at the level of scientifically based standards in food products and articles of mass consumption from agricultural raw materials;

– production of such a quantity of agricultural products of adequate quality to create a food reserve for many years, which will ensure the food security of the country, i.e. independence from the import of basic consumer goods, especially meat (poultry), sugar, vegetable oil, etc.;

– ensuring an appropriate level of efficiency of the agro-industrial system.

Meeting the economic and social needs and interests of agricultural workers (building schools, kindergartens and hospitals) is one of the most important priorities of the first president of the Republic of Kazakhstan.

Agriculture is the main link in the agro-industrial complex. It provides more than half of all agricultural products in Kazakhstan, concentrating about 70 % of its production fixed assets. Agriculture consists of two groups of industries: crop production (farming) and animal husbandry with such sub-sectors as grain farming, fodder production, industrial crops production, gardening, vegetable growing, cattle breeding, sheep breeding, poultry farming, fur farming, pond fish farming, etc.

Crop production produces more than half of all agricultural products of the country, being the leading branch of agriculture, since the level of animal husbandry largely depends on its development. Cereals employ more than half of the country's acreage. During the years of the economic crisis, the area under crops was reduced several times, and a large amount of erosion appeared on the present earth. As well as a decrease in mineral fertilizers and a decrease in the fleet of agricultural machinery contributed to a reduction in the collection of grain crops and a decrease in their yield. Among livestock breeding cattle breeding is of paramount importance. Dairy and dairy-meat cattle breeding is located, firstly, in suburban villages, to the consumer, and secondly, in villages growing juicy green fodder, contributing to the growth of milk productivity. The main task in the livestock industry is the creation of conditions for the products in terms of volume and quality, corresponding to the population of the country, nutritional standards and at affordable prices, ensuring both the profitability of its production and commensurability with the income of the majority of the population. If earlier the main task was to get as many products as possible, almost at any cost, now the main criterion was the competitiveness and break-even of the industry. The decline in cattle numbers in recent years does not indicate a curtailment of the livestock industry. The culling of livestock, including cows, occurs in agricultural enterprises with low animal productivity and unprofitable livestock production. Therefore, special attention in animal husbandry is paid to the creation of highly productive dairy herds using decades of accumulated domestic and foreign breeding resources [1].

The country's agro-industrial complex includes about 65 sectors and sub-sectors. To concretize measures in the most promising areas and strengthen regional specialization based on a detailed analysis of the sectors and subsectors of the agro-industrial complex, 15 promising competitive sectors were selected (production, export of grain and deep processing products, production and export of meat and meat products, poultry farming, production and processing of oilseeds, production and processing of fruits and vegetables, the production of milk and dairy products, the production of white sugar for sugar beet, production and export of wool and products of its deep processing, development of aquaculture and processing of fish products, production and processing of pork, development of horse breeding in meat and dairy areas, with further production of finished products, development of camel farming and its processing, development of maral breeding to meet needs of pharmacy, the development of beekeeping to meet the domestic needs of the population and pharmacy, production and processing of cotton). Of these detailed master plans 8 of the most priority sectors, which set clear guidelines and indicators for entrepreneurs, financial institutions, government bodies and social-entrepreneurial corporations when implementing investment projects, were developed. Volumes of budgetary funds allocated for the development of the agro-industrial complex grow annually. Thanks to the investment policy of the state, food security projects and the development of export potential are being implemented, primarily at the expense of the funds of the institutes of the National Holding «KazAgro» JSC.

The country's agro-industrial complex still has a number of shortcomings — low rates of structural and technological modernization of the industry, an unsatisfactory level of development of the market infrastructure, small agricultural production, financial instability of the industry, insufficient private investment in the development of the industry, a shortage of qualified personnel, etc. Modern AIC is in a difficult financial and economic state: unprofitable agro-industrial enterprises operate in the industry, production costs remain high, payable accounts are not reduced. In addition, the main production assets are extremely worn out, there is an acute shortage of working capital, the necessary methods of technological renewal of production capacities are lacking, and the mechanisms for conducting business activities of agricultural enterprises using modern production technologies, management and organization are not effective enough [2].

Consequently, one of the main tasks of the supporting blocks of the innovation system of the agro-industrial complex is to create favorable conditions for the formation of a fund of innovations and their development in production while smoothing the existing differences between the results obtained in production and the potential of scientific and technical developments. This refers to both the available and accessible quantitative set of innovations to consumers, and their ability to improve production, economic and other indicators of agro-industrial activity.

AIC is faced with the task of increasing 2.5 times the productivity of labor and exporting processed products. To accomplish it, the Ministry's main efforts and resources are focused on nine key areas:

– availability of financing for subjects of the agro-industrial complex;
– availability of markets and export development;
– effectiveness of state control and supervision;
– tax improvement;
– science, education and knowledge dissemination;
– digitalization of the AIC;
– availability of technology;
– efficient use of water resources;
– sustainable management of biological resources.

For each direction, measurable indicators and specific measures are defined. Thus, it is proposed to reload agrarian science mainly on the introduction of the best available technologies existing in the world, and not on the invention of varieties and breeds of animals.

There are three universities and 23 research institutes in the system of Ministry of Agriculture. It was decided to halve their number due to consolidation. It is necessary to overcome the isolation of science from real production. Leading and scientific personnel will be selected strictly according to the principle of progressive thinking and focus on the needs of manufacturers in increasing productivity and competitiveness. As part of the digitalization of the agro-industrial complex, the main focus will be on introducing elements of precision farming and smart farms, from which the greatest effect is expected. At the first stage, it is necessary to create electronic maps of fields with geo-location, vegetation, agrochemical, hydrogeological, land-improvement and meteorological layers.

In 2018, the sown area of more than 21.8 million hectares of crops; grain crops are 14.7 million hectares, including wheat — by 11.4 million hectares with a reduction to the level of 2017 of 0.5 million hectares; oilseeds about 2.6 million hectares.

A set of measures for export growth:

– Firstly, achievement of the objectives of exporting products, a register of priority export markets and agricultural products will be published, indicating the requirements of importing countries, an information and analytical database will be created (constantly updated) for the export of agricultural products;

– Secondly, specific measures will be taken to stimulate the production, branding, certification and promotion of domestic organic and halal products to foreign markets;

– Thirdly, a logistics map of the agroindustrial complex will be developed to solve transport and logistics issues. Work will be intensified in consultation with the importing countries of veterinary and phytosanitary requirements.

The coordination with Iran of requirements for beef and live cattle is being completed; a veterinary certificate for livestock export for slaughter and breeding is being prepared with Saudi Arabia. Negotiations with Israel, Kuwait, Malaysia, Japan, South Korea and the EU are planned.

The Ministry of Agriculture has initiated the introduction to the staff of the embassies of the Republic of Kazakhstan of a representative (adviser, attache) on the issues of agriculture in priority countries (China, Iran, France, Italy, Australia and Canada).

In animal husbandry, the cattle and sheep breeding industries should become strategic directions for development. In order to increase meat exports, the approach to the development of cooperation will be revised. The development of small and medium farmers will be encouraged in cooperation with large feedlots, which provide them with product sales, technology, knowledge and access to finance.

This new type of cooperation will make it possible to economically unite both large and small subjects of the agro-industrial complex using elements of horizontal and vertical cooperation [3].

The republic already has similar merger schemes, for example, in beef cattle breeding — Aktyubinsk region «Aktep Group», Akmola region «KazBif LLP», Kostanay region «Sever Agro» LLP and «Ter-

ra» LLP, in the production of milk Karaganda region «Natizhe» LLP, East Kazakhstan region «Vostok-Milk» LLP and others.

Currently, the Ministry, together with the business and akimats of the regions, has developed the proposed models for the development of anchor agricultural cooperation. For example, in beef cattle breeding, the anchor enterprise will be an export-oriented feedlot, which will involve existing peasant farms, agricultural cooperatives and other agricultural producers in beef production, by distributing breeding bulls for pedigree transformation, transferring breeding stock for rearing and maintenance, forward purchase of feed stock, and will also provide guaranteed purchases of farmed bulls at the market price.

One such example is the Meat Cluster, created in Aktyubinsk region on the basis of the anchor enterprise of the «Aktep Group» of companies, which today includes a breeding reproducer for 10 thousand heads, an export-oriented feedlot for 13 thousand cattle, a modern meat processing complex for 7.2 thousand tons of beef per year and feed mill at 20 thousand tons per year.

A single cluster has been formed around this one, uniting more than 300 medium-sized farmers and farm workers, encompassing all technological chains: breeding livestock, fodder production, modern livestock feeding, processing, and marketing. The basic principle of the cluster is the co-operation of the capabilities of all participants to achieve common goals. The results speak for themselves — having formed in 2011, the company achieved an increase in the cluster's total revenue eight times from 500 million tenge to 4 billion tenge. In addition, over six years, the production of beef increased from 323 tons to 3,078 tons (10 times), the number of pedigree livestock increased from 2,497 to 9,725 heads, commercial cattle — from 6.7 thousand heads to 25.7 thousand heads, the use of pastures from 231.3 thousand hectares to 458.3 thousand hectares.

A comprehensive discussion of the experience of the Meat Cluster on the basis of «Aktep Group» on January 31 of this year with the participation of representatives of akimats and agricultural regions, industry unions and foreign experts showed that this practice can be effectively replicated with the support of the state of the necessary programs. In dairy cattle breeding, an anchor will be a milk processing plant, which will create the infrastructure and build logistics for milk procurement, monitor the quality of milk, and provide services for the distribution of animal feed. Also, in order to provide the necessary feed base, milk producers will interact with feed producers. In both cases, the anchor enterprises will accompany the issues of quality control of the products produced, provide zootechnical and veterinary services and organize training in the application of modern technologies.

The proposed models for the development of anchor agricultural cooperation are an effective tool for increasing labor productivity and reducing the cost of agricultural products. In anchor agricultural cooperatives, a binding to an anchor enterprise is envisaged, which will independently build relationships and financial regulation with other market participants.

Entering the top 5 global meat exporters.

The first necessary steps towards the development of export potential have been made and there are concrete results, and, most importantly, the necessary successful experience has been gained. Thus, the implementation of a program to develop the export potential of cattle meat was the impetus for creating the foundation of beef cattle breeding in the country — an infrastructure was created for exporting 60 thousand tons of high-quality beef, namely:

– 86 reproducers were created with the delivery of 55 thousand heads of cattle (only 1 % of the total livestock) — the share of breeding livestock was doubled by 304.3 thousand heads;

– the number of small and medium-sized farmers participating in the «Sybaga» program reached 16 thousand, the share of livestock in peasant farms increased from 5 % to 35 %, ensuring the fastest growth of SMEs in the industry in 5 years;

– 34 industrial feed platforms and 12 meat processing plants were created, with a total capacity of 60 thousand tons for export;

– a legislative framework and state support measures for the functioning of the industry have been created.

The experience shows that Kazakhstan in the near future has real chances to enter the top 5 world exporters of meat, based on the development model of small and medium-sized farmers in cooperation with large feedlots in regional clusters, which provide them with product sales, dissemination of technology, knowledge and access to finance [4].

Tasks in the field of water resources, land relations.

Under the State Program for the Development of the Agrarian and Industrial Complex, in the current year, 8.8 billion tenge was allocated from the republican budget to ensure the maintenance and operation of transboundary and republican water facilities.

In 2018, the construction and installation work will be completed on the remaining 8 of the 15 emergency reservoirs. It is planned to build 22 new reservoirs, which will allow in the future to put into circulation 160-180 thousand hectares of irrigated land. In order to preserve the ecological state of water bodies, environmental releases in the amount of 1.4 km 3 will be continued.

Also, it is planned to develop the concept of a Single operator for water supply and sanitation of rural settlements. In terms of forestry, wildlife and specially protected areas in the framework of the third modernization of the agro-industrial complex, measures are taken in two directions: sustainable management of biological resources and digitization of the agro-industrial complex.

The development of a map for the development of a network of specially protected natural territories has begun. A step-by-step plan to increase the volume of forest reproduction and afforestation by 10.0 thousand hectares annually will be approved together with the local executive bodies.

To save sturgeon fish species, the issue of allocating funds from the republican budget for the development of design estimates for the reconstruction of the Ural-Atyrau sturgeon hatchery is being worked out. The reconstruction of the plant will allow creating conditions for the maintenance of broodstock of sturgeon fish and increase the production of young sturgeon in the natural environment from 3.5 to 6 million pieces per year. In general, a systematic solution to the issues of conservation and sustainable use of biological diversity will be reflected in a separate section of the Program for the development of the agroindustrial complex until 2021.

In the field of land management in 2018, a number of tasks are planned, aimed at improving the efficiency of land use. In particular, in order to strengthen state control of agricultural land, it is planned to create a geoportal for conducting monitoring of farmland based on satellite imagery data.

Within the framework of the State Program for the Development of the Agrarian and Industrial Complex, work is continuing on conducting soil, geobotanical surveys and soil valuation, the results of which are intended to create electronic soil, geobotanical maps.

Government began work on the land fund audit on industrial lands and specially protected territories on a total area of 10 million hectares. As part of the audit, work will continue to establish the boundaries of 1,208 settlements.

International experts gave a recommendation on the creation of a single legal and land cadastre in Kazakhstan. This year, it is planned to develop conceptual approaches to the creation of the Unified State Real Estate Cadastre (USREC), which will allow Kazakhstan to raise its level in the World Bank's Doing Business rating [4].

In addition, within the framework of the project «National Spatial Data Infrastructure» (NSDI), it is envisaged to establish a new state coordinate system and create on its basis a single open digital map of Kazakhstan, which are included in the State Program «Digital Kazakhstan». Also, today, changes are being made to the current Rules for organizing and conducting tenders (contests, auctions) for the sale of land plots or the right to lease land plots in electronic form, ensuring the conduct of tenders on the web portal of the State Property Register. Work has begun on the collection and analysis of proposals for the further improvement of legislation in the sphere of regulating land relations.

According to the results of 2018, the regional departments of agriculture in the current year, grain crops will be removed from an area of 15.0 million hectares, including wheat — 11.1 million hectares. This is, respectively, 0.3 million hectares and 0.8 million hectares less than in 2017. Harvesting areas of oilseeds is 2.8 million hectares, which exceeds last year’s level by 0.4 million hectares (Table 1).

In general, the gross grain harvest in the republic is projected at 20.0 million tons. Oilseed production is expected to reach 2.3 million tons (Table 2).

These volumes allow bringing the export potential of grain to 9.0 million tons, oilseeds — up to 1.0 million tons, to provide feed and oil processing enterprises with raw materials.

Table 1

Harvesting areas of grain and oilseeds in the 2018 harvest

Fields	Graincrops		Oilseeds	
	area, thousand hectares	(+,-) by 2017	area, thousand hectares	(+,-) by 2017
Akmola	4316,6	11,2	279,0	9,8
Aktobe	442,6	53,7	48,5	13,7
Almaty	448,6	-0,8	171,2	0,0
East Kazakhstan	539,9	-17,9	434,1	6,6
Zhambyl	300,4	25,6	93,9	4,1
West Kazakhstan	244,8	0,6	51,2	-14,1
Karaganda	814,7	20,0	14,3	-0,3
Kostanay	4060,3	-120,6	428	90,9
Kyzylorda	95,3	-2,1	10,3	3,5
Pavlodar	729,0	53,6	214,9	17,9
North Kazakhstan	2801,0	-289,6	975,9	266,3
Turkistan	238,5	-20,3	108,8	-11,5
Total	15031,3	-279,4	2825,3	382,4

The Ministry of Agriculture of Kazakhstan is confident that the implementation of nine key areas of work will achieve the desired results and bring the agro-industrial complex to one of the sustainable leaders of the domestic economy.

Table 2

Harvesting grain and leguminous crops for 2018

Areas	Harvesting area, thousand hectares	Removed, thousand hectares	In %	(+,-) by 2017	Threshed grain, thousand tons	Productivity, cwt / ha
Akmola	4316,6	1997,5	46,3	-1595,8	2057,4	10,3
Aktobe	442,6	368,0	83,1	21,6	370,3	10,1
Almaty	448,6	356,6	79,5	6,2	794,3	22,3
East Kazakhstan	539,9	267,2	49,5	-205,6	427,8	16,0
Zhambyl	300,4	279,9	93,2	20,7	673,9	24,1
West Kazakhstan	244,8	244,4	100,0	-0,4	163,5	6,7
Karaganda	814,7	405,9	49,8	-69,8	447,2	11,0
Kostanay	4060,3	2782,0	68,5	-804,6	2893,2	10,4
Kyzylorda	95,3	52,5	55,1	11,5	227,1	43,3
Pavlodar	729,0	387,0	53,1	-201,6	441,1	11,4
North Kazakhstan	2801,0	1549,7	55,3	-936,9	2291,5	14,8
Turkistan	238,5	238,5	100,0	21,5	418,8	17,6
Total for Republic	15031,3	8929,2	59,4	-3707,5	11206,1	12,5
Regions						
South	1082,8	927,5	85,7	59,9	2114,1	22,4
Western	687,0	612,4	89,1	21,2	533,8	8,7
East	1268,9	654,2	51,6	-407,2	868,9	13,4
North and Central	11992,6	6735,1	56,2	-3381,5	7689,3	11,4
Total in the Republic	15031,3	8929,2	59,2	-3707,5	11206,1	12,6

According to the generated data, there are 1345 active processing enterprises in the Republic of Kazakhstan. The priorities of the types of processing, which are represented by 435 enterprises, are the processing of milk, meat, hides, wool, oilseeds, cereals, fruits and vegetables, sugar beets, potatoes. According to them, a clear map was developed for the location of agro-processing enterprises for 2018–2021 [5].

There are plans to create 31 mini-centers for the processing of milk, the so-called cheese factory. Also, included are programs to create 892 items for the procurement of raw materials, of which 821 are for livestock products, 71 are for crop production. For the development of agro-processing all sectoral measures will be involved — the promotion of processed products through the export center, as well as diversification in crop production for the production of demanded raw materials.

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С. Ержанова, К. Жаксыбаев, Л. Комекбаева

Қазақстанның агроөнеркәсіптік кешені: оның негізгі кемшіліктері мен басымдықтары

Мақалада Қазақстанның агроөнеркәсіптік кешеніндегі негізгі кемшіліктер мен басымдықтар талқыланды. Жаңа жаһандық шындық жағдайында аграрлық сектордың қарқынды дамуына басымдық берілді. Алдағы бес жылда ауыл шаруашылығы өнімдерін өндіру және өңдеу әртараптандырудың негізгі көзі және экономикалық өсудің жүргізушісі болуға тиіс. Агроөнеркәсіптік кешеннің жаңа рөлін жүзеге асыру еліміздің тұрақты дамуын, еңбек өнімділігін арттыруға және халықтың көпшілігінің өмір сүру деңгейін жақсартуға мүмкіндік береді. Ауыл тұрғындары, жетекші қосалқы фермалар кең ауқымды ынтымақтастық және мақсатты мемлекеттік қолдау арқылы тауар өндірісіне қатысу үшін жаңа мүмкіндіктер алады. Зерттеу нәтижесінде Қазақстанның агроөнеркәсіптік кешенін одан әрі дамытуды анықтайтын негізгі үрдістері анықталды. Зерттеудің нәтижелері еліміздің агроөнеркәсіптік кешенінің дамуын болжау үшін пайдаланылуы мүмкін.

Кілт сөздер: агроөнеркәсіп кешені, тамақ өнімдері, ауыл шаруашылығы, өсімдік шаруашылығы, мал шаруашылығы, азық-түлік қауіпсіздігі, өнеркәсіп.

С. Ержанова, К. Жаксыбаев, Л. Комекбаева

Агропромышленный комплекс Казахстана: его основные недостатки и приоритеты

В статье рассмотрены основные недостатки и приоритеты в агропромышленном комплексе Казахстана. В условиях новой глобальной реальности приоритетное значение отводится ускоренному развитию аграрного сектора. В ближайшие пять лет производство и переработка сельхозпродукции должны стать основным источником диверсификации и драйвером экономического роста. Реализация новой роли АПК сбалансирует устойчивое развитие страны, увеличит производительность труда и обеспечит повышение уровня жизни основной части населения. Сельские жители, ведущие подсобные хозяйства, получат новые возможности для вовлечения в товарное производство через масштабную кооперацию и целевую государственную поддержку. В результате исследования выявлены основные тенденции, определяющие дальнейшее развитие агропромышленного комплекса Казахстана. Результаты проведённого исследования могут быть использованы при прогнозировании развития агропромышленного комплекса страны.

Ключевые слова: агропромышленный комплекс, продовольственные товары, сельское хозяйство, растениеводство, животноводство, продовольственная безопасность, отрасль, промышленность.

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