

# Staff Papers Series

Staff Paper P90-1

January 1990

LEASE CONTRACTING IN SOVIET AGRICULTURE IN 1989

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## Lease Contracting in Soviet Agriculture in 1989

Karen Brooks<sup>1</sup>

### Introduction

Lease contracting was endorsed in late 1988 and again in early 1989, but has not been widely adopted at the farm level. Concern about the poor response to lease contracting has led to new efforts to facilitate its adoption, and also to introduction of the individual proprietorship, a more radical departure from the contractual relations of traditional collectivized agriculture. Three pieces of legislation introduced in the last months of 1989 (the leasing law and draft laws on land and ownership) address potential leaseholders' and proprietors' reservations about the legal status of new forms of management. In mid December, 1989, farms that contracted out all or a portion of their assets were offered the opportunity to write off debt in the same proportion.

Support for lease contracting at the highest levels of government and the party is divided, but no one speaks publicly against it. Rather, conservatives considered to be unenthusiastic about leasing argue that state and collective farms still have high potential as productive units, and that small scale contracting should be purely voluntary, not implemented under pressure. As a purely voluntary program throughout 1989 leasing made little progress. The legislation and debt write-off at the end of the year were intended to make voluntary leasing more attractive. With marketing, pricing, and supply of inputs untouched by reform, however, leaseholders work under a sizeable handicap. The apparent inability to open marketing channels, reform prices, and deliver high

quality agricultural implements suitable for small scale production reduces incentives for agricultural workers and farm managers to take advantage of opportunities created by the new laws, both leasing and proprietorship. The hiatus in initiatives on pricing and marketing in agriculture threatens a serious loss of momentum in a sector vital for the success of the overall economic reform.

#### Incentives and Contractual Choice in Soviet Agriculture

Changes in remuneration and implicit contractual relations linking land and labor in Soviet agriculture have been central to efforts to increase productivity since the early 1960s, but they have had little success. The traditional work point system of the collective farm had, in theory, many characteristics of a team's payment regime. It was supplanted in the late 1960s and 1970s by straight wage contracts, and the team principle applied only to the bonus. In the early 1980s promotion of the collective contract was an attempt to revive the team as a unit of remuneration, but it was rejected by both managers and workers. In 1989 the lease contract, similar to an individual or team share tenancy, was introduced, but it, too, has failed so far to supplant the straight wage contracts. The individual proprietorship makes the proprietor residual claimant of net earnings, and is inconsistent with retention of straight wage contracts. The effort to change organization at the farm level throughout 1989 was thus a new stage in the attempt begun in the early 1980s to switch large numbers of workers off straight wage contracts to alternative forms of remuneration.

The effort raises two questions: 1) What is wrong with straight wage

contracts in Soviet agriculture?; and 2) Why, once in place, are they so difficult to supplant? A full answer draws on two separate but linked bodies of economic literature, the theory of incentives and organizational structure and that of contractual choice, and will not be attempted here.

Theoretical analysis of incentives in collectivized agriculture has usually employed two assumptions that limit its practical applicability to Soviet agriculture: the assumption that the team principle applies, and that an individual's contribution can be monitored without cost. Throughout the 1970s and 1980s Soviet agricultural workers have been on straight wage contracts with a high degree of job security and high costs of monitoring an individual's performance. Justin Yifu Lin has developed a model of a team with costly monitoring, in which the incentive to shirk is offset by the team's collective willingness to invest in an optimal degree of monitoring (Lin, 1988). In the Soviet Union the dropping of the team principle and contemporaneous softening of the manager's budget constraint (through expansion of cheap credit and direct grants) removed the incentive for any monitoring of individual performance at all. Shirking increased, not only for labor, but for all inputs.

The literature on contractual choice helps explain why workers and managers separately would reject particular alternatives to the status quo, a contractual regime that offers relatively high returns with low risk, funded by the state budget and the banking system. Considerations of risk, return, interlinkage of factor markets, and imperfections in product markets define the set of alternatives that will be preferred to the current contractual regime (see, for example, Stiglitz, 1974, and Bardhan, 1989).

Lease Contracts: (arendnye kontrakty or podriady)

Under the contracts an individual or small group agrees to manage assets belonging to a state or collective farm or individual proprietor in exchange for a rental payment. Lease contract groups are small, self-selected, and members are often related. The lessees do not receive a guaranteed wage, and instead earn residual profits according to the stipulations of the contract.<sup>2</sup> In the past state or collective farms have been the lessors, but if the draft land law is passed, an individual proprietor could also lease out land.

There are two main forms of the lease contract as it is now being promoted. The first is called the targeted form. It is the more common and it binds producers quite closely to the parent farm. Targeted leases can be simply repackaged traditional labor contracts or genuinely new contractual relations, depending on the terms. A family, individual, or small group contracts to manage a portion of the farm's assets, including land, machinery, animals, and structures. All inputs and output are marketed through the parent farm. The contract specifies quantities of inputs that will be available and their prices, and sets a target quantity of output that should be delivered to the farm in fulfillment of the contract. The mechanism for collecting the rent is a difference between the price the lessee receives for output and the price at which the farm resells output to the state procurement organizations.

If the contracted minimal sale is enforced, this becomes a combination of fixed rent and share contract. The fixed rent is the difference between the contractual price and procurement price times the specified

minimal delivery. Earnings on deliveries above the contracted minimum are shared, with the share determined by the ratio between the contractual and procurement prices. It is not likely that minimal deliveries can be enforced, and the targeted lease contract is best considered a share contract with threat of revocation in the following period if deliveries fall below the minimum. Another form of share contract is based on share of profit, not share of crop.

Targeted leases are intended now to be the main form of leasing. They allow the farm manager to specify the product mix and regulate the behavior of the lessee by threatening to withhold delivery of needed inputs. As long as farm managers are themselves still subject to state orders and sales quotas, they prefer targeted leases that allow them to retain control over the product mix and input distribution.

The second form of lease is the free contract, which is essentially a fixed rent contract. This is considered suitable for land and assets for which the manager of the parent farm has little alternative use. Small livestock operations in the nonblack soil zone far from the central farm, or orchard, vegetable, and flower operations that are too labor intensive for the parent farm to manage effectively are offered on fixed rent leases. Lessees under free leases market their own output, although they may market through the parent farm if both sides agree. They also can have their own accounts in the bank.

Data on adoption of lease contracting are scarce and unreliable. There appears to be no mechanism in place to monitor implementation or distinguish new contractual forms from old. Fragmentary data corroborate the anecdotal evidence that few people are signing leases. As of mid

1989 in the Russian republic, 43% of collective and state farms reported that they had signed at least one contract, and only 9% of agricultural workers were working under leases, some of which were undoubtedly not true leaseholds (Boev, 1989, p.8).

The observation that lease contracting is moving slowly has become generally accepted, and several reasons are often cited:

1) Farm managers do not want to give up control over their assets; 2) potential lessees do not like to be completely dependent on the farm manager for supply of inputs and marketing of output; 3) Potential lessees take on greater risk in exchange for expected returns that may not exceed the guaranteed wage; 4) Even if they earn more the increasing disequilibrium on consumer markets limits the value of their earnings; 5) The current pricing and marketing system discriminates against quasi-independent operators; and 6) Leases do not provide security of tenure even if they are written for as long as 50 years.

This is a formidable list and seems quite adequate to explain the failure of the program so far. Yet there is another side to this failure. Financial discipline has not yet hardened the budget constraint that farm managers face. They are not yet forced by economic measures rather than political campaigns to make better use of their resources, particularly labor and land. Workers continue to draw secure and relatively high wages even though farms cannot afford to pay them out of their own productivity. Wages for employees of collective farms went up 8% in 1989 compared to 1988 (Sel'skaia zhizn', 10/29/89). This is slightly less than the average increase in non-agricultural wages (9%), but it exceeds increase in productivity. Many industrial enterprises



funded excessive wage increases by using their new powers to raise prices, but most farms do not have those powers. When the farm cannot pay its bills, it applies for a special price premium or takes out another loan. The cost of fixed wage contracts with annual escalators shows up either in the state budget or in the accounts of the banking system.

The direct subsidy to pay the difference between costs to procure, process, and transport food and low retail prices in 1989 was 87.8 billion rubles, and is budgeted to grow in 1990 to 95.7 billion (EG No. 40, October, 1989, p. 11). The budgeted amount for 1990 represents a 30% increase since 1987. The large and growing food subsidy is a major contributor to macroeconomic imbalance and the budget deficit, earlier reported as 120 billion rubles but recently revised to 92 billion (EG No. 40, October, 1989, p. 9). Three quarters of the agricultural subsidy pays for meat and milk (Semenov, 1987, p. 35).

The subsidy does not include farm indebtedness unless bad debts are written off the bank accounts and transferred to the budget. When the Food Program of 1982 went into effect in 1983, 9.7 billion rubles of bad debts were written off, and 11.1 billion rubles rescheduled for repayment to begin in 1991. Farm debt increased by ten billion rubles after the price increases of 1983, and additional debt was rescheduled in 1987. In 1987 collective and state farms held 34% of the total bank indebtedness, compared to 15% in 1970 (Narodnoe khoziaistvo sssr, 1987, p. 595.) In 1988 72 billion rubles constituting approximately half of total farm debt was rescheduled.

Gorbachev indicated in his speech to the March Plenum in 1989 that farm debt would not be written off because the budget could not absorb it. In

December, 1989, however, a massive (73.5 billion rubles) new debt write-off was announced. Farms that received fall-out from Chernobyl and those being reorganized as agrarian subsidiaries of industrial enterprises will be automatically released from all debt. Other farms that offer a portion of their assets on lease can write off the same proportion of debt.<sup>3</sup> Much of the money loaned to farms has been used to cover payrolls, and its inflationary impact has already been absorbed. A wholesale write-off of farm debt without genuine restructuring of asset management at the farm level, however, would fuel a new cycle of inflationary indebtedness. It is not yet clear that targeted leasing, even if widely adopted, will provide the needed financial discipline and restructuring.

The financial problems of the agricultural sector at the farm level and the macro level are directly related to the failure of repeated attempts to reform the wage system. It is unlikely that farms will participate in the internal reorganizations necessary to bring down costs of production and increase productivity as long as they can pass high costs on to the budget or the banking system. According to the latest published timetable for the reform, "toward the end of 1991 bankrupt collective and state farms will be reorganized as individual farms, cooperatives, etc." (EG, No. 43, 1989, p. 7). The new debt write-off calls this timetable into question, since bankrupt farms will be harder to recognize once shorn of their debt.

#### Terms of Contracts

The contractual process under current conditions inhibits the spread of lease contracting. Managers are under little pressure to sign contracts,

and face no competition from neighboring farms in retaining their best workers. Productive workers have most to gain from leasing. The farm manager may, however, drive a much harder bargain with them than with shirkers whom he would like to get off the payroll, but who are reluctant to leave.

Productive workers cannot in practice negotiate with the manager of a neighboring farm unless they are willing to forfeit their homes and investment in household plots. Owner occupied housing and household plots are important assets for many rural families, and their disposition under leasing or individual proprietorship has not been clearly addressed. In the past a family retained the right to occupy an owned home and farm a household plot only if a family member was a current or retired employee of the farm. If the family severed relations with the farm, the household plot was usually reassigned and the house sold or abandoned. Leaseholders or individual proprietors might want to quit their employment with the farm but retain housing and the household plot. If they do not have the right to do so, some will opt for targeted intra-farm leaseholds simply to keep their housing.

As long as the lessee and lessor are expected to negotiate contracts in the absence of competitive markets, the process will be one of bilateral monopoly, with most of the power on the side of the farm manager. There are no systematic reported data yet on terms of leases, but reports from the agricultural press suggest that farms are exacting high rental fees from leaseholders. In an example reported from Tselinograd oblast', a leaseholding brigade sold wheat to the parent farm for 7 rubles per centner, and the farm resold it to the procurement agency for 13

(Sel'skaia zhizn', 29 January, 1988). It is unclear from the account who paid for seed, fuel, fertilizer, and other purchased inputs, but these are usually paid in full by the lessee. The leaseholder's share (54%) in this case seems quite low if it includes both labor and purchased inputs, but high if it is only labor. Another set of contractual prices reported from Orlovskaiia oblast' is also quite low:

Table 1

Contract Prices and State Procurement Prices

(Vyshne-Ol'shanskii State Farm, Orlov Oblast', 1988)

	Contract Price	Procurement Price
grain	5.89 rub/cent	10.50 (wheat) <sup>1</sup>
sugar beets	2.75 rub/cent	5.40 <sup>2</sup>
potatoes	8.28 rub/cent	10 - 16 <sup>3</sup>
milk in winter	28.00 rub/cent	36.20 <sup>4</sup>
milk in summer	18.00 rub/cent	

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1. This is the average price for the RSFSR. The zonal price for Orlovskaiia oblast' may be lower, but not less than 9 rubles 70 kopecks. The price for this individual farm may differ from the zonal price. Rye is also grown in Orlov province. The state procurement price for rye on average in the RSFSR is 15 rubles per centner.

2. Average for the RSFSR

3. Depending on quality and time of delivery

4. Average, RSFSR, all seasons

Sources: Selskaia zhizn', August 2, 1988, and A. M. Chursin, Tseny i kachestvo sel'skokhoziaistvennoi produktsii (Moscow: Kolos, 1984).

These contract prices are very low, and suggest a share of at least 40% for the parent farm, although the full parameters of the contract are not reported. The share is probably even higher, since bonus payments

raise farm prices above base procurement prices.

Concern about the level of rental payments has had two consequences. The leasing law and the draft law on land both assign the rural Council of People's Deputies the power to secure a land allotment (either leasehold or proprietorship) for any applicant qualified to work it. Workers dissatisfied with terms offered by their farm manager can apply to the Council of People's Deputies, but the extent to which the Council will be able to offset the manager's monopoly power has not yet been tested.

There is a growing demand for standard procedures for valuing contracted assets, particularly land. One set of guidelines issued in spring of 1988 by the All Union Scientific Research Institute for Agricultural Economics in Moscow calls for fixed rent payment for land or animals equal to planned or accounting profit (pribyl') for the asset in the use specified by contract (Rekomendatsii, 1988). This procedure requires a higher level of performance for the leaseholder than for the parent farm, since actual profit often falls short of planned profit. It also makes rental rates very sensitive to distortions in the price system and provides no linkage to land quality.

A subsequent set of guidelines issued in late 1989 by the same institute is seriously flawed (Boev, 1989, p. 60). Negotiants are directed to take the net present value of the actual (not planned) average profit stream at an 8% discount rate to find a monetary value of a hectare of land. The monetary value is then augmented by the foregone earnings of the cash value of land over the duration of the lease (25 years) at the current rate of bank interest (.5% annually). The resulting sum is to be divided by the duration of the lease to find an annual rental rate.

This odd procedure leads to the recommendation that short term lessees pay more annually for the land than long term leaseholders.<sup>4</sup> The double counting of net present value, first over an infinite horizon at 8% and then over a 25 year horizon at .5%, does relatively little harm because the bank rate is so low. If it were more realistically related to the current inflation rate, the rental rate of land according to this methodology would far exceed what an agricultural producer might expect to earn from it under reasonable management.

The procedure is further flawed because it is based on profit, which includes returns to factors other than land, as well as distortions in the price system. Workers on poorly managed farms would pay less for land of comparable quality than would those on better managed farms. This is perhaps consistent with the effort to switch the financially weak farms over to full scale leasing, but a methodology based on marginal returns to land of comparable quality would be economically more justified. In most parts of the Soviet Union land quality has not been measured adequately to serve as a basis for setting user fees. The draft land law calls for a full land cadastre throughout the country to be carried out by the Council of Ministers of the USSR.

The leasing movement, sanctioned with enthusiasm in 1988 and endorsed again with fanfare at the March plenum on agriculture in 1989, appears now to have lost momentum. Expectations for voluntary leasing may have been too high initially, anyway. The Hungarian experience suggests that even when offered the opportunity to take out leases, many people on reasonably managed collective farms choose to retain the security of their farm employment, and enlarge their private plots or subsidiary holdings

(Szelenyi, 1988).

This hybrid blend of collective and private organization may not be viable in the long run, since costs of production on Hungarian collective farms remain high, and the ability of the state budget to absorb them is conditioned on the health of the macroeconomy. Yet it has apparent appeal to agricultural workers in an economic environment inhospitable to independent operators. The possibility of combining wage work and a leasehold or individual proprietorship has received little attention in Soviet discussions, but families may achieve it by allocating effort internally and regulating the size of the leasehold.

Few would argue that leasing should be mandatory or forced. Yet if it is to remain voluntary and have a chance of success, the parameters within which voluntary decisions are made must be changed. An important change would be imposition of fees for all users of agricultural land, not just leaseholders. Throughout 1989 leaseholders were expected to pay a rental fee to the parent farm for land that the farm received free of charge. The farm manager could collect returns to land either indirectly as producer rents or directly as rental payments from a leasehold. Underutilized land had an opportunity cost (foregone earnings from potential rental payments in excess of producer rents), but no direct cost. Furthermore, the opportunity costs may have been low if there was little known demand for leaseholds. If the farm manager and the lessee faced the same user fees for land, managers concerned about cash flow would actively seek lessees for underutilized land.

According to the draft land law, all users will pay for land, but the timetable for implementation of universal user fees is unclear. Fees will

probably follow completion of the land cadastre, and in the meantime lessees and individual proprietors will be pay fees that state and collective farms do not.

#### The Legal Foundation for Leasing and Proprietorship

Three pieces of new legislation bear directly on leasing and more generally on property relations in agriculture. The Basic Law of The USSR and Union Republics on Leasing was issued in draft form in September, formally passed on November 23, 1989, and took effect January 1, 1990 (EG, No. 49, December, 1989, pp. 14-15). The draft version of the law on ownership was issued November 14, 1989 (EG No. 48, November, 1989, pp. 9-10). The draft version of the new land law was published on December 6 (Izvestia, December 6, 1989). These pieces of legislation strengthen the legal foundation for property relations that deviate from those of traditional collectivized agriculture. They contain ambiguities and contradictions, however.

Many of the ambiguities relate to the status of land ownership. The ideological constraints on property relations involving land appear to be greater than those relating to other factors of production. For example, the draft property law allows individual ownership of means of production except land. The law on leasing sanctions leaseholders' (but not proprietors') use of hired agricultural labor. Each of these is a significant departure from past ideological prohibitions. Yet land remains in a special category. Each piece of legislation distinguishes between proprietorship of land (vladenie) and ownership (sobstvennost'). A proprietor cannot buy, sell, or mortgage the asset, while an owner has



full rights of disposition, including sale and mortgage.

Individual proprietorship of agricultural land is sanctioned in each of the three pieces of legislation, and full private ownership with rights to purchase and sale is prohibited. (As a proposed exception full private ownership of limited quantities of land for homes and dachas would be allowed (Draft Land Law, addendum, article 5). This land could be bought and sold, but agricultural land could not.) Individual agricultural producers, small groups, or families would be granted lifetime inheritable proprietorships or long term leaseholds with user fees determined by the rural Council of People's Deputies. State and collective farms that stay in business would have rights of use but not proprietorship of their land and would pay user fees.

The legal assignment of land ownership promises to fuel rather than quiet controversy over the issue. There are four general categories of ownership of all property: by citizens, collectives, the state, and foreign entities. According to the draft law on ownership, land can be owned, and is included under state ownership. It is said, however, to belong not to the state, but to "the people (narod) living on a given territory, to Soviet people as a whole" (Part IV, article 23). The draft land law states that land is the property of "the people living on a given territory" with no mention either of the state or the Soviet people as a whole. Whether land is owned by the Soviet people, the people of the republics, or a lower territorial designation is unclear. An alternative version of the draft law on property proposed by the Supreme Soviet of Lithuania calls for land ownership by the republics (EG, No. 48, November, 1989).

In comments on the draft land law, A. M. Emel'ianov, a member of the committee that drafted it, states that the committee rejected ownership of land by the national or republican governments in favor of ownership by the "people." Another commentator, People's Deputy and head of the subcommittee on new economic legislation, A. A. Sobchak, states that according to the draft land law, land remains in state ownership, and land users pay rent to the owner (Sel'skaia zhizn', October 26, 1989). Sobchak expressed the expectation that large numbers of proprietors or leaseholders could be on their land already in spring of 1990.

The law on leasing covers leasing in all sectors of the economy. The owner of resources has the right to lease them. State enterprises can lease physical assets that they control, but do not own. Land is in a special category, and can be leased in two ways. A potential leaseholder can seek an "intra-farm leasehold" by negotiating directly with the manager of the state or collective farm that holds the land and employs him or her. Alternatively, he or she can apply to the Council of People's Deputies, in which case the Council can seize an allotment of state or collective farm land and reassign it to the lessee. The Council then becomes the lessor of the land. Subleasing is permitted with restrictions (Part I, article 7).

The law states that the "corresponding [sootvetstvuiushchie]" Council of People's Deputies will have jurisdiction over division of land, but does not specify which council, whether village, district, or higher level. The land law is also vague in its reference to "corresponding" councils. In his commentary on the draft land law, A. M. Emel'ianov states that village councils are to apportion land (Sel'skaia zhizn',

October 28, 1989). The village councils were chosen in an effort to dilute the state and collective farm manager's monopoly power in questions of land disposition. Emel'ianov's commentary appears to be stronger than the language of the law, however. The draft law on ownership states that district and city, not rural, Councils of People's Deputies will distribute land for agricultural use, including leaseholds (Part IV, article 3).

The three pieces of legislation thus have conflicting language on who will distribute the land. They furthermore say little about how land will be distributed, other than to note that laws at the level of the republic and autonomous region will govern procedures for confiscation of state and collective farm land for reassignment to individual proprietors and leaseholders. The rural Council of People's Deputies appears to have power, at least in the area of proprietorships, but there may be confusion regarding overlapping jurisdictions and appeal to higher territorial Councils. The ambiguity is greatest with regard to leasing, when the parent farm will retain use rights. It is unlikely that a lease could be imposed upon an unwilling state or collective farm if the lessee would be dependent on that same farm for purchased inputs, services, and marketing.

Despite their ambiguity, the laws alter the purely voluntaristic nature of leasing and proprietorship. Farm managers will no longer be able unilaterally to thwart the desire of workers to have access to land under new contractual relations. Implementation of the laws and testing of new property relations promises to be contentious.

The leasing law clearly states that the output of leased property belongs to the lessee (Part I article 9). Leaseholders have expressed

concerns that without ownership of their assets they could not defend ownership of the product, and the courts have on at least one reported instance confirmed their fears. A state farm repossessed fattened cattle from a leaseholder without contracted compensation, and the court found in the farm's favor (Sel'skaia zhizn', October 14, 1989). The two issues in the case concerned the leaseholder's right to ownership of a non-land asset (the cattle) and to the product of leased assets (weight gain). The law on leasing states that the leaseholder owns the product outright, and can purchase leased assets (except land) through negotiation with the farm manager.

The draft land law, however, states that the proprietor (zemlevladel'ets) of land has ownership (sobstvennost') of crops and structures on his or her land. The proprietor may lease out land, but according to a strict reading of the draft land law, it appears that the proprietor retains ownership of crops even on leased land. The law on ownership states that the leaseholder has full ownership of the produce of leased assets, and that all leased assets except land may be individually purchased by the leaseholder.

The three pieces of legislation together provide a legal framework for expansion of small holding, both through leasing and independent proprietorship. The mechanism for redistributing land is not clear and the methodology for valuation has not yet been chosen. Prohibitions on the purchase and sale of land will be costly if retained in the long run, but may be useful now. Disequilibrium in the asset market would rapidly drive land prices up if land could be bought and sold now, and would defeat the effort to allow a class of "proprietor-operators" to emerge.

In July, 1989, Lithuania passed a law legalizing private proprietorship of up to 50 hectares of land if it is used as a family farm (Pravda Litvy, July 9, 1989). The land cannot be sold or mortgaged and cannot be rented, although the term for rent (vnaem) is different from the term used for lease (arenda). Farmers who want to start a family farm with land owned by their family prior to collectivization (or other land) apply to the executive committee of the local council of people's deputies. A local commission set up by the Council of Ministers of Lithuania takes the application, surveys and values the land, and oversees the transfer.

#### Lease Contracts and the Collective Contract

The precursor to the lease contract was the collective contract. As late as fall of 1987 the collective contract brigade was hailed in the Soviet agricultural press as the most progressive form of organization of agricultural labor. Yet by mid in 1988 the collective contract had been eclipsed by its successor, the lease [arendnyi] contract, and exposed as a transitional, ineffective, and unpopular form.

Collective contracts began to appear in significant numbers in the early 1980s, and the campaign was increasingly associated with Gorbachev personally.<sup>5</sup> In his address to the Party Plenum in July, 1988, Gorbachev noted that since 1983 he had made a major effort to promote the collective contract in various forms. Under the collective contract, a group of workers negotiated with the farm management to perform a set of tasks in exchange for a specified payment. The group monitored the performance of its members and divided earnings accordingly.

The contracts included elaborate restatements of labor norms and bonus payments for specific tasks. Brigades were encouraged to implement monitoring and accounting schemes using the "coefficient of labor participation [KTU]" to apportion the new bonus among themselves. This was essentially the work point system of the pre-Brezhnev era, and workers who violated discipline could be docked points in the final division of earnings. The collective contract as originally conceived was consistent with the effort to instill tighter labor discipline. Since the pay of each brigade member depended at least in part on the performance of the team, tolerance for widespread shirking and lax discipline was expected to diminish.

Alchian and Demsetz argue in their classic article on the nature of the firm that monitoring labor performance is costly, and that a monitor has incentive to do the job only if he or she is residual claimant to earnings net of payments to other inputs (Alchian and Demsetz, 1972.) The collective contract system shifted the monitoring function to brigade members and made them residual claimants of income. It also imposed upon them a form of organization that had high costs of monitoring and accounting. Use of the new work point system was cumbersome and tied brigade members to the old norms for job performance. Many of the original brigades were large; the average in reported data is 25, but many were larger still. Membership was diverse and not self-selected. The work point system with a heterogeneous work force was cumbersome and costly to administer. Few brigades bothered to use the work point system, and distributed bonuses in proportion to base pay, as they had under the old system. By 1987 the use of the work point system was rarely praised

or even mentioned.

The collective contract brought higher, not lower costs of production. The director of a state farm in Orlovskaiia oblast' reported that the farm's yields increased significantly with adoption of the collective contract, but so did costs of production: "Contract collectives tried to increase output at any price, and did not take costs into account" (Sel'skaia zhizn', August 2, 1988). Costs rose in part because workers negotiated wage increases as a price for monitoring themselves. The base tariff wage became the advance payment for workers on collective contract brigades, and payment according to output functioned much as the bonus under the old system. Higher wages coupled with poor control over purchased inputs pushed costs of production up. The collective contract thus not only failed to ameliorate the existing financial crisis in agriculture, but worsened it.

The collective contract brigade was an unstable organization. Between 1985 and 1987 there were many reports of brigades dissolving and reconstituting themselves in what amounted to a search for lower monitoring costs. Brigades reported as successful in the press were increasingly small brigades, although the official aggregate data do not show much diminution. This is probably because the aggregate data include the wholesale rechristening of large traditional brigades as collective contract brigades, and the simultaneous breakup of older collective contract brigades into smaller self-selected and family units.

The weak agricultural program prior to 1988 put additional and unrealistic expectations on gains to be realized from the collective contract. When asked at the 1987 Joint Soviet Economy Roundtable "Why

not take agriculture first, instead of starting with industry--the hardest sector of all?," Abel Aganbegyan responded, "We did start first with agriculture by establishing Gosagroprom and encouraging introduction of the collective contract" (Aganbegyan, 1987).

Despite glasnost', mounting evidence that the collective contract was not working surfaced only when the deteriorating financial crisis in agriculture in late 1987 forced a reevaluation of agricultural policy (Brooks, 1988). Profiles of successful arendatory replaced those of the collective contract brigades, and many brigades reconstituted themselves under new lease contracts.

The proportion of the work force working under collective contracts continued to increase as individuals and farms still on the wage system switched over to collective contracts. Even while the numbers went up, however, disenchantment with the collective contract and its results was openly expressed. At the March Plenum (1989), Gorbachev reaffirmed his commitment to the collective contract, but observed, "Experience has shown that there are more radical forms of management now based on long term leasing of land and other means of production with full financial independence" (Sel'skaia zhizn', July 30, 1988, p. 2). He went on to advocate lease contracts of 25 or even 50 year duration.

Gorbachev and other leaders stress the financial autonomy and responsibility of the tenant, and by implication underscore the failure of the collective contract to bring the desired cost savings. N. I. Ryzhkov commented on the Law on Cooperatives in May of 1988, "After all, the state is not responsible for the activities of any form of cooperative" (Ekonomicheskaja gazeta, No. 21, May 1988, p. 10). The same is true for a



leaseholder working under contract.

Lin's model of a team with costly monitoring of individual effort can be used to explain the failure of the collective contract (Lin, 1988). The team principle was used only for a portion of earnings amounting usually to about 20%; collective contract remuneration was linked closely to the wage tariff. It did not pay for workers to assume monitoring costs for such a small portion of pay, and the continued soft budget constraint provided little incentive to impose monitoring.

#### Straight Wage Contracts Prove Resilient if Inefficient

Khrushchev monetized agricultural earnings by raising wages on state farms and increasing the value of the work point on collective farms. In 1966 Brezhnev directed collective farms to abandon the work point system and begin paying workers according to the wage scale of state farms (Johnson and Brooks, 1983; Wadekin, 1989). With this the entire agricultural work force became hired laborers on straight wage contracts with a high degree of job security.

The wage contracts and soft budget constraints at the farm level contributed to escalating costs of production during the 1970s, growing farm debt, and an increasing burden of direct subsidy to the sector. Workers and farm managers rejected the collective contract by adopting it fully and transforming its substance to the old straight wage contract with higher wage levels. Lease contracting may suffer the same fate unless financial discipline is imposed and wages are limited to what the farms can afford to pay under a rational pricing system. The new debt write-off program says remarkably little about financial discipline.

Changes in marketing, credit, input supply, and access of rural people to consumer goods are needed before opportunities to work more efficiently and independently will appeal to many workers.

The likelihood that this kind of sweeping change can be designed and implemented from the center now appears low. The current emphasis on regional autonomy suggests that republics will be encouraged to draft their own agricultural policies. This presents an unprecedented opportunity for republics such as the Baltics to try their own agricultural reforms. It also presents the danger that each region will strive for regional self-sufficiency with resulting reduction of comparative advantage and gains from interregional domestic trade.

## ENDNOTES

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2. Workers on genuine lease contracts would not receive guaranteed wages, but many targeted lease contracts may be written with implicit guaranteed wages. Targeted leases appear to be rather easily subverted into straight wage contracts, and heavy reliance on targeted leasing may replicate the fiasco with the collective contract. Furthermore, both targeted and free leases usually contain clauses releasing the lessee from contractual obligations if events "outside his control" reduce yields. These clauses could easily be interpreted to support guaranteed wages as minimal remuneration for workers.
3. This could be an invitation for widespread adoption of fictitious leases. Unless the debt write-off is coupled with financial discipline it will lead to another build-up of debt to cover current expenses.
4. If it is feared that leaseholders will mine the fertility of the soil, then short term lessees should pay more than long term leaseholders, if the long term leases are binding on both parties. This line of reasoning, however, is not behind the recommended rates. Furthermore, if deterioration in soil quality is feared, it should be addressed by policy instruments other than differentiated rental rates.
5. Analysis of the collective contract in agriculture and the optimistic assessment in 1987 of its potential by Soviet commentators and some foreign observers or can be seen in V.P. Gagnon, Jr., "Gorbachev and the Collective Contract Brigade," Soviet Studies, Vol. XXXIX, January, 1987, pp. 1-23.

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