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The development of agribusiness logistics as a factor of expansion the food and fiber market

The article deals with the concept of «logistics» and «agribusiness logistics». It marked the role and importance of logistics in agribusiness food security. The basic principles and conditions of the logistics system is indicated. For such agrarian countries as Kazakhstan indepth study of agribusiness logistics and study it at the state level results from social needs is an important issue. The reason is that for local farmers to ensure availability of public services market, reducing intermediation between producers and consumers, the formation of stable prices of agricultural products, creation of direct links between the consumer and the rural entrepreneurs, improving the quality of socio-economic status of the rural population, the saturation of the internal domestic market production, reducing imports, transportation of agricultural products, providing quality products at affordable prices due to the expansion of marketing, services and other aspects are very important for agriculture. The article deals with the role of agricultural logistics in solving the above problems. Modern state agribusiness logistics in Kazakhstan is illuminated. A dynamic analysis of the share of individual groups and types of goods in the food industry of Kazakhstan's total imports and exports was conducted. According to the latest production of the most consumed types of food and their consumption were taken as a basis and their comparative analysis carried out. The level of self-secure on internal market is measured. The share of imports on certain types of food products is defined. On the basis of quantitative and qualitative analysis of food secure logistical problems in the field of agriculture is defined and the systematic proposals for their solution is offered.

Keywords: logistics, fruit logistics, agriculture, logistic systems, food industry, national economy, food, consumers, agricultural producers, the volume of export and import of food, agriculture, and entrepreneurs.

Ever known among the specialists only before the «logistics» concept is often applied today in all areas of production. Later that requires research broad public values, has become the valuable industry. In the construction of a very rapidly developing field of road construction in the Republic of Kazakhstan logistics and rail transportation, which are considered as the most studied areas. However, further improvement of the transit potential of the country, improved commodity transport, regulation of supply and demand for labor, the gap between domestic and food under the full provision of the domestic market of logistics issues is the question of the day. The role of logistics in reducing the deficit in agrifood is high, daily in providing the population with quality and affordable products, especially food availability, and domestic food.

In 2014 «Nurly Zhol – path to future» Message of president logistics outlined as the one key directions of development. The role of the state in his address stressed the need to establish persistently logistics [1]. Because recently in the case of the world economic situation, geopolitical crises, falling commodity prices on world markets effective logistics management of material needed for the development to increase of competitiveness of domestic producers, development of rural shareasale, food to reduce imported products, flows to address some issues. Therefore, a priority for the development of the national economy and logistics is regarded as one of the priorities of forced industrial-innovative development of the country.

Although the word logistics is familiar to our people, «logistics» and «in agriculture logistics» in the development of the sectors of the national economy review of public importance, is at present one of the questions that require deep research. Logistics, logistics professionals related to the specific field of management, researcher at various references. However, most scientists believe that the basis of its management of material flows. Flows from other resources, which, in particular, organic material flow [2; 8, 9].

Considering the logistics research, to-date situation with logistics, we can notice the practical significance of management the different processes is increasing. According to the concept of modern logistics clearly can be seen that it is optimizing traffic flows in a variety of resources, including financial, technical, production resources. Thus, «logistics», not only the concept of managing the inventory, control,

and but the object of the material flow in the logistics system, can be main. That is, the concept of material flow in logistics is key.

Depending on the type of thread object they can be: material, service, information, financial and other threads in the process. material flows will be the result of transportation and materials, warehousing, loading, unloading. Service flows is a high degree for providing services for material flows [3]. Information flow and logistics operations management, analysis and control are required in the logistics system, between the logistic system and external environment communications, a rotating set of data. Financial flow will be logistics systems to flow the financial resources depends on the other. Financial flows can become either within the system and outside the system.

In the study of logistics industry «logistics» and the concept of «logistics system» should pay attention to the differences between them. Because the priority of material flows in logistics management mentioned above, the priority relations between participants of the logistics chain exists in the logistics system. In the logistic parties, established to perform the basic tasks of logistics in the supply chain, particularly manufacturers, trade organizations, transportation, warehouses, shops etc. joint action provides. The main aim, to reduce costs and liabilities, in accordance with which the increase of efficiency of activity of production, the logistics system should cover all activities anyway. Material flow logistics shows that the value of the industry in providing a continuous process.

The research of experts on logistics, logistics process used «rule of 8» provided that: 1) the product — necessary product; 2) quality — the required quality; 3) cost — a necessary cost levels; 4) consumer — to supply necessary consumer; 5) the dose in the necessary quantity; 6) time — time required; 7) place—required place; 8) individualization — service system depending on each order [4; 4-16]. The goal of logistics activities complied with these rules, you can assume that the size of the required expenditure amount of required products of good quality, while spending on the ground should be timely delivery of needed.

Logistics of industrial production in all developed countries of the world, widely used in the field of promotion and distribution and the placing, save it, and its scope is growing every year. Therefore, is the driving force behind the development of world merchandise huge movement is a real logistics. Hence the importance of logistics in ensuring the movement of goods, you can see from there.

Studies of domestic specialists accounts for over 80 % of all goods produced in the Republic of Kazakhstan is agrifood, including daily necessary products of the population that is 100 percent is from agriculture. Hence agriculture logistics is important for promotion of these products [5].

Logistics of agriculture – branch of science with important practical value to provide necessary material resources to fully meet the needs of the population and national economy in the sustainable management of material flows to production industry [6; 23].

In addition, agrifood logistics ensure population with quality goods by efficient prices and carries important functions and placement in distribution and exchange agriculture, food security agricultural products, raw materials and consumer products. Especially for countries such as Kazakhstan we believe that an important issue on the agenda to research agrifood logistics deeper to consider the value of the level of the state, public needs appearance.

It is crucial for agrifood to ensure the availability of the domestic market for farmers with government procurement; middlemen between the consumer and the manufacturer, reducing the formation of prices for agricultural products; the establishment of direct relations between consumers and agricultural entrepreneurs; support rural entrepreneurship, rural population, socio-economic conditions; increasing domestic food products the domestic market, reducing imported products; transportation of agricultural products, marketing, services, to provide consumers with quality products.

The value of logistics in the field of agriculture, as you know, is incresungly important.

In agriculture with the given importance of logistics, that in the present state of its development, it can be noted that it has a number of complex issues. In particular, because of the high logistics costs associated with transportation of different areas of the country of lighting products of agriculture, of agriculture, are in the development of their business, many entrepreneurs obstacles. Domestic production as the result of increased prices, low competitiveness of manufacturers of products, saturation of internal market with domestic production, the inability to provide complete, timely t, due to the loss of quality of agricultural products, etc. affect the development of the food market.

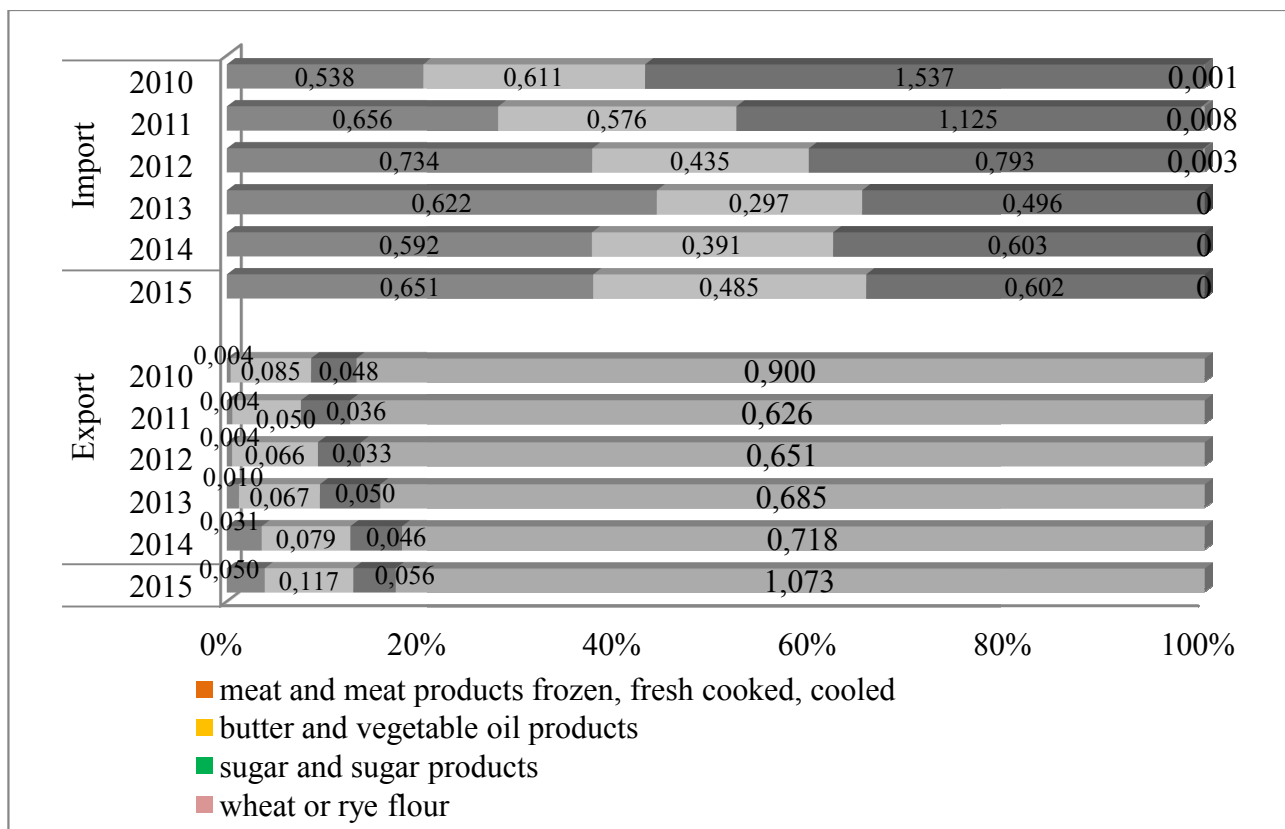


Figure. Export and import share in food manufacture for 2010-2015, % (I7)

Comparative analysis of food imports and exports share in the framework of the analysis of economic indicators according to 2010-2015 can be seen as following [7]. The main food as meat and meat products for food industry, butter; vegetable oil; sugar; a few, wheat or rye flour, foodstuff and analysis of export and imports share in Figure.

Total food imports in 2015 is \$ 30.2 billion (6.7 trillion. tenge) according to the Statistics Committee of Kazakhstan. \$196.6 million (43,6 billion tenge) for import of meat and meat products in various forms and equals 0,651 % of total import; import of fats and oils is 146,4 million US Dollars (32.5 billion tenge) or 0.485 % of total imports; sugar is \$ 181.8 million (40.3 billion tenge) or 0,602 % of total imports [8]. 2013-2015 wheat and wheat-rye were not imported. Because in recent years its production and increasing the share of flour exports was not set by Kazakhstan as the goal. Since 2010, the share of export flour was reached 1,073 % and increased by 0.78 %. The share of imported vegetable oils and fats in an average of 0.45 %; sugar - 0.86 %; meat products was 0.63 %.

The Committee for regulation of natural monopolies and protection of competition of RK and according the Ministry of National economy data, domestic sugar market depends on imported raw sugar on 90 %. In addition, in Kazakhstan, food transportation, shipping markets, and issues such as the presence of leads to a significant increase in the value of products produced due to the high cost of raw materials.

Table - 1

Ttop ten consumed food in the Republic of Kazakhstan, ton (2015)

	Commodities	Amount, ton
1	2	3
1	Flour	1 662 507,8
2	Meat products	1 104 700,8
3	Bakery and confectionery products	910 966,3
4	Dairy products	866 617,1
5	Sugar	446 676,4
6	Vegetable oil	399 791,0

Table continuation

1	2	3
7	Fruits and vegetables	201 142,5
8	Rice	177 675,7
9	Table salt	168 843,8
10	Pasta, noodles, kuskus, products processed from flour and similar food	160 377,0

Note. Source [7].

Flour consumed in 2015 was 1662,5 thousand tons by (Table 1). Next in line meat products (poultry meat including by-products) included in the period under review, the volume is 1104,7 thousand tons. Bakery and confectionery products by maximum consumption on the 3rd place. Dairy products was 866,6 thousand tons – 4-th place and 5 446,7 thousand tons and sugar finished top 5 most consumed food list.

As you can see from the table all food is types of agricultural products and given the fact that the export of products at fair value and the price of the acquisition, its storage and networking creating an effective computerized system, creates new jobs in agriculture and has great importance to the establishment and development of logistics. Table 2 exhibits top 14 consumable food products, the volume of production and consumption, the balance between them.

Table 2

Volume of production of different types of food, use per inhabitants, thousand tons

No n/n	Commodities	Production	Import	Export	Consuming	Share of domestic production, %	Share of import, %
1	Flour	3462,3	9,6	1809,4	1662,5	208,3	0,6
2	Meat products	930,3	186,0	11,6	1104,7	84,2	16,8
3	Bakery and confectionery products	832,1	85,6	6,7	910,9	91,3	9,4
4	Dairy products	728,5	155,2	17,0	866,6	84,1	17,9
5	Sugar	262,0	185,3	0,6	446,7	58,7	41,5
6	Vegetable oil	283,2	160,6	44,0	399,8	70,8	40,2
7	Fruits and vegetables	168,5	34,2	1,5	201,1	83,8	17,0
8	Rice	211,4	32,8	66,5	177,7	119,0	18,5
9	Table salt	162,3	21,6	15,0	168,8	96,2	12,8
10	Pasta, noodles, kuskus, products processed from flour and similar food	145,6	30,0	15,2	160,4	90,8	18,7
11	Processed and canned fish	33,7	47,4	19,1	61,9	54,3	76,5
12	Processed and canned fruits and nuts	1,9	158,6	14,9	145,5	1,3	109,0
13	Chocolate, confectionery made from sugar	77,6	91,0	25,8	142,9	54,3	63,7
14	Coffee and tea	19,9	35,9	2,7	53,2	37,4	67,6

Note. Source [7, 8].

The data observed in the country shows domestic producers and import shares of consumption, can provide sight what kind of products has high deficit and its volume.

Table 2 presents volume of production by types of use in the Republic of Kazakhstan. By 2015 data fully provided by domestic producers was flour and rice.

Flour considered as special production of the Republic of Kazakhstan. This provides not only domestic market but also has the highest share of export products. Nation exports flour to Afghanistan (47 % of total exports), Tajikistan (39 %), the CIS and other countries of the world.

Other types of products show the larger share of imported products. In 2015 the consumption of meat and meat products including poultry meat was total 1104,7 thousand tons, and total production was 930,3 thousand tons.

The shortfall of meat products that is 174,4 thousand tons was imported from US (46 %) and CIS countries (37 %). Profit of those products exported to Russia (total meat export 90 %).

Processed and preserved fish consumption due to the absence of domestic production is more than 2 times higher the volume of production.

Fruit and nuts processed and preserved is only 1.3 % was produced in the Republic of Kazakhstan. They are mostly imported from Uzbekistan, Tajikistan and other CIS countries. Most interesting is that its export 8 times higher than volume of production. Chocolate and sugar confectionery imported from CIS countries. At the end of 2015 the amount of them was 30.6 thousand tons, or \$ 55.6 million (\$12.3 billion. tenge).

The volume of sugar consumption 2 times more than its production volume. Most imported sugar components are from Brazil and CIS countries, particularly 39 % from Brazil, 34 % from CIS countries.

The volume of production food salt is almost equal to its production, as nation's deficit is the only 6.5 thousand tons of salt. As dairy products, bakery and confectionery products consumption is a bit more than its production. Deficit of those products is 138,1 thousand tons and 78,9 thousand tons respectively. 155.2 thousand tons of dairy products was imported in 2015. Basically, this product is imported from Russia and Belarus and other CIS countries. Bakery and confectionery products imports amounted to 85.6 thousand tons, where CIS is the main country-importer.

Current research, quantitative and qualitative analyses conducted in the issues identified logistics systems of food products shows that it is necessary to radically develop logistic conditions. Studies, the conclusions of experts, complementing the first, in agriculture the following proposals for the development of logistics can be offered.

First, through the creation of clustered cooperatives of agribusiness producers in a one system to storage and sales of agricultural products. This leads to cost reduction at all stages of movement of goods, elimination of intermediaries and local food in retail outlets-increasing the volume of production of producers of the food belt, to fully provide internal market with domestic agricultural products, price stability, will allow to provide consumers with quality products.

Second, increase the intensity of information flows in the sphere of production and circulation of commodity products of agriculture. Here we consider only material flow inventory-related logistics information.

The issuance of orders for the purchase of goods that, knowledge of goods movement in warehouses, on vehicles needed to be provided by documented information. Providing by information agribusiness logistics related to equipment, inventory, warehouse, and transportation plays particular importance.

The importance of supply to increase the intensity of information flows explained by following reasons. The automation of information technologies in the procurement of agricultural products, negotiation and conclusion of agreements with enterprises, ranging from ordering of goods before arrival, goods at the warehouse used to reduce cycle time of the logistics. Currently, between suppliers and customers interaction in a global computer network, used to improve the process, as the electronic business-to-business. There are following main advantages of e-business: a provider anywhere in the world, located the availability of buyers; consumers products at an affordable price easily achieve the desired quality; in accordance with the requirements of the market, public, non-clean products; standardized procurement procedures by automated process; saving of time required for procurement; reduced acquisition costs.

Thus, information technology ensures the delivery the necessary products, in the quantity required by high quality, on requested place.

Thirdly, the need for effective management of agriculture reserves. They occur at all levels of material flow. The aim of reserves management is optimize reserves volume, choose their location, analysis. As a result, by planning the volume of inventories determined the necessary conditions of their placement and replenishment of products.

Fourth, the provision of modern equipment for warehouses. Warehouses are important element of creating any trading system. Storage and handling of goods with the required size is the most important activity of industrial enterprises. Company storage costs according to research vary from 12 to 40 % of all material flows organization cost.

Composition of goods in the warehouse and storage them is determined by time of their departure and transformations. In addition the days of reception and dispatch of cargo are recorded.

Controlling the shelf life of products starting from their use to storage parameters with information technologies is very essential tool.

Fifth, the training of specialists in the field of agriculture logistics. This necessity was reviewed by many researchers and it is important for everyday food consuming and it is foundation for food supply. Role

of specialist –logists is significant with promotion of agricultural products and the manufacture, storage and transportation, food safety, the formation of the trade deficit, the decline in affordable price, providing customers with quality products.

Sixth, technical and service supply for producers of agricultural products. Distribution, technical service plays an important role for producers of agricultural products to delivery their products to the market.

By strengthening the material-resource support and technical supply for rural entrepreneurs agriculture producers can reach it in several ways: through the establishment of offices for direct deliveries of the equipment; increase the number of supply agricultural cooperatives; establishing the system of state procurement of agricultural products; provision of agricultural producers for independently purchase parts and machines; the appoint activities of commercial agents selling agricultural products in rural areas to oblige the supply of equipment, service from their side, creating the conditions necessary for rural entrepreneurs.

Recommendations given for logistics development are helpful and their implementation will allow to shape relations between consumers and entrepreneurs for direct agriculture trade; forcing out from the market mediators of products and getting constantly products by affordable prices; acessable government procurement for local entrepreneurs; support rural entrepreneurship; socio-economic improvement of rural population; supply internal market with domestic food products by reducing imports; opportunities for sustainable growth of the national economy will be ensured.

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Қазақстан Республикасында агро-өндірістік кешеннің логистикасын дамыту азық-түлік өнімдері нарығын нығайту факторы ретінде

Мақалада «логистика» және «агро-өндірістік кешен (АӨК) логистикасы» ұғымдарына сипаттама жасалды. АӨК-і логистикасының азық-түлік өнімдерімен қамтамасыз етудегі маңызы көрсетілді. Логистика жүйесінің негізгі қағидаттары мен шарттары келтірілді. Қазақстан секілді аграрлық елдер үшін АӨК-нің логистикасын тереңірек зерттеу және оның мемлекеттік деңгейдегі маңызын қарастыру, қоғамдық қажеттіліктерден туындаған, өзекті сұрақ ретінде қарастырылды. Себебі отандық фермерлер үшін мемлекеттік сатып алу нарығының қолжетімділігін қамтамасыз ету; тұтынушы мен өндірушінің арасында делдалдарды азайту; ауыл шаруашылығы өнімдеріне тұрақты бағаны қалыптастыру; тұтынушы мен ауылдық кәсіпкерлер арасындағы тікелей байланысты орнату; ауыл кәсіпкерлеріне қолдау көрсету арқылы, тұрғындарының әлеуметтік-экономикалық жағдайын жақсарту; отандық азық-түлік өнімдерімен ішкі нарықты толық қамтамасыз ету, импорттық өнімдерді азайту; ауыл шаруашылығы өнімдерін тасымалдау, маркетингтік, сервистік қызметтер нарығын нығайту арқылы тұтынушыларды тиімді бағадағы сапалы өнімдермен қамтамасыз ету, АӨК-і үшін аса қажет. Авторлар аталған мәселелерді шешуде ауыл шаруашылығы логистикасының маңызы зор екендігі көрсеткен. Сонымен қатар Қазақстан Республикасындағы АӨК-і логистикасының қазіргі даму жағдайына сипаттама жасады. Қазақстанның тамақ өнеркәсібінің жекелеген өнім түрлері бойынша олардың жалпы экспорт пен импорттағы үлесі динамикалық тұрғыда талданды. Соңғы жылдардағы мәліметтер бойынша, еліміздегі ең көп тұтынылатын азық-түлік өнімдерін өндіру көлемі

мен оны тұтыну көлеміне салыстырмалы талдаулар нәтижелері келтірілді. Ішкі нарықты отандық тамақ өнімдерімен қамтамасыз етудің үлесі анықталды. Қазақстандағы тамақ өнімдерінің жекеленген түрлері бойынша импорт мөлшері зерттелді. Азық-түлік өнімдерінің ағымдағы жағдайына сандық және сапалық талдаулар жасалып, ауыл шаруашылығы саласындағы логистикалық мәселелер айқындалып, оларды оңтайландыру бойынша жүйелі ұсыныстар берілді.

Кілт сөздер: логистика, АӨК-і логистикасы, ауыл шаруашылығы, логистикалық жүйе, тамақ өнеркәсібі, ұлттық экономика, азық-түлік өнімдері, тұтынушылар, ауыл-шаруашылығы өнімін өндірушілер, тамақ өнімдерінің импорттық және экспорттық көлемі, ауыл кәсіпкерлері.

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Развитие логистики АПК как фактор расширения рынка продовольственных продуктов

В статье раскрыты понятия «логистика» и «логистика АПК». Обозначены роль и значение логистики АПК в обеспечении продовольствием. Приведены основные принципы и условия логистической системы. Для таких аграрных стран, как Казахстан углубленное изучение логистики АПК, причем изучение его на государственном уровне, вытекает из общественных потребностей. Причина в том, что обеспечение доступности рынка государственных услуг, уменьшение посредничества между производителем и потребителем, формирование стабильной цены на сельскохозяйственную продукцию, формирование прямых связей между потребителем и сельским предпринимателем, повышение качества социально-экономического положения сельских жителей, насыщение внутреннего рынка отечественной продукцией, сокращение импорта, перевозка сельскохозяйственной продукции, обеспечение качественной продукцией по доступным ценам за счет расширения маркетинговых, сервисных услуг и другие аспекты очень важны для АПК. В статье раскрыта роль сельскохозяйственной логистики в решении перечисленных выше проблем. Вместе с тем освещено современное состояние логистики АПК в Казахстане. Проведен динамический анализ удельного веса отдельных групп и видов товаров пищевой промышленности Казахстана в общем импорте и экспорте. По последним данным производство самых употребляемых видов продовольствия и их потребление были взяты за основу и проведен их сравнительный анализ. Определен уровень самообеспеченности внутреннего рынка. Показан удельный вес импорта по отдельным видам продовольственных товаров. На основе количественного и качественного анализа состояния продовольственного обеспечения выделены проблемы логистики в сфере сельского хозяйства и даны системные предложения по их решению.

Ключевые слова: логистика, АПК, фермеры, рынок государственных услуг, пищевая промышленность, национальная экономика, продукты питания, потребители, сельскохозяйственные производители, объем экспорта и импорта продовольствия, сельское хозяйство и предприниматели.

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