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Restructuring of traditional farms and new land relations in Russia

Karen Brooks [a], Zvi Lerman [b,*]

[a] *Agricultural Policies Division, Agriculture and Natural Resources Department, The World Bank, Washington, DC, USA*
[b] *Department of Agricultural Economics and Management, The Hebrew University of Jerusalem, P.O. Box 12, Rehovot 76100, Israel*

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Abstract

Under decrees defining the Russian program of land reform and farm restructuring from 1991 to early 1993, 46% of agricultural land in Russia was transferred from state to collective ownership; 80% of collective and state farms reorganized and most registered as shareholding structures. The number of independent private farmers exceeded 250 000 in early 1995. Despite these changes, however, most farms reorganized as whole entities and members kept their land and asset shares in collective production. The paper reports the results of a survey undertaken in 1992/1993 of 2700 farm managers, farm employees, and private farmers in Russia, designed to elucidate changes at the farm level during the early stage of land reform and farm restructuring.

1. Introduction

On 29 October 1993, the Moscow daily Izvestiya carried the headline "Peasants Get the Land that Bolsheviks Promised Them in 1917". Thus, 76 years after the Land Decree of October 1917, abolishing private ownership of land and effectively prohibiting all land transactions, Russian citizens recovered the right to own, buy, and sell land privately. The October 1993 presidential decree was one of a number of pieces of legislation relating to land relations and restructuring of traditional farm enterprises in Russia, and it removed a major formal obstacle to the development of land markets in Russia. Although a framework supporting farm restructuring and land reform is in place, activity on agricultural land markets is very low, and actual change in enterprise form and behavior is modest. Changes at the farm level have not been sufficient to counter the continued deterioration in sectoral performance. This paper presents findings of a survey covering the early period up to February 1993, while the framework for structural reform was put in place. The survey findings showed early indications that the extent of actual change would be modest. These early indications have been confirmed by a resurvey done in 1994, the data from which are currently in process.

* Corresponding author: Fax. 972-2-733954; e-mail: lerman@agri.huji.ac.il.

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The progress of agrarian reform in Russia has been recently discussed by a number of authors (Van Atta, 1994; Wegren, 1994b,c), primarily on the basis of aggregate statistical data, official documents, newspaper articles, case studies, and individual interviews. The present study is based on a survey of 2700 respondents in three categories: managers of large-scale farm enterprises, employees of farm enterprises, and private farmers. The survey was conducted in the period from November 1992 through January 1993 in five Russian provinces (Saratov, Rostov, Novosibirsk, Orel, and Pskov *oblasti*) representing a range of agroclimatic conditions and specializations. The empirical data collected in this survey capture the Russian farm sector in transition and draw a detailed picture of changing patterns of land ownership, land use, and farm structure as viewed at the end of 1992.

The process of agricultural reform in other countries in the region has received less attention in the literature. Schroeder (1994) presents an overview of the process in successor states, while Csaki and Lerman (1994) and Brooks and Lerman (1994b) describe the changes in Eastern and Central Europe. A companion article in this issue presents the findings of a similar survey for Ukraine, where the agricultural transition has been less well documented than in Russia.

2. Privatization and restructuring

Russian agriculture, like agriculture in all former Soviet republics, was based since the early 1930s on large-scale collective and state farms cultivating state-owned land (Medvedev, 1987; Csaki and Lerman, 1992). The large-scale farms were the main source of commercial production, and they coexisted in a symbiotic relationship with a quasi-private sector of subsidiary household plots on which families engaged mainly in subsistence farming (Lerman et al., 1994). The inefficiency of the Soviet model of agriculture is now generally recognized (Johnson and Brooks, 1985; Cook, 1992; Easterly and Fischer, 1994). Moreover, the international experience indicates that collective forms of agricultural production are inherently less efficient than most forms of private farming (Deininger, 1993; Schmitt, 1993). Russia's transition includes reorientation of its farming sector toward privatized land and more efficient farming structures. This reorientation is accomplished through programs of land reform and farm restructuring (Csaki and Lerman, 1992; Brooks and Lerman, 1994b).

Enterprise reform, policy reform, and technological renewal are interlinked. None alone will be sufficient to launch a transition to market-oriented agriculture, and none can be fully accomplished without progress in the others. Interlinkage of enterprise restructuring and the larger reform agenda is not unique to agriculture. The interlinkage is the basis for emphasis on industrial privatization as a priority in the general reform program. Privatization in industry in most countries, however, stops at transfer of ownership and explicitly leaves restructuring to the new owners. Enterprise level restructuring is not in general a feature of industrial reforms except in the case of parastatal monopolies that must be reconfigured prior to privatization.

What is special about agriculture? Why is it necessary to design special procedures for farm restructuring as part of the privatization process? Would it not be sufficient to take the industrial approach; that is, to transfer ownership and assume that new owners will manage the restructuring to protect their assets?

The new owners of farm assets will ultimately implement the change in their enterprises, and this change will be more fundamental than in most industrial enterprises. The organization of the traditional Soviet farm diverges more from farms in market economies than the structure of a typical industrial enterprise differs from its counterparts. Industrial enterprises in both types of economies in many cases are characterized by separation of ownership and management. Privatization in industry usually involves creation of a shareholding company, and transfer of ownership of shares from the state to new owners. The industrial firm owned by shareholders represented by a Board of Directors and managed by professionals accountable to the shareholders is one of several viable firm types seen in market economies. The industrial privatization thus creates a direct analogue to a type of firm organizationally equipped to survive or change further in a competitive environment.

The parallel process in agriculture would be creation of a shareholding company out of a state or collective farm, and transfer of the shares to new owners. This is the model of corporatization of the traditional large farms. However, a shareholder farm with 3000 ha and 400 owner-employees has no ready counterpart in market economies. The fact that this is not a naturally occurring kind of farm in market economies suggests that the organizational form is not suited to a competitive environment. A simple transfer of ownership to members and employees of state and collective farms would not directly create viable and competitive production units. On the contrary, corporatized traditional farms would be likely to become non-competitive, subsidy-dependent enterprises devoting a large share of resources to lobbying and rent-seeking. One way to avoid corporatization is to design mechanisms through which owners can create new farming units, either within the former farm or through exit. Privatization thus proceeds immediately into restructuring.

Privatization of land and other productive assets does not necessarily imply total fragmentation of large-scale farm enterprises into individual family farms. The essence of farm restructuring is to devise mechanisms that allow the new private owners of land and other assets to regroup voluntarily into new farming structures of their choice. The mechanism adopted in Russia and a number of other countries in the former Soviet Union is the share system, including the right to exchange and consolidate shares or the right to exit with underlying land and assets.

3. The legal framework

Approximately 80 legal documents enacted since 1990 on the federal level form the legal basis for land relations in Russia. The legal framework of land reform addresses the major issues: (a) land ownership; (b) distribution of land; (c) restructuring of traditional farms. Although a legal framework is in place, it is weakened by failure so far to pass a land code fully supportive of private ownership and protecting market transactions in land.

3.1. Land ownership

Ownership of land by individual citizens, in addition to state ownership, was reinstated by the Law on Land Reform of November 1990, after 73 years during which the state owned all land. Russian law today recognizes several forms of ownership.

(a) State and municipal ownership, in which a level of government is the juridical owner.

(b) Individual ownership.

(c) Collective undivided ownership (*obshchaya sovmestnaya sobstvennost*), in which a legally constituted collective is the owner and the land is used by an enterprise operated by the collective. Under this form of ownership, individual shares of members of the collective need not be defined.

(d) Collective shared ownership (*obshchaya dolevaya sobstvennost*). Here, as above, a legally constituted collective is the owner and the land is used by the enterprise operated by the collective, but land shares are distributed to individual members. Land area and/or specific tracts may be identified with individual members of the collective, but identification of specific tracts is not mandatory.

Individual ownership is the dominant form for the new private farms, although some land in private farms is held in other forms of tenure (mainly life-time possession and lease). Most household subsidiary plots of employees on collective farms are in the process of registration under individual ownership. Privately owned farm land, however, is only a small segment (about 8% of agricultural land in Russia), and most land (46%) is owned and farmed collectively (Brooks and Lerman, 1994a). Yet even this constitutes a major departure from the traditional pattern of land ownership during the Soviet period, when all agricultural land was owned by the state. In 1992, with the transfer of most land into collective ownership, the state ceased to be the dominant owner of agricultural land in Russia.

Current land legislation significantly circumscribes the rights of owners in two important areas: land holding and land use. The law specifies that ownership of farm land carries the obligation to farm the land and to observe conservation practices. Agricultural land that is not used for its intended purpose (i.e. agricultural production) or is farmed irresponsibly (i.e. without proper ecological safeguards) can be confiscated with no compensation to the owner, regardless of whether or not the owner has received title to this land. The law also sets upper limits on the size of holdings. These limits vary by district, according to the land-to-labor ratios in agriculture within the district.

These restrictions are intended to assure that land leaving collectives is managed by owner-operators. In further pursuit of this objective and with the aim of preventing absentee ownership, the original land reform legislation in Russia also imposed severe restrictions on leasing of land and prohibited sales of agricultural land during a 10-year moratorium (except for the very small proportion of land—about 3% of the total—held in household plots and vegetable gardens). The restrictions initially circumscribing the rights of owners in the area of 'land transfer' were abolished by presidential decree in October 1993 (Wegren, 1994a). The elimination of restrictions to buying and selling of land removes a major obstacle to the development of land markets in Russia, but a presidential decree is a relatively fragile guarantor of this fundamental property right. The right must ultimately be incorporated in the new Constitution and the land code.

3.2. Distribution of land

According to the 1990 Law on Land Reform, the objective of land reform is to promote different forms of land use, with allocation of land to individuals and diverse organizations. Since most agricultural land in Russia is currently allocated to existing farms, assignment of land to new entities created in the process of reform necessarily requires redistribution of existing land resources among users. The process of redistributing land among users and owners is thus one of the basic components of the land reform.

The first step in land distribution is determination of how much of the original farm's land is eligible for redistribution. The farm can allocate no more than the average allotment per person, determined at the district level, times the number of participants in the distribution. The district norm is determined according to land-to-labor ratios within the district, and norms of distribution can vary at the local level within districts. Land in excess of the total distributable to members remains in state ownership and formally passes to the so-called 'redistribution fund' or 'reserve'. The purpose of the redistribution fund is to meet the future demand for private farms, subsidiary household plots, and municipal expansion needs. The undistributed land, although formally transferred to the redistribution fund, may be retained under use rights by farm enterprises until it is needed for its intended purpose.

The presidential decree of 29 December 1991, setting farm reorganization procedures, stipulates that land shall be distributed in shares to the workers and pensioners of the collective and state farms. The employees of non-farm rural social services (such as doctors, teachers, letter carriers, etc.) may also be included at the discretion of the farm's collective. By defining a broad group of eligible participants in land distribution, the December 1991 presidential decree reduces the share of each individual. The broad base of entitlement to shares and small size of shares increase the importance of freely functioning land markets through which consolidation can be effected.

The land allotment based on the district norm is distributed without any payment. Additional land can be leased or purchased from the redistribution fund at rates linked to the land tax rate: rental rates are not allowed by law to exceed the rate of land tax. Individuals not entitled to participate in internal distribution can also acquire land by leasing or purchasing from the redistribution fund.

3.3. *Legal framework for farm restructuring*

The Law of Peasant Farms (November 1990) established the right of members and employees of collective and state farms to exit with a share of land and assets in order to start a private farm. This right is the fundamental motive force behind farm reorganization, since it gives members a meaningful choice between different kinds of farm organizations. A number of changes in procedures for defining, calculating, and distributing shares have been introduced since 1990, but the basic right of members to leave with land and asset shares was affirmed through 1994. Government resolution of February 1995 reaffirms the right of individuals to buy and sell shares and to request a physical allocation of land and assets upon exit from the collective. This resolution, however, focused the attention on an obstacle originating in the Russian Civil Code: collective property can be distributed only through unanimous agreement of all co-owners, so that allocation of land and assets to individuals wishing to leave the collective may be blocked by a single objection. While convenient for the powerful agrarian lobby in Russia, this legal obstacle will have to be resolved by future legislation if the government is committed to farm restructuring through the share process.

Collective and state farms were required by presidential decree to declare their status by the end of 1992. The new form of organization had to be decided by a vote at a general meeting of farm members and then registered with local authorities. Options for farm registration included collective and individual forms of organization.

Collective forms of organization are principally the following: (a) collective farm (*kolkhoz*), in conformance with a revised charter; (b) state farm (*sovkhoz*), with ownership of non-land assets sometimes transferred from the state to the enterprise; (c) limited liability partnership (*tovarishchestvo*), in which land and asset shares of the founders are pooled, and some or all of the founders work on the farm; (d) joint stock society or company (*aktsionernoye obshchestvo*), a form similar to the limited liability partnership, except that stock certificates are issued to owners according to the value of their land and asset shares.

The differences among these collective forms of organization are not always clear to participants in the process. Thus, collective farms often change their name to agricultural producers' cooperative or collective enterprise (*kollektivnoye predpriyatiye*) in the revised charter, without any other change of substance. Since the registration mandated in 1992 has created a number of similar organizations with different names and unclear procedures for operation, it is likely that further legal refinement of enterprise types will be necessary. As the legal definition of forms of organization is clarified, many farms may choose to re-register.

As an individual form of organization, private peasant farms (in Russian, *krestyanskiye* (*fermerskiye*) *khozyaistva*) provide an alternative to collective forms of organization. These are farms based on privately owned or leased land and established in many cases by individuals who left the collective or state farms with their land and asset shares. Most often, one family owns and operates the farm, but multiple family farms are legal and, in some areas, common. Limits on the size of peasant farms are set at the level of constituent republics or provinces and vary from 30 ha in Moscow Province, to 80 ha in Rostov Province, and 350 ha in Saratov Province. The Russian average size of private farms in January 1993 was 42 ha. Once a farm is registered as a peasant farm, it cannot be partitioned or divided upon the exit of a member. Peasant farms are offered a number of benefits, including initial start-up grants, release from land tax for 5 years, reduced social security tax, and additional credit subsidies above those offered state and collective farms.

Peasant farms may form a local association of peasant farms. This is a kind of production or service cooperative, the members of which in theory should all be registered private farmers. In practice, however, associations of peasant farms often do not have independently registered members and they are often chosen simply as another collective form of organization in the process of registration of former farm enterprises. Land in associations of peasant farms should in general be divided among the members, but does not always appear to be so.

4. Restructuring of the farm sector: evidence from the survey

By the end of 1992, the first stage of agricultural reform in Russia was largely complete. Collectives had assumed ownership of land and assets, and many had issued shares to members and employees. Around 90% of farm enterprises in the sample had taken decisions to reorganize. Among the 235 sampled farms that reorganized, 53% chose to become limited liability partnerships, 27% became closed joint-stock societies, and 9% retained their former status (with a revised charter). Most enterprises reorganized as whole units, retaining virtually all former employees (an average of 300 per farm).

Land tenure shifted almost uniformly from state to collective, rather than individual, ownership (Fig. 1(a)). Fully 91% of farm enterprises reported that their land was in collective ownership, and only about 4% of the farms in the sample retained state ownership of land. The balance, both nationally and in the sample, shifted dramatically from state to collective ownership during this period.

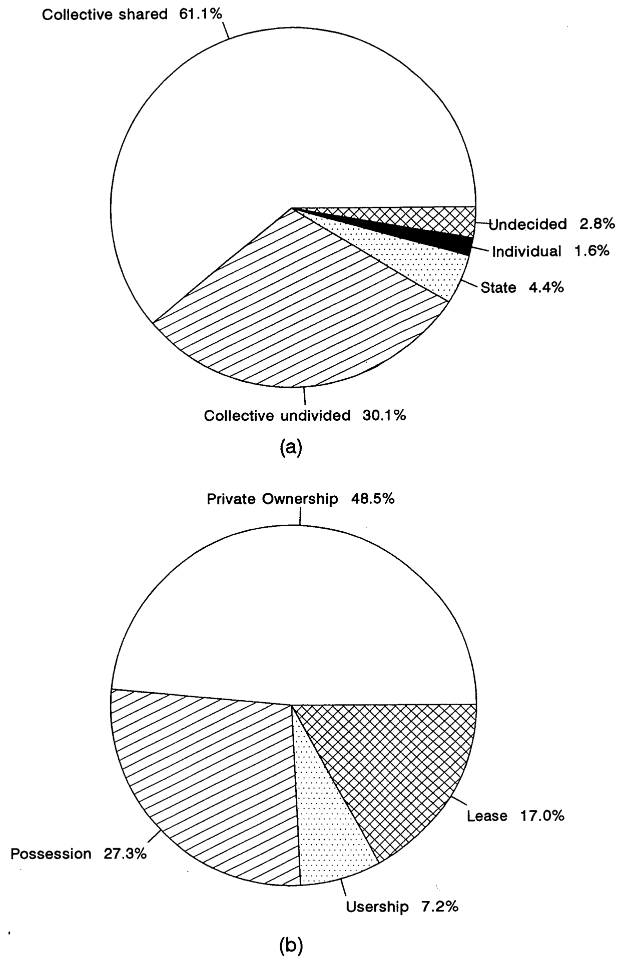

Fig. 1. Land ownership in farm enterprises (a) and land tenure in private farms (b) in the sample.

4.1. Distribution of land and assets

Most farm enterprises with collectively owned land (95%) had decided to issue land shares. A smaller proportion of the farm enterprises (77%) had determined the shares of other productive assets at the time of the survey. The definition of a land share ranged from a paper entitlement without designation of area, location, or boundaries to specification of an actual physical allotment. In 84% of the cases, the distribution of land shares was 'conditional': the shares were paper entitlements rather than identified plots. In 11% of the farms, physical plots of land had been assigned to individual shareholders, but these allotments continued to be cultivated jointly. None of the farms in the sample allocated physical plots to shareholders for individual private production, although all farms augmented the size of household plots. When asset shares had been determined and assigned to individuals, virtually no distribution of physical assets in kind or monetization of shares had taken place.

All farm enterprises that reported dividing land included both employees and pensioners among the list of eligible claimants. A somewhat smaller proportion (75%) included farm employees with non-agricultural jobs, and fewer still (about 50%) included rural doctors, teachers, and other off-farm employees in rural public services. There is no statistically significant difference in size of land share according to the status of the recipient. Asset shares, however, were determined according to the work contribution of each individual to the farm over the years. Years on the job and salary level served as the primary criteria for distributing asset shares (96% of the farms). In 86% of the farms, pensioners were included with the current employees among the beneficiaries entitled to asset shares; former employees were entitled to participate in the distribution of assets in only 13% of the cases.

Land shares reported in the sample are relatively small, on average 11–12 ha per shareholder. Over half of managers report average land shares of less than 10 ha. The largest reported average share is 36 ha. The land shares are much larger than the subsidiary household plots now owned by farm employees (ranging from 0.12 to 1.12 ha in the sample), but they are substantially smaller than the average area of 26 ha per worker in the sample farms. This difference is the result of the broad eligibility base of beneficiaries participating in the distribution of land, which includes pensioners and the rural intelligentsia. The reported land shares in the sample are also smaller than the per household endowments of land that private farmers brought to their farms, ranging from 72 ha in Novosibirsk to 48 ha in Rostov and 20 ha in Pskov.

The value of an average asset share as reported by managers was 270 000 rubles in December 1992 (around $550), or less than one-third of the reported start-up investment of 860 000 rubles for private farms established in 1992. The shares are stated at balance sheet values frozen on the day when the calculations were made, and the true value of the shares in current purchase value of the underlying asset may be substantially higher. This inflationary distortion was corrected in a presidential decree of October 1993 requiring indexing of asset shares to the average wage level.

Around two-thirds of farm managers reported that holders of both land and asset shares have the right to exchange the share for a plot of land or a physical asset upon leaving the collective to start private farming and the right to pass the share in inheritance to heirs within the farm membership (Table 1). Other commonly reported rights attached to land and asset shares include the right to receive dividends (in cash or in kind) and the right to sell shares to the enterprise or to individuals within the enterprise.

Table 1
Rights associated with land and asset shares: frequency of different categories of rights as reported by farm-enterprise managers in the sample [a]

Rights	Land shares	Asset shares
Get land/asset upon leaving enterprise to start private farm	66.5	66.9
Use asset share to purchase home	NA	41.1
Bequeath share to heirs within farm enterprise	62.7	67.3
Bequeath share to any heirs	33.1	32.7
Receive dividends from farm profits	57.7	76.2
Receive distribution in kind	48.1	NA
Sell share to farm enterprise	32.7	58.1
Sell share to other farm employees	31.2	52.3
Receive value of share upon retirement	24.2	21.8
Receive value of share if fired	19.6	43.1
Exchange shares (land for asset or asset for land)	15.8	10.0
No approved charter	11.9	NA
No rights provided by charter	11.5	NA

[a] Percent of managers out of 260 respondents indicating that the particular right was associated with land or asset shares in their farm enterprise.
NA, not applicable.

The mechanism of distributing land and asset shares to farm employees serves a dual purpose. It facilitates the exit of individuals from collective farm enterprises with the object of establishing a private farm by providing a portion of the initial endowment. It also offers incentives to those who remain members of a restructured collective to improve the performance of the collective. The latter effect may be relatively weak, since shares are not tradeable in most cases, and few farms are able to pay dividends on shares. Approximately 80% of farm-enterprise employees indicated intentions to assign their land and asset shares for collective production to the farms on which they are employed. In almost half of reorganizations no employees left the enterprise to begin private farming. Yet the survey also provides evidence that some employees plan to exit: 6% of farm employees expressed intention to use their land and asset shares to start private farms, and in more than 50% of the reorganizing farms between 1 and 134 people (out of an average work force of about 300) left to become private farmers.

4.2. Creation of private farms

Around 75% of private farms in the sample were created by former members and employees of collective and state farms. Farm enterprises report that between 1990 and 1992 they lost around 15% of their land, either directly to private farms or to the state redistribution fund, which is also a source of land for private farms. Most private farmers operating in this early period received their land from the redistribution fund, and not by withdrawing an allotment from a collective.

Most private farms in the five provinces registered in 1991 (30%) and 1992 (67%). The typical private farm in the sample is a single-family farm with four people per household (66% of all farms in the sample). In a number of cases, several families have joined together to form multiple family farms: the average number of households per farm for the entire sample is 2.2, and in the Saratov Province 7.4% of farms had from 10 to 50 households. The size of single-family farms is on average 50 ha, while multifamily farms average 181 ha. (The average size of private farms over the entire sample is 96 ha.) The size of single-family farms should be compared with a land share of 11–12 ha determined on average for farm-enterprise employees in the sample. Even assuming two land shares per household (husband and wife both working on the farm enterprise), the land entitlement of farm employees is much smaller than the endowment in private farms.

Almost half of the parcels in the sampled farms are privately owned (Fig. 1(b)). Leasing is an important source of land in private farms: 17% of parcels are leased. A large proportion of land was, at the time of the survey, still held in lifetime possession. Farmers reported that 90% of parcels were documented, and perceived security of tenure was high.

The survey highlights the importance of the redistribution fund as a source of land in the past. About one-quarter of private farmers who had formerly worked on state or collective farms indicated that, contrary to explicit legal provisions, they received nothing upon leaving the farm (these respondents were concentrated in Orel and Pskov provinces). Only 30% of parcels originated from collective and state farms and fully 65% of the parcels were received directly from the redistribution fund (through district and village councils). As of January 1993, 15.6 million ha remained in the redistribution fund, or more than double the existing area in private farms. Although this is still a large area, little of it is prime agricultural land, or in provinces where demand for private land is great. The depletion of high-quality agricultural land in the fund implies that land shares of collective enterprises and land markets will be of increasing importance in the future as a source of land for private farming.

Private farmers who began farming in 1992 reported start-up investment of 860 000 rubles, or around $4000 at the prevailing exchange rate. The start-up amounts per farm are low in part because private farmers usually retain their former housing, even if it is owned by the collective, and because they maintain few livestock. Private farmers who began in 1990 and 1991 raised their start-up capital from personal savings and bank loans. For those who began farming during the inflation of 1992, savings were an insignificant source of investment and over 80% of start-up capital came from bank loans, usually guaranteed by AKKOR, the Russian Association of Private Farmers. Property shares of people leaving collective enterprises so far have not provided significant capital for private farming. Yet 40% of farmers reported that they had no outstanding debt or loans in late 1992. There is no clear indication that credit rationing prevents access to loans.

The average debt for 57% of the farmers reporting non-zero debt was 880 000 rubles (as of end of 1992). The average debt for farmers who established their farms in 1992 was 910 000 rubles. This figure may be usefully compared with total investment of 860 000 rubles reported by private farmers who established their farms in 1992. Although the reported investments are quite modest, the lack of farmers' own capital and the importance of guarantees from AKKOR raise questions about the adequacy of the system to serve even the current flow of new farmers. AKKOR subsequently ceased to serve as a channel for government support for new farms.

Private farms rely primarily on labor of immediate and extended families: only 3% of the farms report using permanent hired workers and 10% hire seasonal help. Among spouses of private farmers, only 45% list private farming as their primary occupation: 24% were employed in the village (as teachers, medical workers, employees in the social sphere or in rural industry) and 11% held managerial and professional positions on farm enterprises. The off-farm job diversification of private-farmer spouses provides income insurance in a highly uncertain new occupation.

4.3. Changes in farm management

In former Soviet agriculture, collective and state farms were the main commercial producers. Output from household plots of employees was consumed primarily within the household, although approximately one-quarter of the output was sold. The new private farms differ from household plots by the more commercial orientation of their operations (Table 2). Grain and sunflower are the main cash crops in private farms. Meat and dairy products are both for home use and for the market. Households of private farmers in the sample derive on average 85% of family income from their farms. In comparison, farm employees derive from one-quarter to one-half of income from household subsidiary agriculture.

Table 2
Proportion of output sold by private farms and employee households in the sample (in percent)

Commodity	Farms	Employees
Grain	66.9	15.3
Sunflower	84.9	63.2
Meat	45.8	27.5
Milk	35.2	20.4
Potatoes	11.9	7.8
Vegetables	10.5	0.3
Fruit + berries	3.5	0.5
Eggs	4.3	4.1
Wool	41.0	31.9

Private farmers differ most strikingly from collective enterprises in the product mix, specifically in the greater relative weight of crop products

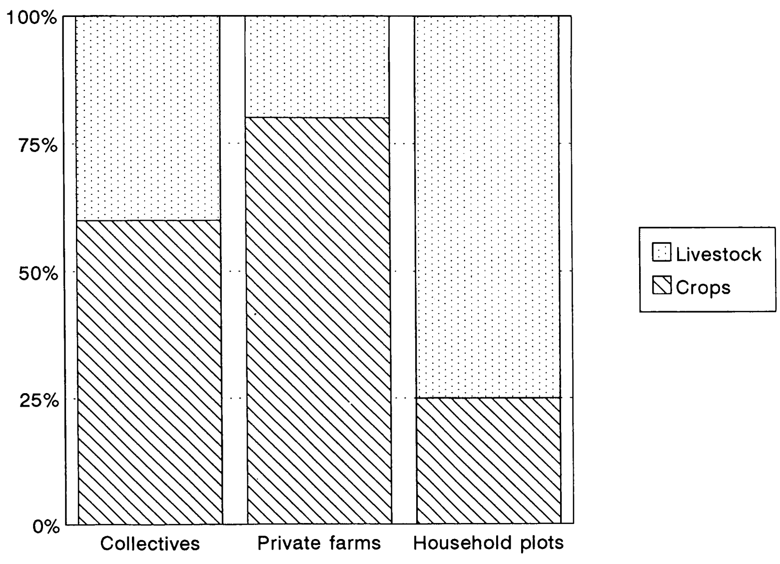

Fig. 2. Product mix in farms of different categories in the sample.

and lesser dependence on livestock sales (Fig. 2). While farm enterprises in this early period retained the traditional proportions of crops and livestock products (56% of sales from crop products and 42% from livestock), private farms derived as much as 72% of sales from crops and only 22% from livestock. Private producers reported that livestock production was profitable under their technology and at their levels of output, while managers of collectives invariably reported that livestock production was unprofitable. Collective managers nevertheless showed reluctance to reduce this subsector. Private farmers planned to increase grain production and reduce sunflower production among their main cash crops, while most collective farm managers reported that they planned to maintain the same level of production of these crops. On the whole, around 60% of managers reported that they intended to keep the same production levels as in the past, although around 80% of the respondents reported that livestock products, for instance, had become unprofitable.

The study thus suggests that as private farmers enter production, they invest in product mixes and technologies appropriate under new relative prices. Collective farm managers, on the other hand, appeared at this stage to be reluctant to change their product mix despite changes in relative prices and profitability of various commodities. The growth of private farming appears to be a vehicle through which the agricultural sector changes product mix and adjusts out of products and technologies for which profitability is low under new relative prices. The small size of the private sector, however, makes this an inadequate vehicle for adjustment unless it is supplemented by increased responsiveness of collective enterprises.

Comparison of crop yields between private farms and collective farm enterprises does not reveal a consistent picture: the relative ranking of private farms and collectives in the sample changes from province to province and from crop to crop; in many instances, the yields are statistically indistinguishable. The only consistent and statistically significant difference across all provinces is in the milk yield per cow. Milk yields achieved by private farmers are significantly higher than the milk yields of collective farm enterprises (2820 kg per cow year^{-1} compared with 2250 kg per cow year^{-1} in the sample). Since the average milk output per private farm in the sample is 30 tons year^{-1} while collective farm enterprises average 1500 tons year^{-1}, the higher yields per cow on private farms may be attributable to better care of animals on small scale operations. There is little evidence in this survey that private farmers in Russia achieve higher yields than in the collectives. The study was not designed to measure factor productivity in the various forms of enterprise.

Despite loss of about 15% of land over 2 years, farm enterprises did not reduce their labor force. The farm enterprises in the sample have on average just under 300 full-time employees (a land to labor ratio of 26 ha per worker), and the reduction in the number of employees between 1990 and 1992 is not statistically significant. The decline in area and production should have created labor redundancies. Yet one-quarter of managers reported a shortage of labor and 57% reported hiring seasonal labor in addition to the full-time workforce. Nearly 50% of managers indicated that they did not expect the number of full-time employees to change in 1993. Only 10% of managers reported excess labor on their farms.

These findings suggest that the managers have not yet adjusted to the new economic reality, even though fully 53% reported that they could not meet the payroll for at least 1 month in 1992 and the proportion of wages and salaries in total farm expenditure increased from 27% in 1990 to 34% in 1992. Despite these financial signals, few managers expressed clear intentions to improve

Table 3
Management strategies: what to do if there is insufficient money to meet payroll? (percent of managers responding)

	Yes	No
Dismiss some workers	13.2	80.6
Keep workers, reduce wages	7.8	87.2
Delay wage payments	57.0	39.1
Delay other payments	64.7	31.4
Take debt	69.8	27.9
Shift workers to outside jobs	8.9	82.2

farm earnings by dismissing redundant workers, reducing wages, or shifting workers to more profitable outside jobs (Table 3). The preferred strategy for resolving liquidity problems was taking on additional debt to pay wages (70% of managers) or delaying payment for other expenses (65%). Fifty-seven percent of the managers indicated preference for postponing wage payments in the future rather than dismissing some of their workers.

4.4. Marketing and input supply

The formerly state-owned procurement organizations continue to dominate the marketing of farm products according to data reported in the sample. Both collective enterprises and private farmers sold more of their output through these central organizations than through other channels. Although these former state organizations have been formally privatized, they still enjoy monopolistic status and are supported by preferential government credits. Nevertheless, the majority of private producers (60–80% depending on commodity) report that they could choose marketing channels. Although private commercial producers of grain and sunflower sold almost exclusively through state procurement channels, they nevertheless indicated availability of alternative channels for both crops (61% of grain producers and 75% of sunflower producers). Private farmers did not report dependence on the collective sector for product marketing: very little output was marketed by private farmers through collectives and other enterprises.

Producers, both private and collective, reported that marketing did not present major problems. Dissatisfaction with low prices was the main concern for both private farmers and managers of collectives. Late payment, slack demand, and difficulties with transport were secondary to concerns about prices received. The prices that private farmers reported receiving for the major products (grain, sunflower, milk, eggs, and wool) are statistically indistinguishable from those that farm managers report. Private farmers appear to have received significantly better prices for potatoes, vegetables, and meat, a relatively high proportion of which was sold directly to consumers in local markets. Lack of standardization for quality, however, makes it difficult to compare prices.

Private farms indicated diverse sources of input supply. Relatively little came from private suppliers, but the farms do not appear to have been dependent on collective enterprises in their localities for most inputs. Instead, they purchased directly from the formerly state-owned supply channels, which were still highly monopolized, and from private and other suppliers. The input supply pattern for private producers was on the whole not different from that for collective farms, which purchased mainly from the formerly state-owned supply sector, with supplementary reliance on interenterprise transactions and private suppliers (mainly for construction materials).

Both private farmers and managers of collective enterprises reported very few inputs to be in short supply, although high prices limited the quantities that could be purchased. Spare parts, construction materials, veterinary medicines, and breeding stock were judged to be relatively scarce, but overall less than 10% of private producers complained of problems with availability of inputs and services. On the other hand, over 50% of farmers complained of high prices of farm inputs and services, especially fuel, agricultural machinery, spare parts, fertilizers, and construction materials. Fuel was reported to be available, but prohibitively expensive. The majority of private producers indicated no problems, either with prices or physical availability, of feed, veterinary medicines and services, and machinery services. Private producers' acceptance of prices for feed and veterinary services is consistent with the adjustment toward less livestock production and greater reliance on their own feed.

4.5. New providers of agricultural services

Lack of access to machinery services and capital were reported to be the main factors keeping producers in collectives, much more so than potential difficulties with access to social services. Machinery was reported to be available for farmers who could finance purchases, but instalment credit and mortgage finance for farm equipment were still missing.

The difficulties with farm support services encouraged emergence of alternative service structures. A number of farmers indicated that they were both suppliers and consumers of agricultural inputs. Between one-fifth and one-quarter of the farmers supplied seeds and seedlings, agricultural equipment, spare parts, and even fuel. Over 40% of the farmers reported supplying machinery services, i.e., rented tractors, combines, and other equipment to work on other private farms (probably with the owner also acting as operator). This is an important indication of a fledgling market for services among new private farmers.

Private farmers also reported joint activities with other farmers, either informally or as part of an organization. Among 984 respondents, 95% participated in some form of joint activity in provision or use of farm services. Between 30 and 40% of farmers in the sample indicated that they join with other private farmers for production, marketing, input supply, use of machinery, and provision or receipt of credit. More than half the private farmers in the sample cooperated in their use of consulting services. Cooperation in processing, on the other hand, was virtually nonexistent at this stage. The emergence of private and cooperative initiative in provision of farm services is an important step toward the development of new market-oriented structures that will eventually replace the inefficient monopolies inherited from the command economy.

4.6. Social services

Collective enterprises, in addition to producing agricultural commodities, have historically been providers of a wide range of economic and social services to rural communities (Table 4). Although some of these services (such as education and medical care) are largely financed by transfers from the government, farms are active partners in delivery of public services. The disposition of responsibility for social assets and services is therefore an important issue in the restructuring of farm enterprises. Legislation provides for the voluntary transfer of public services to the local council during reorganization. The Russian Federal Parliament, however, has never passed the required complementary legislation that obliges local councils to take over the social assets, nor have budgetary channels to finance social services been set up.

Table 4
Provision of social services by sampled farms

	Percent of sampled farms providing the service
Compensation for price increases	40.0
Pension augmentation	21.2
Child allowances	50.4
Day care	79.2
School subsidies	70.8
Student stipends	82.7
House maintenance and repairs	91.5
Heating fuel	76.5
Subsidized food	88.1
Subsidized consumer goods	21.2
Subsidized utilities	69.2
Medical care	69.2
Use of vacation facilities	82.3
Housing	72.7
Subsidized rent	52.3
Transport	95.4
Other services	5.0
Assistance with houshold plots	67.3

Managers in the sample reported that social services accounted for 10–15% of total current farm expenditures. Since most farms had accounting profits in 1992, social services did not appear to weigh heavily on farm budgets. This may explain the low rate of transfer of responsibility for social services and assets from farm enterprises to local councils. Forty percent of the managers in the sample had not considered the problem of transferring social services to local government; around 30% indicated that they had decided to retain major social services as the responsibility of the farm enterprise; and less than 10% of managers reported that on the whole they had successfully transferred social services and assets to the local council.

Most private farmers continue to live in central villages, together with neighbors who are employees of collectives, and the creation of private farms has not been accompanied by physical dispersion of the population in isolated farmsteads. Collectives continue to provide many services to private farmers in their areas, and private farmers previously employed by collective enterprises reported that they retained a number of social benefits even after leaving the collective. Most notably, 31% of households continued using enterprise-owned housing after leaving the collective (compared with 46% before) and 12% of private farmers still received heating fuel from the farm enterprise. It is through housing and social services more than through input supply and marketing that private farmers continue to be linked to collective and state farms.

At the time of the survey, many collectives had fewer than ten private farmers in their areas, compared with a collective work force of about 300, and the cost of maintaining services for this small group of people was not great. As a result, at the end of 1992, neither those in collective enterprises nor private farmers perceived social services as a critical constraint to farm restructuring. More than 55% of farm-enterprise employees indicated that the possibility of losing the social benefits provided by the collective farms was not an important consideration in their decision as to whether to enter private farming. Concerns about social benefits ranked considerably below inadequacy of capital and machinery as factors keeping employees within collective enterprises. The lack of urgency with regard to social services is not likely to remain if the number of private farmers significantly increases in the future and if farm enterprises begin to feel financially constrained as a result of effective implementation of macroeconomic stabilization policies.

5. Conclusion

The key finding of this study is that in 1991–1992 Russian farms largely completed the first stage of a gradual transition to private agriculture. Most agricultural land is now owned by collectives and private individuals. Virtually all farm enterprises registered in new shareholding forms and distributed shares in land and assets to their members and employees.

Yet despite these impressive changes and the emergence of over 250 000 private farmers, the large farms have not altered significantly their internal structure or operating systems. Managerial strategy on reorganized farms appeared to differ little from that on farms that did not reorganize. Managers in the 1992 survey were guiding their farms through reorganization, as mandated by decrees, but did not appear to be doing so in an atmosphere of crisis or urgency. The farms were not in a financial crisis at that time and the level of reported farm debt was strikingly low. On many of these farms, the combination of price and credit subsidies throughout 1992 appeared to have softened the financial impact of the change in relative prices. Although collective enterprises had made few if any changes in employment and production, 80% of managers expected to show an accounting profit in 1992. These figures reflect generally optimistic views of performance among managers, and indicate that managers perceived little need for fundamental change. The managers' survey in 1992 indicated very little perception at the farm level that traditional practices were threatened by new economic conditions. Farms reorganized, but 58% of managers expected the reorganization to have little effect on the farms' performance or did not know what the effect would be.

However, the economic behavior of private producers in the sample differed from that of collectives in the choice of product mix, suggesting that the private sector is more responsive to signals regarding profitability. The private sector is still small, however, and poorly supported by economic services, such as credit and transport. Most farm employees prefer to remain in collectives at present.

Managers participating in the survey consistently identified information as the main problem associated with farm restructuring. The experience of the farm-restructuring pilot project conducted by USAID, the UK Know-How Fund, and the World Bank's International Finance Corporation in Nizhnii Novgorod Province has demonstrated that the process of restructuring requires intensive public information and managerial expertise even in cases where both local management and members want to restructure their farm.

The government resolution of July 1994 approved the Nizhnii Novgorod model of farm restructuring on a national scale, and international organizations have launched a number of technical-assistance projects intended to implement the farm restructuring process in a dozen Russian provinces. If the government remains committed to the share process and continues to support the freedom of individuals to exit and regroup with their land and asset shares, Russian agriculture will probably evolve toward a mix of various farming structures, ranging from collectives through associations to family farms. The unifying feature of all these structures will be their foundation on private ownership of land and assets, which may be used collectively or individually, and free choice of the specific organizational form through voluntary regrouping of members with their land and asset shares. Another feature of these structures, stemming from the voluntary process of regrouping, will be their inevitably smaller scale compared with the traditional mammoth scale of centrally designed collective and state farms. Private and collective production in these farming structures will be supported by a range of market-based rural services, including transport, marketing, input purchasing, machinery leasing, mechanical maintenance, farm credit, and last but not least, professional and management services. The farm support services may be established by enterprising private individuals and groups of individuals pooling their shares in a new business, or alternatively organized as regional cooperatives by producers—both collective and private. The legislation required for this process is largely in place, and the first stage of agricultural transition, culminating in privatization of land and assets and distribution of individual shares, has laid the necessary foundations for further evolution along these lines.

If, however, the government in response to domestic pressures fails to support the freedom of individual exit as a natural extension of the share process, the newly registered shareholding structures will remain largely frozen in their scale and mode of operation. The result will be a corporatized agriculture, retaining most of the inefficiencies of traditional large-scale farms and failing to achieve the desired international competitiveness.

In the absence of a strong national consensus to move forward with an economic reform program integrating macroeconomic stabilization with adjustment in all sectors, the pace of restructuring at the farm level is likely to remain modest. The survey conducted in 1992 suggests that changes have not yet resulted in quantitative improvement in the performance of the sector, but that important progress has been made, nonetheless. Future progress will require continued affirmation of the right of shareholders to exit (either individually or in groups), improved mechanisms for identification and withdrawal of land and assets, and greater development of economic services for the private sector.

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