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AGROLOGICAL SYSTEM IN THE COUNTRIES OF THE EURASIAN ECONOMIC UNION: STATE AND DEVELOPMENT DIRECTIONS

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Abstract: *Logistics is a scientific and practical activity related to the planning, organization, management and optimization of the movement of material and other flows from the producer of agricultural raw materials to the final consumer and enterprises-buyers. The introduction of logistics approaches to the management of goods distribution is becoming more important at the present stage. The need to use logistic tools in the process of marketing agricultural raw materials and food, that is, in the sphere of circulation of the agro-industrial complex, is especially actualized. The leading countries of the world are actively using logistics tools in the activities of agricultural enterprises, which allows to ensure a high level of efficiency in production in the agricultural and processing (food) industries, the competitiveness of products on the market, and entry into new segments. Features of the development of agricultural production and logistics of products in foreign countries are determined by mechanisms to ensure the logistics process (organizational, regulatory, scientific and methodological), the functioning of various types of logistics systems and trade and intermediary structures depending on the specialization of production of individual states, regions and enterprises. The evolution of logistics systems abroad proves that they are becoming one of the most important strategic tools in competition, not only for individual organizations, but also for the country as a whole.The logistics system is an integral part of the national economy associated with the development of a complex of services, infrastructure, and the involvement of enterprises in international schemes for promoting goods on the world market. It has been established that the logistics infrastructure of the member states of the Eurasian Economic Union is at the development stage and is characterized by the predominance of theoretical approaches, the underdevelopment of the corresponding infrastructure, the presence of non-competitive logistic components in the price of goods, an insufficient level of presence of 3PL- and 4PL operators. At the level of organizations in* *the agro-industrial complex, there is a low degree of implementation of effective logistics approaches, which, in conditions of increasing competition in the food domestic and foreign markets, reduces the competitiveness of agricultural goods and producers. According to the World Bank, all member states of the Eurasian Economic Union can be categorized as countries implementing "partial measures".The implementation of the Concept of a coordinated (coordinated) agro-industrial policy of the Member States of the Customs Union and the Common Economic Space provides for the development of interstate cooperation, including in the promotion of products. One of the components of the agrologistical system is the availability of appropriate infrastructure, as well as the use of modern information and communication technologies. In this regard, the relevance of the research is due to the need to study experience in creating and operating a logistics system in the Republic of Armenia, the Republic of Belarus, the Republic of Kazakhstan, the Kyrgyz Republic, the Russian Federation, as well as the development of the transport and logistics market, the development of transit attractiveness for international carriers, and improved performance industry as a whole.The article examines practical approaches to build the appropriate infrastructure, which consists in creating an organic interconnection between all objects, subjects and areas of its activities. The current trends in the development of the transport, logistics and stock exchange systems in the countries of the Eurasian Economic Union are substantiated, which made it possible to identify problems of an economic, informational, infrastructural, personnel nature. As a result, a set of proposals was developed to improve the agrologistical system, taking into account national priorities and the commitments made within the Union. The novelty lies in the substantiation of priority areas to ensure public-private partnerships and the implementation of a set of functions (state regulation, state management, state control), modern requirements for the creation of an agrologistical system of innovation type (accessibility for all business entities; consolidation of production and logistics capabilities and their integration; segmentation by types of agricultural products; reduction in total costs and obtaining a synergistic effect). These developments can be used to substantiate the strategies for the development of the agro-industrial complex of the member states of the Eurasian Economic Union (Republic of Armenia, Belarus, Republic of Kazakhstan, Kyrgyz Republic, Russian Federation) in the medium and long term.*

Keywords: *logistics, agrological system, Eurasian Economic Union, transport system, logistic system, exchange system, efficiency.*

АГРОЛОГИСТИЧЕСКАЯ СИСТЕМА В СТРАНАХ ЕВРАЗИЙСКОГО ЭКОНОМИЧЕСКОГО СОЮЗА: СОСТОЯНИЕ И ПЕРСПЕКТИВЫ РАЗВИТИЯ

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Аннотация: *Логистика – это научная и практическая деятельность, связанная с планированием, организацией, управлением и оптимизацией движения материальных и иных потоков от производителя сельскохозяйственного сырья до конечного потребителя и предприятий-покупателей. Внедрение логистических подходов в управление товародвижением приобретает большую актуальность на современном этапе. Особенно актуализируется необходимость использования инструментария логистики в процессе сбыта сельскохозяйственного сырья и продовольствия, то есть в сфере обращения агропромышленного комплекса. Ведущие страны мира активно используют инструменты логистики в деятельности аграрных предприятий, что позволяет обеспечивать высокий уровень эффективности ведения производства в сельском хозяйстве и обрабатывающих (пищевых) отраслях, конкурентоспособность продукции на рынке, выход на новые сегменты. Особенности развития аграрного производства и логистики продукции в зарубежных странах определяются механизмами обеспечения логистического процесса (организационные, нормативно-правовые, научно-методические), функционированием различных видов логистических систем и торгово-посреднических структур, зависящих от специализации производства отдельных государств, регионов и предприятий. Эволюция логистических систем за рубежом доказывает, что они становятся одним из важнейших стратегических инструментов в конкурентной борьбе не только для отдельных организаций, но и страны в целом.Логистическая система представляет собой составную часть национальной экономики, связанную с развитием комплекса услуг, инфраструктуры и вовлечением предприятий в международные схемы продвижения товаров на мировом рынке. Установлено, что логи-*

стическая инфраструктура государств-членов Евразийского экономического союза находится на стадии развития и характеризуется преобладанием теоретических подходов, неразвитостью соответствующей инфраструктуры, наличием неконкурентных ставок логистических составляющих в цене товара, недостаточным уровнем присутствия 3PL- и 4PL-операторов. На уровне организаций АПК отмечается низкая степень внедрения эффективных подходов логистики, что в условиях усиления конкуренции на продовольственном внутреннем и внешнем рынках снижает конкурентоспособность сельскохозяйственных товаров и производителей. По оценке Всемирного банка, все государства-члены Евразийского экономического союза, могут быть отнесены к категории стран, осуществляющих «частичные меры».Реализация Концепции согласованной (скоординированной) агропромышленной политики государств–членов Таможенного союза и Единого экономического пространства предусматривает развитие межгосударственного сотрудничества, в том числе и в продвижении продукции. Одной из составляющих агрологистической системы является наличие соответствующей инфраструктуры, а также использование современных информационно-коммуникационных технологий. В этой связи актуальность проводимых исследований обусловлена необходимостью изучения опыта по созданию и функционированию логистической системы в Республике Армения, Республике Беларусь, Республике Казахстан, Кыргызской Республике, Российской Федерации, а также развитию транспортно-логистического рынка, формированию транзитной привлекательности для международных перевозчиков, повышению эффективности функционирования отрасли в целом. В статье исследованы практические подходы по построению соответствующей инфраструктуры, заключающиеся в создании органичной взаимной связи между всеми объектами, субъектами и направлениями ее деятельности. Обоснованы современные тенденции развития транспортной, логистической и биржевой системы в странах Евразийского экономического союза, что позволило выявить проблемы экономического, информационного, инфраструктурного, кадрового характера. В результате выработан комплекс предложений по совершенствованию агрологистической системы с учетом национальных приоритетов и принятых обязательств в рамках Союза. Новизна заключается в обосновании приоритетных направлений по обеспечению государственно-частного партнерства и реализации комплекса функций (государственного регулирования, государственного управления, государственного контроля), современных требований к созданию агрологистической системы инновационного типа (доступность для всех субъектов хозяйствования; консолидация производственно-логистических возможностей участников сбытовой цепи и их интеграция; сегментирование по видам аграрной продукции; снижение совокупных издержек и получение синергетического эффекта). Настоящие разработки могут быть использованы при обосновании стратегий развития АПК государств-членов Евразийского экономического союза (Республика Армения, Республика Беларусь, Республика Казахстан, Кыргызская Республика, Российская Федерация) на средне- и долгосрочную перспективу.

Ключевые слова: *логистика, агрологистическая система, Евразийский экономический союз, транспортная система, логистическая система, биржевая система, эффективность.*

1. INTRODUCTION

The agro-industrial complex is one of the strategic and priority sectors of the national economy of the member states of the Eurasian Economic Union. The agricultural turnover of the Union is about 315 million hectares of land, and the total market is 183.8 million consumers. In recent years, countries have developed a positive trend in the production of agricultural products. The largest share of agriculture, hunting and forestry in GDP is characteristic of Armenia - 14.9% and Kyrgyzstan - 12.3%. In Belarus, itis 7.8%, Kazakhstan - 4.3, Russia - 4.0% [8, 10–11].

The agrological system has an impact on the effectiveness of product promotion on domestic and foreign markets. In the World Bank rankings, Germany, Sweden, the Netherlands, Singapore, Belgium, and the United Kingdom have the most efficient transport and logistics infrastructures. In 2018, the EAEU member states were distributed as follows: Kazakhstan (71st place), Russia (75), Armenia (92), Belarus (103), Kyrgyzstan (109th place) [14].

The purpose of the article is to study the experience of the functioning of the logistics system of the agro-industrial complex in the context of all member states and to develop a set of directions for its improvement, taking into account national priorities and commitments made within the Union.

2. PRESENTATION PARTS

It has been established that the transport system of the Union member states operates on the basis of the current national legislation, aimed at harmonizing legal and contractual relations, creating conditions for equal competition in the transport sector, protecting the interests of domestic business in the national and international markets, and establishing cooperation between government agencies and non-governmental organizations. Moreover, at the level of each country, a set of strategic documents was adopted [5].

The basis of the transport systems of the EAEU Member States is rail (72.0%) and road transport (14.5%), which account for more than 86% of the total volume of mutual freight traffic. The total volume of cargo transported in 2018 amounted to 12.6 billion tons, which is 2.8% more than in 2017. At the same time, an increase in traffic was observed in all countries: the Republic of Armenia - by 3.7%, the Republic of Belarus - 3.7, Republic of Kazakhstan - 4.8, Kyrgyzstan - 3.4, the Russian Federation - by 1.7% [11].

Cargo turnover of all types of transport of the EAEU member states in 2018 amounted to 6,381.7 billion ton-kilometers, which is 3.3% more than in 2017. A similar trend is observed in all countries: the Republic of Armenia - by 3.2%, The Republic of Belarus - 4.1, the Republic of Kazakhstan - 7.3, Kyrgyzstan - 5.2, the Russian Federation - by 2.9%.

Currently, the logistics system of the EAEU member states is being created and shaped taking into account national peculiarities and priorities, which, according to the World Bank, demonstrate the development of trade and transport infrastructure, the expansion of logistics services, and the increase in the level of service during international transportation.

Over the past five years, revenues from transportation and auxiliary transport activities of enterprises of the Republic of Armenia grew by 32.1% and amounted to 148,833.21 million drams ($ 71.0 million), and compared to 2016, by 20.4% . The analysis shows that demand is noted for all types of services: in 2017, sales revenue growth for services of auxiliary transport activities amounted to 18.4% or $ 5.1 million, for cargo transportation - 21.9% or 7.0 million USD [8].

Belarus has formed a system of state regulation of logistics activities. It includes regulatory, organizational, financial, economic, informational support and provides for the development of public-private partnerships with professional associations and committees, business entities at the national and interstate levels [2].

Modern infrastructure in the field of internal logistics is represented by 1,246 organizations engaged in logistics and freight forwarding activities (the first group), as well as logistics centers, logistics operators, warehouse terminals, temporary storage warehouses, public warehouses, and parking lots (the second group). In 2017, the volume of logistics services rendered by the first group amounted to 296.7 million rubles. (in 2016 - 246.6 million rubles.), the second - 192.9 million rubles. (2016 - 155.3 million rubles.) [11].

The formation of a network of transport and logistics and trade and logistics centers is carried out in accordance with the Strategy for the long-term development of Kazakhstan for the period up to 2030 and a number of industry programs for the development of transport.

Currently, the agrological system of Kazakhstan is represented [2, 7, 9]:

- a multimodal transport and logistics company JSC KZT Express (a subsidiary of National Company Kazakhstan Temir Zholy JSC), acting as a national multimodal operator;

- 19 transport and logistics centers, possessing mainly warehouse and terminal areas of class “B”;

- organizations of freight forwarding and storage services, as well as a sector for the integration and management of supply chains of agricultural products and food. As a result, large manufacturers and distributors carry out most of these operations in-house, using their own warehouses and a specific fleet.

The demand for logistics services is noted in all regions of Kazakhstan, ensuring the growth of income from the transportation of goods (including international and domestic shipments). In 2017, total revenue exceeded 2.8 trillion tenge (about $ 8.5 billion). Growth rates especially accelerated in 2015–2016.

The logistics services market of the Republic of Kyrgyzstan is still less competitive than in other EAEU member states [13]. An important component of the development of the logistics system of Kyrgyzstan was the adoption of the Resolution of the Government of the Kyrgyz Republic of August 25, 2015 No. 600 “On approval of the Main Directions for the creation and development of a system of trade and logistics centers for agricultural products in the Kyrgyz Republic for 2015-2017” [6].

One of the objectives of the Transport Strategy of the Russian Federation until 2030 is the development of a network of transport and logistics centers [12]:

- at the federal level - the formation of an international and federal logistics network based on logistics centers located in major transportation hubs;

- at the level of the constituent entities of the Russian Federation - the development of regional and interregional logistics centers, taking into account the projected routes of international transport corridors passing through the territory of the country;

- at the level of large companies (holdings) - the formation of its own logistics network, based on the development of its own logistics centers (logistics parks) in large transport hubs;

- at the local level - the creation of logistics service centers for the needs of territories or companies.

The market of transport and logistics services in the Russian Federation consists of five macro segments: assets and infrastructure; basic cargo transportation service; freight forwarding (basic 3PL-services); contract logistics (integrated 3PL-services); integrated logistics (4PL). The integrated model of transport and logistics companies dominates in the Russian market. While in economically developed countries of the world (especially in the USA), companies focus on certain types of logistics services.

An analysis of the main economic indicators of the "Transportation and Storage" industry indicates its development at the present stage. If in 2016 the gross value added of the industry was 5368.3 billion, it grew. then in 2017 it increased by 8.4% (5820.9 billion rubles. rubles.). This ensured the growth of its share in the Russian economy by 0.1 percentage points. (7.0%) [10].

On the whole, the Russian logistics services market is characterized by the expansion of the share of 3PL and 4PL providers, the emergence of regional logistics operators in cities with population over one million, the development of a range of services and an increase in the quality standards of centers, the intensive construction of world-class warehouse and terminal logistics facilities, the creation of technology parks opportunities for providing integrated service.

Exchange logistics functions as exchanges whose activities fall within the scope of state regulation of the EAEU member states [4]. The countries adopted a set of basic regulatory legal acts, signed a number of international agreements on cooperation in the formation of an inter-ethnic organized commodity market, and the process is underway to take measures to remove barriers and restrictions in national legislation. At the same time, the uneven development of the regulatory framework for the activities of commodity exchanges is obvious, which creates serious obstacles to the harmonization of the regulation of inter-exchange cooperation (Table 1).

Table 1:- The main provisions of state regulation of commodity exchanges in the EAEU member states

Directions of state regulation of commodity exchanges	Legislation and laws
Republic of Armenia	
State regulation of the activity of commodity exchanges in the territory of the Republic of Armenia is carried out by the Government of the Republic of Armenia	Basic legislative acts: the Civil Code of the Republic of Armenia, the Law on Commodity Exchanges (1993), certain norms of a number of other laws, government regulations and other acts
Republic of Belarus	
State regulation of the activities of commodity exchanges is carried out by the President, the Council of Ministers, the Ministry of Commerce, other state bodies within their competence as defined by law. The exchange trading coordinating council is an interdepartmental permanent body that ensures the interaction of state bodies with the commodity exchange on the organization of exchange trading	Basic legislative acts: Civil Code (adopted on the basis of the model Civil Code for the CIS member states), laws: "On Commodity Exchanges" (2009), "On Trade" (2003), "On Electronic Document and Electronic Digital Signature" (2009). The main sub-legal regulatory act is the resolution of the Council of Ministers of the Republic of Belarus" On some measures for the implementation of the law of the Republic of Belarus" On Commodity Exchanges "(2009.), which approved: model rules for exchange trading on commodity exchanges; regulations on the procedure for forming the guarantee fund of a commodity exchange and the use of its funds; regulations on the exchange trading coordination council; The composition of the Coordinating Board for stock trading. Other bylaws
The Republic of Kazakhstan	
State regulation of commodity exchanges in the territory of the Republic of Kazakhstan is carried out by the government of the country. Authorized body - Trade Committee of the Ministry of Economic Development and Trade of the Republic of Kazakhstan	Basic legislative acts: the Civil Code of the Republic of Kazakhstan (adopted on the basis of the model Civil Code for the CIS member states), the Law "On Commodity Exchanges" (2009), certain norms of a number of other laws, more than 50 government decrees and other acts
RepublicofKyrgyzstan	

State regulation of commodity exchanges in the territory of the Republic of Kyrgyzstan is carried out by the Government of the Republic of Kyrgyzstan	Basic legislation: the Civil Code of the Republic of Kyrgyzstan, the Law “On the Commodity Exchange and Exchange Trade in the Kyrgyz Republic” (1992), certain norms of a number of other laws, government regulations and other regulatory acts
Russian Federation	
The authorized body for regulation of the organized commodity market on the territory of the Russian Federation is the Federal Financial Markets Service, which performs the functions of legal regulation, control and supervision in the financial markets (with the exception of banking and auditing). The management of the Federal Service for Financial Markets is provided by the government of the country	Basic legislative acts: the Civil Code (adopted on the basis of the Model Civil Code for the CIS member states), the Law “On Commodity Exchanges and Exchange Trading” (1992). Federal laws: “On Organized Trading” (2011), “On Clearing and Clearing Activities” (2011), “On Licensing Certain Types of Activities” (2011), “On Electronic Signature” (2011). Other by laws

Source: The table was compiled by the authors according to [4, 7, 8, 10, 11].

At present, there are 27 exchanges operating in the Union, including 15 commodity exchanges, carrying out activities for conducting exchange trades in transactions with real goods, including agricultural ones (Table 2).

Table 2:- The main indicators of the development of exchange activities in the member states of the Eurasian Economic Union for 2010–2017

Country	Year					2017 to 2016,%
	2010	2011	2015	2016	2017	
Number of active exchanges, units						
Armenia	н/д	н/д	2	2	2	–
Belarus	3	3	3	2	2	–
Kazakhstan	8	9[1]	14	14	14	–
Kyrgyzstan	н/д	н/д	2	2	2	
Russia	23	17	5	7	7[2]	
Number of trading held[3], units						
Belarus	9 776	11 560	15 758	17 158	н/д	–
Kazakhstan	12 983[4]	21 340	42 561	48 594	53 984	111,1

Russia	3 400	3 400	1 300	1 300	1 500	115,4

Source: The table was compiled by the authors according to [2, 3, 7, 8, 10, 11].

[1] - carrying out activities; [2] - the data are given for exchanges that carry out the activity of conducting exchange trades in transactions with real goods; [3] - there are no official data on the number of tenders held in the Republic of Armenia and the Kyrgyz Republic; [4] - including branches.

Exchange logistics is used by commodity exchanges solely in the interests of bidders and is not subject to financial interests. Its use allows you to provide competitive advantages to all participants in the logistics chain.

3. CONCLUSION

The analysis showed that the following factors affect the development of logistics in the AIC of the EAEU member states:

- rapidly increasing trade in agricultural products at the intra-and inter-regional levels;
- there is an increase in demand in the outsourcing logistics market, which consumers are small firms with no own warehouses, and large companies, including agribusinesses;
- the transfer and construction of new warehouses outside the city limits and the concentration of industrial-innovative enterprises around them;
- increasing demand for logistics services, primarily for class A and B warehouses, their construction by private companies without government participation;
- the annual growth in freight turnover in the countries is accompanied by an increase in demand for logistics services and the lack of own companies, the expectation of the arrival of a foreign company with its technology;
- lack of a full-fledged market for logistics operations; there are certain elements of logistics, such as freight, freight forwarding services, undeveloped warehousing;
- there is a demand for transport and logistics services, which leads to the expansion of the activities of business entities, where there are no modern warehouses, terminal complexes.

The main directions of development of the logistics system should be:

- at the interstate level, it is necessary to create a single Eurasian logistic space in the agro-industrial complex;
- at the national level, it is necessary to increase the efficiency of the functioning of the national agricultural market;
- development of joint projects for the creation of international and regional logistics centers with the involvement of trade organizations, transport companies, banks, insurance companies;
- improving the management of market infrastructure based on new information systems;
- development of software and information support for the management and functioning of the market infrastructure;

- training of specialists with higher education in the field of marketing, sales and logistics;

- expansion of the practice of joint organization of additional education on the basis of advanced training, internships and retrainingworkers.

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