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Export of Russian grain: prospects and the role of the state in its development

Экспорт российского зерна: перспективы и роль государства в его развитии

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Abstract

The article discusses the problems and issues of further development of Russian grain exports. The main export grain crop for Russia is wheat; the volume of wheat supplies to the world market exceeds 35 million tons. The study provides a list of the main geographical areas importing Russian wheat and analyzes the dynamics of changes in its supply. However, the export orientation for wheat leads to imbalances in the structure of production and regional distribution of grain crops in Russia. Grain is of fundamentally high importance for solving the problem of import substitution for the production of meat and dairy products and ensuring food security for the population of Russia; therefore, the study emphasizes the need for state management of the grain balance. In the long term, the regulation of grain exports should be reduced mainly to a system of economic measures, but at the moment, government participation is necessary as a driver in the development of production and logistics infrastructure. The complex of economic and political factors determines the diversification of wheat supplies from Russia due to the Far Eastern direction.

Аннотация

В статье рассматриваются проблемы и вопросы дальнейшего развития российского экспорта зерна. Основной экспортной зерновой культурой для России является пшеница, объемы поставок которой на мировой рынок превышают 35 млн. т. В исследовании представлен перечень основных географических зон, импортирующих российскую пшеницу, и проанализирована динамика изменения ее поставок. Вместе с этим экспортная ориентированность по пшенице приводит к диспропорциям в структуре производства и регионального размещения посевов зерновых культур в России. Зерно имеет принципиально высокое значения для решения задачи импортозамещения производства мясо-молочной продукции и обеспечения продовольственной безопасности населения России, поэтому в исследовании подчеркивается потребность в государственном управлении зерновым балансом. В долгосрочной перспективе регулирование экспорта зерна должно сводиться преимущественно к системе экономических мер, однако на данный момент

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Key Words: grain-food subcomplex of Russia, grain crops, wheat, grain production, world grain market, grain export, competitiveness, efficiency, transport and logistics infrastructure, economic and state regulation.

необходимо государственное участие как драйвер в развитии производственно-логистической инфраструктуры. Комплекс экономико-политических факторов определяет диверсификацию поставок пшеницы из России за счет дальневосточного направления.

Ключевые слова: зернопродуктовый подкомплекс России, зерновые культуры, пшеница, производство зерна, мировой рынок зерна, экспорт зерна, конкурентоспособность, эффективность, транспортно-логистическая инфраструктура, экономическое и государственное регулирование.

Introduction

The growing population on the planet leads to an increase in the need for food. Products made from crops are the basis of the diet of people in most countries of the world. Typically, foods in the form of cereals and flour should be at least half the daily human diet, as they contain a lot of carbohydrates and a moderate amount of protein to provide the body with the necessary energy. Another important factor is better affordability compared to meat and dairy products. It is much cheaper to feed the population of poor, densely populated countries by providing enough grain in the domestic market than by purchasing meat; this is relevant for countries where there are no opportunities and conditions for the development of agriculture in order to fully provide key domestic food products through domestic production.

In the last five years, Russia has become one of the world leaders in terms of grain exports, the income from which is already comparable to the sale of domestic weapons to the world market (Davtyan & Vorobyov, 2019). The devaluation of the ruble provided serious help for Russian exporters to step up foreign supplies (Zyukin, 2019). Despite the full provision of its own market with grain products, the export orientation of Russian regions with the best climatic conditions leads to the fact that the domestic market lacks high-quality grain (Panteleeva & Panteleeva, 2018). The contradiction between the benefits of export and the needs of the domestic market arises sharply with the tasks of import substitution of meat and dairy products due to the development of its own livestock complex. The growth in demand due to this direction may become an incentive to increase grain yields and use emerging from an excess of grain in the market. Such a position in the long run is optimal, allowing to compensate

for the domestic needs for meat and dairy products without resorting to imports from other countries (Zyukin, 2018a).

Despite the successes and strengthening of Russia's position in the world grain market, a number of complex problems remain in the country, including the irrational use of the grain balance and poor grain quality, which gives a price advantage, but limits the ability to enter the markets of many countries where better products are required (Altukhov, 2017). Another threat is the instability of gross grain harvests, which significantly exceed the domestic needs of Russia; therefore, surplus grain stocks are created in the seasons, which must be sanitized through export (Zyukin, 2018b). It is problematic to quickly and significantly increase export deliveries, as an appropriate logistics infrastructure is needed; for example, increase shipping capacities in ports. At the moment, this problem is not acute, and great successes have been achieved in expanding port facilities, including deep-sea ones. However, other problems inherent in promoting Russian agricultural products to foreign markets remain (Zyukin, Svyatova & Soloshenko, 2016).

The leading positions in the world grain market have long belonged to five countries: the USA, the European Union, Canada, Argentina and Australia. These countries provided more than 85% of the needs of the world market due to their own exports (Fedorova & Kuzmenko, 2018). After the collapse of the USSR, domestic demand for grain in the country fell due to a reduction in livestock production; this, with growing gross grain harvests, allowed Russia to form a high export potential, which is currently the world's largest exporter of wheat (Tyupakov, Reznichenko, Klochko, Verty & Cherner, 2019).

In the current situation, China, which receives state support in the development of the agricultural sector, is gradually increasing agricultural production, including wheat, which is already affecting the economy of neighboring states (Kong & Kneller, 2016). In the future, a similar development trend may make it one of Russia's competitors in the grain market. In general, Asia has the highest growth rates in grain production, and the leaders in grain production in the world, in addition to Russia, are China (20%), India (11%), the USA (16%) and Canada (4%) (Zhidkov & Voronina, 2019).

Wheat is the main type of grain exported from Russia. Sustainability of the Russian grain market is considered conditionally stable, but at the same time, the influence of adverse macroeconomic factors is quite significant (Nikitin, Verkhovtsev, Kuzicheva & Kastornov, 2019), which determines the relevance of assessing Russia's current position in the world grain market.

Theoretical framework

Grain export has become an incentive to intensify grain production in many regions of Russia, therefore, the search for directions to increase its efficiency and increase the volume of deliveries to the world market forms an urgent task for the state. At the moment, grain export volumes may exceed the level of 50 million tons; however, diversification of the departure routes from Russia did not occur and the concentration of supplies through the Azov-Black Sea basin remains. Due to its scale, the issues of modernization and development of the logistics infrastructure cannot pass without the participation of the state, forming a discussion about the degree of its intervention. The development of the port infrastructure of Russia should be based on the prospects of certain geographical areas where Russian grain is most in demand.

Methodology

Export is one of the important directions of the strategic development of the grain economy, which allows for the reorganization of the domestic grain market, providing a favorable pricing environment for producers. However, export for Russia has become more than just a reorganization tool in recent years, being an incentive for increasing grain harvests in the country, which proves the comparison of its volumes with the size of gross fees. The study of the export structure is important to carry out

depending on the types of crops. The high importance of wheat and its relevance in production among Russian farmers is determined by the fact that it is the basis of export.

One of the key issues in the development of Russian wheat exports is the diversification of markets, which is why the study creates geographic zones among importing countries. An analysis of the dynamics of changes in grain supplies shows the prospects for further expansion of Russian grain to the markets of these countries. Also, the export level of individual zones characterizes the development of logistics routes and defines strategic objectives for increasing the competitiveness of Russian grain in certain geographical areas. An important role in the development of grain and, in particular, wheat exports is assigned to improving the management model, including economic and state regulatory measures. The effectiveness of the proposed model depends on maintaining the market principles of export organization and the functioning of the domestic Russian market.

The reliability and complexity of the study is determined using materials and statistics from the Agribusiness Expertise and Analytical Center «AB Center» (On the export of wheat from Russia in 2015-2019), the Federal Customs Service (Russia's exports of essential goods. Federal Customs Service), the Food and Agriculture Organization of the United Nations (FAO Publication of Cereal Supply and Demand for Cereals) and the Unified Interdepartmental Information and Statistics System (EMISS) (Export of selected goods). The use of statistical methods as the main analysis tool forms an objective quantitative assessment of the indicators of export activity in Russia.

Results

Before the revolution of 1917, the Russian Empire occupied the international market up to 26.0%, and grain was of high quality and relatively low price, which put it at a highly competitive level. On the eve of World War I, the Russian Empire began to lose its competitive position due to a technical and technological lag behind developed countries, which led to a decrease in yield and grain production, including a complication of a lag in infrastructure development (low throughput of railways and ports, lack of trade routes). The USSR returned to the world grain market by 1930 and the export company «Exporthleb» was engaged in export matters, the specifics of which allowed it to

receive foreign exchange earnings in a short time. After the collapse of the USSR, agricultural production was forced to completely rebuild, which led to the excess of imports over exports and jeopardized the country's food security in the 1990s. Now the largest grain exporters in Russia are the International Grain Company, Trading House Reef LLC, the state-owned Cargill company, Outspan International LLC and others, whose share in the Russian grain market is more than 4% (Zhilyakov et al., 2019).

Now the holding has actually been created, the controlling stake of which belongs to VTB, which will become the largest exporter of Russian grain. Such a solution will solve the problem of forward and futures contracts on wheat. Concentration of resources will increase export profitability in the event of unfavorable pricing conditions on the external market. An

unfavorable moment in this case may be the monopolization of the domestic market and a decrease in the level of competition, which in the long run will lead to changes in the efficiency of grain production; all the more, there is a negative experience of monopolistic companies in world practice.

Despite a decrease in the crop relative to the record level of 2017, Russia continues to increase export volumes, which in the 2019/20 season may lead to the introduction of a quota for grain export, so that the influence of a favorable external environment does not lead to grain shortages in the domestic market. According to the forecast of the Ministry of Agriculture, Russian grain exports in the 2019/20 season will be about 45 million tons (Figure 1), which is 3.9% higher than the previous period.

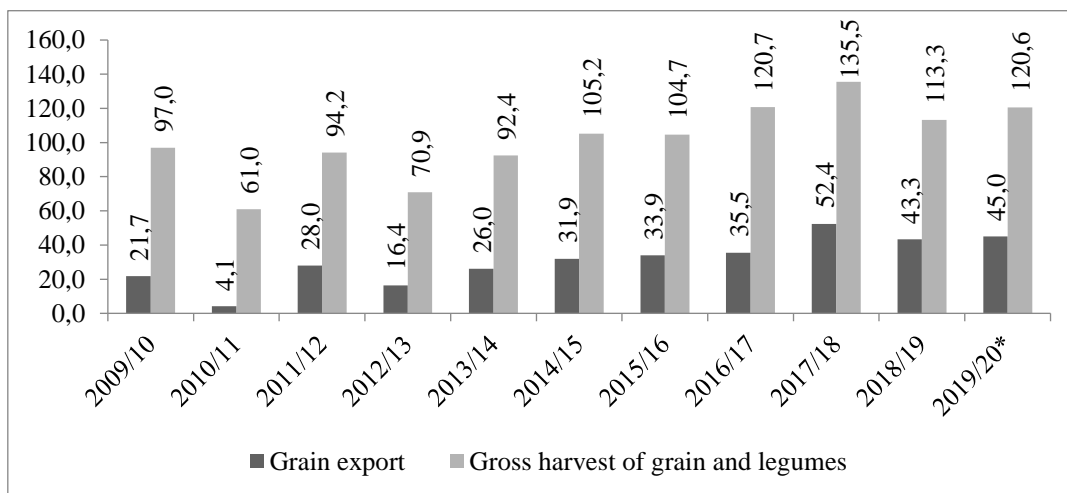


Figure 1. Dynamics of gross harvests and grain exports from Russia, million tons
 * Compiled by the author based on sources (Russia's exports of essential goods, Export of selected goods)
 * 2019/20 forecast

At the same time, gross harvests of grain and legumes steadily increased until 2017/18; they increased by 24.3% in dynamics over 2009-2019. Regarding the peak periods in recession (2010/11) and the maximum value (2017/18), the gap in gross production remained 2.2 times. In the past two years, gross revenues are inferior to 2016-2018. The growth of grain exports from Russia has steadily started to grow since 2013/14, and the record crop of 2017/18 allowed Russia to export more than 50 million tons of grain, which was 47.6% more than in the 2016/17 season. If we analyze the dynamics of exports in a period of sustainable growth, starting from

2012/13, it should be noted that the volume of exports in 2018/19 was 164.0% higher, and in the peak period when exports reached their maximum level, it was at 3.2 times higher than the level of 2012/13.

Wheat prevails in the structure of Russian grain exports, the share of barley and corn is of comparable importance, peas and chickpeas are exported a little more than 1%, rice and lentils are almost 0.5%, other crops (oats, buckwheat, rye, millet, sorghum, beans, triticale) are extremely insignificant in export (Figure 2).

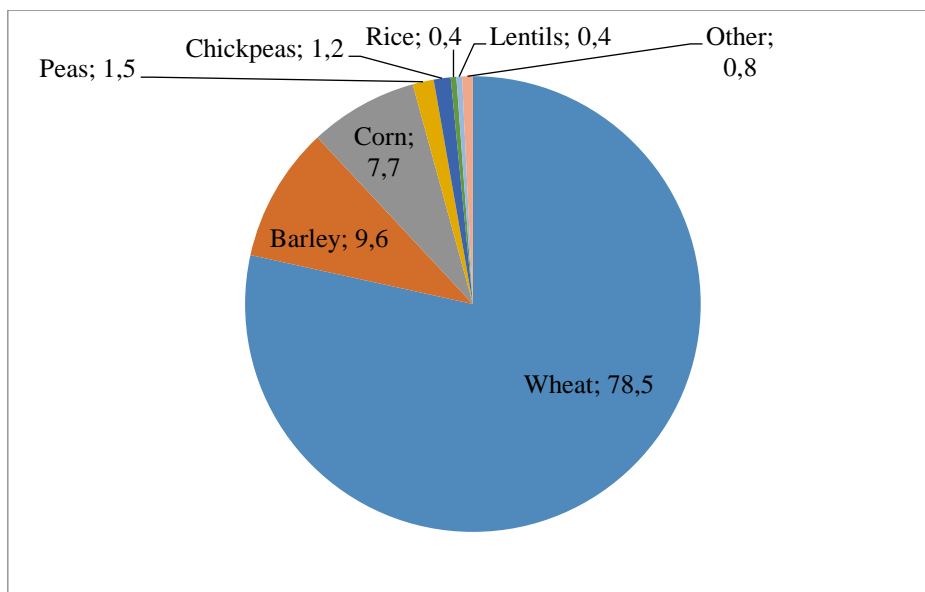


Figure 2. Structure of the Russian export of grain and legumes in 2019, %

* Compiled by the author based on sources (On the export of wheat from Russia in 2015-2019)

At the same time, the impetus that showed Russia's high export potential was the factor of extremely favorable natural and climatic conditions of 2008-2009, which contributed to a high yield and reflected the huge prospects for grain farming. In recent years, large-scale grain export has become one of the most important instruments of Russia's foreign policy in regions with a multimillion population - in the Middle and Middle East, in Central, Central and Southeast Asia, in North Africa (Zhilyakov et al., 2019). Egypt became the largest importer of domestic grain, purchasing in 2018 more than 9.5 million tons (Goychuk & Meyers, 2014).

The problem of product transportation has always existed in the development of grain exports in Russia. Almost all of Russian grain exports are concentrated in the direction of the Azov-Black Sea basin, which, in the event of

conflict with Turkey, can seriously affect Russian grain exports through the Mediterranean Sea. In a conflict with Egypt or Saudi Arabia, a short route to the Indian Ocean to the countries of Southeast Asia will be threatened, showing a high dynamics in increasing purchases of Russian grain. Therefore, the political aggravation in Syria is of global importance for the development of grain exports and the entire grain economy.

At the moment, the geography of Russian exports is very wide and affects a large number of countries. In an enlarged version, zones for the export of Russian grain can be summarized in 9 groups, and the list of the largest importers included in them (with an import volume of over 200 thousand tons of wheat) is presented in Figure 3.

The Mediterranean	• Egypt (1), Lebanon (12), Israel (16), Morocco (19), Greece (25), Libya (26), Tunisia (35)
Caspian-Black Sea	• Turkey (2), Azerbaijan (18), Georgia (20), Armenia (28), Iran (48)
Arabian Peninsula	• Yemen (8), United Arab Emirates (17), Oman (22)
East Asia	• Philippines (10), The Republic of Korea (33), Mongolia (34), Japan (71)
Southeast Asia and Oceania	• Vietnam (3), Bangladesh (6), Indonesia (7)
America	• Mexico (11), Venezuela (29), Peru (45)
Africa, Atlantic	• Nigeria (5), Cameroon (21), Ghana (24), Senegal (31)
Africa, Indian Ocean	• Sudan (4), Kenya (13), South Africa (14), Mozambique (23), Tanzania (15), Ethiopia (30), Uganda (32)
Eastern Europe	• Latvia (9), Belarus (27)

Figure 3. Geographic areas of Russian wheat exports and their representatives (*) – place in the structure of Russian exports in 2018

It is worth noting that the top ten countries import over 1 million tons, and the largest buyers of Russian wheat are located in the Mediterranean zone, in the Caspian-Black Sea basin, on the Arabian Peninsula, in East and Southeast Asia and Oceania, in the Atlantic zone of Africa. Following the increase in yields, export potential also increased, and this affected all geographical areas except the countries of the Caspian-Black Sea basin, including Turkey, the Caucasian countries and Iran. The most dynamically

developing market for Russian grain is in Southeast and East Asia. The largest increase in absolute terms of Russian wheat exports occurred for the countries of the Mediterranean zone, which is geographically and logistically convenient for Russian exporters. However, remoteness is not a significant obstacle to the export of Russian grain, as evidenced by its growth in the formed zones, indicating its high competitiveness (table 1).

Table 1.
Dynamics of export markets for Russian wheat by geographic zones in 2014-2018, thousand tons

Geographic areas	2014	2015	2016	2017	2018	Growth, %
The Mediterranean and Caspian-Black Sea basin	6543	6312	9173	11811	14828	126,6
Arabian Peninsula	7469	6595	5185	5549	6543	-12,4
East Asia	1698	1332	1424	2770	2434	43,3
Southeast Asia and Oceania	290	932	2204	2349	3398	1071,7
America	242	233	240	2130	3865	1497,1
Africa, Atlantic	674	238	638	686	1376	104,2
Africa, Indian Ocean	872	1064	1909	2137	2986	242,4
Eastern Europe	1990	2075	1916	2349	3168	59,2
Other	290	239	331	632	1556	436,6
	2016	2211	2308	2613	3811	89,0

* Compiled by the author based on the source (Countries are importers of grain from Russia)

The largest importers of Russian wheat receive it through the Azov-Black Sea basin. The second most significant zone in the export of Russian grain can be considered sea routes, access to which is via Iran; to access the territory of Iran, it is necessary to cross the Caspian Sea. Basically, access to the Atlantic Sea Route is through the Azov-Black Sea basin, but it can be diversified by exporting flows to the ports of St. Petersburg and the Baltic. A promising direction for the diversification of supplies in view of increased demand for Russian grain in East and Southeast Asia is the development of port infrastructure in the Far East and railway lines

and transshipment facilities in Altai, Orenburg, Khabarovsk and Vladivostok.

Given the high socio-economic importance of Russian grain exports, a state should participate in the development of Russian grain export, whose influence can be traced to the country's grain balance management and export regulation. A broad list of measures of both state and economic regulation should be applied to further build up export potential and increase the efficiency of the functioning of the grain-product subcomplex of the agro-industrial complex (Figure 4).

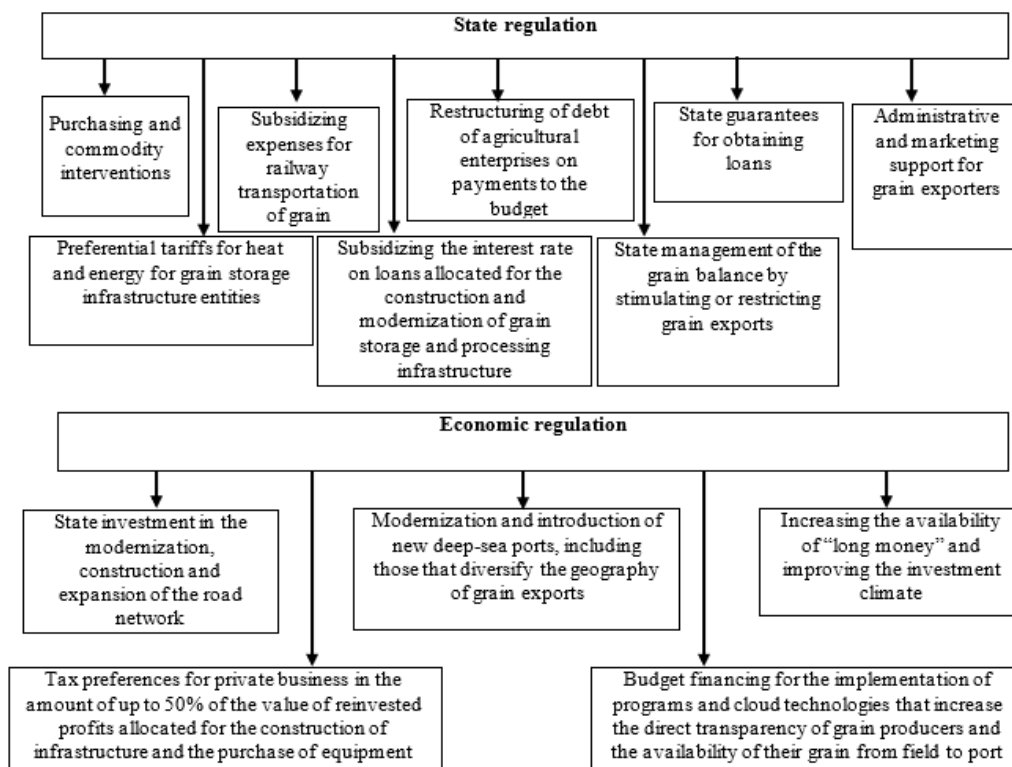


Figure 4. The system of measures of state and economic regulation of grain exports

Russia is still not able to completely abandon state regulation of exports and the development of the grain product subcomplex, but in a strategic perspective, economic regulatory measures should be more important.

Discussions

The production of grain crops in Russia, despite the growth of the crop, is complicated by various problems; the most important of which is the problem of transport and logistics infrastructure, the state of which does not correspond to the possibilities for expanding the geography of exports (Zyukin & Soloshenko, 2019). The resulting problems from suboptimal logistics corridors are the low quality of Russian grain, the speed of its movement and high transaction costs. Therefore, we believe that improving the production and logistics infrastructure, including through the formation of new deep-sea terminals, will become important factors for further expanding export potential. The relevant position of the state, which is obliged to contribute in various ways to its solution (Zyukin, Svyatova, Zolotareva, Bystritskaya & Alyokhina, 2020), is of great importance for the successful achievement of this task.

The positions of the USA and Canada in the world market will slightly weaken due to a decrease in sown areas and adverse climatic conditions in the near future. However, increased competition should be expected from grain exporters from Ukraine, Hungary, Romania and Kazakhstan, which have their strengths against the backdrop of Russian business (Kuksin, 2018).

We agree that the main regions specializing in wheat export in Russia are poorly integrated with the domestic market, the spatial market efficiency of which is hampered by high trading costs. A special role in the development of grain exports and raising Russia's position at the level of global food security is played by increasing the efficiency of spatial markets, including those located in peripheral regions (Svanidze & Götz, 2019a).

In Russia, unlike the United States, information flows caused by commodity futures markets play a much smaller role than physical trade flows. Policies aimed at improving the efficiency of the grain market in Russia should stimulate the development of commodity futures markets and information services markets, and not just the influx of investments in trade and transport infrastructure (Svanidze & Götz, 2019b). One of

the options for improvement in this area is the introduction of a major player in the domestic market; however, such monopolization has its own significant drawbacks.

Conclusions

Due to its socio-economic significance, grain export is becoming not only an economic, but also a political factor, characterizing the increased participation of Russia in the global market. In the context of the development of the grain-product sub-complex of the agro-industrial complex, grain export has been increasing its role in recent years, as it provides for the reorganization of surplus grain, maintaining high prices on the domestic market that are comparable to world prices, which ultimately favorably affects grain-growing farms.

The key Russian grain crop, which is most in demand on the world market, is wheat; Russia has become a leader in exports. At the same time, the complex of problems of grain farming in Russia remains unresolved: optimization of the production structure and regional distribution, deepening of specialization, transition to innovative factors of intensification of grain cultivation in order to ensure not only an increase in gross grain harvests, but also their stability due to yield.

Resources and tools for improving the state of production and logistics infrastructure are key issues that are important to solve in order to build export potential. In view of the political tension amid the Syrian issue, it is very important to look for opportunities to diversify the supply routes of domestic grain. The formation of the Far Eastern transport and port infrastructure is becoming relevant in the context of expanding the geography of exports to the zone of East and Southeast Asia, which will solve the problems of export development and create an incentive to increase grain yields and increase the investment attractiveness of the agricultural sector in the East Siberian regions.

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