

Working Land in Russia



Soviet agriculture was bimodal, as it included collective and state farms on the one hand and what was termed “personal auxiliary farming” (*lichnoe podsobnoe khoziaistvo*) or household plots on the other. These private gardens have always been important for rural survival. In 1928, on the eve of collectivization, individual peasant households accounted for 96 percent of the entire area sown to crops. By 1940, they were left with just 4 percent of that area, and by 1958 with 2 percent, the balance (98 percent) being collective and state farms.¹ Yet these statistics are difficult to reconcile with those reflecting the proportions of agricultural output produced by each of the two modes of farming, collective and household. For example, in 1940, collective and state farms accounted for only 35 percent of meat and 30 percent of all milk produced in Russia.² Officially, rural households supplied their cattle with feed themselves. It is unlikely, however, that they could produce this much feed on just 2 percent of the nation’s cropland.

The household sector always annoyed Soviet authorities. Some Russian researchers aver that in the Soviet Union, there were two collectivization campaigns, not one. The first one, under Stalin, did away with private farmers as a class; the second one, under Khrushchev, finished the job of converting peasants into Marxian proletarians by depriving them of a considerable share

of their own livestock and introducing permits that allowed only very small private vegetable gardens.³ However, even by the mid-1960s, the proportion of peasant income from household farming was still twice that from collective farming.⁴

The role of household farming was always important under the Soviets because of the national food deficit, which was mitigated by close ties between rural villagers and their urban relatives. By 1990, household farms produced more than one-quarter of Russia's agricultural output even though they officially accounted for only about 2 percent of the cropping area (table 2.1). The potato output of household farms was especially high in proportion to the total (66 percent) and fairly significant in other products, as reflected in table 2.1.

Socialized farm production units, by which we mean collective and state farms established under collectivization, were not carved in stone either. They were intermittently joined together and broken up into smaller units. Over time, the enlargement trend prevailed. Thus, if the average landholding of a collective farm was just five hundred hectares in 1940, it was already close to four thousand hectares in 1958. In the late 1980s, many socialized farm units changed their status, mostly from collective to state farms. Such changes were invariably caused by their lingering inefficiency as perceived by the Communist Party organs holding the reins of their management. Party officials seemed to believe that once the "correct" administrative rearrangements had been accomplished, all problems would be resolved. With the passage of time, the proportion of state farms vis-à-vis the overall number of production units grew. Initially the difference between a *kolkhoz* (collective farm) and a *sovkhoz* (state farm) was that the latter was state owned, whereas the former held all its fixed assets (buildings, implements, livestock, perennial plants), its output,

Table 2.1. Percentage of collective and state farms in farmland and agricultural output

	1940	1960	1970	1980	1990
Total farmland	No data	99	98	98	98
Total output (monetary value)	No data	No data	69	71	74
Grain	99	99	100	100	100
Potatoes	46	37	35	35	34
Vegetable	55	52	59	67	70
Meat	35	59	67	70	75
Milk	30	52	66	73	76

Note: The agricultural output not produced by collective and state farms is produced by household farms.

Sources: *Narodnoye khoziaistvo RSFSR v 1987 godu* (Moscow: Goskomstat, 1988), 157, 163, 179; *Rossia v tsifrakh* (Moscow: Finansy i Statistika, 2001), 200–201; *Rossiiskii statisticheskii yezhegodnik* (Moscow: Finansy i Statistika, 1996), 551; *Narodnoye khoziaistvo RSFSR 1957* (Moscow: Gosstatizdat), 127; *Selskoe khoziaistvo Rossii 2000* (Moscow: Goskomstat, 2002), 86; *Zemelnyi Fond 1961* (Moscow: TSSU RSFSR, 1961).

and its profit in communal (formally defined as “cooperative”) property. The idea was to keep collective farms at a somewhat lower level of state control over property so that their dependence on public funds to make ends meet would be held in check. However, in all cases land remained public property, and it was administratively attached to collective farms free of taxation and for an unlimited time. The difference between collective and state farms, however, was purely nominal when it came to their relationships with the state concerning agricultural output. It is no wonder that before long, more subtle differences between the two types of socialized farms virtually evaporated. Nevertheless, the transformation of collective farms into state farms continued to preoccupy the authorities, and by 1989 the share of state farms in the overall number of farm units was at an all-time high. To some extent, this change was linked to a fad of the 1970s: large specialized farms.

Collective farms were dominant in the south, but in the north and east they accounted for only about a quarter of the agricultural land (table 2.2). This regional disparity was related to a combination of two factors: the specialization of a production unit and the unit’s performance. Units that tended to be transformed into state farms were of three types: highly specialized livestock farms that were mostly profitable and located in proximity to large cities; collective farms on whose land expensive reclamation projects were implemented; and the most chronically unprofitable farms. For the last, transformation into a state farm was a locally publicized act of rescue from economic ruin, which, however, seldom resulted in economic recovery. For these rea-

Table 2.2. Regional land in collective and state farms as a percentage of total agricultural land

	<i>1960 collective</i>	<i>1989 collective</i>	<i>1960 state</i>	<i>1989 state</i>
North and northwest	62	27	17	60
Industrial Center	64	40	31	53
Volga-Vyatka	83	55	13	38
Chernozem center	70	66	26	28
Volga	54	42	42	53
Northern Caucasus	58	50	49	44
Urals	55	42	39	50
Western Siberia	46	24	43	56
Eastern Siberia	54	24	29	63
Far East	29	11	33	66
Russia Total	56	38	36	53

Sources: *Zemelnyi Fond RSFSR: prilozheniye k statisticheskomu bulletenuiu TSSU RSFSR*, no. 19 (Moscow: TSSU RSFSR, 1961), 46, 171; *Zemelnyi Fond RSFSR na 1 Noyabria 1989* (Moscow: Goskomstat RSFSR, 1990), 98.

sons, state farms became the more heterogeneous farm category as compared to collective farms.

Rural Development

The scenes of rural life in Russia—wooden huts built around traditional firewood stoves as the only heating devices, makeshift wooden fences around personal plots in front of those huts, no aesthetically pleasing flowerbeds, just vegetable patches, no piped water and plumbing, and no paved roads—remained largely unchanged from pre-1917 times up to the 1960s. With the exception of rural villages in proximity to large cities and most villages within the Moscow, Leningrad, and Kaliningrad (former East Prussia) regions, electricity arrived in the Russian countryside only in the 1960s. In the majority of the so-called non-black-earth or nonchernozem regions (the northern half of European Russia), no less than one-half of all rural settlements lacked electricity as recently as 1966.⁵ To this day, a telephone is rare in Russian village homes, and even more rare is a flush toilet. By rural homes we mean permanent rural residences whose occupants work the land for a living, not homes sold to urbanites and used as seasonal dachas. Until the late 1980s, having a telephone in a traditional rural home was an exceptional mark of belonging to the management team of a collective farm (e.g., a chairperson, bookkeeper, agronomist, or farm animal technician).

Until the mid-1960s, much of the investment in rural Russia was directed to farm equipment and other elements of the production chain such as seed and fertilizer, not the rural infrastructure, which would be best described as “rudimentary.” The production capacity sustained several setbacks, two of which were associated with the world wars. However, the third setback, which occurred in the wake of the collectivization campaign, was coercive with respect to wealthier peasants and exceeded the damage inflicted by the wars. In reaction to the coercive policies, 25 million head of cattle (including 10 million cows), 17.7 million horses, more than 10 million pigs, and 71 million sheep and goats were prematurely slaughtered by peasants in 1929–1933 to avoid surrendering them to collective farms.⁶ The pre-collectivization level of livestock was restored only in the late 1950s. Yields of most crops plummeted; collective farms regained the 1913 level only by 1940 (table 2.3), though the per capita production of grain by 1940 was only half of what it had been before World War I due to rapid population growth in the meantime, without commensurate growth in agricultural productivity.

It would seem that the immediate economic consequences of restricting the enterprise of the more successful peasants were so disastrous that they

Table 2.3. Selected indicators of Russia's agriculture (within borders of the Russian Federation)

<i>Indicators/Years</i>	1913	1928	1940	1950	1960
Cropping area, million ha	69.8	No data	92.1	89.0	120.7
Total output of grain, million tons	50.5	50.0	55.6	46.8	76.2
Wheat yields, centners per ha	8.0	8.1	7.9	7.2	10.7
Total output of flax-fiber, thousand tons	14	298	239	172	240
Flax-fiber yields, centners per ha	3.2	2.3	1.6	1.2	2.4
Number of cattle (cows and bulls), in millions	33.0	No data	27.8	30.2	38.2

Sources: *Narodnoye khoziaistvo RSFSR 1958* (Moscow: TSSU, 1959); *Narodnoye khoziaistvo RSFSR 1970* (Moscow: Statistika, 1971).

would cause the authorities to pause. Yet their faith in the patience, resilience, and vitality of Russian (as well as Belarusian, Ukrainian, and other) peasantry was so tenacious that the authorities stuck to their plan. As time went by, more and more people with peasant roots presided over each and every economic sector, including agriculture. The issue of rank-and-file Russians' complicity in repressions and other coercive policies has by now been discussed by several authors, notably by Alexander Akhiazher. Ioffe and Nefedova also touched upon this issue in their book *Continuity and Change in Rural Russia*.⁷

World War II inflicted still more damage on the demographic potential of the Russian village, on top of the dispossession of the so-called *kulaks* (wealthier peasants, some of whom used hired labor) during the collectivization campaign. No less than 9 million rural Russians were killed in that war (out of a total of 72 million rural residents in 1939), and many more were wounded. The primitive conditions of rural life and the pull of postwar industrial expansion in various regions of the Soviet Union nudged more and more younger villagers to leave the countryside. As a combined result of coercion, wars, and the harsh conditions of rural life, agricultural productivity remained exceedingly low. Despite significant investment in agricultural machinery, production of some crops decreased to a level below what it was prior to World War I. Power utilized in Russian agriculture increased fourfold in the late 1950s compared to 1913 because of collective and state farms' 500,000 tractors and 300,000 grain harvesting combines. Yet no growth in agricultural productivity (e.g., yields of major crops, milk yields per cow, etc.) occurred until the late 1960s.

According to Nikonov, in 1950 peasants contributed 73 percent of their total working time to socialized farming and 10 percent to other state and cooperative institutions. Only 17 percent of their working time was spent on household farming, that is, on tiny subsidiary plots allowed for personal use.

However, only 20 percent of a household's income was earned on collective and state farms.⁸ So while toiling for a kolkhoz peasants actually made their living on their own. It was in essence a throwback to *corvée*, arguably at least as cruel as prior to 1861.

In 1954, Soviet leaders made a historic decision to develop the so-called "virgin lands," a vast span of pristine dry steppes in the northern part of Kazakhstan and western Siberia's southern region. This effort would require re-settlement and colonization on a national scale, as well as considerable investment. After its launch in 1954, the virgin lands campaign lasted for more than a decade. During its first three years alone, 32 million hectares were converted into cropland.

Other analysts (e.g., Nikonov and Nikolsky) have explored the extent of this campaign's success and/or failure.⁹ To us, the important point is that in the early 1950s, the Soviets were deeply concerned with the minuscule growth in agricultural output. At the time, they possessed the human capital and the financial means to alleviate the problem, yet they decided to expand the agricultural frontier rather than invest in the long-settled rural areas. This move was made in the habit of the Soviet leaders' imperial predecessors; it seemed that in Russia and the Soviet Union at large there would always be room for agricultural expansion. A side effect of the virgin lands campaign was that no significant increase in rural investment in the European section of the country followed until the late 1960s. For example, in 1960, 55 percent of all tractors (including 74 percent of the most state-of-the-art tractors with the brand name Belarus) and 83 percent of all grain combines were assigned to the virgin lands. From 1954 to 1959, the Soviet Union added 45 million hectares to the farmland in Kazakhstan and western Siberia but lost 13 million hectares in the European section of the country.¹⁰

The lingering deficit of rural development affected European Russia more than the westernmost part of the Soviet Union, that is, more than Ukraine, Belarus, Moldova, and the Baltics. There, interurban distances are generally shorter, so a higher proportion of the countryside could capitalize on the spillover effect of urban developments. In addition, roads and other elements of rural infrastructure were historically better in the Soviet Union's west, especially on lands incorporated in 1939–1940. Also, under the provisions of central planning, the sheer distance from the decision-making center matters considerably, and the Russian Federation was far more spacious than any other republic, with many more remote places falling out of the government's sight. To be sure, agriculture, rural construction, and light industry were the economic sectors with the most decentralized planning and management available under Soviet rule. Unlike the enterprises of heavy industry, which were managed exclusively by the federal government, these activities

were within the purview of the republics themselves. However, out of the several tiers of state administration concentrated in the city of Moscow—national (USSR), republican (Russia), regional (*oblast*), and local (the city itself)—the weakest and the least funded tier was that responsible for the Russian Federation, and it was this republican tier of the Moscow-based *nomenklatura* that was responsible for agriculture.¹¹ All of the above reasons ensured that agricultural activity in far-flung regions of Russia suffered the most neglect.

This situation could not help but contribute to the changing geography of agricultural productivity in the European section of the Soviet Union. Whereas in the 1950s and early 1960s this geography generally reflected relative soil fertility, with grain yields in the less fertile regions (the Baltics, Belarus, and the northern half of European Russia) below those in the black-earth regions (Ukraine and southern Russia), by the 1970s a west-east gradient that had existed before the Communist revolution reappeared. Even Belarus, which was dirt poor prior to World War II, began to outproduce European Russia both in grain yields and in milk yields per cow. What is more, all the western republics, especially the Baltics and Belarus, surpassed European Russia in return on agricultural investment.¹²

Only in the late 1960s, when the virgin lands campaign was coming to a close, was a significant increase in rural investment in the long-settled regions initiated, in the wake of the Plenum of the Communist Party of the Soviet Union's (CPSU) Central Committee in March 1965. Subsequently, a special investment program was adopted in 1974 for the nonchernozem zone (NCZ) of Russia, which was recognized as the most agriculturally neglected part of the entire country. To be sure, the nonchernozem zone includes Moscow and Leningrad, regions that did not quite fit this qualification. The remaining twenty-seven regions in the northern half of European Russia, however, fit this classification all too well.

Three principal directions of agricultural development were emphasized: land reclamation, "chemicalization," and industrialization of farming. From 1966 forward, the proportion of agriculture in the overall budget outlay was increased to 29 percent in selected years and never dropped below 20 percent before the collapse of the Soviet Union.¹³ This investment stood in contrast with that of the previous period (1946–1965), when the respective budgetary allocation was only 7 to 10 percent of the total. As a result, between 1965 and 1990, the monetary value of the fixed assets of Russian agriculture increased sixfold. That included a fivefold growth in the overall power of the country's fleet of tractors and a sixfold growth in the application of fertilizers.¹⁴ About half of all agricultural investment was directed toward the construction of gigantic cattle-breeding farms and to land reclamation projects involving artificial drainage and irrigation.

The unprecedented sixfold growth in invested capital resulted in only a 50 percent growth in agricultural output, however.¹⁵ It did exceed population growth (which was 35 percent during the same period) but not to the extent it was expected to. Importantly, while the yields of major crops and milk yields per cow reached their all-time maximums in Russia, they were still lower than in every other economically advanced country of the world.

Official Soviet statistics about the individual, regional, and national collective and state farms' profitability were largely unreliable. This lack of reliability was not due to intentional falsification, however. Rather, it was because the scale of subsidization and written-off debts was not taken into account. For example, according to the *Narodnoye khoziaistvo RSFSR* data books the number of money-losing collective farms had been reduced from 74 percent in 1980 to 3 percent in 1990; for state farms the respective percentages are 67 and 3.¹⁶ The progress in profitability seems fantastic until one discovers that the 1982 Food Program introduced the practice of farm-gate price markups, which boosted the profit margins of many farms. To be sure, the prices at which collective and state farms used to sell produce to the state had long been differentiated regionally. Until 1982, this differentiation was exclusively at the macroregional, not local, level, and it was intended to make up for variations in natural fertility. The policy introduced in 1982 provided that in cases where the flat regional price for a product (milk or wheat, for example) did not cover its production costs on a collective or state farm, the price could be locally adjusted to ensure a certain profit margin. The markups over the established regional prices ranged from a few to several hundred percentage points. This practice was intended to ensure the survival of farms that were basically unprofitable. These markups became the most important mechanism for allocating budget support for agriculture. Other state supports included a free supply of machines, discounted prices on fuel and lubricants, a stable network of local buyers for each product/farm, the dispatching of military units and hundreds of thousands of urbanites at a time to harvest crops, and such benefits as temporary loans of additional trucks and other vehicles belonging to urban institutions. According to an estimate by Sergei Danquert, Russia's deputy minister of agriculture in 2002, the federal subsidies of the mid-1980s totaled the equivalent of \$60 billion a year, which is about the same level that the European Union (EU) was spending in subsidies to its farmers in 2002.¹⁷

Reform or State Withdrawal?

It has become a matter of course to label the change in the Russian economy that occurred after the breakup of the Soviet Union as a market reform. Indeed, removing state controls over prices and foreign trade and large-scale

privatization constitute the textbook components of changing a command economic system into a market one. Russian agriculture obviously has been affected, yet by all accounts its losses have so far exceeded gains.

In 1998, the output of crop farming was just 56 percent of that in 1990 (calculated in stable prices), and the relative output of animal husbandry was only 49.7 percent. Growth resumed in 1999 following seven years of reform, but output in 2002 was still only 67.5 percent of what it had been twelve years earlier.¹⁸ From 1991 to 2001, the output of grain declined by 27 percent; sugar beets, 54.8 percent; sunflowers, 20.6 percent; flax, 18.4 percent; meat, 58.5 percent; milk, 41 percent; eggs, 26.4 percent; and wool, by a factor of 5.6.¹⁹

According to various sources, from 20 million to 30 million hectares of arable land alone are already abandoned, and our field observations imply that both figures may be an understatement.²⁰ (Note that, prior to its enlargement in 2004, the entire European Union had just 75 million hectares of arable land.)

The number of cattle on Russian farms reached its peak (60 million) in 1985–1987 and has been declining since then, especially since 1990. In 2002, only 26 million cattle remained, 46 percent of the 1990 total. Likewise, in 2002 Russian farms had only 40 percent of the number of pigs they had in 1990 and only 25 percent of the number of sheep and goats. The collective sector has been the biggest loser; in 2002 collective farms had only 35 percent of the cattle, 27 percent of the pigs, and 2 percent of the sheep that they had in 1990.²¹

In contrast to Soviet times, when the state of the physical plant and agricultural machinery at the disposal of Russian farms was reflected in the monetary value of fixed assets (*osnovnye fondy*) and regularly published, it is difficult to locate any data on their current condition that would be both reliable and comparable across time and space. The infrequent media reports from individual farms all across Russia and evidence obtained in field trips suggest that the number of Russian farms with new machines has plummeted, while what machinery is available has been subject to wear and tear. In 2002, 8,500 new domestic combine harvesters were purchased by Russian farms, while at the same time about 200,000 old combines were written off from the farms' balance sheets. From 1965 to 1985, Russian agriculture was receiving 28 percent of the total investment in the Russian economy. In contrast to that, in 2001 agriculture got just 2.7 percent of the vastly diminished total investment.²²

Two pieces of legislation have been particularly well publicized in the context of Russian agrarian reform. The first was the federal government's ruling in December 1991 that all collective and state farms become joint stock companies (JSC) and partnerships with limited responsibility (PLR) or break up into groups of family-owned farms. (Subsequently, the option to remain collective and state farms was also added.) The second seemingly groundbreaking change was instituted by the Land Code of 2003, which allowed the

sale of agricultural land. This legislation was adopted after being debated for twelve years, with the Communists opposing it. As is always the case with a Russian law, its implementation matters more than the law itself. The intended results of new legislation are seldom realized. More often than not, the results are a far cry from the change that was originally sought.

The implementation of the 1991 ruling resembled a haphazard top-down political campaign, and from that perspective one prominent analyst even likened it to the collectivization of 1929–1935.²³ The objectives of the 1991 ruling were not explained to members of the collective and state farms. They became formal shareholders, and the word “kolkhoz” (collective farm) gave way to “JSC” or “PLR.” But the farms never became what their new names implied. Profit allocation in these production units continues to be based on labor input, not on accumulated shares, and the old rules still govern their production activity and accounting practices. Technically, the members of the former collective farms can withdraw their shares, but this action is a relatively rare event, and most of the members do not even know the monetary value of those shares.

With regard to selling agricultural land, the implementation of the Land Code of 2003 is subject to a veto by regional legislatures. In practice, where demand for land is significant, as is the case in Russia’s south and in proximity to large cities, forty-nine-year moratoria are applied. These moratoria, however, are sidestepped each time local bureaucrats receive a kickback from a wealthy buyer. Obviously, where demand is minuscule because of the poor quality of the land and/or rural depopulation, land sales and transfers are rare.

The most significant change in agricultural production was never legislated, yet it had a more immediate and far-reaching impact on productivity than any law passed by the Duma. This far-reaching change came from the collapse of the state-run procurement and output distribution systems and the removal of government price controls. In other words, collective and state farms (renamed JSC), which used to be supplied with machinery for free, received large subsidies to ensure a profit margin, and were kept on a short administrative leash, suddenly were largely left to their own devices. The result was a massive reduction in livestock tantamount to that sustained during collectivization and land abandonment.

The current role of the state in Russian agriculture is but a shadow of what it once was. To be sure, the financial resources of the federal government have improved and the state is returning to the agrarian scene, but it is doing so in the capacity of an antimarket force, just as any state does in a market economy. The scale of the state’s reappearance on that scene is incomparably less than the scale of its presence under the Soviets. Consequently, Stephen Wegren’s concept of “state withdrawal” continues to be the most lucid notion

applied to the rural developments in Russia since 1991, as it reflects what transpired in the Russian countryside more accurately than the notion of reform.²⁴ The effects of this withdrawal are all the more profound given the state's especially powerful role in agriculture in the last decades of Soviet rule. The change in early 1992 was from one extreme to the other, and it was abrupt.

The idea that the "reform" was actually an abrupt state withdrawal is in line with the views expressed by some other analysts. According to Nikol'sky, "Strictly speaking, the agrarian policies of the [Russian] government conducted since the early 1990s are not a reform." Alexei Kovalchuk indicates that the defining feature of the agricultural situation in 2004 is "that it is no longer manageable," much like a runaway train. He attributes this circumstance to the "swift demolition of the command system not followed by any systematic action." Needless to say, the state withdrawal resulted in a drastic reduction of the state's financial input, including both investment and subsidy.²⁵

In 2002 federal subsidies to agriculture totaled slightly more than the equivalent of \$1 billion, down from \$60 billion in the late 1980s. According to the Russian consulting firm Assessor, the owner of one hectare of farmland in the United States gets \$200 from the American government, a farmer in the EU would get \$800 from that government, and the Russian farmer would get just \$12.50.²⁶ Other significant changes since 1991 include the emergence of new players in Russian agriculture and considerable change in the recorded distribution of output between existing players, notably between household and collective farms.

New Agricultural Operators

A household farm is not officially a business, even though it may function as one. Consequently, household farm output is not taxed, and its owner does not qualify for business loans. However, during the *perestroika* of the Gorbachev era in the late 1980s there emerged a new category of agricultural enterprise: registered family agricultural businesses.

In 1991, there were only about 4,000 of these registered private farms in Russia. However, by 1995 there were 279,000 of them. A combination of factors conditioned such phenomenal growth: considerable tax credit and discounted loans, the opportunity to buy farm implements at discounted prices, relative ease in obtaining land, a generally supportive political climate, and personal enthusiasm. In the early 1990s, private farmers were mostly self-recruited from the rural elite—agronomists, animal technicians, engineers, and even the leaders of collective and state farms. Those farms thus lost some of the most enterprising of their cadre.

In the mid-1990s, the special preferences and discounts were cancelled,

and private farmers found themselves in the same conditions as the former collective farms. In actuality, though, private farms could not compete with larger producers. On average, a private farmer in Russia has fifty hectares of land; in European Russia, the most common size of a private farm is only twenty to thirty hectares. Using 7 percent of Russia's farmland, private farmers account for just 3 percent of the output. The most common specialization of private farms is sunflowers (14 percent of Russia's total output) and grain (8 percent), that is, products that are relatively cheap, hence the small proportion of total output in monetary terms. Around 2000, more than one-half of private farms were losing money, and every fourth such farm had more than half of its land idle. According to Vladimir Bashmachnikov, president of the Russian Association of Independent Farmers, "The 10-year experience of registered private farms in Russia shows that few of them could build or purchase machines and livestock themselves. Out of 270,000 registered farmers, only about 30,000 have not been crushed by the pressure of the market and have been able to set up a viable commercial farm. Another third just feed themselves. And the remaining third have quit."²⁷

Another type of new agricultural operator, the type that seems to hold more promise (for better or worse), is the vertically integrated agribusiness (that is, one organization controlling each level of production, from farming to processing to marketing). Successful food processors initiated these operations. The idea of contractual links between large farms and food processors stemmed from the general success of the latter and their ultimate dependency on the former to supply perishables such as milk. Growth in agriculture commenced in 1999, but most collective farms are losing money. In contrast to that situation, many domestic food processors, including dairy, juice, and sometimes sweetshop producers, have been profitable since the mid-1990s, but their further development was stymied by a deficit of high-quality farm produce. The 1998 default and ruble devaluations made agricultural imports costlier. So the idea became popular that industry, both domestic and foreign, would pull Russian farms out of the quagmire. The contractual links between farms and processors that have emerged since then range from long-term agreements (stipulating exchange of agricultural products for agricultural investment) to wholesale purchase of entire farms that become incorporated in agroindustrial holdings.

Comprehensive information about vertical cooperation and integration of farms and food processors across Russia is impossible to obtain, as no entity within or outside the Russian government seems to monitor such developments systematically. Ioffe and Nefedova systematized piecemeal data from the late 1990s for an article in *Europe-Asia Studies*.²⁸ Since that time, two conflicting developments have attracted attention: the establishment of new verti-

cal structures, including those with capital accumulated outside food processing, and emerging disillusionment about the ability of vertical integration to invigorate Russian farms.

The most publicized corporate group may be Wimm-Bill-Dunn, which is active in the dairy and fruit juice markets.²⁹ It possesses four premier milk farms in the Moscow region, with a total of twenty thousand hectares of farmland, twenty thousand cows, and twenty-two food processing enterprises in various regions, including the Moscow-based Lianozovsky Milk Processing Plant. In October 2003 Wimm-Bill-Dunn was briefly rumored to be on the verge of acquisition by the French dairy giant Danone.³⁰ In addition to Wimm-Bill-Dunn, the following corporate groups are the most publicized by the Russian media: APK Agros, RusAgro, Razguliai-Ukrros, Planeta Management, APK Cherkizovsky, and Rusagroproyekt.

APK Agros was spun off in 2002 from Interros, owned by Vladimir Potanin. Among Interros's major assets is the Norilsk Nickel operation, which produces 20 percent of the world's nickel output. APK Agros is active in grain, pork, and poultry markets; it purchased several chicken farms in Stavropol *krai* (territory) and set up several new grain producing farms on leased land in Russia's south.³¹

RusAgro emerged in 1996 as a sugar refining business. In 1998, it embarked on its own production of sugar beets, having created for this purpose a farm, Agroiinter, in Belgorod oblast in cooperation with Deleplanque & Cie (France). In 2005, RusAgro co-owned nine sugar beet farms in Belgorod oblast, and it has invested the equivalent of \$3.5 million in those farms. Since 2000, RusAgro has been actively expanding its grain operations. The holdings' website claims that in 2002 alone it invested \$500,000 in agriculture.³² In Russia this sum would be equivalent to one-half of the entire federal aid to collective farms. It is unclear what the grain producing assets of the holding are, that is, whether it leases land or buys up existing farms.

Razguliai-Ukrros is yet another sugar and grain company. It has long-term land leases in Krasnodar *krai* and Rostov, Kursk, and Voronezh oblasts, and it is expanding its grain producing branch. The sugar branch of the company does not seem to work land on its own; rather, it operates sugar refineries in several southern regions.³³

Planeta Management is a branch of Sibneft, once owned by Roman Abramovich, better known later on as the owner of the British soccer club Chelsea. In November 2003, Planeta was transferred to the British-based Millhouse Capital. As a food producer, Planeta had emerged in 2001 under the leadership of Andrei Blokh, the former Sibneft president. Planeta owns five meat processing plants (8 percent of Russia's meat production), six poultry farms, and eleven milk processors, and it controls many retail outlets, primar-

ily in the large cities of Siberia. The most well-known structure controlled by Planeta is Omskii Bekon (Bacon of Omsk), the largest pork-processing plant in Russia. Omskii Bekon itself has the structure of a vertically integrated company.³⁴

APK Cherkizovsky produces 11 percent of the sausage in Russia and controls nine meat processing plants (of which Moscow-based Cherkizovsky is the largest, hence the name of the entire corporate group), seven poultry farms, and two large hog farms. Prior to 1998, 85 percent of the meat Cherkizovsky made into sausage was imported. However, in August 1998 these imports became too expensive for the processor; hence its expansion into farming operations.³⁵

Rusagroproyekt is a vertical agribusiness group created by David Yakobashvili and Gavriil Yushvayev, the co-owners of Wimm-Bill-Dunn, but formally not affiliated with it. The group owns thirty-six former state farms, four large-scale mechanized bakeries (also producing breakfast cereal), an oil storage facility, an agricultural machinery factory, and a meat processing plant in the Volgograd region. In Krasnodar krai, it owns the Azov shipyard, 44 percent of the shares of the Azov seaport grain elevator in the town of Yeisk, and 15 percent of the shares of the Yeisk seaport itself. Rusagroproyekt's plans for 2005 were to increase their grain processing operations to 1 million tons. The group already leases 250,000 hectares of farmland, and its planned investments in agriculture will make it one of the top three producers alongside APK Agros and RusAgro. The amount of land Rusagroproyekt uses is second only to that of the Russian natural gas conglomerate Gazprom.³⁶

According to Dmitry Rylko of the Moscow-based Institute of Agrarian Markets, vertically integrated companies are "currently picking up the last unaffiliated farms of Moscow Oblast and continue to buy up the best farms in other regions." However, according to Gennady Frolov, the manager of Cherkizovsky, "No more than 10 percent of all Russian collective farms may be of interest to those buyers. The rest are irremediable."³⁷ Some large food processors have changed hands, and it is not always immediately apparent who controls them.

These six organizations, all headquartered in Moscow, are the most potent players in the Russian food market. However, there are many regional corporate groups that originated as food processors but have expanded into agriculture. The best known are Zerno Povolzhya and Buket (Saratov), Aston (Rostov-Don), Agrico (Samara), Agrokholding (Kursk), and Stoilenskaya Niva (Belgorod).

There is no statistical base from which to characterize the extent of farms' involvement in agroindustrial companies. The share of such integrated farms in the total agricultural output, as well as the dynamics involved, is also

unknown. The agricultural managers of those companies are secretive and avoid contacts with journalists and researchers. Contacts with some neighboring farms and district administrations make us believe that when a corporate business comes to the district, its tax base does not serve local needs and it does not even submit reports to the local statistical bureau. V. V. Patsiorkovsky estimates that about 6 percent of Russian collective farms are part of vertically integrated agribusiness structures, and those farms produce 9 percent of the gross agricultural output.³⁸ It is unclear, however, how such estimates were made. The initial zeal of the new agricultural operators has, it seems, proven difficult to sustain. Even David Yakobashvili of Rusagroproyekt and Wimm-Bill-Dunn representatives complain about low returns and the slow pace of capital turnover, and Fiodor Kliuka, the former owner of Stoilenskaya Niva, says that investing and then not managing the investment project single-handedly is a road to failure.³⁹ Dmitry Rylko compares the expansion of Russia's corporate structures into agriculture with the bonanza farms of Minnesota and North Dakota in 1875–1890, the epic story described by Hiram M. Drache. According to Rylko, the size of land parcels currently under corporate control in Russia is comparable to those of the bonanza farms in the Upper Midwest. Russian corporate agribusinesses currently control by various means (ownership, lease, and contracts) about 3 million hectares of farmland; four corporations control more than 300,000 hectares each, and at least six corporations control 100,000 hectares. Most of the technological modernization of Russian farming is taking place on this land. For example, out of \$84 million spent by Russian importers in 2001 for foreign grain combines, at least \$60 million was spent by the new farming operators. However, Rylko believes that some of the factors that led to the ultimate decline of bonanza farms in North America may soon be replicated in Russia.⁴⁰

Corporate farming operators have run into four principal problems. One of them is that technocratic managers find it difficult to adjust to a production activity that is largely controlled by nature rather than management, particularly with respect to crop farming. A collateral problem is that the costs of establishing cohesive vertical management structures have proven higher than expected. Indeed, according to Yuri Kostyuk, who oversees all farming operations of RusAgro, "Many milk, grain, and other food processors expanded into farming under pressure from the local administrations and in hope that farming would become profitable at some point in time. It is not by accident that sugar refineries, dairy processing plants, grain elevators, and mills were privatized first, whereas collective farms did not interest anybody. They are still unappealing because . . . state regulation of the agricultural market does not exist, and the state aid to farmers is inadequate to make agriculture profitable and attractive for investors. . . . No vertically integrated structures will invest

in working land, if imported stuff [subject to processing] is cheaper than domestic.” Kostyuk believes that vertical integration is feasible only when profit is generated at every rung of the ladder, and the only hope of making farming profitable lies in state support. The third problem of agroindustrial integration cited by Rylko is that the new operators face an acute deficit of skilled workers in the rural villages. Finally, the new operators are viewed as aliens by the majority of rural villagers, who resist their management style.⁴¹

Shifts in the Distribution of Output and Land

As mentioned above, Russian statistics are compiled in ways that do not enable researchers to estimate the agricultural output attributed to farms affiliated with agribusinesses. Official statistics cover just three agricultural sectors: collective, household, and noncorporate private. The major shifts that occurred after 1990 were between the collective and household sectors (table 2.4). By 2001, household farms were already producing more than half of the entire output, up from 25 percent on the eve of the Soviet Union’s breakup. They were contributing more than half of the milk and meat and almost all the potatoes and other vegetables. The growth in the household sector was especially vigorous in 1991–1992, in the wake of retail food price decontrol. During that period, household farms’ output increased 18 percent. In subsequent years, this output has never sustained growth above the 20 percent of the 1990 level. Moreover, by the end of the 1990s, household farms’ output began to decline.

Although household farms are the major producer (at least overtly), they are not the major landholder, at least de jure (table 2.4). What is more, they are very diverse. While some are commercial establishments that are not reg-

Table 2.4. Percent distribution of output, cattle, and cropland by farm type

	<i>Collective farms</i>		<i>Household farms</i>		<i>Registered family farms</i>
	<i>1990</i>	<i>2001</i>	<i>1990</i>	<i>2001</i>	<i>2001</i>
Total output	74	44	26	52	4
Grain output	99.7	0.3	88	1	11
Vegetable output	70	18	30	80	2
Milk output	76	47	24	51	2
Meat output	75	41	25	57	2
Number of cattle	83	58	17	39	3
Number of pigs	82	54	18	43	3
Number of goats and sheep	72	29	28	63	8
Cropland	98	85	2	6	9

Sources: *Selskoe khoziaistvo v Rossii 1998* (Moscow: Goskomstat, 1999), 34–69; *Selskoe khoziaistvo v Rossii 2002* (Moscow: Goskomstat, 2003), 32–71.

istered as independent farms for the tax-related reason mentioned above, the majority are subsistence providers that can exist only in symbiosis with parent collective farms. Although table 2.4 includes exact data about cropland as it stands in the books, it is actually unclear how much labor, land, and capital each mode of farming operations effectively uses; consequently, their relative efficiency is unknown. Only targeted surveys such as those conducted by Judith Pallot and Tatyana Nefedova are able to shed light on the household sector of Russian agriculture.⁴²

Officially, the collective farm sector remains the largest landholder; it controls 81.9 percent of farmland versus 11.3 percent controlled by household farms and 6.8 percent by registered private farms. However, 83 to 86 percent of the twenty-seven thousand collective farms are effectively bankrupt; their costs exceed revenues, and they are delinquent on their debt payments. By 2003, about fourteen thousand collective farms had had their bank accounts frozen by the government and therefore could not obtain a bank loan to purchase fuel and machinery. In 2002, the overall debt of collective farms to the federal and regional budgets increased by 70 billion rubles; in early 2003, the debt was about 350 billion rubles and rising. In 2003, 60 billion rubles were written off that debt, so the remaining debt did not decline.⁴³ According to Leonid Paidiyev, an associate of the State Corporation of Credit Institutions' Restructuring (GK ARCO) and a popular expert at the online site *Otkrytaya Ekonomika* (www.opec.ru), 5 percent of collective farms are "normal market enterprises" that can and do use bank credit as it is, that is, with current interest rates; 15 percent are enterprises that could be raised to that level through "elementary re-organization"; and the remaining 80 percent are entities with seminatural economies that will not be able to repay their debt under any circumstances.⁴⁴

The significant increase in household farms' share of output is actually due to the collective sector's failure. But while there is no reason to doubt this statement, the accuracy of land use and output distribution data from the post-Soviet period (contained in table 2.4) may be easily called into question.

Dubious Accuracy of Output and Land Use Records

Our field observations show that rural households use more land than they own. There are essentially three types of land that rural residents use for their own needs: land attached to a rural residence, additional land within a settlement leased out by the rural administration, and land leased out by a collective farm. To produce feed for one cow usually requires from 0.030 to 0.070 hectare. Land is usually leased for a nominal fee. Some Russian scholars believe that overall no less than one-third of all the farmland in Russia is used by rural

households for their needs.⁴⁵ The magnitude of this hidden land use grew significantly in the 1990s, as collective farms reduced their cropping areas.

Essentially, symbiotic relationships exist between collective and household farms. In many cases, the sole rationale for the collective farm's lingering existence is that it is a de facto conduit for state aid to household operations. If the collective farm exists on paper, people can obtain fertilizer and feed concentrate for their own cattle. Observations of such relationships have allowed some scholars to doubt the statistical records of household farm output. For example, Azer Efendiev and Irina Bolotina believe that the officially recorded percentage of household farming in the gross agricultural output is exaggerated by at least a factor of 1.5. Their opinion is based on an observation that up to 50 percent of the feed grain and up to 40 percent of the hay used by a typical household farm in Belgorod oblast, one of the premier agricultural regions of Russia, are obtained from a collective farm, "and there are valid reasons to believe that the remaining animal feed is from the same source as well, only obtained illegally. . . . Today's peasant household farming in Russia will not survive a single day without [parent] collective farms," conclude Efendiev and Bolotina.⁴⁶

Other evidence suggests that household farms' output may be exaggerated, whereas that of collective farms and, to some extent, private farms is downplayed. In contrast to Soviet times, in the first decade of the twenty-first century there is a pervasive tendency to underreport output in order to minimize corporate taxes, and household farms are exempt from taxation. To artificially assign more output to household farms than they actually produced is easy because the output of household farms in Russia is routinely assessed on the basis of local surveys of just 0.1 percent of the entire region's (an oblast's or republic's) pool of such farms. In contrast to collective farms, all of which annually file identically designed statistical reports, household farms are subject to sample surveys. The guidelines for designing a regional sample require selecting 25 percent of the rural districts (*raiony*), 15 percent of the rural administrations of the selected districts, 10 percent of rural villages under each selected administration, and typical household farms within selected villages.⁴⁷ As far as we know, there is no rigorous control or supervision to ensure that regional samples are consistent and representative. The resulting evaluation of regional household farm output obviously hinges on the subjectivity of local statisticians.

In summary, much of the agricultural output in Russia is produced through peculiar collective arrangements that defy strict classification. These arrangements resulted from multiple adjustments and the combination of erstwhile regimented forms (collective farms) with those spontaneously evolving from the ground up. All of these symbiotic production units are facing an ex-

ternal environment that has changed a lot since 1991. Administratively, this environment has become much less coercive but at the same time it no longer protects the farms from the economic realities of the world beyond the farm gate. Some of these realities are difficult to surmount, especially the so-called “price scissors” and food imports.

The “Price Scissors”

The disparity between agricultural product prices and the cost of agricultural inputs such as fuel and machinery is called the “price scissors,” one of the two most publicized travails of Russian agriculture. Whenever any local agricultural operator or a parliamentary spokesperson for regional or national agricultural interests is interviewed, this topic is the first one discussed. According to Nikolai Kharitonov, an agrarian lobbyist and presidential hopeful, in 2001 one ton of diesel fuel cost forty-five hundred rubles; in 2002, seven thousand rubles, and in 2003, close to ten thousand rubles. At the same time, the price of one ton of wheat has been between twelve hundred and sixteen hundred rubles. According to another member of parliament, Yaroslav Shvyriayev, who represented the former Regions of Russia faction, from 1993 to 2003 the price of wheat doubled, but the price of diesel fuel increased by a factor of 9.6 and for gasoline the factor was 8.2. According to Alexei Gordeyev, Russia’s minister of agriculture, because of the growing price disparity, the total revenue of Russia’s collectives in 2002 was a twentieth of what it was in 2001, despite the fact that in 2002 actual productivity was higher than in 2001.⁴⁸ Note that the World Trade Organization (WTO) insists on further increases in domestic fuel prices as a prerequisite for Russia’s admission.

Prior to 2002, most of the vastly diminished subsidies were channeled through discounted short-term credits. Their function was to replenish farms’ working capital (for seed, fuel, lubricants, animal feed, and spare parts). Such credits were administered during sowing and harvesting and were supposed to be paid off by the end of December. However, most credits were never paid off. In June 2002, the federal government established new credit rules. According to these rules, most credit is for a three-year term; the government subsidizes two-thirds of the interest that the farms are supposed to pay back to the banks; the farm’s property (but not land) acts as collateral; and the banks are free to determine the credit worthiness of a farm.⁴⁹ Should such practices take root, they will make the availability of agricultural credit even more selective than before, simply because half of all collective farms have had their bank accounts frozen and no more than 5 percent have a tolerable credit history. Ironically, instead of sending a warning signal to improve management practices,

freezing farms' bank accounts sets up a cycle: it stimulates the "dumping" of farm products for cash, and this practice effectively means lower prices.

The idea floated by former prime minister Mikhail Kasyanov during his visit to the successful pedigree farm Irten in Novosibirsk oblast in July 2003, that long-term debts of collective farms will be restructured only on the condition that debts on *current* credit are paid off on time, would be worthy of closer attention were it not for the fact that dozens of similar initiatives have been put forward without any meaningful effect since the commencement of Gorbachev's perestroika.⁵⁰ The same holds true in regard to Kasyanov's statement that farms not honoring their current financial obligations would be declared bankrupt and that external crisis management would be appointed. It is entirely unclear who would become a "crisis manager" under the existing acute deficit of able rural leaders. Even in the 1980s, 20 percent of all collective farms produced 70 percent of the total output.⁵¹ Compared with the recent and the more distant past, the current degree of farms' polarization is deeper, as the overwhelming majority of them have degenerated as economic units. Under this condition, pleas of "aid the strong, not the weak" that are emanating with ever-increasing frequency from local policy makers accelerate the demise of the majority of Russian farms.⁵²

Because federal subsidies are minuscule and unavailable for many farms, regionally administered subsidies appear to be more important. According to some sources, regional budget supports account for two-thirds of all state support of Russian agriculture.⁵³ However, the generosity of regional budgets varies by region, which sparks interregional conflicts and tears the domestic market apart. For example, broiler chicken producers from the Samara region complain that they cannot compete with those from Orenburg and Mordovia, where subsidies account for 5.6 rubles per kilo of chicken (whose average cost of production in Russia is about 30 rubles or a dollar per kilo).⁵⁴ Because there are no rules stipulating a level playing field, even the best Russian farms have a hard time planning their activities; they face entirely unforeseen competition from both domestic and foreign producers.

Food Imports

The issue of food imports deserves special attention. "Prodovolstvennaya bezopasnost strany" (national food supply security) has long been a catch phrase in Russia. For some reason, it is believed that food imports should not exceed 20 percent of domestic consumption. If a country imports 30 to 40 percent of what it eats, as is the case with Russia, it is described as being on the verge of compromising its independence. To be sure, 70 to 80 percent of some com-

modities, notably sugar and beef, are imported. According to some sources, the monetary value of food imports to Russia matches that of Russia's oil exports.⁵⁵

The mainstream Russian media broach the subject of government subsidies to farmers in the West about as frequently as they focus on the "price scissors." These subsidies enable foreign exporters to dump low-priced products in the Russian market. This practice reportedly causes up to \$13 billion in damage to Russian food producers each year, though the methodology of such assessments is unclear.⁵⁶ The outcry, however, is loud and lasting, and it is accompanied by wild-eyed exaggerations and chimeras typical for Russia's public discourse. The usually well-balanced source *Argumenty i fakty* has presented the following diatribe:

We are under the onslaught of cheap foreign foods that our mercenary bureaucrats buy up for dumping prices and bring to this city [Saint Petersburg]. . . . What they bring is such crap . . . it only destroys people. All these preservatives, all the genetically altered ingredients which are so abundant in the West end up in our people's livers. [The Westerners] do not eat that stuff themselves; rather, they would send it to us. We are for them like Africa or a third-world country wherein anything can be dumped for profit. Instead of burying those "Bush's legs" [U.S.-produced chicken leg quarters] somewhere in an Arizona desert or in the state of Iowa, they send them to us and earn money on that. . . . In America, they don't eat them at all! America eats chicken breasts, necks, and wings, while drumsticks are separated and, according to their laws, they should be destroyed. Only dog food is allowed to be made of those drumsticks, but this would only utilize a small part of the stuff. So they have to dispose of the rest, and lo and behold, they discovered Russia to push it on. I think that after eating those drumsticks for one straight year one will simply die out of excessive cholesterol.⁵⁷

To be sure, this tirade is not from a staff writer; it is part of an interview with Alexander Egorov, chair of the Leningrad regional branch of the Agrarian Party and a local sovkhoz director. But no sober-minded editorial commentary is offered, and the entire interview is titled "Agrarians Are Convinced: Peasants Can Feed Russia and Europe," which is more of an article of faith than anything else.

With pervasive opinions like this one, fanned by the "national patriotic" circles, the government finally began to take heed. So far, it has come up with import quotas. Some analysts noticed that those quotas were introduced when growth in agriculture conditioned by the 1998 devaluation of the ruble and the ensuing import substitution began to show signs of abating. The first

quotas were set in 2002 on raw sugar. Out of 6 million tons of refined sugar produced in Russia, 4 million tons are produced from imported raw sugar and the balance from domestic sugar beets. It is believed that the introduction of the quotas helped forestall the economic demise of Russian sugar beet producers; in 2003 the cropland devoted to sugar beets was 15 percent greater than in 2002.⁵⁸

In early 2002, the Russian government attempted to limit chicken imports from the United States under the pretext of poor veterinary controls that overlooked salmonella poisoning in chicken produced by fourteen out of four hundred American poultry farms exporting to Russia. A smear campaign against “Bush’s legs” was launched by the media, with the above-quoted interview from *Argumenty i fakty* coming in handy. In these authors’ opinion, Russian chicken is indeed tastier, as is the case with most organically produced food. To be sure, Russian produce is not entirely organic; it just uses one antibiotic instead of the five allowed and used in the United States, and the proportion of feed that is grain is higher at Russian poultry farms while the use of artificial diet supplements is lower. Also, Russian feed grain producers use less mineral fertilizer. Regrettably, all these advantages are bound to evaporate as Russian producers compete with their Western counterparts. However, the above-mentioned smear campaign did not have consumer preferences as its target. A report about a survey that the Russian Institute of Agrarian Monitoring conducted in 2002 exposed the true goals of the entire “chicken war.” The report testified that “because of a scandal with ‘Bush’s legs’ the demand for American chicken lessened significantly. And this acted as a psychological endorsement of price hikes” on Russian-produced chicken.⁵⁹ After retail prices increased by at least 10 percent, *thus benefiting the retailers*, Russian and American veterinary control services signed a protocol on 22 March 2002 stipulating that American suppliers would meet thirteen conditions, and on 15 April 2002 American imports resumed. This action was to be predicted because within the foreseeable future, Russian poultry farms cannot meet the domestic demand for chicken. Out of 166 large poultry farms, only 29 are working at full capacity; 119 farms require modernization, and 30 percent of all poultry producers are on the verge of bankruptcy. Thus the chicken deficit is about eighty thousand tons a month.⁶⁰

In January 2003, import quotas on both red meat and chicken were introduced (table 2.5). It is unclear, though, whether this move will help Russian animal husbandry. The quotas resulted from effective lobbying by such groups as the Union of Russian Meat Packers (*Miasnoi Soyuz Rossii*). Its leader, Mush-eg Mamikonian, claims that in the European Union beef is subsidized at a rate of 0.8 euro per kilo, which is comparable with the retail price of beef in Russia.

Table 2.5. Actual meat imports and import quotas for 2003 in thousand tons

	2001	2002*	Quota for 2003
Beef	476	638	315
Pork	398	533	338
Poultry	1391	1149	744

Note: *Estimate.

Source: Mikhail Sergeev, "Ogranichenie importa miasa kak predvestnik novoi ekonomicheskoi politiki," StranaRu, 28 January 2003, <http://www.strana.ru/print/170073.html>.

As a result, the before-customs price of one kilo of beef is the equivalent \$1.30, whereas without subsidies it would cost \$2.20, which approximately matches beef production costs at Russian farms. "This is why, should European farmers be brought to Russia, they would go bust, their famed technologies notwithstanding," Mamikonian concludes.⁶¹

Even if accurate, the above data lend themselves to various interpretations. In the same interview, Mamikonian acknowledged that in the area of beef "we have only ten large producers left, whose market share is within 3 to 5 percent. To collect the rest, we have to make the rounds of about 1 million rural households, and they don't have an accountant and an administrator with a corporate seal."⁶² This statement of course means that true production costs are simply unknown. It is even more disputable that the degradation of animal husbandry in Russia that Mamikonian refers to is traceable to Western subsidies. For example, the data on pork imports to Russia shows that the largest suppliers are Brazil (45 percent of pork imports) and China (11 percent), the countries where agricultural subsidies are low; only one-fifth of pork imports are from the European Union, but their prices are often lower than those of the Brazilian and Chinese firms.⁶³ It is almost certain that the retailers and go-betweens, not farmers, will capitalize on price hikes that will follow the introduction of quotas.

Russia's Grain Bonanza

Following three years of crop failures (1998–2000), Russia had two straight years with bumper crops (table 2.6). This bonanza, however, was no blessing for the Russian farmer. Because of a drastic reduction in feed grain consumption (due to a drastic decrease in cattle), the bumper crops created a grain surplus of about 15 million tons. As a result, domestic grain prices plummeted: in 2001 one ton of class 3 wheat was priced at twenty-five hundred rubles, but in 2002 prices fell to between seventeen hundred and nineteen hundred rubles per ton.⁶⁴ Most farms actually sold grain for even less. Because so many farms have their bank accounts frozen, they fall short of fuel and lubricants

Table 2.6. Annual grain output in the Russian Federation, million tons

1976– 1980	1981– 1985	1986– 1990	1991– 1995	1996– 2000	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
106	92.0	104.3	87.9	65.2	63.4	69.3	88.6	47.9	54.7	65.5	85.2	86.5	73.5	73– 75*

Note: *Estimate.

Sources: *Rossiiskii statisticheskii ezhegodnik* (Moscow: Goskomstat, 1996), 563; *Selskoe khoziaistvo v Rossii 2000* (Moscow: Goskomstat, 2002), 58; Zhanna Oleinik, “Rossiiskoe zerno uidiot zarubezh,” *RBC Daily*, 11 May 2004, http://www.ikar.ru/press/2004_05_/o.shtml.

on the eve of sowing. This situation is to the benefit of the so-called *treidery* (a calque of “traders”), a growing class of middlemen. They offer necessary supplies in exchange for future crops. Prices at which *treidery* bought up grain in 2002 were usually eight hundred to twelve hundred rubles per ton, which was just two hundred to four hundred rubles above production costs. *Treidery* are the ones with the highest profit margin and the speediest capital turnover in the entire food industry; according to available estimates, in one year their total revenue was the equivalent of \$17.2 billion, while they reinvested just \$2 billion in their enterprises.⁶⁵ According to Dmitri Ushakov, financial director of Agros, “Trade in grain, in the normal sense of the term, does not exist in Russia. Out of the entire 2001 grain output, only 20 percent was disposed of through grain exchanges and other market infrastructure. All the rest was barter.”⁶⁶

In 2001, the government came up with the idea of so-called “state interventions”—buying up grain from the farms while the product is still high priced. However, two years in a row the good idea was brought to naught by haphazard implementation. Both in 2001 and in 2002, state purchases commenced in November. Because farms’ warehouses are inadequate and poorly equipped, by that time most grain was already in the *treidery*’s hands; it was they who capitalized on the state interventions. As for the farmers, most of them, ironically, profited far less from bumper crops than they did from meager crops a couple of years before. The year 2003 is a case in point: because the total grain output was only 73.5 million tons (or slightly short of domestic consumption), grain prices were twice as high as in 2002.⁶⁷

While Russia has once again become a net exporter of grain, the total capacity of its grain terminals in Novorossiisk, Saint Petersburg, and several small Sea of Azov ports was barely enough to process 6 million tons. The actual exports were much larger, however, as an unrecorded amount of grain crossed the border with Belarus, for the most part ending up in Italy and Greece. According to Marina Smovzh, in 2002 Russia exported 18.4 million tons for a total of \$1.4 billion and once again became one of the world’s major grain exporters. This success, however, was not to be repeated in 2003 because

of a much lower output. Still, by September 2003, 3.2 million tons had been already exported.⁶⁸



Agriculture has been the most troublesome sector of the Russian economy for as long as one can remember. Russian agriculture went through some crucial turning points in the past, like the abolition of serfdom and collectivization. But the magnitude of its current travails seems to exceed what has befallen it in the past. The unrelenting demographic trends do not leave hope for long-term retention of rural labor in much of the Russian agrarian ecumene, *and* the sudden imposition of market forces has left Russian rural folk out in the cold, divided, antagonized, and pauperized to the extreme. As one member of Russia's Council of the Federation, the upper chamber of the Russian parliament, put it, "The hand of Adam Smith, which has already clutched the Russian peasant by his throat, will soon squeeze the life out of him."⁶⁹

Although Russian agriculture has been in trouble under various socio-economic formations, most if not all explanations for its numerous failures have invoked structures derived from the dominant socioeconomic order such as incentives, ownership, spontaneous and enforced communal forms, management, legal issues, and the like. Far from denying the significance of aspatial explanatory frameworks (e.g., political economy or legal, managerial, technological conditions, etc.) in the travails of Russian farming, the following chapters explore the idea of agricultural development constraints that arise from Russia's environment (physical and social alike). The idea that low efficiency and poor outcomes have been the scourge of the Russian countryside irrespective of the dominant socioeconomic order may in part derive from the neglect of these objective constraints.

The remainder of this book explores the strong spatial dimensions of these constraints, discusses their implications, and evaluates the resulting prospects for Russia's agricultural development.