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**LAND REFORM, TAXES, PRIVATIZATION, LAND
MARKETS AND THE FEASIBILITY OF
MORTGAGE-BACKED CREDIT FOR
AGRICULTURE IN RUSSIA**

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Land Privatization and Mortgage Finance in Russian Agriculture

John Strasma¹ and Natalia Zenets²

Abstract

Land reform in Russia has begun, but progress is slow. Only 6.3% of the land was claimed by about 300,000 families, and their private farms are only 9.1% of all farms, as of 1994. The rest of 44 million families involved in Russian agriculture still work state farms or in collectives, now called corporations or cooperatives. The managers still expect the state to subsidize them to cover losses. State banks are being privatized; knowing that the collectives default whenever things don't go well, the banks have little interest in financing farming.

The small private farms, averaging 43 hectares, have little access to credit. Farm supplies are hard to find, and many of the farms are unprofitable. The few farmers that have actually received legal titles know that a bill nearing approval in the *Duma* would limit their ability to sell, rent or mortgage their land, though President Yeltsin just issued a decree that may give them that ability. Private farmers and collective managers often say they would be willing to mortgage land for long-term credit, but doubt that the law would allow this; foreclosure seems inconceivable. The land market is far from transparent, and managers with idle land seem uninterested in selling some of it in order to buy inputs and farm with their own working capital.

The market for rural land in Russia is active but far from transparent. Land tax assessments and other official prices are far below real market values. Lenders thus have little help in estimating the price they would receive if they were to auction foreclosed land.

This paper suggests exploration of two variants on mortgage finance. In one, the borrower would get an individual co-signer, who would provide liquid collateral by depositing negotiable securities or buying a certificate of deposit in the lending bank. The borrower would pay a fee to the co-signer, who would thus assume the credit risk.

The second variant mortgages the use of land, but not its ownership. Upon default, the borrower would be evicted but only for a period agreed when the loan was made. The land would be rented out for that time; the rent would cover the overdue loan payment. At the end of the lease, the owner would return to his land. Since no one loses land forever, it would be politically easier to implement; this model works in the Dominican Republic.

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Exchange Rates on relevant dates (Rubles per U. S. Dollar)

1990 average	R/ 1,059
1991 average	2,527
1993 average	1,247
4th quarter 1994	3,550
3rd quarter 1995	4,508
March 1996	4,841

Source: *World Tables*, 1990-93, p. 565.

More recent dates, *International Financial Statistics*, 1996.

Introduction

The present paper seeks to explore the feasibility of creation of a land mortgage-based agricultural credit system in Russia. We discuss the present disarray of rural credit facilities, and the necessary and sufficient conditions for the successful creation of a sustainable agricultural credit system for both production credit and land purchase.

We consider both the conventional mortgage on land often used in other countries, and also a variant in which use rights for a specified period, but not permanent ownership, is lost if the borrower fails to make a scheduled payment. This arrangement, which also tends to limit borrowing to an amount which a farmer is most likely to be able to repay, has been used successfully for production credit in a Latin American country (Strasma, 1990). It is politically far easier to foreclose on the use of land, than on its permanent ownership; it is much easier for the delinquent borrower to find other work for a year than to obtain access to other land after permanently losing what he or she had.

We also recommend minimizing transactions costs by employing a solidarity group to borrow with one loan for a well-defined group, itself handling the on-lending and the actual collection and repayment to the bank. The group itself, instead of having to come up with the money for any member who fails to make the payment, simply seizes and rents out the land of the delinquent borrower, for cash in advance, sufficient to cover the overdue amount. The lending Bank itself need never know that a member was in default; it receives 100%, on time, and with minimal transactions costs.

This mechanism itself requires that land rental be understood, be lawful, and be accepted. It requires that someone in the group or nearby be solvent enough to pay a year's rent in advance. And it requires that the amount loaned plus interest plus indexation (monetary correction), be limited to approximately the going rate for land rental in the area.

First, we present the context in which a future mortgage-based credit system might develop. We present data, some of it not yet published, collected by the Agrarian Institute of the Russian Academy of Agricultural Sciences. We describe the results of Russia's agrarian reform to date, the attitudes of farmers on investing and risk, the profitability of the sector, the rural land market, and the present credit arrangements. It must be remembered that unlike China or Eastern Europe, Russian agriculture was collectivized over 60 years ago; experienced private farmers are few.

Much of the land remains in the hands of enterprises not very different from the former collectives and large cooperatives, in the hands of the same managers that ran those farms before the reform. Input supplies are erratic, product markets are imperfect, many farms are unprofitable, and the demand for land for new or expanded private farms has dropped sharply.

1. Agrarian reform: results since 1991

The state monopoly of land ownership has declined radically since agrarian reform began at the end of 1990. More than 100 laws, decrees and regulations affecting land have been issued, and others continue to appear (Brooks and Lerman, 1993). A land tax of sorts has been created. Almost 300,000 private farms exist, but as Thiesenhusen (1995) reports, the rate of growth has fallen sharply. Almost as many farmers go bankrupt each year, as those who begin new farming operations. The initial hunger for private land appears to be largely satisfied, at least for now.

1.1 Private plots, group enterprises, and state farms

Between 1990 and the latest available data (1994), the number of private farms in all farms rose from 0.3% to 9.1%, holding 6.3% of the land.³ About 44 million families own land or are involved in farming, but as can be seen in Chart I, the vast majority of farm enterprises continue in some form of collective property. The state itself retains about a sixth of the enterprises, holding 44% of the land -- mainly of lower quality. Chart II shows the change in the distribution of farms by size, from 1990 to 1994.

The former "*kolhozov*" and "*sovhozov*" farms were reorganized in 1992 and 1993. Ownership of much of this land was conveyed by the state to the members of these agricultural enterprises. Of the 24,300 state and collective farms existing in 1990⁴, only 8,400 had not been reorganized by Jan. 1, 1994. In the reorganization, 11,500 (72%) became "associations" (*TOO*) or "limited companies" (*AO*). Another 1,800 (11%) became agricultural cooperatives, and 2,600 (16%) became private farms averaging 43 hectares, area varying inversely with soil quality.⁵

1.2 Attitudes of farmers on investing and risk

Employment in agriculture actually rose, from 9,700,000 in 1990 to 10,700,000 in 1992, and appears to be stable at that level.⁶ Most of these families live in rural villages, and the present economic hardships in Russia seem to be more easily endured in the villages than in the cities. Nonetheless, many Western observers have been surprised at the reluctance by many, to strike out on their own with private farms, even when given the opportunity.

³ Agrarian Institute, Russian Academy of Agricultural Sciences, Moscow, calculated on the basis of data obtained in the Land Registry (*Roskomzem*).

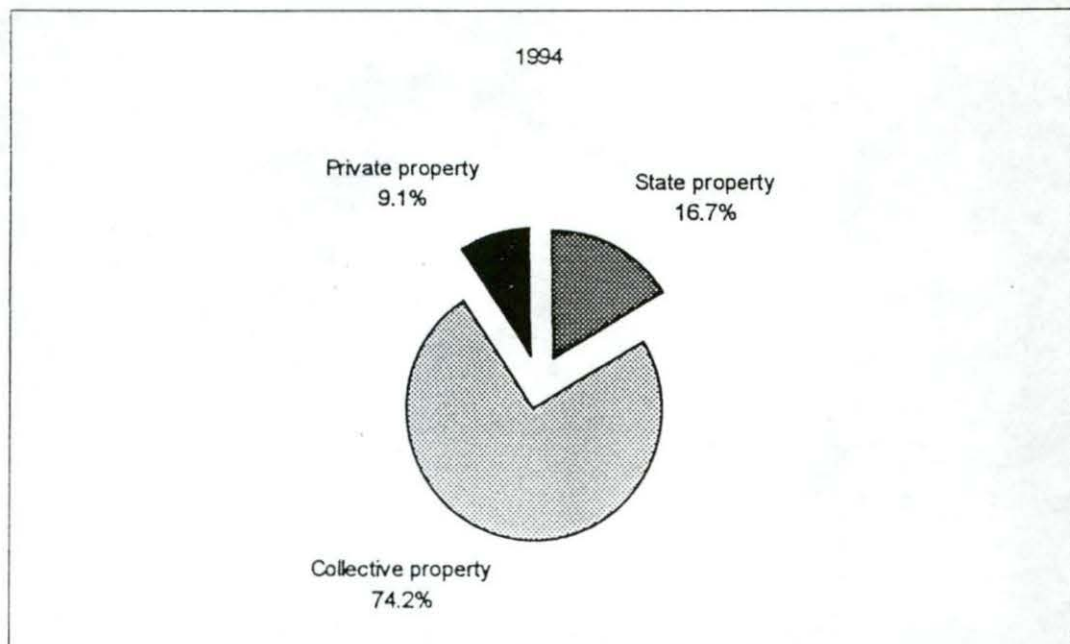
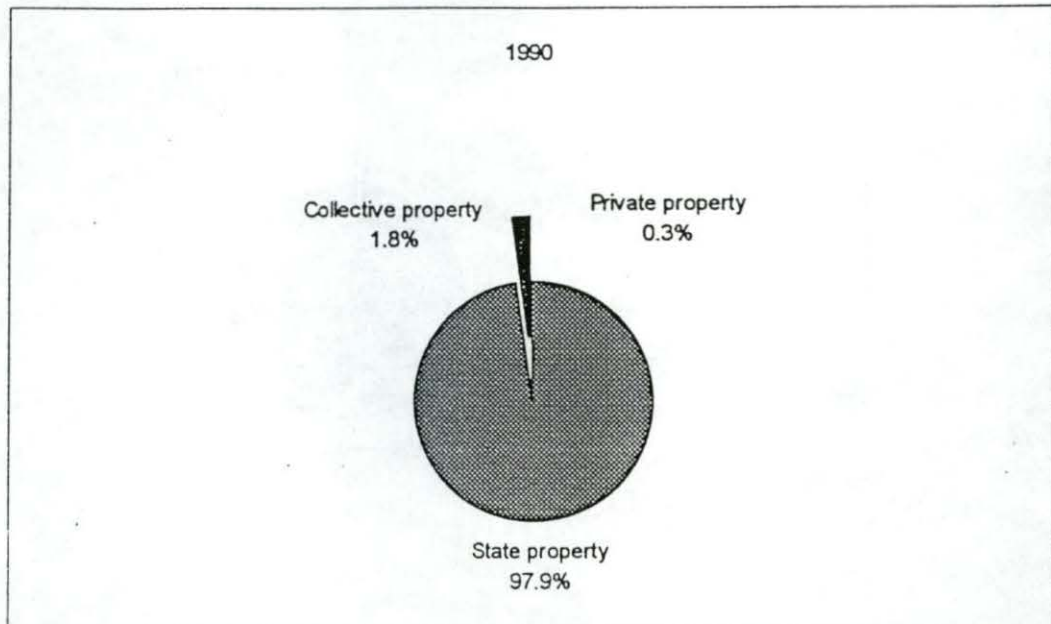
⁴ Data collected by the Agrarian Institute, Russian Academy of Agricultural Sciences, Moscow.

⁵ Associations are essentially collectives, averaging over 100 members; limited companies may be as small as 2 but average about 80 members; like the former *kolhozovs* and *sovhozovs*, these names seem to be a distinction without a difference.

⁶ Data collected by the Agrarian Institute, Russian Academy of Agricultural Sciences, Moscow.

CHART I

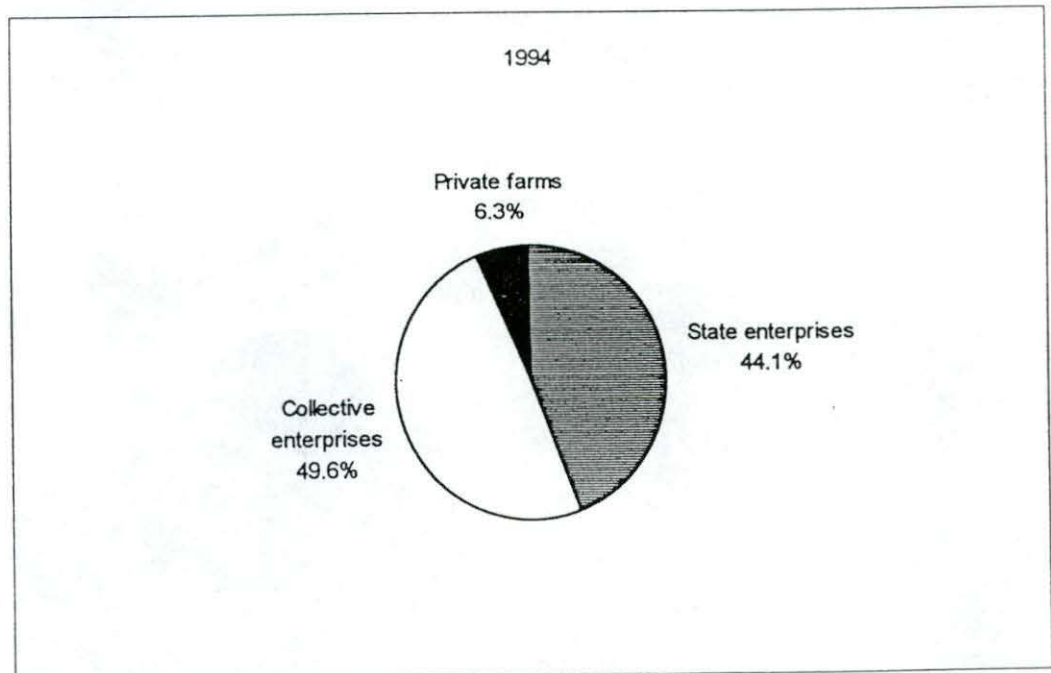
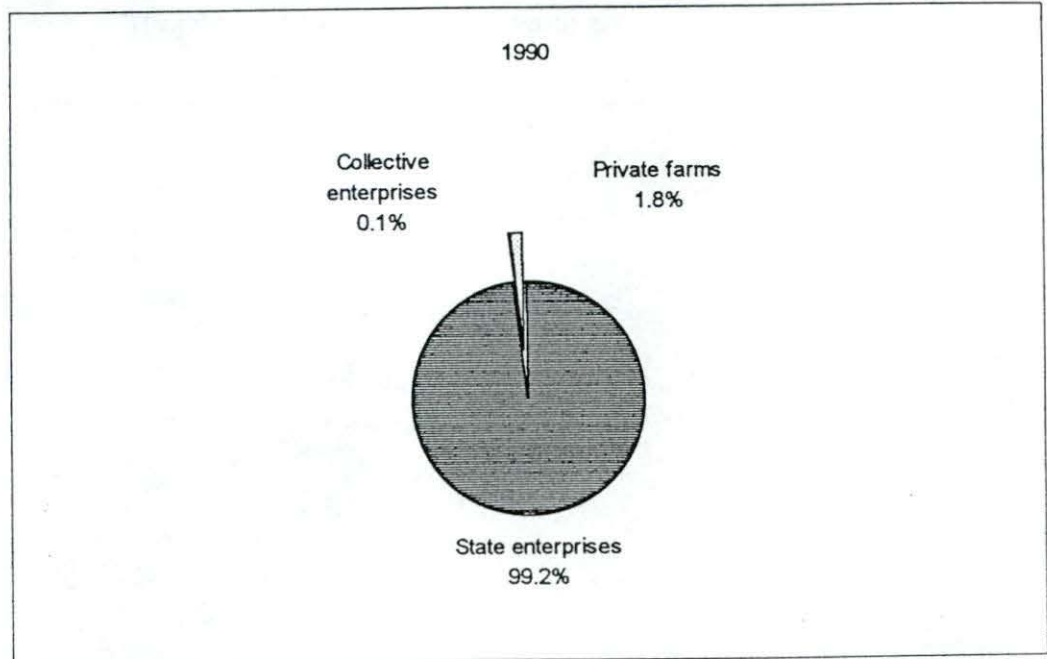
Structure of land property (percentage)*



*Source: Data of Russian Committee of Land Resources and Agrarian Reform

CHART II

Total area of land (percentage)*



* Source: Data of Russian Committee of Land Resources and Agrarian Reform

The hunger for more land seems to be abating. Sociological surveys in 1992 found that 23 to 32% of rural residents wanted to add to their land holdings. By 1993, the figure dropped to 18%, and in 1994, it was only 9 percent. This reflects progress in the redistribution of land, but also perhaps reduced demand as families realized that land alone did not solve all their economic problems. Indeed, for 70 years Soviet agriculture ran on a collectivized basis, and Russian villages had few repair shops, farm supply stores, or other supporting services readily available to independent farm operators (Thiesenhusen, 1995, p. 29).

By 1995, the rate of increase in the number of private farms had slowed greatly. It is also interesting to note that the average size of private farms is almost constant, from 1993 through 1995. As Table 1 indicates, at least so far, there is no indication of either division into smaller units, nor a consolidation or increase in average size.

Table 1

*Number and Average Size of Private Farms**

Item	1993	1994	1995
Number	182,900	270,000	285,600
Average size, in hectares	43	42	41

* Source: Russian Goskomstat

1.3 The rights of members of share enterprises

Reorganization of the collectives did not change the social status of many workers, nor increase their economic activity. In a sociological survey conducted by the Agrarian Institute of the Russian Academy of Agricultural Science in 1994, the managers of 230 reorganized enterprises discussed discipline and the work force. 24% reported that worker discipline had improved since 1990, 37% said it had declined, and 40% said it was unchanged.

In most enterprises, the reorganization was informal, based on changes in the enterprise by-laws but not in well-defined individual worker rights. Surveys compared their rights in 1992 and 1994, with the results shown in Table 2. The Table also indicates which of these rights are supposedly established in the relevant State laws.

Table 2

Percentage of Land Share Owners Enjoying Specific Rights in 230 Agricultural Enterprises, According to their By-Laws, 1992 and 1994

Type of Right	1992	1994	Same Rights in statutory Law?
1. To leave, taking land share and using it to start a private farm.	66.5 %	85.0 %	Yes
2. To take your land share and contribute it or sell it to a worker in a new farm, though not yourself employed there.	18.8	15.8	No
3. To bequeath a land share to heir working in the same enterprise.	62.7	80.8	Yes
4. To bequeath a land share to heir(s), even if not employed in that enterprise.	33.1	39.7	Yes
5. To receive dividends from the farm profits.	57.7	71.4	No
6. To obtain grain, hay or other farm products for personal use.	48.1	74.4	No
7. To sell the land share back to the enterprise.	32.7	41.9	Yes
8. To sell the land share to another person who is employed in the same enterprise.	31.2	37.6	Yes
9. To retire and receive a pension equal to value of the land share.	24.2	26.1	Yes
10. To receive compensation for land share if fired or quitting to take a different job.	19.6	23.9	Yes
11. To exchange a land share for a share in other assets of the enterprise (cattle, machinery, etc.).	15.8	14.5	Yes
12. No rights defined in By-Laws	11.5	4.3	-

Source: Surveys of farm managers in 5 provinces, 1992 and 1994, Agrarian Institute of the Russian Academy of Agricultural Sciences, Moscow. (1992 figures also appear in Brooks and Lerman, 1994, p. 50.)

Within some enterprises, the reorganization was less formal, and took the form of an internal market for shares in land and other property of the enterprise. There are about 1,500 such enterprises, whose informal privatization is not recorded in the Land Registry.⁷

The most frequent case finds that the owners of shares rent that land to tenants or contribute it toward the initial capital of new agricultural enterprises. About 1.5% of the owners used their land and property shares independently (i.e., contributed one to an enterprise and the other to a different one, or used it themselves). Another 1.5% of them sold their shares. However, most of the land and other property continued as undivided shares "contributed" to large enterprises, most of which keep the old managers and habits. Thus only 2% of the agricultural land is actually held as wholly private small farms.⁸

In one case study,⁹ it appears that the most popular legal form of reorganization is to create a mixed association, similar to the former cooperatives or state farms, not quite as large, without those members who chose to take their share as a private farm or to rent it to a tenant.

1.4 The Presidential Decree of March 7, 1996:

There is no comprehensive Land Code in Russia yet, and the resulting uncertainty explains some of the problems of agrarian reform there. As indicated in Table 2, most agricultural enterprises were reorganized informally, changing the enterprise by-laws but not defining clearly the rights of individual workers. The *Duma* has been debating a land code, but enactment was not imminent. On March 7, 1996, President Yeltsin issued a decree entitled "On the Realization of Citizens' Constitutional Rights to Land," attempting to resolve many issues and improve the security of farm owners. The entire Decree appears in the Appendix to this paper. However, the most relevant points appear in Article 4, which states that every owner of a land share has the following rights:

- a. Sell the land share to another person.
- b. Bequeath or give the land share to another person.
- c. Exchange the land share for a share in land or in property on another farm.

⁷ According to data collected by *Goscomumychestva*, the Russian Federal Enterprise Privatization Organization, and analyzed by the Agrarian Institute.

⁸ Agrarian Institute analysis of data for period 1992-1994.

⁹ This was a detailed case study of former state and collective farms at Nishnii Novgorod.

- d. Contribute the land share, or the right to use it, to the charter capital or equity of an agricultural organization.
- e. Lease the land share to an individual farm, to an agricultural organization, or to citizens for use as household plots.
- f. Use the land share (with specific land allocated in kind to the owner) to set up an individual farm or for use as household plot(s).

Another important point in the decree is that it increases the maximum size of the land plots that may be assigned to citizens as their household private plots, charging this against their land shares. The decree also clarifies the rules on the leasing of land shares, providing that agreements shall be for three years or more, and that land shares may be leased out by owners individually or acting as a group.

Notably, the decree does **not** prohibit transfers, nor the pledging of land as collateral for mortgage-backed loans, for any period of years, as does the draft Land Code before the *Duma*. The decree is an important step toward the creation of a normal land market, and it continues the development of Russia's agrarian reform.

1.5 Social services, living standards, etc.

The reform has had an uneven influence on the social position and standard of living of rural families. On the one hand, their legal rights to enterprise resources became stronger, as they were redefined as owners of the enterprises. On the other hand, the quality of life was adversely affected because the level of social services provided them declined.

As compared to the averages for urban workers, relative real incomes of rural collective farm members slipped from 83% in 1985 and 86% in 1990, to only 69% in 1993. In attitudinal surveys, 54% of rural residents opined that living standards had declined, and in 1994 75% reported that assessment. In 1994, only 4 to 5% of rural residents thought the land reform had been a success. However, it is not clear whether this refers to the change in land tenure as such, or to the unfavorable macroeconomic situation in which farming had to be carried out, or to the decline in social services formerly provided by state and collective farms.

2. Profitability of and financial support to the sector

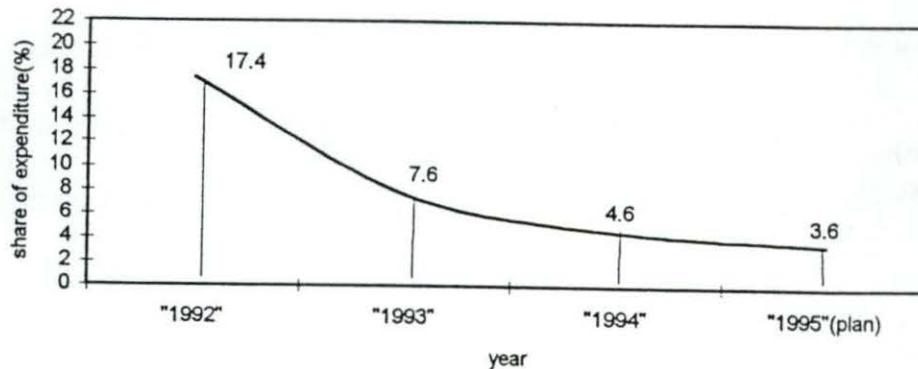
Most of the early legal changes reflected reforms of the legal relations of individual families and the land and other property. The land tax, for instance, was created at the end of 1990, and taxable values were based on the economic conditions of 1990. By mid-1992, it was clear that the taxable values were not appropriate; prices had fallen, marketing was going through new channels, and the relationship between land and people was still evolving. New private farms are exempt for five years, and many of the collectives did not pay, nor did the government succeed in forcing them to pay, except perhaps by increasing subsidies and then subtracting taxes.

The problems were both external and internal to the agricultural sector. Externally, the economy suffered a high degree of instability, three-digit inflation, fiscal budget deficits, and a general breakdown of debt repayment, plus the breaking of existing ties between agricultural enterprises and the state processing and industrial firms that formerly bought their output. Charts 4 and 5 show the resulting disaster.

The federal budget assigned 20-23% of state expenditures to develop the agricultural sector at the end of the 1980's; this has fallen sharply, as shown in Chart III:

CHART III

Share of Expenditure from Federal Budget to the Development of Agriculture (%)



* Source: Data of Russian Ministry of Agriculture.

Municipalities were supposed to retain and develop social infrastructure; they were very short on funding to do so. The new land tax is no help; its revenue must be used exclusively for conservation and land improvement, so cannot fund schools, clinics, etc. that the state farms and collectives used to finance as though they were costs of production. Also, though private farmers need services too, they are exempt from the tax for five years. Other enterprises pay it already, but inflation has greatly reduced the effective rate, as assessed values lag behind market prices.

2.1 The Terms of Trade with other sectors are falling

The terms of trade turned against the farm sector; in 1992 alone, wholesale prices of industrial equipment rose 20 times, and the retail prices of agricultural products rose only 11 times.¹⁰ Inflation exceeded 200% in 1995, though it is lower so far in 1996. Thus the farmer must increase productivity rapidly, or his revenues in real terms will fall. It is thus unclear whether savings invested in farm operations will earn a positive real rate of return. At the same time, the other options for investing savings are no better; the farmer has no way to invest savings in an account or instrument that is guaranteed to keep pace with inflation.

2.2 Marketing problems

With much of the land privatized, at least in theory, the manufacture and distribution of farm supplies lag behind. There is no network of farm supply stores, private or cooperative, at which a private farmer can readily buy what he or she needs. Product marketing is little better; roads are bad, and market price information is not easily discovered. When the state does offer help, it usually seeks to buy crops for much less than the private farmer believes he or she could get from buyers somewhere else, if there were just information and transport readily available.

Table 3 shows the major marketing problems reported by enterprise managers in a recent survey by the Agrarian Institute. Note that respondents often indicated several problems, so the total is more than 100%. We do not have comparable data for small private farms, though anecdotal information suggests that many of them have similar problems either in selling their products, in getting a satisfactory price for them, in collecting for them, or in getting the products to market over inadequate roads.

¹⁰ Source: Russian Ministry of Agriculture, unpublished report, 1995.

Table 3*Difficulties of agricultural enterprises in marketing agricultural products, 1992 and 1994**

Item	Difficulties: (Percentage of managers mentioning the specific problem)							
	Low price		Late payments		Can't find buyers at all		Roads impassable	
	1992	1994	1992	1994	1992	1994	1992	1994
Grain	84.8	92.4	24.7	92.9	18.6	48.9	9.5	10.7
Potato	82.1	65.9	22.9	43.9	30.1	43.9	12.1	7.3
Vegetables	78.2	73.0	21.8	54.1	43.6	48.6	19.2	13.5
Meat	97.6	95.6	42.9	83.4	19.9	44.1	8.5	7.9
Milk	96.7	97.3	50.4	84.7	21.9	50.9	8.4	9.0
Eggs	68.6	60.0	34.3	60.0	22.2	40.0	11.0	4.0

* Data from social-economic monitoring of a sample of all collective enterprises, conducted by the Agrarian Institute of the Russian Academy of Agricultural Sciences, 1992 and 1994.

2.3 The Net Result: Farming is Largely Unprofitable

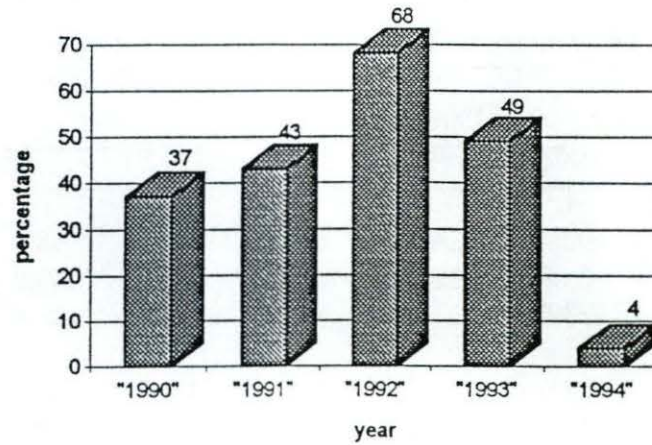
For 1994, the last year for which data are available so far, the profitability of Russian agricultural enterprises fell sharply as compared with previous years. As shown in Charts IV and V, in 1990, when the reform process began, the average enterprise (all types, private, state and cooperative alike) netted 37% of sales as profits (before any charge for land or depreciation of capital). The figure rose slightly for 1991, shot up to 68% in 1992, and fell back to just under 50% in 1993. However, in 1994 the average enterprise only netted 4% out of its gross revenues.

Actual yields and production were down slightly from 1992 and 1993, but by no means so much as to explain this collapse of profitability (See Table 4). The major causes thus appear to be the ending of previous subsidies and costs that rose faster than product prices. For private farms, the lost subsidies are less than 10% of total revenues (Table 5). However, given the sharp drop in real product prices and thus a drop in real revenues, the loss of subsidies is sufficient to push the average private farm from profitability into a loss for the year.

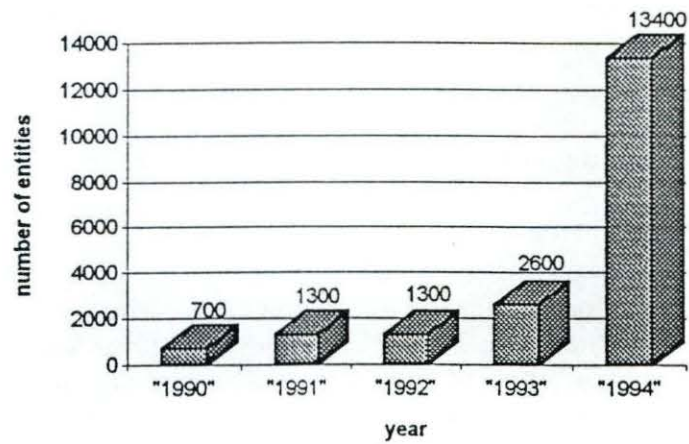
Unfortunately, we do not yet have comparable figures for the financial results of the average collective farm. It is possible that their subsidies were formerly relatively larger than the subsidies of private farms; if so, the collectives may now face relatively greater losses.

Charts IV and V

Profitability of Agricultural Enterprises (%)



Number of Unprofitable Agricultural Enterprises



* Source: Russian Statistical Book

Table 4*Area, yield, and total grain production in Russia (1992-1994)**

Item	1992	1993	1994	1995
Area, hectares	57,900,000	55,900,000	52,600,000	51,600,000
Yield, in tons per hectare	1.77	1.70	1.48	1.55
Production, tons	102,400,000	94,800,000	77,700,000	80,000,000

* Source: *International Agriculture and Trade Reports*, United States Department of Agriculture. *Former USSR*, May, 1995, page 24.

Table 5*Financial results of the average private farm in 1992 and 1994 **

Item	1992	1994
Sales, rubles :		
a) including subsidies	R/ 9,800,000	R/ 13,400,000
b) excluding subsidies	R/ 8,700,000	R/ 12,100,000
Net profit (loss):		
a) including subsidies	R/ 3,000,000	R/ 1,200,000
b) excluding subsidies	R/ 1,900,000	R/ - 100,000
Percent of farms operating profitably:		
a) including subsidies	44.4 %	9.4 %
b) excluding subsidies	29.1 %	1.1 %

* Source: Market Research Office (*Konukturu*) of the Russian Government.

This unprofitability suggests a major problem in the creation of a farm credit system in Russia: **Are** there potential borrowers who will profit by borrowing to finance farm operations? Can the farm credit system **identify** them? Can it **refuse** to lend to those who will probably not profit by using borrowed money? And can it **collect** from farmers who borrow and then fail to recover their costs? **How** will it collect repayments from farmers who lose money?

Given all these problems, it is not surprising that a modern farm credit system is not yet in place. It is also not surprising that private farmers, in Agrarian Institute surveys, are not eager to add to their present landholdings.

2.4 Legal indefiniteness; informality of tenure

Private farmers obtained their land under terms laid out in a 1990 Presidential decree. However, the legislature (the *Duma*) is considering a draft Land Code that would give a statutory basis for land ownership -- but in the present draft, it would greatly reduce their ownership security and rights. For example, it would forbid private owners from renting or selling their land to others without a functionary's approval, for ten years from the time they receive title gratis from the state, or five years from the time when they acquire a plot from someone for payment.

The draft law does not specify the criteria by which that functionary is to give or refuse to give approval, so private landowners logically fear the worst. Worse, the ten years haven't begun to run yet, since only a few private owners have actually received a title so far. Under the circumstances, and with some political candidates for election speaking openly of bringing back the "good old days," it is understandable that private farmers and even the members of the new cooperatives feel somewhat insecure and exposed to arbitrary processes, with no effective right of appeal to a fair and neutral tribunal.

President Yeltsin's new decree of March 7, 1996, attempts to address these matters. From press reports, however, its effectiveness will depend on whether low-level functionaries apply the decree promptly. They may well stall, waiting to see how the upcoming Presidential elections turn out, since some of the candidates openly oppose effective privatization.

In any case, and despite all these problems, there is a lively market for rural land in Russia. Land transactions are taking place, and many of them are being recorded. We now turn to what is known of that market.

3. The Rural Land Market in Russia

Land reform in Russia had two stages. In the first, state-owned land was transferred to people, and in the second, these land shares are transferred, bought and sold. The land market is quite active, even though the Land Code has become obsolete and needs rewriting in order to provide effective legal support to the land market.

3.1 The transition; equal division of the land.

Initially, every worker, pensioner and professional associated with a given collective or state farm was assigned, without cost, a land share within limits imposed by the number of eligible persons and the amount of land available. At least in theory, the amount of land was the same for every eligible person. That is, the managers of a collective got no more farming land than the youngest, newest laborer on the same collective, though the elite might get much more land for non-farming purposes, than did the young.

The collective and state farms also had other productive assets, such as dairy installations, machinery, livestock, and processing equipment. The division of rights to these assets was more complicated, and will not be analyzed here. In some cases, members could choose to take their share in these assets rather than in land; in others, this was not an option (see Table 2, above).

3.2 Subsequent transactions; redistribution through the market.

There is a Land Registry (*Roskomzem*), with an office in every county (*oblast*). In 1994, the Registry recorded 134,567 land transactions in which a person or enterprise was either the buyer or the seller, in transactions with national or local governments, or in which both parties were private individuals or enterprises. The average size parcel transfer recorded was only 3.2 hectares (See Table 4). It may be helpful to divide the land transactions into two segments, by purpose. In both segments, however, the land originally was held by collectives or by the government.

The first segment of the land market includes parcels to be used as gardens or small farm production, or for building *dachas* or individual houses.¹¹ Most of these purchases (55%) are outside urban areas, bought to plant a vegetable garden for household consumption. The average size of these parcels is only 9.6 *sotka*, or 960 square meters.

¹¹ A *dacha* is a rustic shack or cottage, used mainly in warm weather, and usually with no indoor plumbing. While some are used for recreation, most are occupied mainly while their owners tend their gardens at that site.

This is about 9600 square feet, or just under 0.1 hectare, or 0.4 acre.¹²

A second part of this first segment (33%) is land on which to build individual houses or garages. These transactions, naturally, occur mostly in urban areas. And the remainder of the first segment, 12% of those transactions, is the purchase of land for small commercial farm operations, engaged in vegetables, animal husbandry or tree crops.

Clearly, there is a significant volume of formally-recorded land transfers in Russia, despite the problems already mentioned with legal uncertainty and farming profitability, and the lack of credit institutions to finance land transactions.

Table 6

*Formal Land Market Sales, by Intended Use, Russia, 1994**

Sector	Land transactions:					
	Family use: for small production gardens, <i>dachas</i> , or family housing construction			Business uses: company or family businesses, Local government, etc.		
	Number	Area in hectares	Average, hectares	Number	Area in hectares	Average, hectares
Rural	74,738	7,175	0.096	129	15,209	117.89
Urban	44,771	4,105	0.109	839	1,356	1.62
Periurban	15,088	2,521	0.167	558	2,872	5.15
Total	134,597	13,801	0.103	1,526	19,437	12.84

* Note: Formal recorded transactions. Does not include informal, unrecorded transactions.

Source: Data of Russian Committee of Land Resources and Agrarian Reform (*Roskomzem*)

¹² A *sotka* is 100 square meters or 1000 square feet; a hectare is 10,000 square meters; there are about 2.47 acres in a hectare.

The second segment of the land market is the sale of land to local government (usually for offices), individuals or firms (usually for commercial farming, food processing, storage, or agribusiness operations). The purchasers focus on productive use, rather than on residential and family-size enterprises.

The total number of transactions recorded was approximately 136,000 in 1994. We do not yet know the total number of parcels existing, in order to compare the level of activity with that in other countries. In the United States, with many credit institutions, land sales only involve about 1.5 to 2.0% of the farmland per year, and total transfers (including gifts, bequests, sales, etc.) only represent about 3.5% (Wunderlich, 1996).

3.3 Paternalism and the Land Market

The legal basis for the land market may become shaky, if a bill now in the legislature (*Duma*) becomes law, which appears less likely after President Yeltsin's decree of March 1996. It would forbid the sale or transfer of land rights or actual parcels received gratis, for 10 years, and it would prohibit the sale or transfer of purchased land for 5 years, except for sales to local governments.

Ostensibly to discourage speculation, or rapid turnover in the land market, the real reason may be a paternalism often found when city dwellers make laws affecting peasants. By the experience of other countries, the only result will be that transactions will be "off the books." Official records will not match effective possession on the ground. Worse, such prohibitions are regressive, affecting the poor far more than the wealthy. If sale were legal, a small farmer doing well on the average plot of 43 hectares could buy another 3 or 4 hectares. But if that is all he or she has, this is too dangerous. If a jealous neighbor reports the purchase, a functionary might well appear and confiscate it without compensation.

When a peasant is injured and cannot work, or for whatever other reason wants to sell the parcel, the legal restrictions again are unfair to the relatively poor, because the law greatly limits the number of potential buyers. Peasant sellers will receive less because potential buyers will be limited to those with enough wealth to take the chance of getting caught and having the parcel confiscated, or rich or powerful enough to be confident that officials can be bribed or bullied to ignore the illegal transaction.

In short, restrictions on the resale of farm land tend to deny access to those with only a little money, and hence actually favor accumulation by speculators, functionaries and the wealthy.

Land shares, or rights to an unspecified portion of the land of a former collective or state farm, are also traded informally, with or without legal sanction in the enterprise

by-laws. For example, in the experiment at Nishnii Novgorod, 2,875 shares were distributed to the workers of enterprises, and of those, 43 were sold by workers to other workers, between 1992 and 1994.¹³

3.3 Land Prices

Research on land market prices is just beginning, mainly in the regions in which the market is most active, such as the Moscow *Oblast*. Most sales here are for individual construction, such as *dachas*. There are two prices for land: the true market price, and a much lower fixed price set by the *Oblast* Administration, at 200 times the level of the annual land tax. "Fixed prices" are indexed, and adjusted periodically according to movements in the legal minimum wage.

The "fixed price" for Moscow area parcels in September 1994 was 14,620 rubles/*sotka*, then about US \$3.20, with a range from about US \$1.00 to US \$6.00 depending on location. When the minimum wage was raised by 250%, this "fixed price" rose 2.5 times, but was still far, far below the actual market price. By one plausible report, in June 1995, land in regions near Moscow commanded market prices of anywhere from US \$90 to US \$3,000 per *sotka*.¹⁴

In Vologda, on the other hand, the price set by the municipal administration for rural land was about 25,400 rubles for a hectare (under US \$6.00). In Siberia, it was much less. The market is far from transparent; transfer costs may be high, and declared prices are often false, to reduce stamp taxes. Lower transfer taxes and fees, and newspaper reporting of land sale prices would all help.

The price assigned to a land share in a collective is set by the Committee on Land Resources and Agrarian Reform, at the *rayon* level; the average is upwards of 17 million rubles per eligible worker.¹⁵

4. Agricultural credit in Russia

There is little published data readily available on agricultural credit now in use by Russian farms, whether large cooperatives, state farms, or private enterprises. For the World Bank's 1993 study, the Agrarian Institute conducted a survey of farm operators in five provinces, chosen to include the major climatic zones, and to include major kinds of restructured farms. It does not seek to be a random sample of a defined universe, either

¹³ The data refer to 15 *oblasts* in the Russian Federation, and were provided by the Agrarian Institute.

¹⁴ Source: *Glishnaya Inithiativa*, "Housing Initiative Corporation," a private company.

¹⁵ All price estimates were provided by fax from the Agrarian Institute, February, 1996.

of the nation or within each province.¹⁶

4.1 Start-up finance set a bad precedent

While private farmers who began operations in 1991 reportedly used their own savings as a significant part of start-up capital, along with bank loans, from 1992 on the savings of private farmers were not a significant source of investment. In the Agrarian Institute/World Bank study, private farmers establishing farms in 1992 reported an average investment of 800,000 rubles (about US \$4,000), usually provided by a bank loan co-signed by AKKOR, the Russian Association of Peasant Farms and Cooperatives. AKKOR in turn got its capital from the Federal Government. However, AKKOR is not a financial organization, and it appears that banks found it difficult if not impossible to collect from AKKOR when the borrower defaulted. And since no mortgage or other enforceable collateral had been pledged, the banks were simply unable to collect. If so, the privatized banks are not likely to make that mistake again.

As in many Third World countries, the failure to lend against collectible collateral created a "culture of non-repayment" in which the borrower expected to repay if things went really well, but did not feel particularly obligated to repay if they did not. Psychologically, it would have been far better to make outright grants to start-up farmers, much as South Africa is now doing for land distributed in its program of restitution to blacks who were forcibly removed from farm land under the apartheid regime.

4.2 Ownership without owner equity is vulnerable.

Russia recently introduced higher tariffs on imported food, plus a value-added tax on agricultural imports that were formerly exempt, claiming that chemical and hormonal additives make imported food unsafe. Consumers, however, seem to like the better packaging, convenient preparation, and longer shelf life of imported products.¹⁷

The managers of collectives demanded the continued payment of subsidies, as in the past, sufficient to enable them to repay bank loans last year. It is clear from the tone of these statements that managers do not think for a moment of selling off some of the farm assets, land or otherwise, in order to increase equity and rely less on debt. On the contrary, experience suggests that they do more financially for their collectives by

¹⁶ Karen Brooks and Zvi Lerman, *Land Reform and Farm Restructuring in Russia*. Washington: the World Bank, Discussion Paper 233, 1994, 89 pp. Hereafter described as the Agrarian Institute/World Bank study. This work was summarized at the 1993 annual meetings of the American Agricultural Economics Association, and appears in the *AJAE*, December 1993. (Brooks and Lerman, 1993).

¹⁷ Sharon Sheffield, in *Agricultural Outlook*, USDA, August 1995.

economic rent-seeking with politicians, than by working to cut costs, raise productivity, or market more shrewdly. Reflecting the notion that insolvency is someone else's problem, the World Bank/Agrarian Institute study of 1992 reported little or no equity in the balance sheets of most farms, collective or private, except for those private farms begun in 1991.

4.3 In inflation, debt may be a burden -- or may not be.

The triple-digit inflation of 1993 and 1994 had relatively little impact on private farms, since most of them had not sought, or if they sought, had not obtained bank credit. In the 1992 survey, 40% of the private farmers reported having no debt, while the rest owed an average of 9.5 million rubles, of which 5 million were offset by amounts receivable from crop buyers (public and private). The net debt of 5 million rubles for the average private farm with debt was far below the estimated market value of assets other than land, averaging 140 million rubles.¹⁸

On the other hand, about two-thirds of those interviewed in the 1992 study said they hesitated to leave the collective and become private farmers, largely because they would not have access to enough capital and machinery.¹⁹ This fear may well be warranted; survey respondents setting up private farms in 1991 and 1992 obtained only 2% of their needed investment from their share in the collective farm assets. Those beginning in 1991 provided 46% of their working capital from savings, but in 1992 the average was only 6%, and galloping inflation made it hard for farmers or interviewers to figure out exactly where things stood at the end of 1992.

4.4 Collateral and Access to Credit

In the Agrarian Institute/World Bank study, nearly 70% of the private farmers interviewed in 1992 reported that they "must provide collateral or guarantees for loans." However, it appears that most of them actually planned to have AKKOR provide that guarantee -- as it did for about 42% of the private farmers interviewed. In effect, it appears that close to half of the private farmers thought "someone else" should provide the collateral and take the risks, not they.

Machinery and equipment were used as collateral by 40% of the private farmers in the sample, with wide variations among provinces. Homes, grain and livestock were pledged by fewer than 5%, and land by almost none at all. Land guarantees were not reported at all in three of the five provinces, and land was mentioned as collateral in only

¹⁸ World Bank/Agrarian Institute study, p. 61.

¹⁹ *Ibid*, p. 69.

3.3% of the interviews in Oryol and 1.7% of the interviews in Saratov Province. Informal credit from friends and relatives appeared in 10% of the cases, but only for very short-term needs.

In the survey, about half of the respondents said they would be willing to mortgage their land if necessary to obtain a loan. However, they also stated that it was important that the land be legally mortgageable -- suggesting that they thought it was not. Interestingly enough, in the 1992 survey, 13% of the farmers said they "can borrow as much as they want," and another 10% said they had no need to borrow. Those who were not able to borrow as much as they wanted tended to blame "rationing" constraints, though many (45%) also said that interest rates were too high.

5. The bases of a sound mortgage finance system

From world experience with agricultural lending, it is clear that a sustainable credit program must start with economically sustainable borrowers, with a clear understanding as to who is going to repay if any specific borrower does not, and with a legally and more importantly, politically viable way of making that repayment happen. Russia faces real problems in all three dimensions, in attempting to design a mortgage-based agricultural credit system.

5.1 Economically sustainable farm borrowers.

The collective farms appear to have a full-fledged culture that financial matters are someone else's problem. On average, both they and the private farms appear to face serious economic problems, though this is not entirely clear. Many have significant stocks of harvested grain that they hope to sell to government procurement agencies at prices higher than those now on offer from those agencies. The agencies in turn threaten to seize these stocks, suggesting that those involved are far from understanding, let alone accepting, the workings of a market in which sellers are not forced to sell at a price dictated by a buyer, and buyers are not forced to buy at a price dictated unilaterally by the seller.

Profitability in 1994 appeared to be historically low, but this may be an artifact of triple digit inflation and slow payment for grain already delivered.

5.2 Economically sustainable lenders.

If Russia is to create a viable agricultural financial system, it needs to have an eye out for the sustainability of the lenders as well. It does not appear likely that Russia's macroeconomic situation will allow significant annual recapitalization of lending banks,

nor should it. Therefore, banks and other lenders need to update their own outlook, and to seek loanable funds from sources suited to agricultural lending. The first place to look would be deposits from those private and collective enterprises that do have some savings, and the key to capturing those savings is probably an inflation-proof account, independent auditing, and a reputation for hard-nosed lending and collecting.

Lenders, to be sustainable, must also find loanable funds that are available to them for time periods at least as long as the repayment period for the loans made. When short-term deposits are loaned out for longer periods, the lender is vulnerable to "runs" or withdrawals by depositors, that it cannot honor because the borrower is not obliged to repay the loan in the short term. Lenders in the United States, especially Savings & Loan Associations, got into trouble around 1980 because many had made 20 and 30-year mortgage loans to home buyers, yet their depositors were free to withdraw funds at any time or with notice of only a few months or a year.

Could lenders force borrowers to agree to repayment on demand? This will not succeed unless the borrowers can in fact pay off the loans on short notice; farmers usually seek long-term loans precisely because they do not expect to be able to pay off the loans in a short period. Farmers know that weather and crop prices are highly variable, and they may have great difficulty making payment in any given year, especially on short notice, even when they are quite able to repay over the long run.

5.3 Effective recording and collection mechanisms

Sound mortgage lending also requires that the lender have an effective way to collect the loan if the borrower defaults. This requires that the lender be able to foreclose -- that is, seize the land that is the collateral guaranteeing repayment, and auction the land to a buyer who will repay the loan that is in default. Thus a second requirement is that the legal system be efficient and allow lenders to seize the land and sell it quickly, if a borrower does not repay on time. It appears that Russian law is unclear on this point at present, and the bill now before the Legislature may worsen matters by forbidding any farm owner from alienating the land for five or ten years after acquiring it.

Such restrictions are paternalistic, and very unfair to the small farmer. Some countries do allow small farmers to pledge land as collateral for repayment, even when the law forbids outright sale.²⁰

²⁰ Nicaragua, for instance, recently enacted a comprehensive law to resolve all pending conflicts over land and compensation that arose during the Sandinista regime and continue to the present. Law 209, of December 1995, provides that urban reform parcels may be sold, rented or pledged as soon as title is registered. However, land reform beneficiaries are treated as second-class citizens, who may neither sell nor rent their parcels without permission by a land reform functionary until the year 2,000, although they may pledge the land as collateral for loans for agricultural production.

A related requirement is an efficient, honest system of recording, in which the lender can inform all other lenders that a given piece of land has been pledged, or mortgaged, as the guarantee for a loan. If any other lender later makes another loan, with the same land serving as guarantee, that second lender has no right to any of the land unless and until the first loan is repaid, provided the first lender has filed a "lien" or notice that the land involved has in fact been mortgaged as the guarantee for a loan. It is vitally important to lenders that there be a Registry, in which their rights will be recorded, and which is efficient in notifying others that the lien exists. (Clearly, it is also necessary that there be an efficient system of identifying land by its location and ownership, so that potential lenders can rapidly learn whether a specific farm has already been mortgaged to another lender.)

5.4 Interest rates, spreads, and inflation

Lending institutions must earn the money with which to cover their costs and reasonable surpluses for their owners, by charging interest rates that are higher than the interest rates the lending institutions pay to their own depositors. The difference is called a "spread," and efficient lenders in the West usually operate with spreads on the order of 4 to 6%. That is, if the bank or other institution pays 10% to depositors, it charges 16% to borrowers, and if it pays 20% to depositors, it charges 26% to borrowers. Any lender that does not charge more to borrowers than it pays to depositors, will soon collapse.

Inflation presents a special challenge to the creation of long-term credit programs. If the lender does not charge interest rates that equal or exceed inflation plus its costs, its capital will soon disappear (Adams et al, 1984). And if it doesn't pay depositors interest rates as high as the rate of inflation, they will take out their deposits and buy land or merchandise whose price rises as fast as inflation. Neither the lender nor the borrower knows how much inflation will be in future years, so long-term deposits and long-term lending require an automatic interest rate adjustment mechanism.

The normal solution is called "indexing." That is, lenders charge and borrowers agree to pay, a low rate of interest, such as 6% yearly -- **plus** the percentage rate of inflation shown by a specific index²¹, from the date of borrowing until the date of repayment. Another common method is "monetary correction," which involves indexing according to the exchange rate with another currency, usually the U. S. dollar.

²¹ We recommend an index of farm-gate prices, as most suited to the borrower's future ability to pay. Over time, it should track other price indices, and be the easiest to enforce on borrowers.

Russia does not yet have such a mechanism in place. Thus Russian banks charge what appear to be extremely high interest rates to borrowers. In 1995, the banks generally paid an average of 72% a year interest to depositors, and charged 160% to borrowers.²² Even so, the banks generally loaned only for short periods, and hence mostly financed commodity traders and other commercial enterprises, which buy merchandise, resell it quickly, and hence can repay short-term loans. Until an indexing system for inflation is in place, it will be difficult for lenders or borrowers to agree to long-term loans, nor will such wide spreads be tolerated.

Of course, if macroeconomic conditions and world market price trends indicate that the terms of trade are likely to continue to move adversely to farmers, lenders and borrowers must recognize that farm income will not necessarily rise by the same amount as consumer prices or whatever index is being used. For this reason, lenders properly expect farmers to be increasing their own productivity, and to use at least some of their own capital to finance their operations.

Again, sustainability requires a clear and open discussion of who is to bear the risks of the marketplace, as well as climate and other risks of farming. The lenders cannot be expected to do so without risking their own viability.

5.5 Informal lenders; possible links with formal lenders

It appears that informal lenders other than friends and family are not important sources of credit in Russia. In many Third World countries, they are the only source of credit to the poor. Although often criticized for interest rates well above the traditional subsidized rates of official credit programs, if they face competition from other lenders their interest rates often appear to be about right for the risks of non-payment they face. Of course, if the capital market is so undeveloped that there is no effective competition among informal lenders, they may indeed charge monopoly rates and farmers would do well to struggle along without them.

In some countries, especially where legal interest rates are below expected rates of inflation, banks prefer to lend to less formal financial intermediaries (perhaps owned by the bank, or by the same stockholders. Some sort of working relationship often exists, even where interest rates are uncontrolled, to help banks reduce the costs of lending to farmers.

One little-known method that links both informal and formal lenders, meeting the needs of borrowers who cannot provide other guarantees. It might be worth consideration in Russia. Essentially, the system has the informal lender provide a funded co-signature

²² Agrarian Institute, fax, February, 1996.

on loans to the farmer borrower. The informal lender deposits liquid investment securities, perhaps even the stock or bonds or certificates of deposit of the lending institution, sufficient to cover the debt guaranteed. (The lender continues to earn interest on securities, which remain in his name unless and until the lending bank or cooperative must seize them because the co-signed loan is unpaid.

For the service of providing this effective guarantee of repayment, the informal lender charges the borrower a fee (typically, 10% of the amount guaranteed in rural areas of the U. S. middle west).²³ The informal lender also takes a mortgage on land or anything else that suits his needs, but he or she also relies heavily on a personal relationship with the borrower.

The formal lender gains greatly from this teamwork. It has no actual risk and next to no transaction costs. In the event of default, it can liquidate the securities without court action. The borrower pays a price for his lack of real collateral, but probably less in total than the informal lender would charge for a direct loan. If his potential profits justify the total cost of the loan -- then at least the small farmer gets credit, despite his lack of collateral. And legislators might realize that if they allow farmers to risk foreclosure, then they would not need to deal with the informal lender and could save that expense in the future.

For the informal lender, the 10% or so charged to the borrower increases the rate of return on the investment securities. And as a local resident, the informal lender's transactions costs are low -- he may be a merchant who sees the farmer frequently anyhow, for instance. And he can keep loan losses low with social or physical means that formal lenders cannot use.

5.6 Machinery and livestock as collateral

A few Russian institutions have considered lending with something other than land serving as collateral. Loans have been guaranteed with livestock, inventories of seed or fertilizer, machinery, and especially with the guarantee of the next year's harvest.

The classic problem with such guarantees is that unlike land, the collateral may disappear. If a loan is unpaid, the lender's first problem is to **find** the livestock, machinery, inventories or harvested crop, that supposedly guarantees repayment. Experience in the United States and in Latin America suggests that informal lenders can pursue such moveable assets; banks cannot.

²³ Note that the co-signer charges a fee for service, not interest. He continues to earn interest on the negotiable securities deposited as collateral for the co-signed loan(s). In this way, the guarantor avoids running afoul of usury laws limiting the legal interest that can be charged.

5.7 Solidarity groups, as co-signers

Micro-enterprise lending through solidarity groups has proved highly successful in a variety of countries. The best-known is the Grameen Bank, of Bangla Desh, but the program can be found working very successfully in countries from Bolivia to South Africa. A key to success, however, seems to be a high level of motivation, social organization, and daily contact among the members of the solidarity group, so that problems are detected early and can often be solved before a default occurs.

Solidarity arrangements do fail if the co-signers simply refuse to pay the debt of the member who defaults. From their viewpoint, they are not really accepting the risk, and too often they view the co-signature as a bureaucratic requirement to get their own loan, but not a real obligation that they might actually have to pay. Some government lending institutions take such losses without punishing the co-signer who fails to pay for the default, except that they will not lend to the co-signer the next year. "Solidarity" then just a screen for yet another set of grants disguised as loans; all the risks of farming are really borne by the lender.

The only solution for this problem, other than the daily contact, highly socialized model of the Grameen Bank, appears to be to provide the other members of a solidarity group with a way to get the money to make the payment for the defaulter. We next analyze that method, which Russia may want to consider seriously.

5.8 A modified mortgage: Limited-term Use-Rights (LTUR), not ownership

When conventional mortgages are not enforceable, it is time to look for a new kind of contract. One such guarantee is an agreement by the borrower that the lender, if unpaid, may rent the land to someone else for a certain number of years, sufficient to cover the overdue payment(s).

For example, if the normal rental price of land in the area is R/ 500,000 per year, a lender could make a one-year loan of R/300,000 at 50% interest. The borrower must repay R/ 450,000 at the end of the year. If the borrower does not repay the loan, the lender would "seize" the land -- but for one year, not forever. The lender would rent this land to another farmer, who would pay the rent in advance, or R/ 500,000, which would cover the overdue loan, the interest, and the expenses of the lender.

At the end of the rental year, the original owner/borrower would get his land back, the lender would have collected the loan in full, and the land would have been kept in production (by the renter). The political advantages of this system are large, because the original borrower loses the use of the land, but does not lose the land itself. A year later, he gets the land back, and can start again.

5.9 Constraints to the Limited-term Use-right Mortgage for farm credit

The LTUR solution is not a panacea for all credit problems. First, the legal system must allow the rental of farm land. Second, the amount of repayment due must be at or below the market rental value of the parcel that is serving as guarantee. Third, there must be reason to expect someone in the area to want to rent the land, and to be able to pay cash in advance in order to do so. This means that drought-prone areas or monocrop areas might find simultaneous defaults by many borrowers in some years, with few or no solvent persons able to step forward and rent so many parcels on short notice.

Once again, we see that sustainable agricultural lending requires that farmers have some equity capital of their own, to insure against the normal risks of farming (like almost any other business). Repayment obligations then can be kept within reason.

If Limited-term Use-right mortgages ("LTURs" are used to guarantee long-term lending, the payment due each harvest must be in line with rental market levels, but there is no reason that this method cannot be used as collateral for land market transactions. However, in these cases there must be a down payment by the buyer, sufficient to reduce annual debt service to what the borrower can earn -- or the rental value of the land in the local market. Note also that the LTUR cannot guarantee both production credit and land purchase credit unless the combined payment obligations "fit" within the rental value.

5.10 Combining solidarity groups and the Limited-term Use-right mortgage:

The very best method of meeting political feasibility and keeping transactions costs low may well be a combination of solidarity groups of borrowers, and the limited-term mortgage of use rights to the land (Strasma, 1990). In this system, each borrower would sign a contract authorizing the group to intervene if a payment is missed, and to rent his or her parcel to someone else (probably another group member). All legal costs are eliminated, and if the delinquent borrower refuses to move out, the group reminds him physically of his part of the contract, while assuring him that he is welcome to move right back in as soon as the year is up. With this method, the group takes out the loan in the first place, of a certain amount for each group member. And the group collects the loan at harvest time, and immediately rents out the parcel of any member who fails to repay. The group then pays the bank in full, without any group member actually having to pay the amount that the delinquent member failed to pay.

Transactions costs are practically zero, and the bank never even knows that a particular person defaulted. Thus even the delinquent borrower is still a subject of credit in a future year.

This method, combining solidarity groups and easily-enforced rental of the land to cover delinquent payments, has functioned with a 100% perfect repayment record for

production credit in the Rincón Valley of the Dominican Republic for well over five years (Strasma, 1995). The bank is pleased with this group's performance; it makes new loans to them in an hour, while other applicants make multiple trips and wait several weeks.

We must note, however, that the LTUR mortgage method has been used solely for production credit. It could probably be extended to apply to each installment payment due on a land purchase as well, but we must note that the farmer is still going to have to put in some equity of his own. The maximum repayment that the LTUR method can protect is the going land market rental in the area; it is likely that this will not suffice **both** to cover a loan for 80% of expected production costs **and** a significant debt for land purchase.

5.11 Farm Credit and the "Poorest of the Poor."

Critics of sustainable lending projects sometimes confuse a credit program with a welfare program that gives grants to the poor, disguised as loans but knowing that most of the money will be used to resolve desperate personal needs, rather than for productive purposes, and hence that the "debtor" will never be able to repay. Those needs should be met from grant money in the first place, rather than from decapitalizing credit programs and making their managers look bad.

These critics often complain that down payments and requirements that the borrower have some equity of his or her own, "do not solve the problems of the truly poor." That is correct; sustainable lending programs do not, and they should not try to. Latin American experience suggests that this complaint is less valid than it appears. It is often a political poker bluff, stated in the hope that the government or an external donor will come in with soft credit and allow it to become a grant.

In developing a possible Land Bank Fund in Central America, the designers provided that the down payment would be an objective, fair method of determining who got loans first (Strasma, Meza, Norton and Umaña, 1992). That is, the new lender would make land purchase loans first to all borrowers who could provide 20% down payment out of savings, and demonstrate that they also had needed working capital. As soon as all applicants with a 20% down payment were served, the Bank would process the applications from those able to make a 15% down payment, and so forth. "Eventually," those with no down payment at all would be eligible.

With that simple, objective criterion replacing political or personal favoritism to decide who got loans first, many would-be borrowers admitted that they did in fact have animals they could sell, or that family members in the city or abroad would give them the money for a down payment. And on that basis, more borrowers could be helped per year, and the loans were much sounder because the borrower had some equity at risk. They wanted long-term credit badly enough to put some of their own money into the

operation, if this was the only way to get to the head of the line for getting a long-term loan. Down payment requirements thus assign loans to the more viable farmers, as well as helping keep the credit program itself viable.

Finally, critics from church and non-governmental organizations were invited to set up their own programs, to make grants or lend against second mortgages, to the families **they** thought were the most deserving new small farmers. The Land Bank would have great confidence in their judgment, since the money at risk would be that of the church or non-governmental organization. However, if the borrower did default, the sponsor could also figure out how to help him or her. In this way, the formal lender would keep transactions costs low, default to a minimum, and ensure its own sustainability to continue lending to others.

5.12 Insurance programs: crops, market prices, and borrower lives

For practical purposes, the collective system relies on politics to get above-market prices and to bail enterprises out of crop failures. Every year, substantial sums of money are used to subsidize these enterprises. It appears that a manager may more profitably spend time and energy in obtaining subsidies, than in improving cultivation or harvest practices. Likewise, when enterprises fail to repay loans from State banks, it is unclear whether any sanctions whatever are applied. This "culture of non-repayment" may be a major problem for the creation of a viable system of farm credit. However, that problem centers on the psychology of the borrower, who is eager to borrow but reluctant to repay if that will be at all difficult.²⁴

The naive suggest that if borrowers do not repay, they must be the innocent victims of drought or some other cause beyond their control. This is as absurd as it is to blame all unprofitable farming on "world markets" or the "terms of trade." Politicians often enact laws forcing lenders to refinance overdue loans on concessionary terms, thus subsidizing those who do not repay on time and making the credit programs unviable.

Nor are price supports likely to help. It should be possible, in theory, to set price supports at levels that clear markets over time, and to design an insurance program that would repay loans when drought or disease hit. Both are hard to do, in the real world.

²⁴ In Russia as in Latin America, the poor actually have a better repayment record than the rich in most agricultural credit programs that lend to both. The poor repay if they can, hoping to at least be eligible for a loan again the next season. The rich use political power to force the banks to roll over their loans -- on paper, they are not delinquent, but they are also not repaying the loans. However, without effective collateral, even the best programs for the poor seldom charge interest rates high enough to cover their cost of funds, inflation, and uncollectible loans. Hence the programs must seek replenishment of their capital frequently, and they appear to be badly managed.

Politicians almost always set price supports too high, accumulating surpluses and running out of money. And agricultural insurance poses two major problems:

First, these programs are very vulnerable to "moral hazard," or cases in which the insured party makes a false report of losses. The experience of many such programs is that the reported losses are much larger than actual historical experience predicted. And the cost of investigating carefully to eliminate this fraud, means raising the premium to unacceptable levels.

Second, farmers are often very unwilling to pay the premiums that are needed to operate an insurance program on a sustainable basis. Like many other businesses, farming is subject to risks. Farmers who do not have some savings of their own against such risks, are likely to be unable to repay credit when drought or other disaster strikes - just like urban small businesses.

It is not recommendable that government or other lenders agree not to collect loans when the borrower reports such a loss. The program itself will likely soon be decapitalized. But it would be very reasonable for lenders to ask borrowers to be realistic, and either to take out commercial insurance in the insurance market, or to prove that they have assets with which to repay the loan they desire, even in the event of drought or other disaster.

If governments want to help farmers in a drought-prone area by providing grants, that is a political decision, not an economic one. If a rural credit program is to be sustainable, and to continue operating in future years, it cannot ignore this problem. It must not be an insurance company unless it charges premiums sufficient to cover losses, above and beyond the interest rate.

One type of insurance is feasible, however, and a sound credit program for farmers will often include it. This is life insurance for the amount of the debt and interest due. Death is seldom faked successfully, and when the borrower does die the lender is often reluctant to try to collect from the widow. Instead, viable programs usually provide automatic accidental death and disability insurance, adding 1% a year to the interest rate to cover the cost of this insurance. (Death by illness is usually not covered, since otherwise persons with terminal illness would seek loans, an adverse selection that would greatly raise the cost of the programs.)

6. Summary and Conclusions

Russia's agrarian reform has begun, but it needs major complementary policy and resource decisions. Unlike collective farm workers in Hungary or the People's Republic of China, Russia's workers on collective farms never experienced life as an independent small farmer in a market economy. They will learn, but it will help greatly if the macroeconomic conditions make farming profitable for the efficient.

A viable system of agricultural credit, backed by collateral in the form of enforceable mortgages, could help. For those farms, collective and private alike, that are in fact well-run, such credit will increase their output and profitability, and help them invest in still further improved performance. For those farms and farmers who are not really efficient, and who are unwilling to change, the foreclosure of mortgages on land will force them to get out of the way, and allow good farmers to acquire the land.

Success in creating a mortgage-backed credit system requires major improvements in the land market, and in the transparency of information about land prices, demand and supply. It requires political acceptance that inefficient farmers will, and **should**, lose their land in favor of more efficient ones -- just as happens with urban businesses.

Success requires an inflation-proof loan accounting method, reliable systems of recording land rights and mortgages, and effective and politically-acceptable methods to actually evict those who do not repay, selling the land to others, at low transactions cost.

Russia may consider, in addition to traditional mortgage guarantees, non-traditional methods that have worked elsewhere. One of these is to make the mortgage apply to use rights for a specified time period. In that, the loan payments are adjusted to the land rental market. If a payment is missed the borrower must go elsewhere for a year, during which the land is rented to someone else and the rent -- paid in advance -- makes up the missing payment. At the end of the year, the borrower returns and again has his land.

The other experiment would enlist informal lenders who would be co-signers, and who would deposit liquid investment securities (government bonds, perhaps), as the collateral to guarantee repayment of a loan to a farmer. They would charge a fee for the service, to the borrower, but this would eliminate loan losses and greatly reduce transactions costs for the lender.

Similarly, borrowers should be expected to pay premiums for needed insurance, or to accept the risk of drought or other problems, just as other businesses must. The lender cannot be sustainable unless those costs are also covered by someone.

Other countries have shown that agricultural credit, though often badly managed, can be created on a sustainable basis on a small scale. Russia has an enormous potential, and we are therefore optimistic that she can do the same, on a pilot basis at first and then on a scale as great as the country itself.

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APPENDIX

The following translation of Decree 337, of March 7, 1996, issued by the President of the Russian Federation, is an unofficial English version by an anonymous translator, circulating informally in the World Bank, April 1996.

The authors of this Staff Paper have not seen the official version of the Decree in either language as yet; this version does appear to be consistent with press accounts.

DECREE OF THE PRESIDENT OF THE RUSSIAN FEDERATION

337 of March 7, 1996

**ON REALIZATION OF CITIZENS CONSTITUTIONAL RIGHTS
TO LAND**

As a result of land reform implementation since the beginning of 1991 about forty million citizens of the Russian Federation have become owners of land plots and twelve million people in the rural areas have become owners of land shares.. Nevertheless a large number of legal issues pertaining to the regulation of land relations remain unresolved.

In order insure to citizens constitutional rights to land until the Land code of the Russian Federation is adopted I hereby decree:

1. Establish that land plots received by citizens before January 1, 1991 on the basis of inheritable possession for life, including those extending the established maximum size, and used as household private plots, for collective gardening, construction of houses or summer houses shall remain citizens property with full legal ownership. Citizens possessing the above land plots shall not be obliged to buy them out or lease them.

The Government of the Russian Federation within one month shall submit to the State Duma a draft federal law on free assignment of the land plots specified in this point to citizens.

2. In order to strengthen the private sector in rural areas the local administrations in accordance with established procedures shall increase the maximum size of land plots assigned to citizens as household private plots using their land shares.

3. The Government of the Russian Federation and executive bodies of the subjects of the Russian Federation shall:

take measures in order to complete the proces of insurance of certificates of ownership of land shares to members of agricultural organizations and other citizens - owners of land shares by end of 1996;

in 1996 provide for the conclusion of agreements between land plot users irrespective of the form of ownership with all land share owners;

carry out educational work with rural population and explain to them their rights as land share owners and the options for their use.

4. The owner of a land share without the consent of other owners of share property has the rights to:

bequeath the land share;

use the land share (with land plot allocated in kind) for setting up an individual farm or for use as household private plot;

sell the land share;

give the land share as a gift;

exchange the land share for a property share or a land share on another farm;

lease the land share (with land plot allocated in kind) to individual farms, agricultural organizations and citizens for use as household private plots;

lease the land share on the basis of an agreement of life time support;

contribute the land share or right to use therefore to the charter capital or share fund of an agricultural organization.

The above land share transactions shall be conducted on the basis of legislative and other normative acts of the Russian Federation and provisions of this Decree with commitments previously assumed by land share owners taken into consideration. Alienation of land shares for compensation shall be carried out on the basis of ruralis envisaged by Article 250 of Civil Code of the Russian Federation.

Land plots assigned in kind against land shares shall be used for the purpose of agricultural production only. The purpose designation of these plots can be changed in compliance with the laws of the Russian Federation.

5. Establish that lease of land shares to agricultural organizations, individual farms as well as contribution of land shares or the right to use thereof to the charter capital of agricultural organizations shall be carried out on the basis of agreements between share owners and agricultural organizations or individual farms. The agreements are subject to registration in the local Committees on Land Resources and Land Survey in accordance with established procedures.

The Government of the Russian Federation within one month shall provide for approval of model agreements.

Establish that land share lease agreements shall be conducted for a term of not less than three years. Both, individual owners and groups of land share owners can be lessors of land shares. In the event of land share lease land tax shall be payable in accordance with the lease agreement either by the lessor or the lessee.

The area of agricultural land leased for the purpose of agricultural production shall not be limited.

6. Local administrations shall be allowed, upon the application of the owner to purchase his/her land share, with the aim of increasing the redistribution fund and then transfer it to legal entities and citizens of the Russian Federation for the purpose of agricultural production. The procedure and terms of purchase shall be established by the bodies of state power of the subjects of the Russian Federation.

7. Leaders and specialists of agricultural bodies, agricultural specialists of local administrations and bodies of state power of the subjects of the Russian Federation, leaders and specialists who have worked on collective and state farms or other agricultural organizations for not less than five years, shall be assigned land plots free of charge for acting up individual farms or use in other purposes in compliance with the Russian legislation using vacant land shares of farms or redistribution funds or terms envisaged for free assignment of land plots or land shares to citizens - agricultural producers.

8. Establish that in the event of transfer of agricultural lands to citizens and legal entities land plots under bushes, young forests and other non-agricultural lands located between the plots of agricultural land and within the boundaries of the assigned land tract shall be transferred free charge.

Land which is no longer used for agricultural purposes shall be transferred free charge to citizens and legal entities who were not previously assigned land plots or whose who are assigned land plots in addition to those already owned for the purpose of agricultural production under the condition that they will contribute not less than 50 percent of land rehabilitation costs.

9. Within one month since the publication of this Decree local administrations shall notify all owners of land shares of the procedure of receiving certificates of ownership of land shares registered in compliance with the Russian legislation (those who have not received the certificates earlier).

Unclaimed land shares for which no applications for receiving certificates of ownership of land shares have been filed shall be transferred to (or remain property of) the agricultural organizations who may use them for a three year period. In the event the owner of the above land share does not file an application for the certificate of ownership of land share within this period of time and takes no decision on the use of the land share the agricultural organization may use it for a further three year period.

10. Executive bodies of the subjects of the Russian Federation together with the Committee of the Russian Federation on Land Resources and Land Survey shall provide for land survey work pertaining to compact location of land plots of individual farms, agricultural cooperatives and other agricultural organizations and private plots in order to create conditions for their voluntary cooperation in the sphere of production, processing and sale of agricultural products, services and maintenance, improving the engineering infrastructure and rendering every day services to the population.

Location of the land plot assigned against land shares for setting an individual farm, an agricultural cooperative or other agricultural organizations, for use as a household private plot or for the purchase by the local administration shall be determined during the period of one month upon agreement between owners of land shares.

In the event of disputes the decision shall be taken by the local administration together with the local Committee on Land Resources and Land Survey. They shall provide for the rational organization of the territory (compact location) and ensure that the land quality of the plot assigned is not lower than the farm's average.

In the event the state or a municipality purchases land shares for its needs and charges their purpose designation (in compliance with the Russian legislation) the location of the land plot shall be determined on the basis of town-planning documents or documents confirming the choice of the land plot for construction.

In the event owners of land shares disagree with the location of the assigned plot the dispute shall be settled by court.

11. The Government of the Russian Federation and executive bodies of the subjects of the Russian Federation shall provide for timely funding of land survey work related to the implementation of this Decree.

Establish that leaders of federal executive bodies and executive bodies of the subjects of the Russian Federation who use land tax and land lease payments for purposes not stipulated by Federal Law "On Land Payments" shall bear responsibility in compliance with the Russian legislation.

Boris Yeltsin, President of the Russian Federation

Moscow, Kremlin, March 7, 1996

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