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A GROHOLDINGS, TECHNOLOGY, AND THE POLITICAL ECONOMY OF RUSSIAN AGRICULTURE

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This article details the rise of Russian agricultural corporations, known as the agroholdings. These companies have accumulated control of Russia's most fertile land over the last 20 years and have become the main producers of agricultural commodities and processed food. They are also the driving force of a profound technological transformation of agriculture and food production during this time. A core claim of this article is that the technopolitics of twenty-first-century Russian agriculture made the meteoric rise of agroholdings possible. Technology was central to both the economic and political roles of these large, vertically integrated agricultural conglomerates. Agroholdings grew rapidly because they adopted cutting-edge agricultural technologies that maximized yields and economic efficiency. Agroholdings' control of technologies earned them, in turn, the political support they needed to thrive in the state capitalist system of the Putin era. They were privileged allies of President Vladimir Putin's government, which sought to enlist them for the political goals of strengthening domestic farming and food production and reducing Russia's dependence on food imports. More broadly, the article suggests that a technopolitical lens recasts and improves our understanding of the political economy of post-Soviet Russia. Technopolitics reveals the role of both the state and corporate actors, of power and capital, in the construction of a new economic order and draws attention to how these processes shape post-Soviet byt.

Keywords: Agriculture; Russia; Technopolitics; Political Economy of Transition; Agroholdings; Food Sovereignty

INTRODUCTION: THE TRANSFORMATION OF RUSSIA'S FOOD SYSTEM

In 2017 the Russian company Cherkizovo launched a new pig farm in Lipetsk Oblast that increased Cherkizovo's production volume by over 350,000 heads a year. Already the country's second largest meat producer, the company ended up with a pig herd of over 2 million heads by the end of that year. Meanwhile, in March of that same year, 1,327 pigs belonging to small household farms in Irkutsk Oblast were

slaughtered within three days (Kolbasov et al. 2018). This event was precipitated by a pig's infection with African swine fever (ASF), a lethal disease that spreads rapidly. The Irkutsk pigs were located within a five-kilometer zone from the ASF case; they were culled on the orders of Rossel'khoznadzor, Russia's federal food safety and veterinary authority, as a precautionary measure to prevent the spread of the virus that causes ASF.

Even though Lipetsk and Irkutsk are separated by over 5,000 kilometers, these two events were closely related. They are both characteristic of far-reaching changes in Russia's food system that have been taking place over the last two decades. During this time, livestock herds belonging to large corporate farms have expanded dramatically, leading to a rapid increase in the production of meat in technology-intensive, efficiency-oriented confinement facilities. Meanwhile, the number of animals housed in Russian backyards has fallen and, with it, animal rearing that relies on extensive human care. The relative importance of small-scale backyard livestock holdings has declined for a number of reasons. Most importantly, meat from large-scale corporate farms has become more widely available and more affordable to Russian citizens. Interventions by the veterinary authorities of the kind described above also played a role; they became more common as concerns about pathogen outbreaks have intensified in recent years. Rossel'khoznadzor reported that over 1,000 AFS outbreaks resulted in the administered culling of approximately 800,000 pigs in 46 regions across Russia between 2007 and 2017 (Kolbasov et al. 2018:796).

While these events involve pigs, similar trends played out in other livestock sectors. Very large, vertically integrated poultry plants, dairy farms, and cattle farms have expanded production during the mid-2000s. That same year, in 2017, EkoNiva, Russia's largest dairy company, for example, launched three new livestock operations in Voronezh, Kaluga, and Tyumen' oblasts, thereby increasing its milk production from 600 to 800 tons per day (EkoNiva Vesti no. 55, July 2017). This article documents and explains the rise of large-scale, vertically integrated private agrifood corporations, known as agroholdings, over the last 20 years. These companies are now Russia's largest landowners and the main producers of agricultural commodities and processed food. Many, though not all of them, are profitable businesses and owned by well-connected oligarchs. They are the driving force of a profound technological transformation of agriculture and food production. All of these characteristics of agroholdings—their sheer size, economic importance, financial clout, and political connections—make them protagonists in a profound transformation of Russia's food system. These trends deserve attention: who produces food is a central pillar of a food system—not only because it affects how food is produced, but also what foods reach Russian tables. The rise of agroholdings and the relative decline of household farming are an important element of Russia's post-Soviet transformation because of their influence on citizens' post-Soviet everyday experience—or byt.

¹ Svetlana Barsukova (2016:65) also points to Rossel'khoznadzor's phytosanitary measures as playing a role in the relative decline of small-scale backyard farms.

What accounts for the rapid rise of agroholdings? On the one hand, a number of economic factors contributed to the growth of Russian agrifood corporations: The 1998 rouble devaluation made domestic crops and food more affordable vis-à-vis imports. Further, rising global food commodity prices in the early and mid-2000s led to increasing demand for land and agricultural assets across the world, which meant that Russian farmland and agricultural assets were in demand by domestic and foreign investors. On the other hand, while economic factors played a role, politics and technology also mattered for the rise of this type of oligarchic corporations in ways that have largely escaped the attention of those studying the political economy of Russia's post-Soviet transformation.

Let me turn to technology first. An expanding range of sophisticated technologies are fundamental for crop and food production in Russia as elsewhere—from precision combine harvesters to CRISPR-Cas9 genome-editing techniques to highly specialized, proprietary food processing, storage, and packaging. In the 1990s Russian farmers and food processors had only very limited access to new agrotechnologies, relying mostly on machinery and technology inherited from the Soviet planned economy. Russian agricultural production collapsed as President Boris Yeltsin liberalized markets, in large part because of the overwhelming competition from foreign agricultural and food producers. Russian consumers were swamped with imported food, originating in countries where cutting-edge food- and agrotechnologies were the norm. This situation changed gradually after 1998 and more swiftly in the early 2000s, when Russian food processors and farms gained access to capital and technologies to update production methods. Agroholdings rose to economic prominence, because they adopted agricultural technologies that maximized yields and economic efficiency and acquired ownership of fields that had belonged to collectives and lay fallow during the 1990s. A large share of agrotechnologies was imported from the United States and Europe, creating important and durable connections between the Russian and the global economy. Although Russian stakeholders sometimes refer to these technologies as "Western," given that many of the specialized agricultural input producers operate across the world, the knowledge, machinery, and equipment are more accurately described as global agrotechnologies.

Agroholdings' control of technologies earned them the political support they needed to thrive in the state capitalist system of the Putin era. President Vladimir Putin's government turned to these agroholdings as privileged allies, enlisting them for a political project known as the Russian food security agenda. The main goals of the agenda were the recovery of Russian farms, the reduction of import dependence inherited from the Yeltsin administrations, and more meat in Russians' diet. Since the early 2000s a whole host of public support measures, such as subsidies, tax breaks, and trade barriers helped agroholdings thrive. They were also encouraged to acquire vast swathes of farmland, in return for their contributions to a political project to strengthen domestic agriculture and food production (Wengle 2018). Public support measures initially encouraged technology imports but over the last decade have shifted to measures that promoted the recovery of domestic agrotechnologies. This shift was part of an expansion of the food security agenda: as the inherited

dependence on foreign agricultural products lessened around 2010, more competitive domestic inputs and technologies for Russian agriculture appeared as a new and feasible policy goal. Some Russian agricultural technology suppliers gained market domestic shares, such as Rostsel'mash, the country's largest combine manufacturer; however, foreign technologies remain important across virtually all aspects of domestic agricultural production.

Technology has thus been central to both the economic and political roles of Russian agroholdings. The term technopolitics allows us to grasp this centrality of technology in the political economy of Russian agriculture. A core claim of this article is that the technopolitics of twenty-first-century Russian agriculture made the meteoric rise of agroholdings possible. In general terms, technopolitics refers to the support of and reliance on technologies in policy regimes that seek to realize particular political goals. Gabrielle Hecht's formulation of technopolitics is particularly useful here: in her account technopolitics denotes the "strategic practice of designing or using technology to constitute, embody, or enact political goals" (1998:15). Russian authorities think of agricultural technologies in political terms, viewing them as tools that Russian farmers and food processors need to acquire, master, and employ in order to reduce the country's dependency on Western powers. Even though these were private companies, the Putin government mobilized agroholdings and the agrotechnologies as indispensable instruments to realize its political agenda. Agroholdings thrived and became globally competitive economic actors because they farmed more efficiently and profitably than collective farms ever did, but also because they could rely on political protection and support. Technopolitics is a useful conceptual tool to grasp this reality. It reveals the role of both the state and corporate actors, of power and capital, in the co-construction of the post-Soviet economic order. As a conceptual tool, technopolitics is closely affiliated with the paradigm of co-production of science and society. In Sheila Jasanoff's terms, co-production at its broadest holds that "knowledge and its material embodiments are at once products of social work and constitutive of forms of social life" (2004:2).2 Unlike other theoretical approaches to food systems, a technopolitical lens does not a priori single out economic actors (profit-oriented corporations and investors) or powerful political actors (states, bureaucrats, and political elites) as the primary drivers of change, but pays attention to how they evolve together as mutually constitutive and codependent.3 In our case, attention to agro-technopolitics reveals the co-construction of Putin's state-driven political project (a social construct) with the post-Soviet version of industrial agriculture (knowledge-intensive agriculture and technologies as their "material embodiments" in Jasanoff's wording).

² Jasanoff argues that in the political realm, a co-production lens draws attention to the role of knowledge, expertise, and technologies in shaping relations of authority, and vice versa (2004:3).

³ Saara Matala's (2019) study of Finnish shipbuilding in Cold War context, for example, illustrates this aspect of technopolitics. Corporate actors were indispensable for the ambitious shipbuilding program Matala describes, but it also hinged on the state's resources and on the political power of actors to marshal them.

If the rise of agroholdings did indeed profoundly affected post-Soviet everyday experience, the technopolitics of Russian agriculture has important theoretical implications for how we think of the political economy of the post-Soviet transformation. We have long known that theories of post-Soviet change that rest on stylized ideal types—from plan to market, in the case of the Russian economy—are conceptually blunt and normatively flawed (Collier and Way 2004). At the same time, the challenge to find conceptual frameworks to understand socioeconomic change and Russia's global economic integration since the collapse of the planned economy is still with us. The rise of agroholdings and technopolitics as a theoretical lens reveal the texture of economic change in a new way—drawing attention to the how, the who, and the what of agricultural production and to changing byt in cities and the countryside. The rise of agroholdings, for example, shifted the balance from homemade sausages to chicken nuggets engineered by a fast-food chain and from smetana sold in bulk to a single-serve, flavored yogurt. What the colorful yogurt containers and the chicken nuggets have in common is that they are both manifestations of the growing influence of agroholdings on Russian byt. Melissa Caldwell argues that Russians "incorporated McDonald's into their daily lives," making it part of "family celebrations, cuisine and discourses about what it means to be Russian today" (2004:6). As introduced in the preceding paragraph, Russian agroholdings, food processing companies, and fast-food chains all relied in significant ways on global technologies. What this means is that the changes in Russia's food systems outlined here shed light on the post-Soviet economic transformation not as an abstract move from plan to market but as a profound transformation of lived experience that accompanied Russia's integration into the global economy (see also Wengle, forthcoming).

Many excellent studies help to understand the transformation of Russia's food system in the post-Soviet period. Vasilii Uzun and Natalia Shaqaida (e.g., 2019; Shaqaida and Uzun 2015) and Svetlana Barsukova (2016) are among the keenest observers of the large-scale structural changes in Russian agricultural production and their implications for different kinds of rural producers. Stephen Wegren (1998, 2009; Wegren and Elvestad 2018) has highlighted the policy and institutional context of rural changes. Alexander Nikulin and Irina Trotsuk provide valuable insights about the transformation of rural production and social structures from Russia's regions (e.g., Nikulin 2003; Wegren, Nikulin, and Trotsuk 2017, 2018). Oane Visser and Max Spoor, together with Brian Kuns and Anders Wästfelt, have also helped us understand the origins of the financial investors and capital inflows to the Russian agrifood sectors (Kuns, Visser, and Wästfelt 2016; Visser and Spoor 2011). Judith Pallot and Tat'yana Nefedova (2007), Oane Visser, Max Spoor, and Natalia Mamonova (2012, 2014) and Alexander Vorbrugg (2018, 2019) have conducted insightful ethnographic studies that show how relations between agroholdings and rural communities have changed with the arrival of agroholdings as landowners and rural producers. There are also many excellent ethnographies of changing byt and consumption, including by Caroline Humphrey (2002) and Melissa Caldwell (2004, 2009).

The research presented here contributes to this body of work and our understanding of the economic and political roles of agroholdings over the last two decades by introducing the concept of technopolitics and by emphasizing the mutual dependence of the Putin government and agroholdings. The unique strength of a technopolitical account is its ability to create connections between the realms of politics, production, and consumption that all participate in post-Soviet economic change, but are often conceptually distant in political science accounts of institutional change, sociological accounts of changing modes of rural production, and ethnographies of consumption. The remainder of the article proceeds as follows: the next section introduces agroholdings as corporate actors, with a focus on the land and technology they control; it is followed by a discussion of their political role; finally, the conclusion returns to the concept of technopolitics and what it adds to our understanding of Russia's post-Soviet economic transformation.

THE RISE OF AGROHOLDINGS

Boris Yeltsin and his team of young reformers initiated the privatization of Sovietera collective farms (kolkhozes and sovkhozes) in the early 1990s. Reforms gave collective farm workers rights to privately own a share of the collective's land. Although Yeltsin's reforms continued Gorbachev-era initiatives to decentralize administrative control, in legal terms privatization of collective farmland was a radical institutional transformation. For the first time since 1917 land could be privately owned, and rural residents could operate their own farms—on paper, both use- and ownership rights to land were transferred to individuals. In reality, however, few kolkhozniki opted out of collectives to farm privately. Observers noted several obstacles to the de facto privatization of farms, including the skyrocketing prices of inputs, the lack of capital, and competition of cheap imports. Perhaps the most important obstacle to the privatization of farms was the extremely limited access to cash or loans to buy inputs and equipment. Jessica Allina-Pisano summed up succinctly that "farming land required ... capital, and villagers had few ways to get it" (2007:139).

This situation changed gradually around the turn of the millennium and more swiftly in the mid-2000s. Over the last two decades, Russian agricultural and food production recovered in large part because of the capital that flowed to these sectors, which in turn allowed for technological upgrading of the machinery used on fields and in food processing plants. Foreign and domestic investment in Russian agriculture increased significantly during this time. Foreign direct investment in agriculture more than quadrupled in the decade between 2004 and 2013 (Rylko et al. 2015). Food processors recovered relatively early from the economic collapse of the 1990s and started expanding in the late 1990s and early 2000s. Wimm-Bill-Dann,

⁴ In addition to the scholarship discussed in the introduction, landmark studies on Russia's post-Soviet land reforms include Allina-Pisano (2007); Ioffe, Nefedova, and Zaslavsky (2006); Leonard (2010); Nikulin (2003).

Russia's largest dairy and soft-drinks producer, for example, expanded production in Russia by importing the technologies and adopting the marketing strategies of global food processing giants. Global food companies, such as Danone, and the largest global fast-food chains had also moved to Russia by the late 1990s. The rapidly growing food processing and fast-food sectors needed high-quality inputs and were an early and significant source of demand for Russian agricultural products. By the early 2000s oligarchic conglomerates from other sectors of the Russian economy started buying and investing in processing plants and farmland (see, e.g., *Moscow Times* 2002). By 2010 agroholdings emerged as important economic and political actors in Russia.

The swift emergence of large, vertically integrated agrifood corporations in Russia had many important dimensions. Two stand out as particularly significant and will be the focus of the discussion below: first, agroholdings' role as large landowners and, secondly, their role in the technological modernization of agriculture and food processing. Before proceeding to discuss land and technology, the next few paragraphs introduce these new corporate actors. In the first decade of the 2000s agroholdings were initially known as new agricultural operators (NAOs), and many of them were affiliated with Russian parent companies in the cash-rich finance, energy, and metals sectors. Others were founded by companies that had imported crops or agricultural inputs. Some of the most successful agroholdings were owned by Russian entrepreneurs and oligarchs; others had foreign ownership stakes. Some of them are publicly traded; others are not. While most Russia's new "land barons" were domestic oligarchs, the origin of capital investments in Russian agroholdings and thus in Russian farmland was remarkably global, including sovereign wealth funds from the Gulf states (Bahrain, United Arab Emirates, and Saudi Arabia), Libya, South Korea, and China, as well as a variety of other institutional investors (pension funds, hedge funds, private equity funds) from the United States, Canada, Israel, and Europe (Denmark, Germany, Luxembourg, Sweden, and Switzerland). 5 Some of the investment in Russian agriculture was "repatriated" capital—that is, Russian money that had fled abroad during the 1990s was being reinvested in domestic agribusiness and land. The investment by Chinese private and state-owned enterprises in the Russian Far East was one of the foreign investment streams that deserves special mention. The purpose of investment also varied. Some of these investments were pursued as shortterm risk spreads; others were part of long-term strategies to invest in food and biofuel production in low-cost countries (Visser and Spoor 2011:311). The deterioration of Russia's relationship with the West after the 2014 annexation of Crimea led some, though not all, Western investors to pull out of Russian agricultural assets (Kuns et al. 2016).

In primary production, agroholdings tend to cluster in one of two categories: they are either field crop producers with a focus on grains, sugar beets, or vegetable oils, or they are vertically integrated livestock producers. Prodimex and Rus-

⁵ Visser and Spoor's (2011) careful analysis documents regional trends: European investors were mainly interested in the Russian Black Earth, while China pursued opportunities in Siberia and Kazakhstan.

agro exemplify the first category. Prodimex was founded in 1992 and Rusagro in 1995. Both agroholdings were initially importers of sugar and sugar beets before they started producing domestically, and both remain focused on sugar beets and grains. Prodimex invested in several sugar mills in the late 1990s. Rusagro acquired a sugar plant in Belgorod Oblast around the same time. Sugar beets and sugar production remain Prodimex's core business, but the company also produces large quantities of other field crops, such as wheat, barley, sunflower seeds, corn, and soy. By 2019 it owned 16 sugar refineries, producing nearly 1.5 million tons of sugar from over 10 million tons of sugar beets. It is Russia's largest sugar producer, supplying sugar to Coke and Pepsi since the mid-2000s. In 2001 the company owned 60 hectares of land; by 2018 it was the largest landowner, owning nearly 800,000 hectares. Rusagro, much like Prodimex, moved from importing sugar to refining sugar in the late 1990s. In 2004 the company expanded to vegetable oils. In 2008 Rusagro built its first pork facility and has expanded meat production since then, adding more facilities in more regions across Russia. Rusagro is Russia's largest producer of margarine, the second largest producer of mayonnaise and vegetable oils, and the third largest sugar producer. It now owns farmland and produces in the Urals and in the Russian Far East, where it grows corn and soy for export to China. Rusagro is majority owned by Vadim Moskovich, a Russian oligarch, who also represents the agricultural region Belgorod in the Federation Council, the upper house of the Russian parliament. Prodimex is majority owned by Igor' Khudormov, a Russian oligarch and citizen of Malta since 2018. Both companies have been on the list of Russia's largest landowners over the past few years (see table 1 below).

Vertically integrated meat companies are a second type of agroholding in Russia. Miratorg and Cherkizovo are Russia's two largest meat producers. In 2020 Miratorg was the country's largest pork producer and second largest poultry producer; Cherkizovo was Russia's second largest pork producer and third largest poultry producer. Cherkizovo had been a food processor in the Soviet planned economy since the 1970s, surviving the tumultuous 1990s by making sausages. Miratorg was founded in 1995 as a company that imported dried milk from the Netherlands. In the early 2002 both companies expanded rapidly by building several large pork and poultry plants, as well as processing and packing facilities. Miratorg added beef and sheep over the last five years, and Cherkizovo started a turkey facility in 2017. Miratorg's annual overall slaughter volume was 521,000 tons (slaughter weight), or on average 520 heads of pork per hour in 2017. Both companies are fully vertically integrated: Miratorg's slogan, for example, is "from field to counter." Miratorg and Cherkizovo both own and operate land and produce feed for their livestock operations. In addition to meat, Cherkizovo also produces

⁶ The information on Rusagro and Prodimex corporate history is available in the companies' annual reports and on websites.

⁷ Information on Miratorg and Cherkizovo stems from annual reports, company press releases, the USDA and industry reporting, and accounts from technology suppliers; see, e.g., Skrynnik (2014) and Vanderberg et al. (2017).

wheat, corn, peas, and soy, owns nine feed mills and twelve grain elevators, and controls thousands of hectares of farmland in several oblasts in the European part of Russia (including Bryansk, Belgorod, Kursk, Smolensk, Kaluga, Kaliningrad, Tula, and Orel). Both companies also have well-known brand names in the Russian market, and both sell to CIS countries and increasingly in Asia as well. Miratorg has retail stores across Russia, and its offerings include hundreds of finished products and dozens of convenience and ready-made meals, as well as a wide range of slaughter byproducts, such as bones and bone meal, rendered fat, blood plasma, offal, and so on (see, e.g., Miratorg Agribusiness Holding 2013, 2019). Miratorg has long supplied meat to the largest fast-food chains operating in the country (McDonald's, Burger King, TGI Fridays, Pizza Hut, Carl's Jr.), as well as for several high-end hotel and restaurants chains (Hilton, Radisson, and Marriott). Miratorg is majority owned by the brothers Viktor and Aleksandr Linnik. Cherkizovo is majority owned by Igor' Babaev and his wife Lidiia Mikhailova.

Some of these agroholdings are lucrative corporations, and a handful of owners rank among Russia's wealthiest oligarchs (Kulistikova 2020). The oligarchic owners of all four companies mentioned above, Moskovich, Khudormov, the Linniks, and Babaev-Mikhailova, belong to the class of Russia's super wealthy. Overall, however, the profitability of these companies likely varies and is also somewhat unclear, as only a few of them are publicly traded. A study by Brian Kuns, Oane Visser, and Anders Wästfelt (2016) shows that some investments by foreign owners were less profitable than anticipated. It is certainly the case that various public support measures have facilitated expansion of agroholdings as a group, subsidizing their operations and protecting their property rights in the long run (I will return to this point below).

The case of EkoNiva is interesting for the political economy of Russian agroholdings; the remainder of the article will draw on the company's experience as a case study to illustrate its main claims. EkoNiva was founded in 1994 by Stefan Dürr, a German entrepreneur. Dürr had come to the Soviet Union in the 1980s as a student interning on a Soviet farm. For much of the 1990s EkoNiva was a small agricultural producer, growing organic buckwheat and importing German and American agricultural machinery and seeds for Russian farms. Today EkoNiva is Russia's largest milk producer, known as a "milk empire," and one of the largest agroholdings in the country. The company is a vertically integrated dairy producer, with dairy and crop farms in many regions across the European Russia and in Siberia (Voronezh, Kursk, Leningrad, Moscow, Kaluga, Orenburg, Tatarstan, Bashkortostan, Tyumen', Novosibirsk, and Altai). The expansion of EkoNiva began in the early 2000s, when the company built dairy facilities in Voronezh, Kursk, and Orenburg oblasts (2002) and in Novosibirsk a few years later (2006). Over the last 15 years the company expanded its dairy, feed crop, and seed operations at the rapid pace of several facilities each year. As of 2019 the company milked over 67,000 dairy cows, producing more than 1,600 tons of raw milk per day across Russia and planning to further expand production by doubling its herd in the near

future (Schairer 2019).8 The dairy farms in Voronezh Oblast remain the company's largest facilities, with over 30,000 dairy cows. EkoNiva also operates milk processing facilities. Having long supplied Danone and other large dairy processors, it started selling fluid milk and dairy products under its own brand, Academy of Dairy Science, in 2013. The company has also been involved in seed production, producing seeds for its own forage crop, as well as commercial crop seeds supplied to other farms in Russia and abroad. The milk yields on EkoNiva dairy farms are high, and its seed business is profitable. The EkoNiva group has nearly 9,000 employees and sponsors a range of corporate social responsibility programs across all the regions where it is active, supporting churches, kindergartens, and sporting events. As introduced above, the control of land assets and the expansion of technology-intensive production are two characteristics of agroholdings; the sections below will come back to EkoNiva's track record in both regards.

FARMLAND: LARGE SCALE SHIFT IN OWNERSHIP

The rise of agroholdings had enormous consequences for every aspect of Russia's food system. A first important change that followed the influx of capital to the rural sector was a historically large transfer of land assets starting in the early 2000s. Russia's most fertile land was sold by collective farm members and regional authorities to the agroholdings. Yeltsin's rural reforms had envisaged that privatization would lead to the breaking-up of collective farms and a decentralization of land ownership. Yet, much like rural production elsewhere in the world, Russian farms became larger, not smaller. Rather than breaking up Soviet-era land assets, agroholdings accumulated large land banks in Russia's most fertile regions, amounting to what Andrew Barnes recognized early on as a "radical transformation of asset control in agriculture" (2006:199).

The overall scope of land transfers is difficult to track as there is no official data available on land sales to agroholdings. Each year the Russian consulting company Black Earth Farming and the industry publication *Agroinvestor* publish a list of the land assets of the largest 50 farms with land banks of over 100,000 hectares each. Virtually all agroholdings have expanded their land banks every year, and the largest among them have traded places on the top-five list. Rusagro, for example, stated in 2014 that its land bank consisted of 460,000 hectares in Russia's Central Black Earth. By 2018 it was the largest landowner with a land bank that had grown to over 670,000, which includes 85,000 hectares in Far Eastern region of Primor'e. In 2020 Miratorg was the largest agroholding in terms of land assets, controlling over a million hectares of land. EkoNiva climbed into the top ranks of Russia's largest landowner over the last few years, controlling a land bank of nearly 600,000 hectares in 2020.

⁸ For comparison, this is about the size of a very large dairy farm in the US. For instance, FairOaks Farms, located in the state of Indiana, milks roughly the same number of cows.

⁹ While many agroholdings do not have a public presence, some of the larger Russian agrifood corporations publicly boast about the size of their land bank (see, e.g., http://www.rusagrogroup.ru/).

Company	Landholding (hectares)	Main commodities			
Miratorg	1,047,000	meat, pork, chicken, beef			
Prodimex and Agrokul'tura*	865,000	Prodimex: sugar beets, sugar, grains Agrokul'tura: wheat, barley, soybeans, sunflower, corn			
Agrokompleks	653,000	meat, dairy, vegetables, fruit, rice, sugar, eggs, oil			
Rusagro	643,000	sugar beets, sugar, pork, crop, vegetable oil/fat			
EkoNiva	599,000	dairy, grain, seeds			
* Note: Prodimex and Agrokul'tura are separate companies but controlled					

Table 1. Russia's Five Largest Landowners, 2020

by the same majority owner.

(BEFL annual report of Russian agroholding land assets; published in Agroinvestor.)

By 2020 the 10 largest agroholdings each owned over 380,000 hectares of land. Since a Soviet-era kolkhoz tended to farm around 6,000 hectares, the largest agroholdings control and work farmland many times larger than a typical collective farm. 10 A very small number of new agricultural holding companies now own a very large share of Russia's most valuable farmland. Agroholdings usually accumulated land banks through land purchases and long-term leases from the former collective-farm workers. These private transfers were often facilitated and encouraged by regional and federal authorities' intent on bringing this land under cultivation. If rural residents had left the village and landrights were unclear, regional authorities helped agroholdings reach deals with remaining relatives and former kolkhozniki. Corporate landholdings are concentrated in Russia's most fertile regions with the highest agricultural yields; agroholdings dominate landholding in the Central Black Earth region, and they have a large presence in the Volga region and southern provinces (see figure 1, map of agroholding activity, below). 11 They are least active in the more remote and northern regions. 12 Agricultural production in southern Siberia and the Russian Far East has recovered over the last decade or so. Chinese rural migrants first set up small farms and greenhouses and later expanded hectares under cultivation. Encouraged by both the Chinese and Russian governments, small-scale investments were followed by more technology- and capital-intensive farming focused on grains and soy in the 2000s (Zhou 2016). In recent years the Russian government tried to incentivize European-based agroholdings' move east with a type of land-lease act that transferred public land in the Far East to these corporations.

¹⁰ The largest sovkhozes were roughly 15,000 hectares (Csáki, Feder, and Lerman 2004).

¹¹ The map was compiled by the author based on corporate reports by Russia's five largest agroholdings, Rusagro, Miratorg, Prodimex, Cherkizovo, and EkoNiva for the years 2018, 2019, and 2020. The map is not exhaustive of all agroholding activity.

¹² Agroholdings have much less of a presence in the more remote and less fertile regions of the country (see Rylko 2012). These regional trends have accelerated; unfortunately, I am not aware of more recent data on the regional presence of agroholdings.

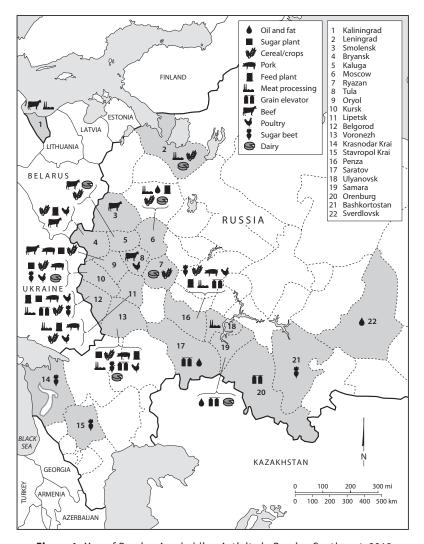


Figure 1. Map of Russian Agroholding Activity in Russian Southwest, 2019

NEW TECHNOLOGIES

Agroholdings brought far-reaching technological change to Russian farms and food processing facilities. A recent Russian textbook on agricultural technologies notes that "agriculture is undergoing a technological renaissance" (Katalevsky and Ivanov 2018:371). The new technological frontier in agriculture and food processing does indeed contrast sharply with the troubles of collective farms in the 1980s and 1990s. Farm technology inherited from the Soviet collective farms ailed, while new machines were largely unaffordable for the newly privatized collective farms. Repairing Sovietera tractors had been a challenge in the best of times, but with the collapse of the planned economy the number of stranded machines multiplied. A report from 1994

notes that 20 percent of trucks, 16 percent of tractors, 15 percent of ploughs, and 14 percent of seeders were in serious state of disrepair, and the share of defunct machinery increased as the decade progressed (Banerji 1994:1148). In the first few years after privatization, the prices for all important inputs—especially machinery, fuel, fertilizer, and pesticides—outran crop prices, making them essentially unaffordable for Russian farms (Wegren 2009). The supply of new agricultural machinery was slow during that time, even though some foreign manufacturers started selling to Russia as early as 1992. By the early 2000s a shortage of agricultural machinery persisted. Grigory Ioffe, Tatyana Nefedova, and Ilya Zaslavsky (2006:103) observed that agricultural operators were still so short on technology during this time that they rented combines from Turkey during harvest time, complete with seasonal work teams from Central Asia.

After the 2000s the demand for technologies by the rapidly growing agroholdings strengthened, and they became excellent customers for global agrotechnology companies. For the first 10 years of the rural recovery, most of the technology employed by new agroholdings originated abroad. Russia was importing agricultural machinery and processing equipment from a few dozen countries, including the US and Western European countries, such as Germany, Belgium, UK, Denmark, and Italy. The range of imported technologies is diverse and sophisticated, reflecting the dynamic technological frontier of capital- and technology-intensive farming in the capitalist West. They include, for example, technologies grouped under the term precision agriculture, which refers to the hardware and software that enables tractors, sprayers, and harvesters to collect, analyze, and operate based on GPS data. These are expensive and proprietary technologies that in the early 2000s decisively distinquished foreign machinery from Russian-made tractors. Similar to other agroholdings, EkoNiva's expansion was in large part related to the company's focus on bringing cutting-edge farming technologies to Russia—in the EkoNiva case to dairying and the seed business. The company reported in 2017 that it had "14 high-tech freestall dairy operations," and that the old Soviet dairy farms owned by the company had been "reconstructed and modernized in accordance with cutting-edge livestock farming technologies" (EkoNiva Vesti no. 55, July 2017). The company relies on a myriad of technological inputs, including a technology known as AG-Data Integrator, for example, one of John Deere's precision farming technologies (EkoNiva Vesti no. 64, June 2019). Over the years, EkoNiva also constructed several state-of-the-art grain elevators in Voronezh, Kursk, and Orenburg.

These kinds of technology imports created new connections between Russian agroholdings and transnational companies that have been relatively durable and were an important part of Russia's integration into the global economy. One of the reasons technology imports created lasting ties relates to ongoing service contracts and training component of agricultural technologies. When Russian producers imported agricultural technologies from abroad, they bought more than the material equipment. Built into the machinery and processing equipment are ways of farming and processing, as technologies are built in accordance with knowledge, practices, and food safety standards largely defined by US and European regulatory

regimes.¹³ For many global agrotech corporations, the connections with Russian agriculture strengthened over the years. EkoNiva, for example, has a long-established partnership with John Deere, first as an importer linking the US company to Russian farms and later as an important customer. Technical experts of both companies have continuous and close connections, manifested by farm visits and foreign trips to facilitate the exchange of knowledge and technology.¹⁴ Other global suppliers of agrotechnology started to operate subsidiaries in Russia to supply its fast-growing domestic markets. For example, Claas, a leading global manufacturer of farm machinery, started selling used German combine harvesters to Russia in the 1990s. By 2005, responding to rising demand for agricultural machinery, the company built an assembly plant for combines in Krasnodar to supply Russian-made tractors to agroholdings.

Tractors and combines are only the most obvious types of farm technologies that make up the technological frontier of agriculture. One of the most fundamental technologies for crop and livestock production is the genetic material used in agriculture: seeds for field crops and parent stock for animal agriculture. The Soviet Union had a long and fascinating history of plant and animal breeding, but in many sectors Soviet legacy seeds and breeds were abandoned for imported genetic material. The agroholdings that specialize in meat have expanded production by importing foreign purebred animals. In 2010 a Voronezh cattle farm, Stevenson Sputnik Ranch, imported 1,434 head of Black Angus cattle from Montana, for example, bringing this sizable herd by cargo ship via the port of Novorossiisk in a somewhat less than smooth journey. EkoNiva purchased 550 purebred Simmental heifers from Germany in 2006 and is today largely relying on Holstein cows. Overall, hundreds of thousands of live purebred cattle were imported to Russia since the early 2000s (see table 2).

Table 2. Russian Imports of Live Cattle for Purebred Breeding, 2011–2016

	2011	2012	2013	2014	2015	2016
Live purebred cattle imported (head)	86,534	136,982	96,894	41,958	33,065	30,402

(Leishman et al. 2017.)

¹³ This matters in particular for the livestock sector. Companies like Miratorg and Cherkizovo have excess capacity export and are hoping to increasingly export to foreign markets; this was mentioned in an interview by author with Musheg Mamikonian, president of the industry association for Russian meat, Miasnoi Soiuz (Moscow, July 2014).

¹⁴ The interactions with John Deere are widely reported in the *EkoNiva Vesti*, the company's corporate newspaper (see, e.g., *EkoNiva Vesti* no. 64, June 2019). Various articles in successive issues of the newsletter document that Stefan Dürr and EkoNiva executives are active participants in Russian and international agricultural associations and fairs.

¹⁵ Email exchange by author with Darrell Stevenson, owner of Stevenson Sputnik Ranch (May 2016); see also account by Bell (2011).

¹⁶ As noted in several issues of *EkoNiva Vesti* that year (no. 2, October 2006; no. 3, December 2016). EkoNiva is also a founding member of Russia's Holstein Cattle Breed Association, an industry association that aims to promote this particular breed and coordinate dairy farms relying on Holsteins.

Imports of live purebred animals have declined over the last few years, largely because Russian agroholdings have developed domestic genetic breeding centers that produce parent stock of the international breeds supplied to livestock operations. The most important institution in pig breeding in Russia today is the Znamensk Genetic Selection Center, created in 2006 and located in Orel.¹⁷ The Znamensk Center was established through a partnership with Hypor, a leading global supplier of pig genetics. The Znamensk Center specializes in raising the parent stock of four most commonly used breeds in commercial pig operations internationally: Large White (originating in the UK), Landrace (Netherlands), Duroc (US), and Piétrain (Belgium). Znamensk appears to be owned (at least in part) by the company Exima and has received investments from the two meat giants Miratorg and Cherkizovo. The seamless supply of purebred parent stock remains a concern for domestic producers however. As Russia sought to ban foreign food as a response to Western sanctions after the annexation of Crimea in 2014, it made a notable exception for purebred parent stock. The Russian government is also promoting domestic agro-genetic technologies (see further details below).18

THE POLITICAL LIFE OF AGROHOLDINGS: CHOSEN INSTRUMENTS AND AGENTS OF CHANGE

Agroholdings played a central role in the economic transformation of Russian agriculture, because they have the financial resources and the global connections to introduce, adapt, and use cutting-edge agricultural technologies on Russian soil. This raises the question of whether and how the rise to economic prominence is related to their political connections. We will see below that agroholdings received generous subsidies from the Putin government, which suggests that their oligarchic owners are in some way influential political actors. Given that they own and control enormous landholdings, Russia's corporate farms have been called "land barons" and likened to the Latin American latifundia. The concept of agricultural lobby, borrowed from the US context, is also sometimes used to describe why public funds are directed to private agribusiness. Lobbying in the US context works via agricultural interests' hold on institutions, such as congressional subcommittees. In the Russian context, however, economic actors are generally far more beholden to the good graces of public officials, who have an established track record of instrumentalizing regulations or tax codes to threaten the property and profits of private actors. And even though they are similar to Latin American landowners in size, the history of Russian landowners differs quite significantly from history of latifundia's owners. Though some of the agroholding owners are clearly well connected to political elites through informal networks, they are not long-standing members of entrenched power elites.

¹⁷ The Russian name of the center is Znamenskii selektsionno-geneticheskii tsentr; the information on the Znamensk Center here is retrieved from the Center's website, http://nsgc.ru/.

¹⁸ Presidential decree no. 680 On Development of Genetic Technologies in the Russian Federation, first issued on November 28, 2018, amended on December 12, 2019.

How then can we interpret the political dynamics that led to such generous support for agroholdings? And how can we describe the relationship between the Putin government and the agroholdings? The public support for agroholdings flows not so much from their strength vis-à-vis the government and their powerful position within formal and informal institutional structures but from their usefulness as actors who can bring about the modernization of agriculture desired by the government. The political role of Russian agroholdings, this article argues, can be usefully described as a chosen instrument of the Putin administration.¹⁹ Agroholdings gained control of Russia's most fertile farmland with the explicit encouragement of federal and regional authorities. Svetlana Barsukova (2016:66) argued that a large share of agroholdings is dependent for their daily operations on federal and regional authorities and their support, calling this cooperation a kind of public-private partnership. Many agroholdings also have personal or family connections to either regional or federal political elites; this is an aspect of the state-business relationship in Russia that is well documented in extant studies of Russia's state capitalism. Yet, these personal connections alone do not explain why agroholdings are privileged actors. Agroholdings are in a kind of informal contractual relationship, or bargain, with the Russian government that rests on mutual dependence. As a group, they were chosen as indispensable allies at a political moment when the Putin government sought to pivot away from unconditional market integration toward greater national self-sufficiency in the main food commodities. The relationship between agroholdings and authorities is a central element of a technopolitical regime that enlists agroholdings, with their financial clout, their land, and their technological edge, as effective agents of change and modernization.

The political context of Vladimir Putin's and Drimtrii Medvedev's presidencies was thus an important prerequisite for the rise of agroholdings. As noted above, the privatization and marketization of agriculture under Yeltsin had led to a dramatic reduction of domestic agricultural production. Russia had inherited its dependence on foreign food imports from the Soviet Union. In the 1990s it increased and broadened its reliance on foreign products, even receiving food aid from the US and Western Europe on several occasions (Kramer 1999).²⁰ Reversing the collapse of domestic agriculture was one of Putin's central concerns. Much like Soviet leaders in generations past, he called for special attention to the problem of food production: "food problems" (prodovol'stvennye problemy) were once again elevated to be a central concern of the state (Wegren 2009:35).²¹ The crisis of Russian meat production was

¹⁹ This relationship is remarkably similar to the kind of contractual relationship that Ilya Vinkovetsky (2004) describes as characteristic of the Russian-American Company in late imperial Russia.

²⁰ Kramer concludes that food aid in such large quantities was a misguided policy in many ways: "US food aid has inadvertently undercut private farmers and propped up the old state-controlled grain monopolies" (1999:2).

²¹ Note that this is not a new priority; food problems have been a concern for Soviet governments for generations (see Wengle forthcoming).

deemed particularly alarming.²² The core of the Putin-era food security agenda was support for grain, meat, and sugar producers, which materialized through various policy tools and an evolving series of programs. Unlike in other countries, food security in Russia is centered not on guaranteeing small-scale subsistence production but on increasing the scale and volume of domestically produced food (Visser et al. 2015). By the mid-2000s a host of programs had been established, including the so-called National Priority Project Development of the Agro-Food Complex in 2005. The most high-profile policy initiative was the national Food Security Doctrine (first draft published in 2008, adopted in 2010), which was explicitly coordinated with the country's national security policy. The centerpiece of the Food Security Doctrine was a set of precise and ambitious self-sufficiency targets for the staples of the Russian diet.²³ The government also set "norms" for meat consumption (the so-called rational norms of consumption, *ratsional'naia norma potrebleniia*) at 75 kilogram per person per year (Prikhodko and Davleyev 2014:33).

Over time, the government was also increasingly concerned about the dependence on foreign technology imports and has tried to strengthen the domestic agrotechnology sector. Domestic production of the genetic material for field crops and livestock, introduced above as an important component of agricultural technology, were supported by the state through various programs. An amendment to the tax code made in 2016, for example, reduces the tax rate for "operations with purebred breeding agricultural animals" to 0 percent until 2020 (Leishman et al. 2017). Another set of programs supported agro-biotech research and the development of Russian high-performance seeds and livestock breeds. Note that this is a significant change, as Russian legislation has generally prohibited the use of genetically modified crops. The decree passed in 2018 carves out a new space for the research and cultivation of gene-edited crops, explicitly allowing and supporting the development of CRISPR-Cas9 technologies that have become increasingly popular in US agro-genetic research (Dobrovidova 2019).

Food sovereignty was about domestic production and consumption, but it was also closely linked to Russian foreign and security policy and part of the increasingly nationalist and assertive stance vis-à-vis Western countries. When Russian wheat exports not only recovered but also gained global market shares, some government officials emphasized that the price and quantity of grain could serve as a foreign policy tool with regard to the countries that are major importers of Russian grain, such as Turkey, Syria, Egypt, and Pakistan. Aleksei Gordeev, minister of agriculture, boasted in

[&]quot;We are particularly concerned about the situation in livestock production," noted Agriculture Minister Aleksei Gordeev in a Federation Council session on March 7, 2007 (see transcripts at: http://kremlin.ru/events/president/transcripts/24074). The 2010 Food Security Doctrine also singled out meat production as a priority (http://www.kremlin.ru/events/president/news/6752).

²³ For example, grain and potato targets are at 95 percent; milk and dairy products at 90 percent; salt, meat, and meat products at 85 percent; sugar, vegetable oil, and fish products at 80 percent (e.g., Hansen et al. 2015).

²⁴ The support to the pork industry was particularly robust in the mid to late 2000s. Between 2006 and 2011, for example, \$8 billion of state funds were allocated for the update of pork production facilities (see, e.g., Higgins et al. 2014a, 2014b).

2008 that Russia has become a "major agrarian power" (Kramer 2008). Given that global markets for agricultural commodities are highly competitive, attempts to use grain as a foreign policy tool were less effective than Russian political actors portrayed them. Nevertheless, wheat trade has indeed become a central element of the relations between Russia and the countries that rely on it for basic staples foods. Finally, the link between domestic agriculture and foreign policy is also evident in the Russian government's choice to target Western food imports in its response to sanctions imposed on Russia in the aftermath of the 2014 annexation of Crimea. Russian countersanctions ban imports from US, Canada, EU, Norway, and Australia (Wengle 2016). The ban was extended several times over the years and is widely understood to have provided critical protection for Russian agricultural producers.

One element of the technopolitics of Russian agriculture is a strong mutual dependence and a kind of informal bargain between the government and agroholdings. This is evident in the agroholdings' rhetoric that aligns their operations and corporate goals with the political priorities of Putin's food security agenda. The core corporate values that Miratorg communicated with shareholders show how the company seeks to align corporate with political goals (Miratorg 2013). Miratorg's values are stated as follows:

- (1) The effective integration of the interests of national governmental policy with the interests of our company and those of end-user consumers.
- (2) Using modern technology and innovation to achieve our manufacturing goals.
- (3) Adherence to Russian and international standards in all aspects of the vertical integration structure of our group of companies.

These core values could be interpreted as sending the following signals to the government and to shareholders, two important constituents for the company: we are good corporate citizens, because we help realize political goals (see reference to "national governmental policy"), while also meeting all the necessary quality standards and making products that Russian consumers will love. Point 2 illustrates well how technological upgrading, features as a key component of the successful alignment of the political and corporate goals. Miratorg also very explicitly noted that a very large loan that made them the largest company in the meat sector was "personally signed" by President Putin (Miratorg 2013).

Many other Russian agroholdings explicitly mention in corporate communications that they share the political goals of the Putin government. The United Grain Company says that the company's strategy is to "expand the infrastructure of the grain market; in order to *strengthen the international position of Russian grain*" and that its activities take place in the "framework of the *food security agenda*" (emphasis added).²⁵ Cherkizovo shares with the public that the company's leadership "real-

²⁵ The exact wording of United Grain Company's statements have changed over time. As the government increased its ownership stake in UGC, the company more explicitly identified its mission with food security. The Russian name of UGC is Ob"edinennaia zernovaia kompaniia (http://www.oaoozk.ru/).

ized the need for *import substitution*" (emphasis added).²⁶ Exima explicitly aligns its own operations with political goals of the Putin era, stating that "the company actively takes part in the realization of the government's plan for agriculture until 2020."²⁷ Finally, many companies seek to project visual images of the partnership with the government by releasing images of corporate executives shaking hands with President Putin into the public domain.

EkoNiva's relationship with the government serves well to illustrate the close and mutually beneficial relationship of agroholdings and Russian authorities. The company openly acknowledged that it benefitted greatly from subsidized credits for its rapid expansion. In 2017 the company newspaper reports that a plan to construct a new milk processing plant in Novosibirsk Oblast has received the "governor's blessing" (*EkoNiva Vesti* no. 56, September 2017). In 2019 Sberbank and Rossel'khozbank, two state-owned banks, financed the construction of several new EkoNiva production facilities in the Liskinskii, Bobrovskii, and Buturlinovskii districts of Voronezh Oblast (Andreev 2019). Adrian Schairer, an EkoNiva executive, summarizes the importance of subsidies as follows:

The Russian government currently grants three types of subsidies to companies in raw milk production: investment grants, soft loans and operating subsidies. Investment grants and soft loans play the most important role for the EkoNiva Group. If these subsidies were no longer paid or were significantly reduced, the growth of the [EkoNiva] Group would cease or continue at a much slower pace. (Schairer 2019)

Stefan Dürr is a well-known public figure in Russia, and EkoNiva explicitly aligns its corporate strategy with the political goals and programs of the Putin and regional administrations. Dürr has also publicly supported the Russian government's ban on imported foods, arguing that it has greatly helped Russian food producers (Amos 2015). Public actors, on the other hand, openly credit EkoNiva and Dürr for the company's role in realizing political and economic goals. The governor of Novosibirsk referred to the above-mentioned expansion of milk processing facilities as a "priority task" (EkoNiva Vesti no. 56, September 2017). The mayor of Lipetsk similarly showed that she perceives the company as an agent of regional rural development: "EkoNiva is engaged in modern agricultural production. The company develops rural areas and provides local people with job opportunities.... My wish is that EkoNiva will continue contributing to the development of the Russian agriculture with ... enthusiasm and optimism" (EkoNiva Vesti no. 66, December 2019). At the federal level Dürr's contributions to the development of domestic industrial agriculture were rewarded with several prizes and honors. He became a Russian citizen in 2014 by a

The "History" page of Cherkizovo's website states: "Realizing the need for import substitution in the food market, Mr. Babaev and his team acquired and modernized poultry farms, pig farms, feed mills, and meat processing plants" (https://cherkizovo.com/company/#history).

²⁷ Information retrieved from Exima website, http://www.exima.ru/company/.

²⁸ Stefan Dürr has mentioned these goals in several public venues and in media appearances. See also an entry in the corporate history on the company website of EkoNiva APK Holding, https://ekoniva-apk.ru/company/history.

decree signed personally by President Putin (Mukhin 2017). Finally, EkoNiva and Putin elites were also connected through informal and personal relationships. It is well known that Dürr is close friends with former minister of agriculture (1999–2009) and governor of Voronezh Oblast (2009–2017) Aleksei Gordeev. EkoNiva in fact acquired the company OkaAgro with its land bank from Nikita Gordeev, Aleksei Gordeev's son, in 2017. The same year EkoNiva took over the company Moskovo-Medynskovo AP that belonged to the former mayor of Moscow Iurii Luzkhov (Diatlovskaia 2017).

In sum, agroholdings are useful political instrument for the Putin government and have been supported with a range of shifting policies and support measures, from area payments (payments received for each hectare planted) to highly targeted support for particular industries to the food ban that keeps out Western products. Credit subsidies have overall likely played the most important role, as they allowed agroholdings to expand production rapidly at low cost, but several targeted programs were also influential in promoting particular subsectors. The strategy to enlist agroholdings has fundamentally transformed agriculture and Russian diets, a feat that was hailed as political victories by the government. "We are first! Russia leads the world," claimed Putin in December 2019, referring to Russia's leadership in global wheat exports (Diatlovskaia and Kulistikova 2018).

CONCLUSION: AGROHOLDINGS AND RUSSIA'S INTEGRATION INTO GLOBAL MARKETS

Agroholdings, the driving force behind the recent transformation of Russian agriculture, lead economic lives and have political careers. The informal bargain between the agroholdings and the government hinges on the cutting-edge agrotechnologies that the corporate actors bring to Russia. Technologies increased the scale and concentration of production and lowered costs, thereby bringing more meat to Russian tables and reducing import dependence. The technopolitics of Russian agriculture greatly benefitted agroholdings, helping them accumulate land assets and rapidly gain economic and political prominence.

While many studies have emphasized the close connection between the Russian government and oligarchic conglomerates, few have documented *how* the private companies operate and their role as instruments of power. The article emphasized the importance of the technologies employed by agroholdings: they underpinned their economic expansion and were at the heart of the political bargain that singled them out as chosen instrument to realize the Putin-era political agenda. The *how* of the economic transition matters in the case of agroholdings in particular because it has far-reaching consequences for fundamental economic practices such as food production, agricultural labor, and consumption, and thus the everyday lived experience of Russian life in cities and the countryside. Though this article has not focused on the consequences of the rise of agroholdings, this rise affected virtually all aspects of the food system: *how* food was produced, *who* produces, and *what types of foods* end up on Russian tables. Although some consumers are nostalgic for the simpler and less processed foods of the Soviet era, Russians, like consumers elsewhere, have on the whole

welcomed new, convenient, and plentiful foods. Masha Gessen (2014) goes even further and argues that Russia's "cafe society" was willing to "forfeit significant amounts of freedom if this coincided with gaining access to delicious meals in increasingly pleasing surroundings." The future will tell whether or not the balance and tradeoff of political rights and processed foods will remain stable or come undone as the political space contracts and as global economic integration continues.

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80

А ГРОХОЛДИНГИ, ТЕХНОЛОГИИ И ПОЛИТЭКОНОМИЯ РОССИЙСКОГО СЕЛЬСКОГО ХОЗЯЙСТВА

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Статья основана на исследовании, проведенном при поддержке Швейцарского национального научного фонда (Swiss National Science Foundation), Шведской коллегии углубленных исследований (Swedish Collegium for Advanced Studies) и Университета Нотр-Дам.

В работе подробно рассматривается возникновение российских сельскохозяйственных корпораций - так называемых агрохолдингов. В последние двадцать лет эти компании приобрели контроль над самыми плодородными землями России, став главными производителями продуктов сельского хозяйства и продовольственных товаров. Сегодня агрохолдинги – это движущая сила, стоящая за фундаментальной технологической трансформацией сельского хозяйства и производства продовольственных товаров. Основная мысль статьи заключается в том, что головокружительному взлету агрохолдингов способствовала технополитика ХХІ века. Экономическая и политическая роль этих крупных, вертикально интегрированных сельскохозяйственных конгломератов в решающей степени зависела от технологий. Агрохолдинги смогли быстро вырасти, так как внедрили передовые сельскохозяйственные технологии, обеспечивающие максимальную выработку и экономическую эффективность. Контроль над технологиями, в свою очередь, помог агрохолдингам заработать политическую поддержку, необходимую для процветания в государственной капиталистической системе путинской эпохи. Агрохолдинги стали привилегированными союзниками путинского правительства, заручившегося их поддержкой в достижении таких политических целей, как укрепление отечественного животноводства и производства продовольствия, а также снижение зависимости России от импорта продовольственных товаров. В более широком смысле статья утверждает, что технополитическая оптика помогает переформулировать и укрепить наше понимание политической экономии постсоветской России. Технополитика раскрывает роль государства и корпоративных акторов, то есть власти и капитала, в конструировании постсоветского экономического порядка, обращая внимание на то, как соответствующие процессы формируют постсоветский быт.

Ключевые слова: сельское хозяйство; Россия, технополитика; политэкономия переходного периода; агрохолдинги; продовольственный суверенитет