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**Agrarian Reform and Agricultural Productivity  
in the Russian Far East**

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## EXECUTIVE SUMMARY

Agriculture in the Russian Far East is struggling, as are agrarian reforms. Production has fallen dramatically over the past decade, reliance on agricultural imports has increased, and reforms continue along in a state of semi-implementation. Agrarian reform in the RFE has been characterized by the failure to privatize the majority of agricultural land. The state-owned “land redistribution fund” (land fund) continues to possess the land, where most of it lies out of productive use. Very few rural citizens realize the benefits of private land ownership, even where land has been nominally privatized into shares held by former members of collective farms. In most instances former collective farms continue to use this land for free, without payment to the new land share owners.

Peasant (farm) enterprises (PFE’s, or “peasant farmers”) and small plot owners are among those who have realized some of the benefits of private land ownership either through withdrawing their land shares in kind from a collective farm, receiving land in ownership from the land fund, or a combination of the two. Despite inferior machinery and often inferior land, many peasant farmers have survived the past several years and some have found ways to expand production. The total number of registered PFE’s in the Russian Far East has decreased since 1993. The average size of the peasant farms that remain, however, has increased. Small plots (private household vegetable and garden plots) have also benefited from privatization—with secure land rights, small plot owners now produce the great majority of vegetable and potato crops in the RFE.

A market in agricultural land sales is not currently active in the RFE (except in the case of small plots), although a lease market is slowly developing. The vast amount of unused agricultural land in the Far East (and hence the low demand for land) may represent, in part, economic inefficiencies of farming in the RFE given current input/output price ratios and, above all, a significant and increasing scarcity of capital. The lack of a functioning market compounds the problem of land lying out of production, allowing even the most inefficient, unproductive farms to retain good land in desirable locations.

A number of issues stemming from macro-economic circumstances and institutional deficiencies continue to hamper the potential for private farmers (and hence agrarian reforms) to succeed. These issues include insufficient and deteriorated physical capital, limited credit opportunities, an undeveloped food processing industry, restricted access to markets, and an insufficient labor supply. Impediments related to each of these issues constrain the potential for private farms to succeed in a competitive marketplace. Failures by private farms in turn drive down the demand for land and undermine support for reforms from politicians and rural citizens.

The faltering agrarian sector in the RFE affects regional, social and political stability in a number of ways. Increased food security would better ensure political and social security in the RFE, an area that has shown strong affinity with the Communist party in the last decade and is struggling with a massive demilitarization. Increased agricultural production could reduce dependency on imports of basic foodstuffs. It could thereby reduce vulnerability of the RFE to volatile inflation and exchange rates, and decrease dependency on emergency international

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food aid. Greater self-sufficiency in agriculture could also reduce vulnerability of the Far East to regional trade barriers within Russia. To the extent that increased agricultural production raises the overall standard of living in the RFE, it could also help to lessen border tensions with the Chinese, who some people in the RFE resent for their relative economic prosperity. It would also increase the consumption capacity of the RFE for non-agricultural imports from other Asian countries.

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## I. INTRODUCTION

In October 1999, the Rural Development Institute (RDI) conducted field research on agrarian reform in the Russian Far East (RFE). Our purpose was to explore the current status of reforms, including land privatization and farm reorganization, and possible impediments to higher regional agricultural productivity.

We conducted research in Khabarovsk *Krai* and Amur *Oblast*, two of the three regions covered by an RDI fieldwork trip to the Russian Far East in 1997.<sup>1</sup> Our research included interviews with *oblast* and *raion*-level officials, peasant farmers, managers of agricultural enterprises, land share owners, and rural pensioners.

This paper begins, in part II, with an overview of the current status and background of agrarian reforms in the RFE. In part III, we discuss the issues and impediments directly related to these reforms and make specific recommendations. In part IV, we describe a number of economic and institutional issues that affect the success of the private farming sector. In the conclusion, we turn briefly to the potential for increased regional stability that could be realized through successful agricultural reforms. Attached to the paper is an annex that summarizes our recommendations for strengthening implementation and benefits of reforms.

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<sup>1</sup> See Bradley J. Rorem & Renee Giovarelli, *Agrarian Reform in the Russian Far East* (RDI Report No. 95, available at the Rural Development Institute) (October 1997). The 1997 work, which also covered land reforms in Primorskii *Krai*, touched only briefly on reforms in Khabarovsk *Krai*, as the authors were unable to conduct local interviews within the *krai*. In addition to this previous research in the RFE, the Rural Development Institute also conducted field research in 15 provinces in western Russia and Siberia throughout the 1990s.

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## II. CURRENT STATUS AND BACKGROUND OF AGRICULTURE AND AGRARIAN REFORMS IN THE RUSSIAN FAR EAST<sup>2</sup>

The agricultural sector in the Russian Far East employs 8 percent of the regional labor force. Primary crops are soybeans, oats, wheat, barley, potatoes, tomatoes, cucumbers, cabbage, and livestock fodder. Meat, milk, eggs, and honey are also produced in the RFE.<sup>3</sup> Agriculture in the RFE accounts for 1 percent of the total grain production in the Russian Federation, 5 percent of the potato and vegetable production, 50 percent of the honey production, and 74 percent of the soybean production.<sup>4</sup>

Soviet policies from the 1960s through the 1980s propelled the expansion of agricultural production in the region through the creation of very large collective and state farms. The total amount of plowed land in the RFE peaked at 2,756,000 hectares in 1988, bolstered by heavy subsidies from Moscow that propped up agriculture.<sup>5</sup> Even while highly subsidized, however, the collective and state farms were unable to produce at the level realized in countries with private land ownership and market economies.<sup>6</sup> Natural limitations including mountains, forests, and a severe climate restrict agricultural production in the RFE to narrow bands of land in the south, mostly in Amurskaia oblast, Primorskii krai, Khabarovskii krai, and the Jewish autonomous oblast. Amur accounts for nearly 60 percent of the arable land in the RFE, and one-half of the region's agricultural production.<sup>7</sup> The area of land under agricultural production in the RFE has substantially decreased since the reduction of state subsidies in the early 1990s. Out of 1,760,000 hectares of arable land in Amurskaia oblast, for example, only 600,000 hectares were in production in 1999 (a decrease of 200,000 hectares since 1997).<sup>8</sup>

Though it is doubtful, given difficult climatic conditions, that the RFE will ever be able to fully support its population with agricultural production, several factors indicate that the Russian Far East has not, at least since collectivization, produced at even a fraction of its potential. Although many areas of the RFE may be unsuitable for crop production, the Amur River valley contains some of the most fertile soil in Russia. Some agricultural land in Amurskaia oblast, for example,

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<sup>2</sup> This section focuses on changes between 1997 and 1999. For a more complete discussion of agrarian reform in Russia, including the RFE, see Roy L. Prosterman, Robert G. Mitchell & Bradley J. Rorem, *Prospects for Family Farming in Russia*, EUROPE-ASIA STUDIES (1997).

<sup>3</sup> *Bulletin: Development of Economic Reforms in Primorskii Krai from January to June 1997* (Primorskii krai Committee on Statistics), 20; *Amur Region: Guidebook for Businessmen* (VOSTOKINCENTER, 1994); *The Russian Far East: A Business Reference Guide*, 3d ed. (1997–98), as cited in Bradley J. Rorem and Renee Giovarelli, *Agrarian Reform in the Russian Far East*, RDI Report no. 95, The Rural Development Institute, Seattle (October 1997), 7.

<sup>4</sup> Discussions with officials in Khabarovsk krai and Amur oblast Land Committees (October 1999).

<sup>5</sup> From 1986–1990, for example, the Soviet government spent 3.5 billion rubles (officially equivalent to \$3.5 billion because at this time the exchange rate was pegged at one ruble to one U.S. dollar) on the development of the agro-industrial complex of the Russian Far East. Pavel A. Minakir, ed., *The Russian Far East: An Economic Survey*, trans. Gregory L. Freeze (Khabarovsk: RIOTIP, 1996), 97.

<sup>6</sup> Even when agriculture was more heavily subsidized by the Soviet Union, it did not achieve yields at levels experienced by noncollectivized agriculture in countries with agro-climatic conditions similar to Russia.

<sup>7</sup> FT Asia Intelligence Wire, *International Market Insight Reports*, October 21, 1998, 6.

<sup>8</sup> Interview by author with Anatoly Bonetskii, head of the State Committee on Land Resources and Land Tenure for Amur oblast (October 1999).

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is considered equally as valuable for agricultural production as the “black earth” areas of western Russia.<sup>9</sup> It seems quite possible, then, that this area could produce a wheat yield on par with that realized in countries with similar growing conditions, like Canada or Finland (roughly between 2.2 and 2.7 tons per hectare). Historian John Stephan has attributed the failure of the RFE to achieve self-sufficiency in foodstuffs during the Soviet era to human errors such as the misuse of machinery and repeated failures to deliver produce on time. This resulted in a widespread, progressive failure of agriculture in Amur, which he described in these terms: “Once the breadbasket of the Far East, the Amur District in the early 1980s had one of the worst production rates in the USSR.”<sup>10</sup>

One final curious note pointing to the potential for higher yields in the RFE is that in 1913 peasant farmers in Amurskaia oblast produced 0.9 tons of grains per hectare and 7.4 tons of potatoes, using completely manual labor. These grain yields were only 0.1 tons per hectare less than yields produced in the oblast from 1986–1990; potato yields were only 3.5 tons less per hectare than those produced from 1986–1990.<sup>11</sup>

The RFE relies heavily on imports of agricultural products, leaving it vulnerable to fluctuations in the exchange rate and protectionist measures taken by agricultural regions in western Russia.<sup>12</sup> Both the Russian government and the international press have reported potential food shortages and hunger in the Russian Far East as recently as 1999, which have become one of the central rationales put forward by Russia and donor governments for emergency food aid to Russia.<sup>13</sup>

## Summary of the Agrarian Reform Process in the RFE

A series of laws and decrees issued in 1991 ushered in the privatization process in the agricultural sector in Russia.<sup>14</sup> As a result of the reforms, the majority of land held by collectives and state farms should have been transformed into land shares privately owned by

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<sup>9</sup> International Industrial Information, Ltd., *Russia Express-Perestroika, Executive Briefing*, April 8, 1996 (available on Westlaw).

<sup>10</sup> John J. Stephan, *The Russian Far East: A History*, (Stanford, Calif.: Stanford University Press, 1994), 269.

<sup>11</sup> Minakir, *The Russian Far East: An Economic Survey*, 438–39.

<sup>12</sup> For example, several of the primary agricultural production federation subjects of western Russia erected regional trade barriers in the wake of the crash of the ruble in August 1998. Objectives included protecting local consumers from rapidly rising demand for domestic agricultural products from Moscow, and in some cases protecting local producers from rising competition from other regions. See Evgenia Serova, “Influence of Interregional Trade Barriers on the Development of Agro-food Markets in Russia” (unpublished paper presented for a conference on “Interregional Trade Barriers,” Moscow, March 13, 2000; on file at the Rural Development Institute, Seattle).

<sup>13</sup> See Dmitrii Kirsanov, *Russia to Start Receiving Food Aid on January 1, 1999*, ITAR-TASS, December 15, 1998; Dan Glickman, U.S. Secretary of Agriculture, Prepared Statement before the House Agricultural Committee (as reported by Federal News Services, October 6, 1999).

<sup>14</sup> See, for example, the law of the Russian Soviet Federated Socialist Republic, “On the Peasant (Farm) Enterprise” (as amended January 5, 1991); Presidential Decree No. 323, “On Urgent Measures for Implementation of Land Reform in the RSFSR” (December 27, 1991), Article 6; Government Resolution No. 86, “On the Procedure for Reorganization of Collective and State Farms” (December 29, 1991); and Roy L. Prosterman, Robert G. Mitchell, and Bradley J. Rorem, “Prospects for Family Farming in Russia,” *Europe-Asia Studies*, vol. 49, number 8 (December 1997), 1384–85.

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farm members.<sup>15</sup> Some of this land was later withdrawn by shareowners to start peasant (farm) enterprises (PFEs). A portion of land from each collective also went to the raion land redistribution fund, to be reallocated by the raion governments to PFEs. Finally, the reforms left household plots under the control of individual families, and provided for full ownership rights to these plots.

Agrarian reform legislation also called for privatization of nonland assets of collective and state farms.<sup>16</sup> This legislation directs state and collective farms to determine the value of their total nonland assets (known as property shares) by deducting net liabilities from net assets, then dividing this total net value into shares among several categories of people including farm workers, workers temporarily absent from the farm, and pensioners. Shares to eligible individuals were to be determined by their former contribution to the fund (e.g., by the relative amount of hours they had worked). Persons withdrawing from a collective or state farm have the right to withdraw their property share in kind. While most farms originally completed the process of dividing up nonland property and assigning monetary value to individual shares, they have often prohibited individuals from withdrawing a reasonable property share in-kind.

Following privatization, three types of agricultural producers emerged in the private agricultural sector: large agricultural enterprises; peasant (farm) enterprises; and household auxiliary plot owners.

### ***Large Agricultural Enterprises***

Agricultural enterprises are former collective farms now registered as agricultural production cooperatives, joint stock companies, limited liability companies, or, in some cases, even (mistakenly) PFEs.<sup>17</sup> Most of these farms have barely changed in structure or productivity, with only a cosmetic name change and the distribution of shares (on paper) to reflect any movement toward privatization. One former collective we visited had managed to make more significant changes through a radical change in leadership, transforming from a failing business in 1995 to a fairly successful enterprise. Such instances are rare, however, indicated by the wry observation of an oblast official in Amur that “finding failing former collectives would not be difficult.” In 1998, Khabarovskii krai had fifty-eight agricultural enterprises (down from seventy-six in 1993), and Amurskaia oblast had fifty-four such enterprises.<sup>18</sup>

One typical former collective we visited in Khabarovskii krai consisted of 11,000 hectares, all of which were under production in 1999. It was negotiating to acquire more of the neighboring land: however, this was difficult because that land was divided into shares and required the

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<sup>15</sup> Each land share on a particular enterprise is of equal size and represents its holder's ownership, in common with the other land share owners, of the land being used by the enterprise.

<sup>16</sup> See the laws and decrees cited in note 12. Of particular relevance for the remainder of this paragraph are articles 13–17 of the regulations, “On Reorganization of Collective and State Farms and Privatization of State Agricultural Enterprises” (approved by Resolution No. 708 of the Government of the Russian Federation, September 4, 1992).

<sup>17</sup> See Rorem and Giovarelli, *Agrarian Reform in the Russian Far East*, for further discussion.

<sup>18</sup> For Khabarovsk, see *International Market Insight Reports*, information provided by an official from the Khabarovskii krai Ministry of Agriculture. For Amurskaia oblast, see Bonetskii, interview by author.

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consent of numerous shareowners. The enterprise had undergone some reorganization in 1991, when the collective's land was converted into shares. In 1999, the enterprise rented shares from 500 people, while only 280 people actually worked on the farm. The enterprise has three-year rental contracts with the shareholders, many of whom are pensioners. Rental compensation was in kind, in the form of one ton of grain per year, as well as in various services, such as transportation and plowing of household plots. Workers were paid additional monthly wages, including advance and post-harvest payments, and received favorable purchase rates for farm produce.

This enterprise, like many throughout Russia, is slowly failing.<sup>19</sup> Workers are not paid on time, and may only be paid in-kind after harvest. Many enterprises have had their bank accounts frozen for failure to make timely payments to government budgets, which has forced those enterprises to operate almost completely through barter arrangements. In 1997, one Khabarovskii krai official estimated that perhaps 50 percent of all agricultural enterprises in the krai had their bank accounts frozen pursuant to a 1996 Presidential Decree.<sup>20</sup>

While large agricultural enterprises use the majority of the RFE's agricultural land, these enterprises generally do not own the land. Rather, it is owned in common by individual shareowners, who are permitted to dispose of their shares by permanently contributing them to the enterprise charter capital; temporarily contributing them (for use) to the enterprise; leasing them to the enterprise or to a peasant farm; or withdrawing them to create a peasant farm, add to an existing peasant farm, or to augment an existing small plot. Some 108 million hectares, or 49 percent of Russia's 222 million hectares of agricultural land, were transferred into private ownership through land shares in the early to mid-1990s.<sup>21</sup>

The majority of land share owners in the Russian Far East have been unable to formally dispose of their shares, and enterprise management continues to use them with no written agreement with the shareowner.<sup>22</sup> For example, one female pensioner interviewed in the village of Korsakovo near Khabarovsk suspected that her land was being used but did not dare to request compensation from the boss of her former collective farm. This same woman was also unable to afford the cost to ascertain the location of her land by a surveyor. Based on this and other fieldwork findings, the absence of a written agreement often signifies that lessors/land share owners are in fact receiving little if any compensation for use of their land by the enterprise.

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<sup>19</sup> The Economic Research Service of the USDA estimated in 1997 that 75 percent of former state and collective farms in Russia were unprofitable in 1995, even if all subsidies were included in revenue. "International Agriculture and Trade: Newly Independent States and the Baltics" (Washington, D.C., USDA Economic Research Service, May 1997), as cited in Rorem and Giovarelli, *Agrarian Reform in the Russian Far East*, 32.

<sup>20</sup> Presidential Decree No. 1212, "On Measures to Improve the Collection of Taxes and other Mandatory Payments and Streamlining Cash and Noncash Money Turnover" (August 18, 1996).

<sup>21</sup> Data from Russian Federation State Land Committee, 1996.

<sup>22</sup> Data from Primorskii krai (the second largest agricultural region in the RFE) gathered in 1997 shows that nearly 45 percent of all shares in this region (37,765 out of 86,021 shares) are used without consideration by agricultural enterprises. Of even greater notice, as of 1997 Primorskii krai had issued only approximately 45 percent of shares to entitled owners in the region. Rorem and Giovarelli, *Agrarian Reform in the Russian Far East*, 16, Table 5.

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## **Peasant (Farm) Enterprises**

Peasant farms occupy about six percent of Russia's agricultural land, and represent roughly six percent of all agricultural households. The relative size of the peasant farm sector in the RFE roughly mirrors that of Russia as a whole, although the average size of PFE's appears greater in the Russian Far East. In Amurskaia oblast, for example, the average size of a PFE was 148 hectares in 1999, according to official statistics. This average could be inflated and misleading, however, due to the registration of some large, former collectives as PFE's. Most PFE members interviewed were formerly collective farm members who had withdrawn their shares from the collective, often also leasing or purchasing additional land.

A consolidation trend has emerged within the peasant farm sector in the Russian Far East, as in the rest of Russia, where the amount of land owned and leased by peasant farms has increased while the number of peasant farms has decreased slightly.<sup>23</sup> This consolidation trend has been especially prominent in Amur, where the number of PFEs decreased from 2,783 in 1993 to 1,926 in 1999 (a 31 percent decrease). Peasant (farm) enterprises possessed an aggregate of 333,497 hectares of arable land (not all of which was in production) in the oblast in 1993, compared with 284,534 hectares in 1999 (a decrease of only 15 percent). The result is an increase in average farm size from 120 hectares in 1993 to 148 hectares in 1999.<sup>24</sup>

In Khabarovskii krai, however, PFE land holdings have not consolidated as they have elsewhere in Russia. The number of PFEs in the krai decreased from 1850 in 1993 to 886 in 1999 (a 52 percent decrease). Aggregate land holdings by PFEs fell from 45,451 hectares of arable land in 1993 to 18,059 hectares in 1999 (a decrease of 60 percent), signaling a slight *decrease* in average peasant farm size. One reason for this deviation from the national trend may be the high concentration of PFEs producing livestock rather than crops. Since livestock production requires less arable land mass than crop production, a consolidation of resources among fewer farms may not necessarily be reflected in consolidation of land.

On one PFE that we visited in Khabarovskii krai, the farmer had to travel some distance to his farm of 98 hectares. He began his PFE in 1992 by purchasing virgin land from the rural administration. He purchased land in parts, beginning with 30 hectares of land and gradually expanding with additional applications to the rural administration for more land. With his first 1,000 rubles of profit, the farmer purchased some machinery. The farmer was deeply discouraged by fuel prices, and feared that his farm would fail as a result. Competition with middlemen purchasing cheaper potatoes from Amur made it impossible to maintain a competitive price and still account for the additional fuel costs. The farmer raised pigs as well as growing potatoes and soy; however, he was unable to slaughter the 20 pigs he had prepared for sale because he could not afford the fuel to transport them to the market. He was also unable to afford the fuel necessary to harvest and transport his soy crop.

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<sup>23</sup> As discussed below under the section on "small plots," some of the recorded decrease in the number of peasant farms may be attributed to deregistration of smaller farms to operate as household plots rather than as PFEs. (Reasons to deregister include tax advantages and less bureaucracy.) See, for example, V. Ia. Usun, "Privatization of Land and Farm Restructuring: Ideas, Mechanisms, Results, Problems" (August 23, 1999), 6 (on file at the Rural Development Institute, Seattle).

<sup>24</sup> Data from Amurskaia oblast, State Committee on Land Resources and Land Tenure, 1999. Note that nationwide the amount of land in production by PFEs has increased.

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Reasons for reductions in numbers of peasant farms and the amount of land they control may include limited access to machinery by the smaller farms, receipt of poor quality land from the land redistribution fund (rendering small-scale, intensive farming more difficult), and a formal deregistration of many PFEs, whose owners now continue their farming activities in the informal sector. Peasant farms in the RFE that have grown in size have generally done so by leasing land from either shareowners on agricultural enterprises or from the land fund.

### **Small Plots**

Household auxiliary plots (or “small plots,” which include garden plots, household vegetable plots attached to houses in former collective villages, and household vegetable plots located in a field some distance away from the family house) constitute the most efficiently used agricultural land in the Russian Far East. Almost all interviewees obtained some significant portion of their daily subsistence food from their household plots.

The only sector in which a nearly functional land market is emerging in the RFE, and in Russia as a whole, is that of small plots, which have been “owned” in the full sense for almost seven years. The minimal capital requirements for small plot cultivation contribute to higher market demand for small plot land. The ability to transact small plots has allowed their allocation to efficient users, and has probably facilitated sustained high levels in production on these plots over the past decade. More importantly, tenure security has encouraged more hard work and investment on the land.

Household plots are larger in the RFE than in Russia as a whole, reflecting the high ratio of arable land per RFE resident. In Khabarovsk, for example, garden plots are 1,200 square meters on average, compared with 600 square meters in Moscow oblast. In Khabarovsk and in Amur, as in the rest of Russia, household plots produce a great quantity of high-value crops, such as vegetables and potatoes. In Russia, small plots represent only about three percent of all agricultural land, but account for significant percentages of total agricultural output for many crops, including potatoes (90 percent); vegetables (77 percent); meat (52 percent); milk (45 percent); and eggs (31 percent).<sup>25</sup> In Khabarovskii krai, the estimated contribution from small plots (which occupy 10,000 hectares, or only 10 percent of the cultivable land) range from 50 to 80 percent of the total production of these crops. Small plot production is also important in Amurskaia oblast, where the land committee reported that more people each year were relying on household plots for survival as production on the former collectives continued to fall and unemployment continued to rise.

Families generally use produce from small plots for household consumption, and occasionally sell surpluses at local markets. Many vendors we interviewed at the Khabarovsk central market, for example, had come to sell pork from their family pig or milk products from their family cow. Small plot vegetable growers sell potatoes, beets, carrots, and other products along the roadside not far from the central market, as the central market stalls for fruits and vegetables are taken by middlemen selling mostly imported products.

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<sup>25</sup> Russian Federation State Land Committee, *Russia in Figures, 1997*. See also Aleksey Filatov, *Private Plots Supply Over 50 Percent of Food in Russia*, ITAR-TASS, April 3, 2000. (Small plots account for 50 percent of the food consumed in Russia.)

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Many families located in villages on former collective farms receive some degree of subsidy for their small plots from the collective farm management. This often takes the form of free plowing and sometimes of reduced-cost inputs for planting. In some cases, collectives offer to plow their members' household plots as a lease payment for the use of the members' land shares. Resource transfers (both explicit and implicit) from collectives to farm members for their household plots, although of immediate benefit to small plot owners, could discourage members from withdrawing their land shares for private farming, as this would terminate the flow of resources from the collective.

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### III. ISSUES RELATED TO LAND PRIVATIZATION AND FARM RESTRUCTURING

Despite the current surplus of agricultural land in the RFE, allocation of this land continues to be an important factor in increasing productivity. This is true for three reasons. First, while much land currently goes unused, the supply of readily cultivable land that does not require a large initial investment (in leveling or clearing, for example) is more scarce. Second, land in desirable locations is also more scarce. Most potential buyers or lessees are interested only in land that adjoins parcels currently in their possession. When this land is owned by private shareowners or PFEs rather than by the land redistribution fund, the potential buyers rely on functioning lease and/or sales markets to obtain the land. Land near urban centers such as Khabarovsk and Blagoveshchensk is also highly desirable and in shorter supply than land further out. Third, and perhaps most importantly, any increases in production brought about through a future increase in the availability of credit and capital will be limited if land cannot transfer via the market to successful enterprises, and away from those unlikely to succeed even with greater access to capital.

#### Privatization and Farm Restructuring

Where collectives have been “privatized” into land shares, shareowners are often unable to exercise their rights to their shares in any meaningful way. Most collective farms have undergone a superficial restructuring at best, and continue to operate as collectives with over 5,000 hectares. Few operate efficiently, nor would they be able to operate efficiently even with more capital. Most have retained the exact dimensions and characteristics they had as collectives in the past, including size (some remain as large as 10,000 to 12,000 hectares), a large number of employees, methods of production, and decision-making. In most cases, the only difference has been a marked drop in production resulting from the ending of state subsidies. While most managers we interviewed acknowledged that workers and pensioners now own the land of the collective in the form of land shares, they rarely compensated these land share owners in any way for the continued use of their shares by the collective.

In addition, some collective farms in Khabarovskii krai have not yet restructured and have not been divided into land shares as directed by agrarian reform legislation.<sup>26</sup> According to the Khabarovsk land committee, twenty-three out of fifty-three former collective farms in the krai (representing 29,700 hectares, or about 14 percent of the total agricultural land in the krai) have been “reorganized,” but without privatizing the land and property that are supposed to be owned by the members. These twenty-three enterprises are distinct from those enterprises exempted from privatization for purposes of specialized state production. Officials explained how this reorganization without privatization might have occurred by telling us that each of these collective/state enterprises may have adopted a provision in its new enterprise charter that all land shares held by individual members would automatically be contributed to the new enterprise. This explanation is not sufficient, however, as these shares should then have been

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<sup>26</sup> See especially, “On Reorganization of Collective and State Agricultural Enterprises,” (Approved by Resolution No. 708 of the Government of the Russian Federation of September 4, 1992).

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included among the official tallies of “permanently contributed shares.” Instead, it appears that land shares were never even calculated on the twenty-three farms, depriving farm members of all rights to the land to which they were entitled.

One of the defining characteristics of agrarian reform in the RFE relative to anywhere else in Russia is the great amount of land that regional governments have retained in the land redistribution funds. In fact, the majority of agricultural land in the RFE remains unprivatized in the raion land redistribution funds. In 1999, Khabarovskii krai held 93,900 hectares of arable land in its fund, while Amurskai oblast held over 900,000 hectares of arable land. In 1999, the Amur Land Committee leased out 251,176 hectares from the fund to agricultural enterprises and only 700 hectares to peasant farmers.<sup>27</sup> The amount of land held in the land fund in both regions has increased since 1997 (in Amur by 13 percent and in Khabarovsk by 45 percent).<sup>28</sup>

It is unclear exactly how the land funds in Khabarovskii krai and Amurskaia oblast became so large. In Amur, the size of the fund may be related to the oblast land committee’s aggressive policy of land monitoring and penalties pursued in the years following reforms.<sup>29</sup> It may also be related to an oblast-wide policy limiting land shares to ten hectares each, which probably resulted in large amounts of land on some farms being unallocated “residual” land slated for the land fund; or to a depressed demand for agricultural land, which in turn is related to the economic inefficiencies of farming in the Far East given current input/output price ratios and, above all, an intense and increasing scarcity of capital.

The notably high level of land held in state control through the land funds in the RFE has important implications for the agrarian reform process. It indicates that the oblast and raion-level officials in the RFE have only partially implemented federal privatization and agrarian reform policies.<sup>30</sup> The purpose behind the funds was to redistribute land to peasant farmers, not to hold it en masse at the local or regional level. Reform-oriented legislators certainly did not anticipate that over 50 percent of the arable land would be withheld from privatization in the land funds.

Rather than allocate ownership of this land to agricultural enterprises or PFEs, regional governments have chosen to lease some of it out on five-year terms (for free or, at most, nominal rates), retaining the option to terminate the lease at the end of the term in the event of misuse or nonuse. The Amur Land Committee has shifted its policies over the last two years to encourage more land to be in production, partly by allocating land in lease (or use) to almost anyone who applies for it.<sup>31</sup> In some cases the Land Committee has allowed immigrant farmers from China, Korea, Holland, and the United States to lease land in the fund for farming.

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<sup>27</sup> Data from Amurskaia oblast State Committee on Land Resources and Land Tenure, October 1999.

<sup>28</sup> In 1997 Khabarovsk had 65,000 hectares and Amur had 779,000 hectares of arable land in their respective land funds. Ibid.

<sup>29</sup> Rorem and Giovarelli, *Agrarian Reform in the Russian Far East*, 22–30.

<sup>30</sup> For a full discussion of laws and regulations directing land fund creation and sources, see Ibid., 19–21.

<sup>31</sup> One official from the Amurskaia oblast Land Committee was aware of only three cases in the past two years in which the oblast denied applications. In each case, officials deemed that the applicant had insufficient machinery to productively farm the land.

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The strategy of Amurskaia oblast appears to be to maximize agricultural production by retaining ownership of most arable land and allocating it to supposedly efficient private users for short terms. This policy, coupled with strict management policies of land held in private ownership, appears to have comprised a regional strategy to reduce inefficient land use by private owners. This strategy leans heavily on the supremacy of central state planning in organizing efficient production.

The policy of retaining most arable land in state control is a dangerous one for several reasons. First, it assumes the state is a better regulator than the market for moving land into efficient use. However, data shows that a well-functioning market is the best way to ensure allocation of land into efficient use.<sup>32</sup> Second, the more resources retained by the raion and oblast-level governments, the more opportunity for corruption and nepotism in distributing them. Third, the government accrues administrative costs for monitoring the land, making and reviewing lease contracts, and executing penalties. (These costs could, of course, be considered advantageous from the perspective of the oblast and raion-level officials whose employment currently depends on them.) Fourth, short-term leases fail to provide the type of security of rights required by farmers to make long-term investments to boost productivity. Any government policy of strict monitoring and intervention into the nonuse of privately held land is also likely to decrease farmers' incentives to make these longer-term investments.

Finally, holding large quantities of land in state ownership, available for lease at nominal rates (quoted as anywhere between zero and five rubles per hectare per year) may ensure the availability of inexpensive land to many of those desiring to use it, but at the cost of developing a market in private transactions.<sup>33</sup> As long as large quantities of land are available for no cost, or practically no cost, land will continue to have very little, if any, commercial value. This point brings us back to the initial reasons for developing a land market, which include the creation of wealth in rural areas.<sup>34</sup> Attaching commercial value to land allows shareowners to exit the farming sector. This may be especially important for pensioners and for people wishing to migrate to urban settings. Without real land privatization and the development of a functioning land market to facilitate the movement of agricultural land from inefficient to efficient users, obsolete farms will continue to sit on large tracts of land and production will continue to stagnate. Furthermore, banks cannot accept land for collateral in the absence of a land market, impeding farmers from leveraging credit for major infrastructure improvements. Clearly, the best way to hasten the development of a functional agricultural land market in the Russian Far

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<sup>32</sup> Rorem and Giovarelli, *Agrarian Reform in the Russian Far East*

<sup>33</sup> For further discussion, see *Ibid.*, 19–20.

<sup>34</sup> Experience in other countries underlines the potential for creating wealth through rural land market development. The average price of agricultural land in the eastern region of Germany has recently been estimated at \$4,000–\$5,000 per hectare. Roy Prosterman and Leonard Rolfes, Jr., *Review of the Legal Basis for Agricultural Land Markets in Lithuania, Poland and Romania, and Implications for Accession to the EU* (report presented at the Second World Bank EU Accession Workshop, "Structural Change in the Farming Sectors of Central and Eastern Europe: Lessons and Implications for EU Accession," June 26–29, 1999, Warsaw, Poland). In the United States, non-irrigated wheat cropland is worth between \$300 and \$1200. Information from Dr. Steven Tass, University of Minnesota; and "Agricultural Land Values," United States Department of Agriculture (March 20, 2000).

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East would be to privatize the great majority of land that is currently contained in raion land redistribution funds.<sup>35</sup>

Another problem with the process of privatization is that peasant (farm) enterprises established on land-fund land in the early period of the reforms often received poor quality land. This meant that many of the “pioneer” peasant farmers, even if they may have received subsidized credit for machinery purchase (a significant advantage relative to PFEs established later in the reform period), faced an additional obstacle to survival in the ensuing years. One official in Khabarovskii krai estimated that only 70 out of 307 PFEs in one raion produce efficiently due to the poor soil quality possessed by most. Several interviewees remarked that the land they now lease is of better quality than the land received in early land-fund distributions.

In privatizing land-fund land, peasant (farm) enterprises should be given priority through (1) offering PFEs the first rights to land currently leased out to them from the land fund, and (2) assigning a preference to PFE's in auctioning the remainder of “unleased” land-fund land.

A final problem with privatization and restructuring in the RFE, as in the rest of Russia, is the inclination of large farm enterprises to impede people from withdrawing property shares in kind upon leaving to start a peasant farm. Property shares are still a largely untapped source for machinery and equipment for peasant farms, and the laws regarding property share valuation and withdrawal are largely ignored. Presently, individuals who leave agricultural enterprises continue to have great difficulty exercising their right to withdraw property in kind or receive the cash value of their property shares. Many agricultural enterprises may have a shortage of working machinery since the enterprises have not had funds to make repairs, and enterprise workers have little incentive to care for the machinery. Whether for this reason or others, the enterprises are reluctant to give property shareowners any functioning machinery or other capital assets. Nor do the enterprises have sufficient funds to redeem the property shares for cash. Moreover, property shares on the great majority of farms have not been adjusted for inflation for several years, so the denominated value of property shares is ridiculously low, sometimes being undervalued by a factor of several thousand.

## Government Regulation of Privately Held Land

The land committees in both Khabarovskii krai and Amurskaia oblast continue to monitor privately held land used by PFEs for irrational or nonuse, whether this land is leased from the land fund or owned. Punishment for irrational or nonuse by a lessee is refusal to renew the lease contract upon its expiration; punishment for irrational or nonuse by a private owner ranges from warnings to fines to outright confiscation. Although land committee personnel in both Khabarovsk and Amur strongly believe they have the legal right to enforce land use

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<sup>35</sup> It is possible that some of the agricultural land in the RFE that is not currently in production has, at best, marginal productive capacity. Oblast governments should decide whether to remove some or all of this land from agricultural production, allowing it to return to its natural state.

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regulations on farmers who hold land in ownership,<sup>36</sup> they have become increasingly reluctant to do so since the amount of land not being cultivated has increased, although one official from the Khabarovskii krai department of agriculture thought that stricter monitoring policies would increase productivity.

In our fieldwork in 1999, farmers did not appear to be concerned that the land committee might fine them or confiscate land for failure to use it properly. However, it is important to note farmers' concerns in interviews in 1997 that the land committee could fine them or withdraw their land if they did not use it in a manner that satisfied the land inspector. The threat of withdrawal affected the manner in which peasant farmers chose to expand their operations. The difference between 1997 and 1999 in perceived threat of land committee interference appears to be due to oblast/krai decisions to relax strict monitoring and penalties on private land.<sup>37</sup>

## Land Transactions

As noted, working land markets function as a powerful tool for encouraging productivity and investment among land users.

### **Lease**

A land share lease market is developing in the RFE, defined by a number of different participants and variations. The most common type of lease agreement between private actors takes place when a land share owner leases out his or her share to the agricultural enterprise (former collective farm) that occupies it. Sometimes an agricultural enterprise leases land from shareowners on a neighboring enterprise. In a few instances, peasant farmers also lease land from shareowners, usually at a higher rate than the average paid by agricultural enterprises.

Lease agreements between land share owners and large enterprises vary greatly in their terms and level of payment. In most instances, terms are for three to five years, with an option to renew at the end of the term. Terms offered by at least one former collective we encountered were much longer, however, ranging from 10 to 49 years. Payment ranged from zero to 10 percent<sup>38</sup> of the gross production and was usually in kind, offered in a combination of grain, soy, and discounts on items such as hay and coal (bought in bulk by the enterprise). Payment sometimes also included plowing the lessor's household auxiliary plot. Some farm managers also cited payment of land tax as part of their lease payment to the land share owner.

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<sup>36</sup> In fact, legal authority for some land-monitoring activities is lacking. Federal legislation includes irrational use, but not nonuse, as a violation. In fact, under the rules for fining owners, it would be irrational to include nonuse, which is equivalent to allowing the land to lay fallow for a longer period of time and should generally improve the fertility of the agricultural land. See Rorem and Giovarelli, *Agrarian Reform in the Russian Far East*, 23–30, for a detailed discussion of legislative authority for land monitoring.

<sup>37</sup> *Ibid.*

<sup>38</sup> Even a lease rate equal to 10 percent of the gross production is low relative to that in developed market economies, where lease payments for agricultural land constitute on average 25 percent of gross production.

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Many lease transactions also take place between the land fund (making the raion government the lessor) and private farms as lessees, including both former collectives and PFE's. In a few instances, peasant farmers work out informal "sublease" arrangements where one larger, wealthier farmer leases land from the land fund and smaller, neighboring farmers use part of this land for a very nominal fee paid to the primary lessee.

Where former collectives produce on only a portion of the land they possess, they generally provide lease payments for only those shareowners whose shares are located in the fields under production (if they provide lease payments at all). This is true even though a land share represents a right to common ownership of the enterprise land: if one hectare of land is cultivated, that hectare represents a minute part of everyone's land share. At a former collective in Amurskaia oblast, for example, one pensioner told us she had approached the farm management about lease payments on her land share, which the farm was currently using. The manager, who was also the chairman of the former collective, responded that if she demanded payments, he would simply stop cultivating her land and shift production to another field where shareowners did not make such demands. This response underscores the imbalance of power between the management of agricultural enterprises and former collective farm members who are now land share owners, and indicates a low level of organization among former members/ shareowners. Most importantly, this response exposes illegal activity by the enterprise management.

Further reports by land share owners at the same farm in the RFE reinforced the level of coercion employed by management in avoiding payments for use of land shares. One pensioner couple reported that their shares were located in a field the farm management was not currently cultivating. The couple approached the farm manager, asking him to lease in their shares. Management responded with an offer for a ten-year lease at 1,000 rubles (\$40.00) per year. This, said the couple, was "crazy!" The manager went on to say that he would only lease the land on these terms if and when the couple convinced the additional ten people who owned land shares in their field to lease out on the same terms.

A final problem relating to the lease market is that even when farm managers do make lease agreements, they often breach them without suffering consequences. In several cases we encountered, farm managers (of agricultural enterprises and, in one case, a peasant farm) claimed they were "unable" to pay the in-kind lease payments they had contracted to, and so did not plan on making any payments in that year. In another case, the manager of a former collective in Amurskaia oblast planned on "renegotiating" the terms of his five-year leases with shareowners after only three years. The first shareowners selected for termination of the lease agreement or reduced payment would be those who were no longer employees of the farm, and the last shareowners selected would be pensioners, he said.

### ***Inheritance***

Inheritance transactions are, and will continue to be, an essential component in transferring the lasting benefits of agrarian reforms to rural households. Of the roughly 108 million hectares, or 49 percent, of Russia's 222 million hectares of agricultural land that were transferred into private ownership through land shares in the early to mid-1990s, about 40 percent of these

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shares went to pensioners. By 2010, it is likely that rights to roughly three-quarters of these pensioner-owned land shares, representing about 32 million hectares, will have passed by inheritance to their children.

Despite the importance of inheritance as a means of transferring land rights within rural households, apparently only 158,512 “successions” (inheritances), with an average size of less than one-third hectare each, were formally registered in all of Russia in 1997.<sup>39</sup> Virtually no inheritances of land shares, which are likely the principal source of land for new and expanded family farms, are being formally documented and registered. Many collective farm managers currently attempt to restrict the inheritance of land shares, leading to additional delay, expense, and discouragement for the heir attempting to claim his or her rights to the land share or to sell or lease out those rights.

In the RFE, many heirs simply do not claim inherited land shares or plots, however. This may be because they cannot afford to pay land tax on it and, in the presence of an insecure legal framework about their rights to dispose of the land through sale or lease, they may view assuming rights to the land as a net liability. This is especially likely for heirs living in urban areas who are unable to benefit from farming the land themselves.

### ***Purchase and Sale***

As in the rest of Russia, a market in agricultural land purchase-sale has been slow to develop in the Russian Far East.<sup>40</sup> A number of factors impede the development of a market in the purchase and sale of agricultural land in the RFE. First, farmers and officials are unclear about legal rights to purchase and sell land. Current legislation does not provide a solid framework for buying and selling agricultural land and land shares. On one hand, Article 36 of the Constitution of the Russian Federation establishes a right to dispose of land, and presidential decrees clearly provide for private purchase-sale transactions in agricultural land. However, the federal legislature has not adopted a law confirming these rights; this absence of parliamentary confirmation has led many rural residents to believe these rights are not secure. The unclear legality of purchase/sale transactions depresses demand for land in two ways: people do not want to buy land for fear the transactions could be revoked at a later time; and people not want to own land because they are not certain they would be able to sell it in the future. Perceptions that it is illegal for PFEs to lease out their land also reduce the demand for land purchases and ownership.

Second, at least some shareowners believe they must go through a potentially time-consuming and difficult process to obtain approval from farm management and/or the farm’s general meeting to sell their shares. A third factor impeding the development of a land market is the high availability of land at low lease rates, which undermines a market in sales. As long as

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<sup>39</sup> Evgenia Serova, “The Impact of Privatization and Farm Restructuring in Russian Agriculture” (September 1999), 21, Table 11 (paper on file at the Rural Development Institute, Seattle, Wash.).

<sup>40</sup> The only sector in which a market in land turnovers is functioning well in the RFE is the small plots (household auxiliary plots, *dacha* plots, garden plots). A law adopted by the Russian parliament in late 1992, complemented by a regulation on how to actually carry out such sales issued in May 1993, has given potential buyers and sellers high confidence in the legality of such transactions. As mentioned above, the ability to freely transact small plots has probably contributed to their high productivity.

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people are able to lease land from the land fund at nominal rates, the demand to purchase land from private shareowners will remain low. Finally, a lack of information about buyers and sellers increases transaction costs and further impedes purchase and sale.

### ***Mortgage***

The federal law “On Mortgage” explicitly prohibits the mortgage of agricultural land.<sup>41</sup> Even if mortgage becomes legal, until a stronger agricultural land market develops in the RFE, it is unlikely that banks will engage in mortgage transactions. Meanwhile, farmers are unable to secure credit for machinery and inputs, which would foster higher productivity and thus contribute to increased land values. The majority of peasant farmers in Khabarovsk and Amur were familiar with the concept of using land for collateral, and many expressed an interest in mortgaging their land if federal law allowed. Most farmers would use credit secured through mortgage for the purchase of much-needed machinery or processing equipment.

### ***Registration***

The registration and mapping processes in Russia give rise to several issues that affect sale transactions, including delays in and costs of demarcation and registration of land plots, and broader institutional shortcomings related to the establishment of a new registration apparatus under the Ministry of Justice. The 1997 law “On Land Registration” and accompanying regulations transferred land registration functions from the Land Committee to the Ministry of Justice.<sup>42</sup> The ministry has been working to set up registration offices (known as “chambers”) in every raion in Russia. The Amurskaia oblast government, according to officials in the Land Committee and Ministry of Agriculture, has yet to implement the new chambers, with the result that the Land Committee continues to perform registration functions, as well as to manage and allocate state and privately held land. Maintaining both functions allows a consolidation of a large amount of authority within one branch of government, an outcome the new system avoids.

In Amur oblast and Khabarovsk krai, procedural requirements related to demarcation and registration may deter some land share owners from selling their plots, according to reports by pensioners and other shareowners. Anyone wishing to sell his or her land must first confirm the boundaries with the oblast/krai land committee, then register it with the land committee (or in the case of Khabarovsk, with the Ministry of Justice). The registration process costs 200 rubles (eight U.S. dollars) and takes two-three days, according to krai officials. Perceptions of the demarcation/registration process by land share owners vary from straightforward and fairly efficient to extremely onerous, expensive, and time-consuming.

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<sup>41</sup> Law of the Russian Federation, “On Mortgage” (June 24, 1997).

<sup>42</sup> Law of the Russian Federation, “On the State Registration of Rights to Immovables and Real Estate Transactions” (June 17, 1997); Resolution No. 1378 of the Government of the Russian Federation “On Measures to Realize the Federal Law on State Registration of Rights to Immovable Property and Transactions With It” (November 1, 1998).

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## **Bankruptcy**

It may be possible to use bankruptcy as a tool for transferring land and other resources from broken, inefficient agricultural enterprises to productive new or existing enterprises.<sup>43</sup> Officials in Amur have, in fact, exercised bankruptcy on roughly twenty farms. In some cases, outside buyers have purchased farm resources (often one or two of the “productive sections” of the former collective) from the state after it has carried out bankruptcy proceedings.

An important question relates to the outcome of individuals’ rights to land and property shares in the event that the state declares bankruptcy on an agricultural enterprise. According to federal legislation, land shares that have not been formally contributed to the charter capital of the agricultural enterprise belong to the individual land share owners (not the enterprise), and can be withdrawn or transferred at any point through the liquidation process in accordance with Presidential Decree No. 337. Land shares that have been contributed to an enterprise may still be withdrawn if allowed by the enterprise’s charter. In that case, however, the land to be allocated in kind may be subject to some debt, since the land was “owned” by the enterprise (subject to withdrawal rights). What has actually happened with shareowners’ rights in the twenty cases of bankruptcy in Amurskaia oblast is not clear.

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<sup>43</sup> See, for example, V. Ia. Usun, “Privatization of Land and Farm Restructuring,” 5.

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#### IV. ECONOMIC AND INSTITUTIONAL FACTORS AFFECTING IMPLEMENTATION OF AGRARIAN REFORMS

In addition to land privatization and farm reorganization, a complex set of issues related to physical capital, credit, marketing, taxes, and labor affect agrarian reform in the Russian Far East. These additional factors provide an important backdrop for understanding the climate in which agrarian reforms must take place in the Russian Far East.

##### Physical Capital

One of the primary constraints on agricultural productivity (and hence demand for agricultural land) in the Russian Far East is inadequate physical capital, including machinery, storage, seasonal production inputs, processing facilities, and public infrastructure.

##### ***Machinery***

One of the greatest cited impediments to effective land use by farmers and officials alike is a lack of adequate machinery. Particularly in the Far East, where land is in abundant supply and farms tend to be larger, the aging arsenal of farm machinery has significantly constrained growth and production. Statistics show a steady decline in agricultural machinery throughout the Russian Far East. Throughout the region, tractor supplies have decreased 47 percent and grain harvesting combines 44 percent between 1991 and 1997. Taking into account the deteriorating condition of the remaining supply, this sharp decline in machinery reduces the plowing and harvesting potential of the region by almost half.<sup>44</sup>

With the passage of time, the situation has only grown worse. The price of farm machinery and equipment across Russia rose exponentially between 1990 and 1997.<sup>45</sup> Some farmers predicted that they would only continue to farm for a short time before the inevitable breakdown of their machinery. Without access to new machinery in the near future, those farmers still able to farm at all will be forced to work smaller and smaller plots of land with fewer and fewer modern agricultural aids. In Amurskaia oblast, lack of machinery was cited as the main cause for the removal of 200,000 hectares from production between 1997 and 1999.

Most farmers have not purchased new machinery since the beginning of the land reform in 1991–92, when subsidized credit was widely available. Others had received their machines as property shares from their former collectives. This option is also largely obsolete today, as many of the most valuable machines have already been distributed among the earliest shareowners to withdraw from collective farms. What machinery remains is often decrepit and unsuited to the smaller parcels farmed by peasant (farm) enterprises. In fact, unusually large numbers of

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<sup>44</sup> Figures from V. A. Uvarov, *Agriculture of the Russian Far East: Choosing the Form of Production*, Rosseskogo Dalnego Vostoka: Khabarovsk (1998), 315.

<sup>45</sup> The deputy general director of Rosagrosnab, a company administering a government fund for the lease of machinery was quoted as saying that the cost of equipment rose as much as 20,000 times during that period. FT Asia Intelligence Wire, "Russia Farming Equipment Lease Deal Signed," *International Market Insight Reports*, August 14, 1997.

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farmers stated that they had sufficient machinery, but that it was of poor quality or unsuitable for their needs. Moreover, due to the scarcity of machinery, many agricultural enterprises, including small farmers, used tractors and combines well in excess of their recommended capacity—in some cases more than double the standard amount.

Lack of access to long-term credit prevents farmers from purchasing machinery. In 1999, rates of credit from banks could be obtained with interest rates as high as 180–200 percent, for the maximum period of one year. The fragile state of Russia's undercapitalized and institutionally unstable banks has contributed to unpredictable and often very high interest rates.<sup>46</sup> Moreover, agriculture is seen as a risky investment due to the low profitability of farms. The credit histories of small farmers further discourage loans, and mountains of paperwork hamper even the initial application process. As noted, land cannot be used as collateral under the existing moratorium on mortgages, and the practice of using the new machinery itself as collateral for loans is still uncommon and unreliable in a volatile market riddled with high inflation.

One consequence of the machinery shortage in Amurskaia oblast is increasingly intensive production of such profitable crops as soy in order to maximize use of machinery.<sup>47</sup> To grow soy over an extended period of time, it must be rotated annually with other crops. Without fertilizers, soy can be grown on only two-fifths of the land each year. Even under ideal circumstances with fertilizers, it can be grown on only one-half of a farmer's arable land. Currently, farmers often violate crop rotation norms by increasing the relative amount of land grown in soy. Overuse endangers the already fragile quality of the soil and the sustainability of production.

### **Storage**

Inadequate storage further reduces farmers' profitability. Where storage is available, farmers are able to maximize profits by storing their produce until spring, when prices are higher. Where storage is not available, however, farmers attempted to sell all their produce (at lower prices) in the autumn, leaving any surplus to spoil. In some cases, vegetable farmers without access to storage have lost up to 45 percent of their production to rot. Meat-producers also have difficulty finding storage for their fodder hay through the winter season.

Farmers living near former collectives sometimes have the option of leasing storage space from the collectives. The cost of leasing was often deemed excessive, however. The possibility of cooperation in building and sharing storage facilities, while attractive, is unrealistic for many farmers living too far apart.

Competition from Chinese farmers with adequate storage across the border further exacerbates the problem. According to reports from farmers and officials in the RFE, Chinese farmers purchased vegetables at low prices from the Russians in the autumn and sold their own

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<sup>46</sup> Robert L. Walker, *Russian Agriculture from an American Perspective* ([www.riaea.hypermart.net/book98/e02.htm](http://www.riaea.hypermart.net/book98/e02.htm)). For analysis of the banking system, see Pavel Minakir, "The Influence of the 1998 Financial Crisis on the Russian Far East's Economy," chapter 2 in this volume.

<sup>47</sup> The Amur region produces 90 percent of Russia's soy.

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produce on the Russian market at higher prices in the spring. One farmer complained that even though he managed to save his produce for the spring, the early sale of large quantities of Chinese products that spring drove down prices, reducing his profit.

### ***Seasonal Production Inputs***

A rising disparity between the high costs of inputs and the low prices of agricultural products impedes farmers' ability to make a profit. Fuel prices, for example, quadrupled between 1998 and 1999, while the prices of produce only doubled or tripled. With profits already slim, these differential increases between expenses and returns have been sufficient to seriously harm farmers. Some were unable to use their machines or harvest their entire crops because they could not afford fuel. Other farmers located far from urban areas and markets were still more hard-pressed because of the high cost of transporting their produce.

In addition to high fuel costs, high costs of fertilizers and herbicides raise farmers' production expenses. Prohibitively high prices force many farmers to abandon using these inputs altogether. Because fertilizer is both difficult to obtain and expensive, farmers often sow the soil with hay or use crop rotation to maximize production. One cause of the expense and scarcity of herbicides is that they are imported from Japan, Germany, and the United States.

Cooperation among farmers may help to reduce the cost of inputs. In Romnetskii raion in Amur, for example, the Organization of Peasant Farms and Cooperatives of Russia (AKKOR) helped to reduce the cost of inputs to peasant (farm) enterprises by purchasing large quantities of fuel from wholesale suppliers and reselling them at no profit to those enterprises. Again, one of the underlying problems is lack of available short-term credit at reasonable rates to purchase inputs. Many farmers are forced to rely on contracts with state organizations or processors at disadvantageous rates of exchange to receive the necessary inputs.

### ***Processing Facilities***

As in any economy, processing greatly increases the value and profitability of agricultural products in the Russian Far East. Without adequate capital or access to credit, however, the agricultural processing industry has grown slowly. The processing facilities that do exist appear to monopolize the sector, forwarding farmers fuel and other inputs in exchange for a promise from the farmers to deliver produce after fall harvest at prices substantially below market levels. Most farmers we interviewed complained bitterly about these future contracts with processors, saying they paid dearly in the fall for advances of fuel and fertilizer the previous spring. Many, however, said they had no other option either for obtaining seasonal credit for planting or for selling their products.

In Amurskaia oblast, for example, soy processing is dominated by several processing plants in Irkutsk, Khabarovsk, and Ussuriisk. (It is an example of lingering Soviet era inefficiency that while the oblast produces by far the most soy in the country, it has virtually no soy processing facilities.) We found one exception in Romnetskii raion, where several farmers purchased their own small-scale soy processing equipment. The AKKOR helped these farmers to obtain loans to purchase processing equipment from an agricultural bank at an interest rate of just 18 percent,

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with the AKKOR serving as the guarantor. After ensuring capacity to process their own raw soy, the equipment owners give priority to other farmers in the raion, and then to farmers from neighboring raions.

Access to foreign direct investment may be necessary for the development of the food processing sector of the RFE. This may leave processors (and indirectly farmers) vulnerable to fluctuations in the exchange rate, however. When the ruble collapsed in August 1998, some processors in the RFE realized net losses due to an increased loan repayment burden to foreign investors during a period when they could have benefited from the increased demand for domestic production created by the rapidly declining value of the ruble.<sup>48</sup>

### **Public Infrastructure**

Several farmers located in more remote areas complained of lack of road access to fields. Roads once actively used by collectives are now falling into disrepair as more and more land falls out of production. Electricity supply lines often do not reach remote “homestead” farms, and many farmers operate without reliable electricity or are forced to invest in their own power sources. One enterprising farmer had installed his own wind propeller to produce an increased amount of electricity to his remote farm.

### **Credit**

Commercial bank credit is a rare form of credit financing under current circumstances. Most farmers absolutely ruled out the option of obtaining bank loans because of interest rates ranging from 60–220 percent, even taking into account current rates of inflation. Banks, in turn, are reluctant to invest in farm enterprises. Agricultural profitability is down and collateral is of questionable value. Under any circumstances, banks take relatively high risks investing in agriculture because of the unpredictability of weather and harvesting factors.

A much more common form of credit is the “budget loan,” a state-subsidized loan from a commercial bank at a fixed low interest rate of approximately 18 percent. These can enable significant capital purchases and investments to those who qualify, although qualification (requiring solid credit history, a lengthy application procedure, and proof of sufficient collateral) may elude many farmers. Cooperative loan efforts with AKKOR-type assistance may be an effective means to overcome the stringent requirements needed for receiving state subsidized bank loans.

Another type of credit involves contracts with state organizations. In Khabarovsk, for example, the krai administration helps farmers with spring planting in return for delivery contracts with state organizations. Farmers who agree to deliver a fixed amount of their production to a state institution such as a military barracks, hospital, or public school may be eligible for these contracts. The state agrees to pay for the delivery in two parts: an initial payment for operating expenses (fuel, fertilizer, herbicide) in the spring and a second payment in cash upon delivery in

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<sup>48</sup> FT Asia Intelligence Wire, *International Market Insight Reports*, October 21, 1998, 6.

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the fall. The agreement resembles a commercial forward contract; the advantage to farmers is low interest rates for the value of the forwarded inputs.

In practice these contracts have been problematic. Most noticeably, the state repays contracts late, often one to three years after delivery. With high inflation rates, these delays cause payments to be virtually worthless. Furthermore, state payments generally consist of in kind deliveries of fuel or other inputs or repayment of old loans. Thus, if farmers need cash for any other needs, state delivery contracts are not an option.

An alternative form of credit available mainly to soy producers is future contracts with processing enterprises, as discussed above. Under these contracts, processors lend farmers in kind operating expenses (such as fuel and fertilizers) for the spring planting season and charge high interest rates that must be paid by the farmers upon delivery of their goods. Farmers who participate in these contracts (only some of which are written) receive inputs in the spring for no cash up front but, by promising to deliver a fixed amount of product to the processor/lender at a submarket price, give up the potentially higher prices for soy they could receive in the open market.

The formation of credit cooperatives may offer an alternative means for farmers in the RFE to secure credit. Although these are not common among farmers in the Far East, we did encounter one example of a successful credit cooperative in Amurskaia oblast. Membership in the cooperative consisted of 12 PFEs, one former collective, and AKKOR. Members contributed machines and cash as charter capital and collateral.

While this innovative method of credit access appears promising, it still faces considerable hurdles. The law of the Russian Federation “On Cooperatives”<sup>49</sup> is tailored to production cooperatives rather than “secondary” cooperatives (such as credit, marketing, or service cooperatives) and so applies clumsily to credit cooperatives. The paperwork is complicated and cooperatives’ income may be subject to double taxation (as income to the cooperative enterprise and to the individual members). In a period where taxes are not always collected, the threat of double-taxation may not be a significant detriment to the individual cooperative, but it will most certainly discourage the proliferation of such organizations in the future. In an attempt to address some of these gaps, a federal law on credit cooperatives that defines its legal status, goals, specific features and basic principles of operation was finally approved by the Russian government in January 2001, and was introduced in April of that same year.

## Marketing

Farmers in the Russian Far East market their products through a variety of channels, including foreign importers, domestic processors, stalls at central or local markets, and roadside trucks. Sale of agricultural production directly to consumers is a prime means of cash for farmers. Many farmers reported, however, that they could not afford the time or transport costs of selling at consumer markets. These farmers had instead reluctantly chosen to sell their goods to

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<sup>49</sup> Law of the Russian Federation “On the Consumer Cooperative System in the Russian Federation” (July 1992).

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middlemen at lower prices. Other farmers found an abundance of demand, selling their goods at the roadside or to an established round of customers.

The middleman sector in the RFE has grown over the past decade. By purchasing goods in bulk directly from farmers at lower than retail market prices, middlemen are able to profit even after deducting transport and marketing costs. Although farmers prefer to receive retail market prices for their goods, selling to a middleman saves transportation, transaction, and market costs and so presents an important alternative. Despite additional marketing choices presented by an evolving middleman sector, many farmers view middlemen as corrupt, usurious, or monopolistic. Middlemen often gain access to premium stalls in local markets that are inaccessible to farmers, and some farmers suspect collusion between market operators and middlemen. Some middlemen also import goods at lower rates from other areas, thereby creating competition for local farmers.

A dearth of processing equipment further restricts the marketing potential for farmers in the Far East, as it does throughout Russia. Farmers bear the brunt of the extra costs required to deliver soy (for example) to processors in distant regions, and lack the bargaining power to demand higher prices for their deliveries. Instead of benefiting from the apparently strong demand for soy products, farmers end up making unfavorable deals with middlemen who represent these processors in the spring when the farmers are cash vulnerable and in great need of inputs for planting.

The demand for soy products appears high. Soy farmers seemed to have no trouble selling everything they produced. Much of the demand for processed soy comes from markets overseas. Seventy percent of soy oil exports from the Russian Far East have gone to China over the past four or five years. Soy meal is largely exported to Japan. Other countries such as Holland and Israel have also imported soy from the Russian Far East.

The market for grains seems somewhat less dependable, and even the largest collectives appear to have no stable buyers, while the market for local grains is also suffering from competitively priced imports. Although some local producers briefly profited from the fall of the ruble in August 1998, importers were quick to adjust prices to remain competitive. For example, one dairy farmer in Amurskaia oblast capable of producing eighty tons of milk per day produces only five tons per day because of competition from high quality, inexpensive Swedish dairy products. Similarly, competition from U.S. chicken drumsticks had virtually wiped out profits of local poultry producers until the fall of the ruble in August 1998. For a brief period after August, Russians could not afford the U.S. chicken, and Russian poultry factories began to work in full swing again. Later, drumstick prices from the European Union dropped dramatically to compete with local prices. Officials in Amurskaia oblast thought that highly subsidized farms in EU countries could afford these competitive actions to ensure long-term demand for their products. Because Russian farmers are lacking in long-term credit, technology, storage, and subsidization, they are being driven out of the market by their more robust foreign counterparts.

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## Taxation

Many farmers cite agricultural taxes, which they claim absorb from 68–90 percent of gross receipts, as a major burden on their resources. Land share owners who were considering withdrawing their land to start a PFE feared taxes, as much for their complexity as for their actual financial burden. Support for a uniform tax appeared widespread. While former collective farms have been able to maintain accountants, smaller PFEs often negotiate the maze of financial requirements alone or with limited assistance.

The Russian tax structure is extremely complex and includes profit taxes, value-added taxes, road fund taxes, income taxes, property taxes, and land taxes.<sup>50</sup> The most significant payments required of agricultural enterprises are the compulsory deductions for extra-budgetary funds such as the pension, social security, medical insurance, and public employment funds, amounting to a total of 31.1 percent.

As a final note, tax enforcement appears inconsistent. While most farmers deemed the tax burden onerous, we interviewed several peasant farmers and managers on former collectives who had not paid their taxes for several years, raising questions of the efficiency of enforcement.

## Labor

An ineffective labor force may also impede agricultural production in the new market system in the Russian Far East. Several enterprising farmers complained that they had difficulty finding workers willing to labor more than eight hours per day in order to make a profit. Some PFEs in the Russian Far East hire Chinese laborers to supplement their work force. These seasonal workers usually work in exchange for a percentage of the crop, which they then take with them to sell in China upon their return. The Chinese workers, according to officials and farmers, are hardworking and willing to work for lower wages than Russians. They often bring with them useful techniques to maximize production. Particularly in the areas of soy and melon production, Chinese and Korean immigrant laborers have brought valuable expertise to Russian farmers. The official numbers of such immigrants are relatively few, however. In Khabarovskii krai, for example, officials reported that only 200–300 Chinese agricultural workers participated in farming in 1998.<sup>51</sup> Aside from immigration restrictions, cultural attitudes and suspicion of Chinese intentions may contribute to the relatively rare usage of this valuable labor resource.<sup>52</sup>

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<sup>50</sup> For example, one major tax for some agricultural producers is the profit tax, which amounts to 35 percent of an enterprise's gross profit less expenditures. See the Law of the Russian Federation, "On Tax on Profit of Enterprises and Organizations" (December 27, 1991, with amendments made on July 16 and December 22, 1992; on August 27, 1993; on October 27, November 11, and December 3, 1994; and on April 25, 1995).

<sup>51</sup> Interview with Sergei Egorov, Chief Specialist on Peasant (Farm) Enterprises, Khabarovskii krai Agro-Industrial Committee (October 18, 1999).

<sup>52</sup> For an evaluation of the perceived Chinese threat, see Mikhail Alexseev, "Chinese Migration in the Russian Far East: Security Threats and Incentives for Cooperation in Primorskii Krai," chapter 13 in this volume.

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Immigrant laborers do not, for the most part, have the benefits of land tenure security available to Russian farmers through ownership or long-term leases. Russian law does not provide for foreign ownership of land. Furthermore, at least some of the foreign laborers lack valid immigration documents, increasing their vulnerability to poor wages and reducing their security in crop-sharing arrangements. Pursuing a policy of leasing out land fund land to foreigners who have the means to effectively cultivate it would be one way to increase the contribution of immigrant laborers to agricultural production in the RFE.

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## V. RELATIONSHIP OF AGRARIAN REFORM TO REGIONAL SECURITY

Eight percent of the labor force of the Russian Far East currently works in agriculture, indicating an even greater percentage of people who depend on a family member's income from agricultural employment. In addition, the vast majority of households in the RFE cultivate small plots that provide a major source of food supply. Many of the people who depend on agriculture to earn their living or feed their families are living in poverty, or are struggling day-to-day to avoid descending into poverty. Reform of the agricultural sector to enable these people to make choices for themselves that will increase their production, and by corollary their household incomes, should result in a more stable population and thus a more stable region. Production increases should also benefit the RFE population living in the cities, who will have access to a larger, less expensive and more stable supply of food.

Policymakers in the Russian Far East have the power to make key changes to the legal and policy structure that would increase agricultural production—and thereby improve food security and standards of living throughout the region. The basic steps they could take might include:

- Privatizing the large stores of land currently held (mostly out of production) by the raion land funds;
- Helping owners of land shares currently being used by large agricultural enterprises to understand their land rights, and then to exercise their land rights to increase their incomes. Such exercise could be through leasing, selling, or using the land themselves in private farms. Enforcement of rights is also crucial; and
- Adopting policies encouraging foreign workers with farming expertise and access to capital to lease unused, nonprivatized land from the raion land funds.

At the federal level, lawmakers need to:

- Ensure that rights to purchase, sell, lease, and inherit agricultural land are clear, widely understood, and enforced;
- Amend the Law on Mortgage to allow for mortgage of agricultural land.

The above changes would be greatly facilitated by private capital investment, especially in machinery. Creating the proper policy environment for such investments is therefore also crucial.

Finally, when viewing the Amur River Valley, it is clear that national boundaries impose constraints on production. While the Russian side of the valley has a surplus of land and a scarcity of labor and capital, the Chinese side has a scarcity of land, a surplus of labor, and greater access to capital. While recognizing the obvious political issues, it is nevertheless possible to imagine a transformation of agricultural production in the RFE brought about by a fluid exchange of labor and capital across the Russian/Chinese border. Production could be increased, and the benefits shared by all concerned.



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