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Adapting to a Market Economy: Changes in Russia's Farm Structure

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Reform's impact on agriculture

During the Soviet regime, Russian agriculture was dominated by large collective and state farms (*kolkhozes* and *sovkhozes*). The state allocated land and intentionally created only large farms while restricting individual activity. Rural people had no choice but to work for the local farm enterprise. Farms were managed through central planning. Soft budget constraints were implemented to cover losses and write off debt, ensuring that unprofitable farms would never go bankrupt. The large farms faced no competition.

Russia's transition to a market economy ended the dominance of large farms, and this brief examines the development of different farm structures during the post-Soviet transition and their adaptation to the new market conditions. The research analyzes the amount of state support given to the different farm types compared to measures of their efficiency and productivity. While small farms play an increasingly important role in Russian agriculture, policy continues to favor the larger farms, even those that are unproductive.

Evolution of farm structure and support

Today, there are about 24,000 large corporate farms in Russia, which succeeded the *kolkhozes* and *sovkhozes* by a legal procedure that began in 1991-92. Most corporate farms are private agricultural producers; fewer than 3,000 state farms remain. The corporate farms control 80% of agricultural land, averaging 6,000 hectares and more than 150 workers per farm. "Superlarge" farms also are emerging. Each of these giants controls tens or even hundreds of thousands of hectares of farmland and employs tens of thousands of workers (see **BASIS Brief 35** for a discussion of this phenomenon). In 2002, 25% of corporate farms classified as "best performers" contributed 55% of sales, while roughly the same number of loss-makers contributed 5% of sales. On the whole, about 40% of corporate farms grow wealthier, while the rest accumulate so much debt that it cannot be paid off. Liquidations are becoming more frequent, releasing resources to new users and owners, primarily other corporate farms.

According to Russian law, agricultural businesses with fewer than 60 permanent workers are classified as small enterprises. Under this designation are found small corporate farms, a certain proportion of independent peasant farms, and some commercially-oriented household plots. By 2003, there were nearly 30,000 small agricultural enterprises in Russia, using 7.8 million hectares of land (4% of all agricultural land) and producing 23.3 trillion rubles in agricultural output (2% of the total).

Contrary to early expectations, the peasant farm sector had not become the dominant force in Russian agriculture. In 2002, some 260,000 peasant farms produced only 3.7% of gross agricultural output. Nevertheless, land in peasant farms increased by one million hectares in each of the past five years and reached 18 million hectares (9% of agricultural land) in 2003. The increase was made possible mainly by

leasing land shares from rural individuals. Peasant farmers outbid corporate farms in competitive land leasing because they offer higher rent to the owners of land shares. Peasant farms also achieve the highest growth rates in agricultural output. In some regions of Russia, peasant farmers out-produce corporate farms.

The role of corporate farms in the labor and land markets has dramatically decreased. Between 1990 and 2002, employment on corporate farms dropped from 8.3 million to 3.8 million (see **BASIS Brief 37** on labor issues). Land used decreased from 209.8 million hectares to 150.4 million hectares, a decrease of almost 30%. Overall, corporate farm output declined by a factor of 2.3.

Conversely, over the same period, employment in small agricultural businesses increased from 1.4 million to 3.9 million, and another nearly 10 million people work on small subsistence farms. Land used by peasant farms increased by a factor of nearly 20, reaching 18 million hectares by 2003, whereas land in household plots doubled to 13 million hectares. The individual sector today uses 16% of agricultural land in Russia. This does not include municipal common land and land on corporate farms informally used by the rural population, which according to our estimates adds another 36 million hectares to household plots at the expense of the official land numbers for corporate farms.

Household plots and peasant farms combined are producing more than 60% of gross agricultural output. The importance of the household plot in rural life is highlighted by official household budget surveys, which show that income from the household plot is 4.7 times higher than the wages earned on a corporate farm.

During the 1990s, all of Russia followed the same transition path: corporate farms losing their share of land, labor and agricultural product, and small agricultural enterprises gaining in those areas. Rates of change, however, varied across regions. As a result, after more than a decade of transition, different regions have different farm structures. Regions where corporate farms contribute more than 50% of agricultural production we characterize as a *corporatized* farm structure. Regions where individual farms produce more than 70% of output we characterize as an *individualized* farm structure. All other regions we characterize as a *mixed* farm structure.

Corporate farms dominate only in nine of Russia's 77 regions. Individualized agriculture is observed in 26 regions. All other regions are characterized by a mixed farm structure, but with a clear dominance of the individual sector, which produces around 60% of output. A corporatized farm structure tends to appear in regions with the most favorable natural conditions or the most developed economic environment. Individualized agriculture is observed primarily in regions where corporate farms are relatively inefficient and have not adapted to market conditions. In 1995, in corporatized regions, 37% of corporate farms were unprofitable; in individualized regions, 71% of corporate farms were unprofitable. Individualized agriculture predominates in regions governed by ethnic minorities and where arable land is less abundant.

From the beginning of reform, the government-declared goal was to achieve a multi-organizational agricultural structure with equal support for farms of all types. Actual policy, however, remains strongly biased toward supporting large agricultural businesses and restricting small businesses. Peasant farms had access to state funds in the early 1990s, but this support disappeared. Formally, peasant farmers are eligible for partial reimbursement of interest expense within the subsidized interest rate credit program. In practice, however, commercial banks refuse to lend to small producers, and there is no subsidized interest rate on loans from the credit cooperatives that peasant farmers patronize. Household plots are not mentioned in the budget and therefore cannot receive subsidies.

Corporate farms are the main recipient of subsidies, and even within this sector there is discrimination in favor of the larger farms. Overall, 15% of corporate farms did not receive subsidies, and 20% received on average a mere 45,000 rubles (US$1,500). Conversely, 1.4% of the largest corporate farms received 22.5% of all subsidies. Each enterprise in this latter group received more than 10 billion rubles (US$350 million) in subsidies and compensation. The three largest beneficiaries received nearly 200 billion rubles (US$6 billion).

Many countries limit the total amount of government subsidies that a single farm can receive. In the United States, a farm cannot receive more than $50,000 from the government. Thus, large corporations cannot secure correspondingly large subsidies. In Russia, there are no such limits. As a result, the Russian agricultural budget is used for the benefit of large farms, whereas the U.S. budget mainly supports small farms. In the United States, the 26,500 largest farms contributing 42% of sales receive 8% of government payments in all farm programs; in Russia the 24,300 largest farms contributing 40% of gross agricultural product receive almost 100% of government subsidies.

Analyzing large farm impact

Close interaction between large farms and household plots is a long-established feature of Russian agriculture. The local corporate farm often provides machinery for plowing private potato patches in the village. It typically plays an even greater role in private livestock production by selling calves, piglets, and chicks to households, and then supplying feed free of charge or at preferential prices. The local corporate farm also assists village households with hay cutting and delivery and with marketing and transporting products.

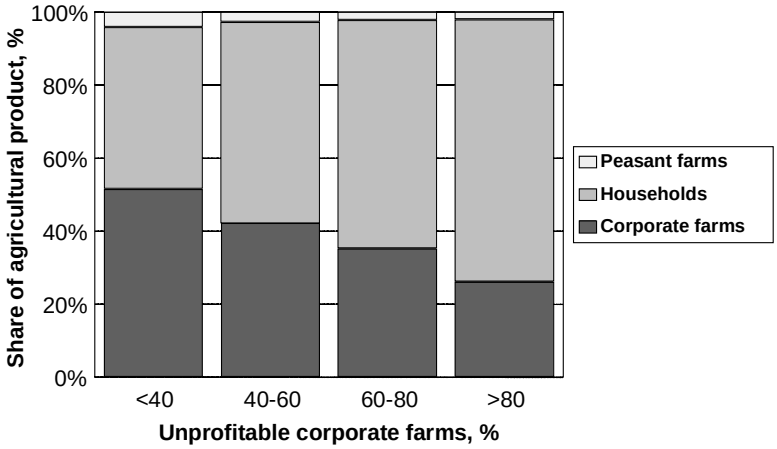
Many scholars and politicians are of the opinion that the more developed the corporate farm, the higher the level of development of the small farms in the same area. They argue that household plots are not viable without inputs and services from corporate farms. To be able to provide these services, the corporate farm itself must be sufficiently profitable and productive.

Others view the relationship differently. Small farms achieve a higher level of development in a given area because people have lost their jobs with the unprofitable corporate farm and are forced to farm the household plot or create an independent peasant farm. The resources of the deteriorating corporate farms are gradually reabsorbed by the small farms in the area.

A third point of view holds that there is no direct relationship between the two types of farming; individual farms existed long before the appearance of collective farms and they still exist in areas where corporate farms have disintegrated. To ensure that large corporate farms operate efficiently, their relationship with household plots must be on a strictly commercial basis. Without adequate reciprocal arrangements, the household plots will ruin the corporate farm and pilfer its resources.

To test the hypotheses concerning the relationship between the efficiency of corporate farms and the development of small farms, we grouped Russia's 77 regions by percent of unprofitable corporate farms. The value of output per rural family produced in household plots is fairly stable across the profitability groups. Its variability is substantially less than the variability of output per family in corporate and peasant farms. There is no statistically significant correlation between the output per family produced in corporate farms and in household plots. As corporate farms become less efficient ("more unprofitable"), their share in agricultural production decreases, while the share of peasant farms correspondingly increases. In the first profitability group, corporate farms account for 52% of agricultural production; in the last profitability group they account for 26%. In regions where corporate farms are weak, peasant farms are also less developed, and it is only the share of household plots in agricultural production that increases (see figure). Employment in subsistence-oriented household plots also rises from 56% of agricultural employment in regions with the best corporate farms to 69% in regions with the least profitable corporate farms. The machinery of corporate farms is important for the development of household plots, but corporate farm characteristics—such as the financial situation, the production volume, agricultural land, and number of those employed—do not significantly influence agricultural production on household plots.

Role of household plots across regions with varying rate of unprofitable corporate farms. Source: Goskomstat.



Analyzing productivity

To date, performance comparisons between large and small farms are restricted to partial productivity measures, such as land and labor productivities. Comparative analysis of total factor productivity is left to future research because of data limitations. Household plots achieve the highest productivity of land among all farm types, with an output per hectare 8-9 times higher than corporate and peasant farms. These results are probably overestimated, because part of the land actually used by household plots is officially registered to corporate farms and livestock production is largely supported by feed from the corporate farm. Nevertheless, household plots use their land much more productively than other farms. This is evident

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from the figures for crop production per hectare, which maintain the same advantage relative to corporate farms as gross agricultural output, which includes both crops and livestock. The higher productivity of land in household plots can be explained by the difference in cropping patterns: household plots specialize in labor-intensive crops, while corporate and peasant farms mainly produce extensive crops.

The ranking by partial productivity of labor is reversed. The output per worker on household plots is lower by a factor of 2.2-2.3 than on corporate and peasant farms. In livestock production, this gap is even greater, which is not surprising given the primitive technology used by most household plots and their reliance on manual labor.

On peasant farms, the output per hectare is somewhat lower than in corporate farms. Peasant farms use 9% of agricultural land and produce only 4% of agricultural output. Opponents of private farming in Russia cite this as proof of inefficiency when compared with corporate farms. This comparison is not valid, though, because peasant farms are compared not with corporate farms, but with *all* farms, including the highly productive household plots. In comparison with corporate farms as a separate group, peasant farms are found to be more efficient in crop production and less efficient in livestock production. However, most livestock production included in this comparison originates in large specialized complexes, which use their resources very efficiently due to industrial economies of scale. It is more appropriate to compare the productivity of peasant farms with the group of relatively small corporate farms (those with the lowest sales). Corporate farms with sales revenue not exceeding 4.1 million rubles, or US$130,000, in 2002 (47% of all corporate farms) produced approximately the same value of output as all peasant farms. However, these corporate farms used 58 million hectares of agricultural land, so that their land productivity was a factor of 3.4 lower than the land productivity of peasant farms.

Change requires change

Russian agriculture is characterized by a wide spectrum of organizational forms. The share of large corporate farms in agricultural resources and production has steadily declined since 1990, while small enterprises have become the main producer, employer, and source of income for the rural population. At the same time, the shrinking corporate farm sector is increasingly differentiated by financial health and performance, with the share of the largest "best performers" rapidly growing at the expense of the weak unprofitable farms. Russian agricultural policy continues to channel support to the largest farms, ignoring the increasing role of small agricultural enterprises. As a result, government support programs and subsidies have no virtually no impact on the efficiency of agriculture. The government must revise its policy priorities in view of the changing structure of agricultural production.

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Related reading

Brooks, K, E. Krylatykh, Z. Lerman, A. Petrikov, and V. Uzun. 1996. *Agricultural Reform in Russia: A View from the Farm Level*. World Bank Discussion Paper 327. World Bank: Washington, DC.

Epshtein, D. 2005. "Financial Performance and Efficiency of Corporate Farms in Northwest Russia." *Comparative Economic Studies* 47(1): 188-99.

Roszemkadastr 2002: *Zemel'nyi fond Rossiiskoi Federatsii na 1 yanvarya 2002 g.* [Russia's Land Balance for January 1, 2002]. Roszemkadastr: Moscow.

Rylko, D. and Jolly, R. 2005. "Russia's New Agricultural Operators: Their Emergence, Growth and Impact," *Comparative Economic Studies* 47(1): 115-26

Shagaida, N. 2005. "Agricultural Land Market in Russia: Living with Constraints." *Comparative Economic Studies* 47(1): 127-40.

Uzun, V. 2005. "Large and Small Business in Russian Agriculture: Adaptation to Market." *Comparative Economic Studies* 47(1): 85-100.