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State-of-the-Art in Russian Agriculture: Production, Farm Structure, Trade, Policy and New Challenges

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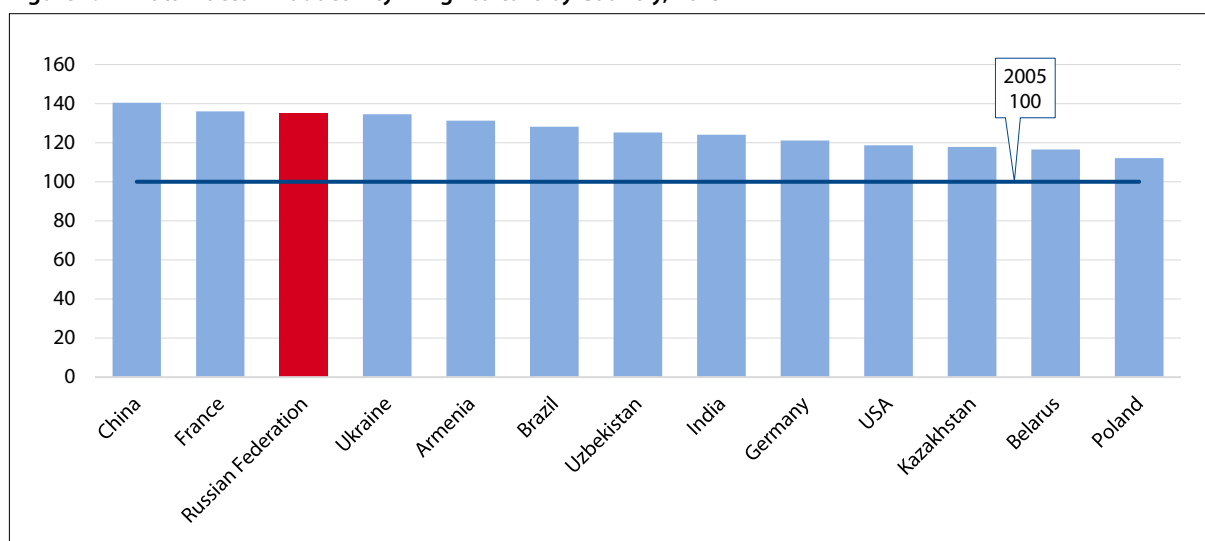
Abstract

This article is devoted to the modern state of Russian agriculture, which has made significant progress in recent years. The authors cover three major areas of agricultural development: changes in the structure of agricultural production, trade development, and agri-food policy. The article concludes by listing the major challenges Russia must address in order to maintain its position in the national economy and in global markets. The article is based on academic studies by the Institute of Agricultural Studies (InAgRes) at the Higher School of Economics—HSE (Russia).

Introduction

Almost unnoticed, Russia has managed to address its longstanding problem of food shortages. The country's modern agri-food sector is one of the most steadily developing sectors of the national economy. Production of selected crops is reaching historical records. The country, which was once a stable importer of staple foods, has become a significant supplier to the world market. Over the past ten years, progress has been made in the field of food quality and safety, all of which has been noted internationally.

Figure 1: Total Factor Productivity in Agriculture by Country, 2015



Source: USDA, Economic Research Service

The increase in agricultural output has been nearly exclusively due to total factor productivity growth, which has been higher in Russia than in most developed countries: in 2015, Russia ranked 24th in TFP growth out of 186 countries (see Figure 1). Both partial sector performance indicators and total factor productivity (TFP) are growing. This growth in production is achieved primarily at the expense of intensive factors.

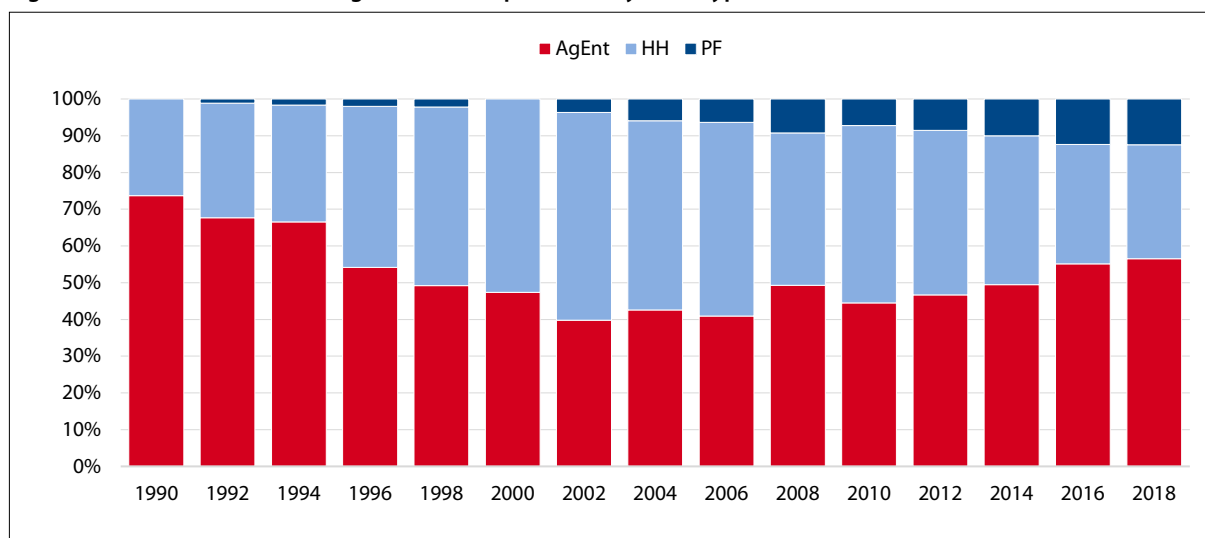
Conventional indicators of national food security show that Russia is consistently in the top third of the world's countries (FAO 2020; Economist Intelligence Unit 2020).

A turning point in the development of the sector was the 1998 crisis, which suspended imports and precipitated a flow of domestic investment first into the food sector and then into primary agriculture and the upstream sector. The main growth factors, therefore, were the growth of investment and a corresponding improvement in the quality of management. The 2008 crisis was a second push of the same kind. The introduction of counter-sanctions in 2014 was another attempt to protect domestic producers. That being said, investment and management have almost exhausted themselves as growth factors.

Agricultural Structure

In the Soviet Union, large producers—collective and state farms (*kolkhozes* and *sovkhozes*)—dominated agriculture, while small household plots played a subsidiary role as a source of food and supplementary income for rural families. The structure of agricultural production began to change with the onset of agrarian reforms in the late 1980s and early 1990s. A new category of agricultural producers—peasant or family farms—emerged. These, unlike the subsistence-oriented household plots of earlier years, were market-oriented.

Figure 2: Structure of Gross Agricultural Output (GAO) by Farm Type, 1990–2018 (% in Current Prices)



Legend: AgEnt—agricultural enterprises; HH—household plots; PF—peasant farms.

Source: Federal State Statistic Service (2019)

At the start of the transition, in 1990, Russia had 25,800 agricultural enterprises with an average of 320 employees and 7,800 hectares of agricultural land each. Taken together, these agricultural enterprises accounted for 75% of the country's agricultural production (Rosstat, 1995). Household plots generated the remaining 25% of agricultural production. Peasant farms, which had just begun to appear and managed only 100,000 hectares of agricultural land, made a negligible contribution to Russia's agriculture at that time. By 2018, the agrarian structure had changed completely (see Figure 2): agricultural enterprises' share of agricultural production had dropped to 55%, while family farms' share had increased to 45% (33% for household plots and 12% for peasant farms).

By the late 1990s, a new form of large-scale farming agglomerations—which would become known as “agroholdings”—had begun to emerge. Although there is still no legal definition of agroholdings in Russia, they have established themselves as a separate farm structure alongside the three conventional farm types: agricultural enterprises, peasant farms, and household plots. Today, agricultural enterprises can be distinguished according to their status with respect to agroholdings—that is, as either members of agroholdings or independent enterprises.

Trade

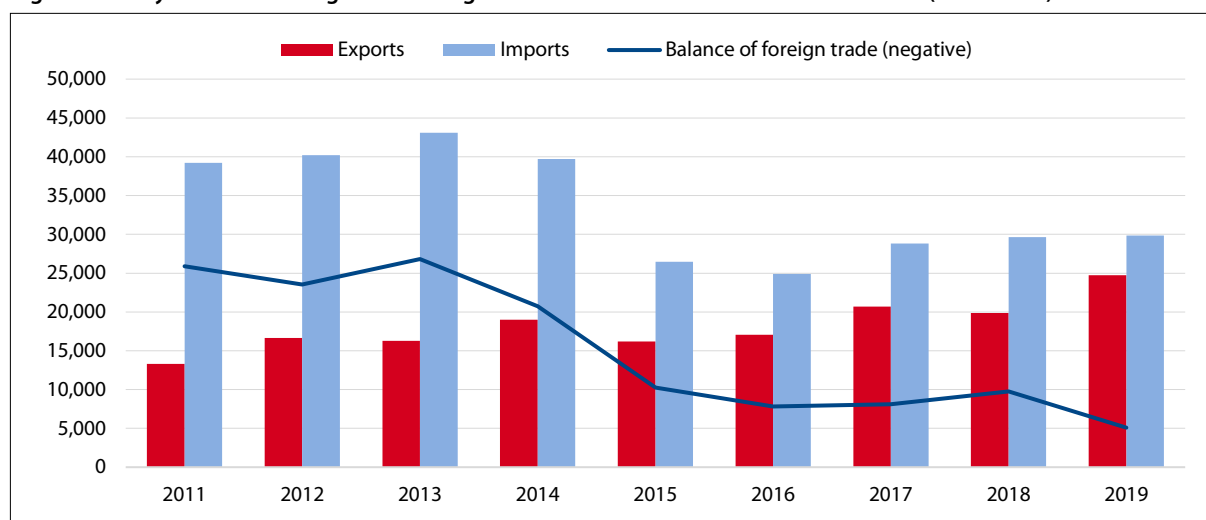
As part of the USSR, the Russian Federation depended on imported agricultural and food products from the other republics and member countries of the Council for Mutual Economic Assistance (COMECON). As reforms began in the 1990s, the sector experienced a lengthy transformational shock caused by a sharp decline in demand for food products (which had previously been heavily subsidized) and by the imports that flooded the market following the liberalization of foreign trade. Recovery began after the 1998 crisis, and by the mid-2000s the country had formulated—and successfully implemented—an import-substitution and food independence strategy. Moreover, the country's domestic output of certain products (e.g., wheat and barley) increased dramatically, making it a prominent global exporter. Naturally, an emphasis on exports became the next national agriculture strategy. In 2018, the Russian President set the goal of achieving USD 45 billion in agricultural and food exports by 2024.¹ In this context, the main

¹ Presidential Executive Order No. 204 dated May 7, 2018 “On national goals and strategic objectives of the Russian Federation through to 2024.”

long-term task now is to increase exports and to win sustainable competitive positions for Russian products in international agricultural and food markets.

Between 2011 and 2019, agri-food exports from Russia grew by 86%, while imports declined by 24% (see Figure 3). However, the number of exported goods in which Russia has a comparative advantage in foreign markets is quite limited. In 2018, out of about 170 exported items in the agricultural and food product category, Russia had a comparative advantage in only 35 of them (Karlova & Serova, 2020). These were mainly traditionally exported commodities (fish, seafood, grains). This complicates the task of integrating Russia into global value chains, especially for higher value-added products.

Figure 3: Dynamics of Foreign Trade in Agri-Food Products of the Russian Federation (in million t)



Source: Federal Customs Service Online (2020)

Under these conditions, the overall backwardness of Russian agriculture and the food industry in terms of innovative growth is becoming apparent. Meanwhile, global 21st-century markets are generally focused on processed foods, while traditional agricultural commodities are gradually losing their share (Senauer & Venturini, 2005). Without its own groundbreaking technological approaches, the country will struggle to compete with global players and global value chains. In its export policy, Russia could either integrate into global chains—requiring a dramatic improvement in the quality of its raw materials—or enter fast-growing markets, especially those in China, India, Africa, South-East Asia, and the Persian Gulf.

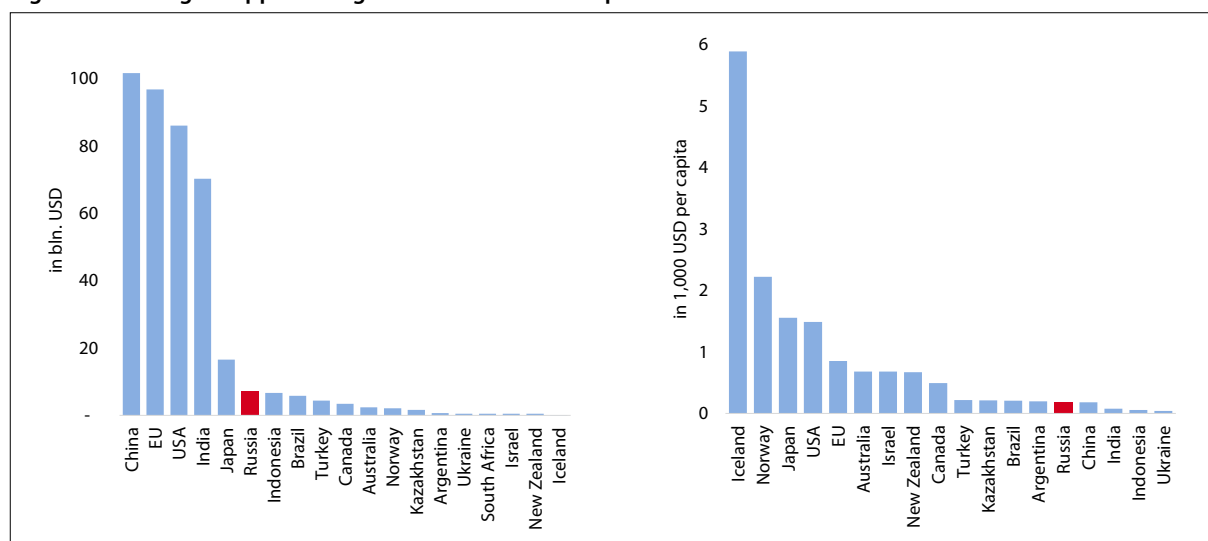
Policy

Agricultural policy in Russia is a combination of budgetary support, tax concessions, and trade-related measures. Budget transfers to agriculture are high compared to other countries: at 482 billion rubles, or about USD 7 billion, of transfers to agriculture, Russia ranks 6th among those countries for which the OECD measures the level of state support for agriculture. That being said, this level is only a tenth of that provided by the EU, the US, and China (which range between USD 86 billion and 102 billion), and support per person is much lower in Russia (see Figure 4 overleaf).

Tax concessions for the sector are estimated at 400 billion rubles per year,² about the same amount as annual budgetary transfers. Market price support (an estimation of the transfers to agriculture from trade-related measures and other measures affecting producers' prices) also remains a very important instrument, although its share of total support has declined from 49% of the total in 2017 to 42% in 2019 (OECD 2020). The high proportion of price support as a share of total support reflects the important role that trade policy, currency devaluation, and food embargo (counter-sanctions) play in supporting agriculture by providing advantages for exporters and import substitution.

In the Russian budget, support to agriculture is provided mostly in the form of subsidies, a number of which are not always effective in achieving their goals. About 40–50% of the funds are allocated to the most distorting programs that promote the expansion of production. The share of support to general services—programs that increase

2 According to the registry of tax concessions by the Russian Ministry of Finance (https://www.minfin.ru/ru/document/index.php?id_4=124742)

Figure 4: Budget Support to Agriculture in Russia Compared to Other Countries

Source: authors' calculations based on OECD statistics

the potential of the whole sector (research and development, education, inspection services, infrastructure development programs, etc.)—declined from 48% in 2006 to 26% in 2019 (OECD, 2020).

While support for innovations and the provision of digital technologies for agriculture are declared as being among the government's policy priorities, those activities are not prioritized in budgeting. Only 3.1% of the agricultural budget is allocated to research and development, and this share has been declining. Moreover, in 2019, only 45% of the funds budgeted for the digital transformation of agriculture were actually disbursed.³

The recent shift in the stated policy objectives from production growth to export expansion requires redirecting funds to research, development, and innovation in order to improve the international competitiveness of Russian agriculture. However, the structure of support has not changed with the shift in policy goals and most export-promotion measures are also production-related: subsidized credit, land improvement, capitalization of the state-owned agricultural bank and leasing company (81% of the federal transfers under the "Exports" project in 2019), etc. General services to exporters, such as simplification of border procedures, veterinary and phytosanitary services, information support, and support for promotion and market access amount to less than 10% of budget transfers under the "Exports" project.⁴

New Challenges

In order to maintain and strengthen its position in both domestic and foreign markets, Russia urgently needs to respond to a number of challenges.

1. Global food systems are undergoing a structural transformation toward more sustainable models that will benefit, among other things, from innovations and digital technologies. Food production is one of the world's most knowledge-intensive industries today. Russia must switch to an innovative method of developing its agri-food sector.

What are the main constraints on the innovative development of Russian agriculture today?

First, there is a huge generation gap in agricultural sciences, dating back to the 1930s and 1940s, when restrictions were imposed on many agricultural areas (for example, agricultural economics, agricultural statistics, and genetics) and scientific schools in these areas were destroyed. Furthermore, in the 1990s, the entry of young people into science declined sharply.

Second, the main investor in applied agricultural science today is the private sector. Worldwide, the investment cycle in applied agricultural research is 12–20 years on average. Such investments, therefore, are only possible in a stable business environment. In today's Russia, even the largest agribusiness companies have an average planning horizon of 4–5 years. In these conditions, investments in science and personnel become high-risk.

³ Author's calculations from The Federal Treasury's data: <https://minfin.gov.ru/ru/statistics/>

⁴ Ibid.

Third, innovative development and new technologies call for a completely different approach to agricultural education. Not only is the modern system of agricultural education in Russia detached from basic research, but it also trains generalists, leaving graduates unable to meet the practical needs of business.

2. The main challenge to global development today is the need for the sustainable development of all spheres of human activity, including agriculture. The main obstacle to the sustainable development of agriculture in Russia is, of course, the “resource curse”: the availability of vast land and water resources and Russia’s relative biodiversity mean that there is as yet no urgent need for the country to preserve them. Russia is still the planet’s environmental donor. Nevertheless, there are already challenges to sustainable development that need to be addressed in the medium term.

First, there is the problem of maintaining soil fertility. Second, although the reduction in the area used for agricultural production due to the increase in productivity per hectare has led to some improvement in the conservation of biodiversity in the country, the limits of the ecological burden on agricultural production have already been reached in some parts of Russia. Third, the lack of a national strategy or even a vision for food loss and waste (FLW) reduction is a serious threat to sustainable agricultural development. Since there is practically no official monitoring system for FLW in Russia, we have to rely on the expert opinions of market participants. For the main branches of the agri-food sector, losses reach up to 40% of output (Galaktinova et al. 2020), which means that all types of resources are used in a correspondingly unproductive manner. Fourth, modern food systems should be more focused on the needs of different groups of consumers. The modern middle class worldwide, including in Russia, is concerned about sustainable food production practices. Thus, pointing out sustainable practices is becoming an increasingly important factor in an enterprise’s ability to compete in the food market.

3. Switching the national priority from import substitution in the agri-food sector to an export orientation is associated with some long-standing risks.

First, there is an economic risk to the domestic market. The literature well explains the risks to the domestic market of developing export-oriented value chains. Second, there are social risks. The targets set out for increasing the export of agri-food products may be met at any cost, including by reducing the amount of food supplied to the domestic market. Third, a focus on exports also bears the ecological risk of over-exploiting natural resources.

4. With increasing productivity in the agricultural sector, a large proportion of rural areas of Russia have been marginalized. This has led to the degradation of rural areas in these territories, the migration of the rural population to the cities, and the disappearance of a large number of settlements. Moreover, large-scale agribusiness in search of skilled labor has switched in some cases to shift methods of organizing work.

The underdevelopment of rural areas is becoming an obstacle to the development of agriculture. The marginalized social environment creates risks for production and businesses cannot attract qualified employees on a permanent basis.

About the Authors

Natalia Karlova is head of the Division on Analysis of Agrarian Markets at the Institute for Agrarian Studies of the HSE. She has over 20 years’ experience in market research and the development of state policy measures. Natalia has participated in research projects commissioned by state authorities (Ministry of Agriculture, Ministry of Economic Development, regional administration), international organizations (IMF, World Bank, OECD, FAO), and private companies. She has experience working in one of the largest agricultural holdings and the Central Bank of Russia. Her interest lies in forecasting developments in agri-food markets, the prospects of the Russian agro-industrial complex in world markets, the diversification of Russian agricultural exports, the inclusiveness of product chains, food losses, and waste along the food chain. She graduated from the HSE and holds a Ph.D. from the Institute for Economy in Transition (the Gaidar Institute).

Olga Shik is an expert in the Agrarian Policy Division at the Institute for Agrarian Studies of the HSE. Previously, she was a senior researcher at the Analytical Centre on Agri-Food Economics at the Institute for Economy in Transition (Gaidar Institute). She participated in research activities for leading international organizations such as the Inter-American Development Bank, the World Bank, the UN FAO, and the Organisation for Economic Co-operation and Development (OECD). She currently provides support for the Inter-American Development Bank’s analysis of the agricultural policies in Latin America and the Caribbean “Agrimonitor.” Olga is a member of the Technical Working Group of the International Organisations’ Consortium for Measuring the Policy Environment for Agriculture. She graduated from the Higher School of Economics in Moscow and holds a Ph.D. from the Institute for Economy in Transition (the Gaidar Institute).

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Renata Yanbykh is head of the Agrarian Policy Division at the Institute for Agrarian Studies of the HSE. She graduated from the economic faculty of Lomonosov Moscow State University, where she received her Ph.D. in 1992. She was an advisor on agricultural policy for two Deputy Prime Ministers of the Russian Federation: Jacob Urinson in 1997–1998 and Alexey Gordeev in 2000–2002. She is one of the authors of the first State Program for the development of agriculture, regulation of markets for agricultural products, raw materials and food for 2008–2013 and the State Program for Integrated Rural Development, adopted in 2019. Renata has participated in international projects of the FAO, OECD, DFID, and JRC-IPTS EC, was trained at the World Bank, and took part in the EAAE and IAAE forums.

References

- Economist Global Intelligence Unit (2020). Global Food Security Index <https://foodsecurityindex.eiu.com/>
- Federal State Statistic Service Russia (2019), Agricultural Statistics, www.gks.ru
- Karlova, N. and E. Serova (2020). Prospects of the Chinese market for Russian agri-food exports.—In: Russian Journal of Economics 6(1): 71–90/ <https://doi.org/10.32609/j.ruhje.6.50824>
- Senauer, B., & L. Venturini (2005). The globalization of food systems: A conceptual framework and empirical patterns, Working Paper 05-01, The Food Industry Center, University of Minnesota. <https://ageconsearch.umn.edu/record/14304>
- FAO, IFAD, UNICEF, WFP and WHO (2020). The State of Food Security and Nutrition in the World (SOFI): Transforming food systems for affordable healthy diets. <http://www.fao.org/publications/sofi/en/>
- OECD (2020). Agricultural Policy Monitoring and Evaluation 2020, OECD Publishing, Paris, https://www.oecd-ilibrary.org/agriculture-and-food/agricultural-policy-monitoring-and-evaluation-2020_928181a8-en
- Галактионова Е. А., Ким В. В., Антонец К. В. (2020) Продовольственные потери и пищевые отходы на потребительском рынке РФ. – Международный сельскохозяйственный журнал. 2020. № 4. С. 1–20. (Galaktionova E.A., Kim V.V., Antanovich K. Food loss and waste at consumption market of Russian Federation—International Agricultural Journal. 2020, #4, pp. 1–20) <https://publications.hse.ru/articles/377994246>