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Land Reform and Private Farms in Georgia: 1996 Status

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Preface

EC4NR is engaged in a process of updating the current developments in land reform and farm restructuring in the region. The process is conducted under the management of Csaba Csaki, and the final status report to be published in the fall of 1996 will be based on farm surveys from four countries — Armenia, Georgia, Moldova, and Ukraine. The present publication is a component of the final report. It describes and analyzes the detailed results of a survey of farm households conducted in Georgia in April-May 1996. Detailed data on Georgian private farms, presenting the full richness of survey findings, are published in order to provide the World Bank and the Government of Georgia with unique information relevant for policy making and to support lending operations.

The survey was conceived and designed as a joint effort of the Government of Georgia and the World Bank (EC4NR). The survey was implemented through the World Bank Project Preparation Unit in Tbilisi with the participation of Messrs. George Maglakelidze, Iveri Melashvili, and David Labadze. The field work was organized and managed by a team of Georgian experts affiliated with the State Committee for Statistics, under the leadership of Messrs. Iosif Gogodze and Zurab Kirvalidze. The survey instruments were prepared by local experts, based on specimens from previous World Bank farm surveys in other countries of the FSU. On behalf of the World Bank, Karen Brooks, Csaba Csaki, and Zvi Lerman provided methodological advice and professional support; Amnon Golan and Iain Shuker were responsible for administrative coordination with the Government of Georgia. The survey was managed by Zvi Lerman, who also analyzed the data and wrote this report.

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Summary and Conclusions

A survey of farm households was conducted in Georgia in April-May 1996. Encompassing 2,000 "private landowners" in four districts around Tbilisi, the survey is a source of unique information about Georgian private farms in the post-independence period. This information is particularly valuable in view of the almost total collapse of Georgian agricultural statistics and the inadequacy of the traditional statistical system for the new environment. The main findings of the survey are summarized in this section.

- *Georgian Agriculture: Inactive Large Farms and Active Smallholders*
  Half the cultivated land in Georgia has been distributed to rural households. The remaining land is registered to former collective and state farms, most of which are not active. Georgian agriculture today is thus an agriculture of smallholders. A typical farmer owns 0.75 ha of land, although a small proportion of farmers lease additional land from the state reserve and cultivate plots of 5-10 ha. Georgian farms rely on family labor, operating with 2-3 workers on average. Household members work mainly part-time on the farm, augmenting the family income with off-farm employment in non-agricultural enterprises and services. Therefore, while farm production is an important source of household income, fully 60% of farms derive more than half their total income from off-farm sources.

- *Combining Subsistence Farming with Commercial Sales*
  The farms are too small to specialize. These are generally mixed farms, producing crops and animal products in virtually equal proportions. The main crop products are corn, wheat, legumes, potatoes, vegetables, fruits, and grapes, with most farms growing from 2 to 5 different varieties of crops. An average household has two cows and a dozen chickens, so that milk and eggs are produced by most farms. Meat is much less widespread among Georgian farms. Although farm products are largely used for family consumption, a substantial proportion of the farm output (30%-40% depending on the product) is sold commercially. Georgia clearly has not retreated back to subsistence agriculture since independence.

- *Emergence of Private Sales Channels and Difficulties with Transport*
  The farmers sell directly to the consumers in the local markets, and the traditional marketing channels are no longer of any importance for private agriculture. Farmers complain mainly about difficulties with transport and delivery of products to the market.

- *Georgian Household Farms are Profitable*
  The prices received by farmers appear to be quite high compared to world prices. The relatively high product prices and reasonable crop yields, which remain comparable to the long-run yields that characterized Georgian agriculture before independence, are responsible for positive profitability of smallholder farms. Input costs absorb 30%-40% of sales revenue, and the remainder provides a respectable contribution to family labor, land, and capital. Livestock production appears to be particularly profitable.

- *Shortage of Machinery and Limited Use of Purchased Inputs*
  Two-thirds of farmers surveyed have no farm machinery of any kind. Among others, mini-tractors and sprayers are the most widespread pieces of equipment. On average 20%-30% of farmers purchase various farm inputs, mainly from private individuals and definitely not from the traditional centralized channels. Availability of farm inputs is not a problem, and the main complaint is about high prices.

- *No Access to Commercial Credit*
  Private farmers in Georgia have no access to commercial banks. Very few farmers borrow, and those who do, borrow mainly from their relatives and friends. Half the farmers indicate that they will need credit for farm operations in the coming year, and the borrowing demand is estimated between 1000 lari and 5000 lari per farm ($850-$4000). Yet despite lack of commercial banking and the anticipated need for credit, private farmers in Georgia manage to produce, purchase inputs, and make a profit from sale of farm products already under the present circumstances.

- *Georgian Farmers are Creditworthy*
  Farmers are totally opposed to using their land as collateral for loans. Yet Georgian farms have a fairly substantial asset base, which is reported at 36,000 lari or $30,000, including the house, vineyards, and orchards. The high value of assets combined with respectable net income from farming suggests satisfactory creditworthiness of Georgian farmers today.

- *Completion of Land Transfer to Revitalize Agriculture*
  Despite smallness of plots, difficulties with inputs, and unavailability of credit, Georgian farmers successfully combine small-scale agriculture with commercial sales. Markets in Georgia are full of agricultural products, and private farms are generally profitable. In the interest of economic recovery and revitalization of agriculture, the Government of Georgia should assign the highest priority to the transfer of inactive land holdings from former collective and state farms to active private farmers in the framework of the new Law on Land Leasing.

General Background

The process of land reform in Georgia began under President Gamsakhurdia during the period of political instability and active civil war that followed the declaration of independence in April 1991 and the initial secession from the CIS. Land reform was driven by the so-called “land privatization decree” (Government Resolution 48 of January 1992), although more properly its objective was land distribution, as all agricultural land remained state-owned land and was given to individuals in inheritable lifetime use. The notion of land privatization reflected the intention to transfer the distributed land eventually to private ownership, but actual transfer of land ownership from the state to the individual land users became possible only after the passage of the Law of Agricultural Land in March 1996, more than four years after distribution of land had begun.

Following the 1992 landmark resolution, a "privatization reserve" of 850,000 ha was set up. The reserve included the 200,000 ha actually used by household plots at that time and provided an additional 650,000 ha for augmentation of existing household plots and creation of new ones. Although roughly 25% of all agricultural land, the privatization reserve was predominantly arable land and perennials (the only kind of land used by subsidiary household plots) and represented fully 70% of these land resources.

“Land privatization” in Georgia was basically designed to increase the production in the quasi-private subsidiary household sector, thus strengthening the traditional subsistence agriculture and also enhancing the supply of commercial farm products to urban markets. Georgia followed neither the example of the large Slavic republics, where land distribution to households was part of a fairly comprehensive program of overall agricultural reforms, nor the example of its neighbor Armenia, where most of the arable land was summarily distributed to the population in 1991-1992 and the traditional large scale farms were physically disbanded. Contrary to the approach adopted in Russia and Ukraine, for instance, the Georgian move to distribute land focused only on one component of the sector — the subsidiary household plots, and did not propose any program for the traditional farms. Contrary to the Armenian approach, Georgia distributed only part of the cultivated land and did not take any action with regard to the remaining lands and the traditional farms holding that land in permanent use.

Even the partial land distribution program remains largely uncompleted as of mid-1996. Although the area in subsidiary household plots more than trebled between 1990 and 1996, increasing from 211,000 ha to 654,000 ha, this is still far short of the target figure of 850,000 ha envisaged by the 1992 program. The land distributed to households up to January 1996 represents only 49% of cultivated land (including arable land and land under orchards and vineyards), while 51% remains in collective and state farms (Table 1). However, the collective and state farms appear virtually to have ceased production. The situation where only half of the land resources is actively engaged in agricultural production, while the other half remains idle, is of course untenable. Although there is no intention to privatize the remaining agricultural land, Georgian parliament has recently passed a land lease law which is intended to activate the market for leasing underutilized state-owned land to private individuals and thus revive full-scale agricultural production in the country

Table 1. Land Distribution in Georgia: June 1996 Status

	Total, thou. ha	*Distributed*	
		thou. ha	*percent*
Arable land	800	362	45.2
Perennials	322	185	57.4
Meadows	154	45	29.3
Pastures	1727	62	3.6
All agricultural land	3011	654	21.7
Non-agricultural land		39	
Total distributed		693	

Source: Land Cadastre Department

Survey Design

The present report is based on a survey of farm households, so-called "private landowners," conducted in April-May 1996 in four districts around Tbilisi: Mtskheta, Gardabani, Sagaredjo, and Dusheti. Two of these districts — Mtskheta and Gardabani — are the site of a rural land-registration pilot project financed by a loan from the World Bank. The main rationale for the survey is to establish a bank of base-line information about farm households in the project districts that will enable the Government of Georgia and the World Bank to assess the impact of land registration on private farm performance in a time frame of two to three years. The two other two districts — Sagaredjo and Dusheti — were chosen for control purposes to facilitate valid evaluation of project-related changes in performance. In addition to providing a basis for evaluation of the land-registration project, however, the survey is a source of unique information about Georgian private farms in the post-independence period. This information is particularly valuable in view of the almost total collapse of Georgian agricultural statistics and the inadequacy of the traditional statistical system for the new environment, where the focus of data collection must shift from organized large-scale farms to scattered family farms.

The survey instruments included the following main modules: household profile; land resources and land tenure; farm production; sale of farm products; purchase of farm inputs; farm labor; finances and credit; rural social aspects. The survey covered 1946 households in the four rural districts. The structure of the sample is shown in Table 2. While the sample is representative for the four districts surveyed, it is not representative, by its very design, for the Republic of Georgia as a whole. Generalizations from survey findings to the entire country therefore must be made with caution.

In addition to 1946 households in four rural districts, the survey also included 500 urban households from Tbilisi with land plots in the countryside. The survey findings for these urban households with land will be published separately.

Table 2. Sample Structure

Districts	Number of respondents	Percent of respondents
Gardabani	478	24.6
Mtskheta	497	25.5
Total in project districts	*975*	*50.1*
Dusheti	490	25.2
Sagaredjo	481	24.7
Total in control districts	*971*	*49.9*
Total rural respondents	*1946*	*100.0*
Urban: Tbilisi	500	

Demographic Profile of Households

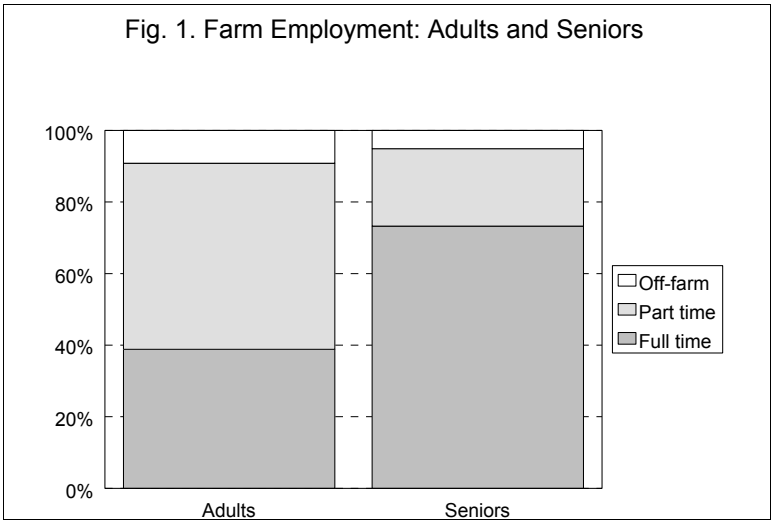
The survey covered 1946 households of "private landowners" comprising a total of 7953 family members. The average family size in the sample was 4.1, with most families falling in the range between 2 and 5 persons (Table 3). Nearly 15% of all family members were seniors aged 60 and older. Over 25% were children and youth under 18 years of age. Adults between the ages of 18 and 60 constituted 60% of the household population in the sample. The average age for adults was 36 and the average age for seniors 67. Fully a quarter of the seniors (4% of all household members) were in ages between 70 and 97. All age groups on the whole are equally divided between males and females.

Table 3. Family Size and Age Distribution of Household Members

Number of persons	Percent of households	Age group	Percent of household members
1	5.1	Children (under 12)	15.3
2	10.0	Youth (between 12 and 18)	11.5
3	17.0	Adults (between 18 and 60)	59.5
4	30.2	Seniors (60 years and older)	13.6
5	20.2		
6	12.0		
7	5.4		

Senior household members aged 60 and older are pensioners, but by no means retired. Three-quarters of the senior age group report that they work full time on the farm and another 20% report part-time occupation on the farm (Fig. 1). Among adults in the normal working group (aged 18 to 60), however, only 40% report that they are employed full time on the farm, while 52% work part time and 9% do not work at all on the farm. Children under 12 do not work, whereas among teenagers under 18 only 40% are reported to work part-time on the farm, while

the rest do not work. Georgian farmers are thus mainly part-time farmers, supplementing their income from off-farm work.



The main off-farm jobs for the families of the respondents include rural social services and other non-agricultural occupations (25% of adults and seniors). Curiously enough, nearly 20% of adults and seniors report an off-farm job that is connected in some way with the local collective or state farm, while on the other hand many of them report full-time occupation on the family farm. Thus, though most collective and state farms in Georgia have ceased functioning, they have not entirely shed their labor force, and even if they do not pay any salaries, the workers at least continue to accumulate pension and other benefits. There are natural gender biases in different off-farm occupations reported by the respondents. Women are mainly employed in housework, village-level social services, and social services of the local collective farm (70%-80% of those working in each area are women). Men, on the other hand, are employed off-farm mainly in non-agricultural enterprises or in managerial and skilled jobs at the collective farm.

Over 35% of adults in the sample (ages 18 to 60) have higher or uncompleted higher education (Table 4). Another 30% have finished a technical high school, and 25% a general high school. Only 5% finished 8 grades or less. Seniors (60 and older) are reported to have a much lower level of schooling: 40% finished 8 grades or less, 40% finished high school (technical or general), and only 12% have higher education. The illiteracy level is also substantial among the seniors (7%). While there are no significant differences in the education level between men and women in the 18-to-60 age group in the sample, among seniors over 60 there is a definite tendency for men to be better educated than women (Table 4). The under-60 generation thus clearly benefited from the Soviet education system, which during the decades after World War II was universal, completely gender-independent, and with generally free access to higher education.

Virtually all rural families in Georgia (over 90% of respondents) live in detached houses, which are reported to be private property. Only 8% live in apartment buildings, but two-thirds of the

apartments are privately owned (the rest are owned by the local collective farm or the village council). The housing stock is mostly older than 20 years (60% of respondents), and only 20% report that their house is less than 10 years old.

Table 4. Education Level of Household Members

	Adults (18-60)	Seniors (≥60)	Adults: males	Adults: females	Seniors: males	Senior: females
Higher/uncompleted higher	35.2	12.5	37.3	33.3	14.6	10.3
Technical secondary	31.4	18.1	31.0	31.7	20.0	15.5
General secondary	26.9	21.2	25.8	27.6	20.9	21.5
8 grades or less	4.9	39.2	4.5	5.4	37.1	41.6
Illiterate	0.2	6.6	0.1	0.3	3.5	10.1

Rural mobility is very low: 90% of respondents have lived in the rural area since their birth, and 80% of respondents have lived in the same village since birth. In line with this, some respondents actually indicate that they started independent farming as early as the 1930s. Overall, one-third of respondents give the starting year for their farm between 1930 and 1989. It is hard to imagine that there were independent private farms in Georgia at that time, and these responses probably identify the year when the family received a household plot from the collective farm or the local authorities. Most respondents (60%) indicate that they started independent private farming between 1990 and 1994, when the main land reforms were taking place in Georgia and the collective sector disintegrated in the wake of civil war and political uncertainty.

Georgian farms are predominantly organized by one family (94% of respondents), although there are about 5% of cases when the farm is organized by 2-3 families, probably parents and their married children's families. Family farms in Georgia are usually not registered as businesses. Only 15% of respondents report that their farm is officially registered as a legal entity.

The typical head of farm (64% of respondents) is male, 44 years old, with higher or secondary education, and works at least part time on the farm. Nearly 40% of heads of farms, however, are seniors with an average age of 68, and 80% of them work full time on the farm (compared with only 50% full time for members of the younger generation). Not all farms are run by males: 14% of heads of farms are females. Nearly 60% of heads of farm report that they worked on a collective or state farm before taking up independent farming. Others worked in local administration, rural social services, and in industry (Table 5). There is a fairly uniform distribution of respondents by various jobs and positions previously held in their respective sectors: neither managers nor menial workers dominate the sample.

Among all the respondents in the sample, 17% are still registered as members of a collective farm. Among those who were collective farm members before taking up independent farming, nearly 30% remain collective farm members. Virtually all of them report that their collective farm is a functioning producer, and only 6% indicate that the collective farm has stopped

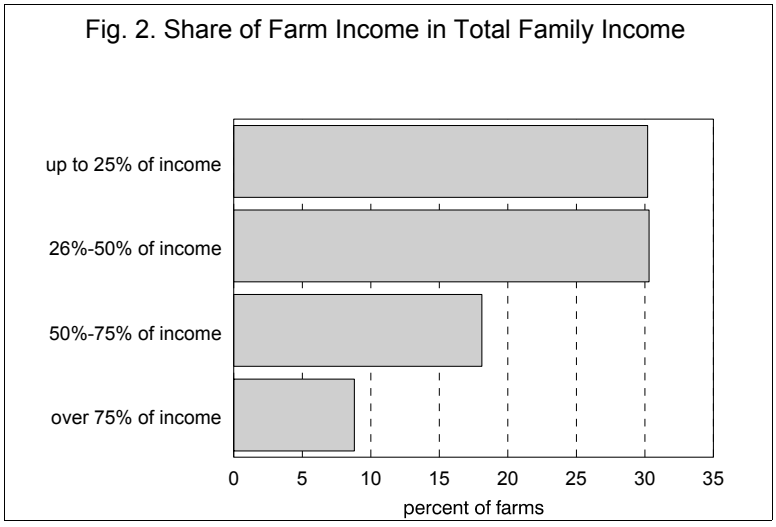
producing. Around 2% of former collective members indicate that they received a small plot of land on exit. No other entitlements are reported.

Table 5. Former Occupation of Respondents

Former occupation	Percent of respondents
Collective/state farm	58.6
Industry	16.9
Rural social services	12.6
Local administration	8.7
Missing	3.2

Family Income

While farm production is an important source of income for the households in the sample, it is by no means the only source of household income. Thus, the farm is the main source of income for fewer than 10% of respondents (Fig. 2). For fully 60% of households the farm provides less than half the family income, and for another 20% of households farm income constitutes between half and three-quarters of family budget. Transfers from family members employed outside Georgia are not a significant factor in household income: only 4.5% of respondents report that they receive financial assistance from family members abroad.
Despite substantial reliance on outside sources of income, Georgian farms are not entirely subsistence farms. An average farm earned 1500 lari (around $1250) from sales of farm products in 1995, and 10% of farms earned more than 3000 lari ($2500). The sales revenue was equally divided between crops and livestock products, with around 5% of sales income derived from other activities.



Land Holding and Land Tenure

Georgian farms are mainly smallholder farms. Two-thirds of the farms surveyed have less than 0.5 ha of land, and only 7.5% of the farms report more than 1.5 ha (Fig. 3). An average farm in the sample has 0.9 ha of land, of which 0.7 ha is privately owned and 0.2 is leased land (Table 6). The farms in the project districts of Gardabani and Mtskheta are significantly smaller than the farms in the other districts (0.7 ha compared to 1.1 ha); they also use much more leased land (0.3 ha on average compared to 0.1 ha in non-project districts).

Fig. 3. Distribution of Farms by Size

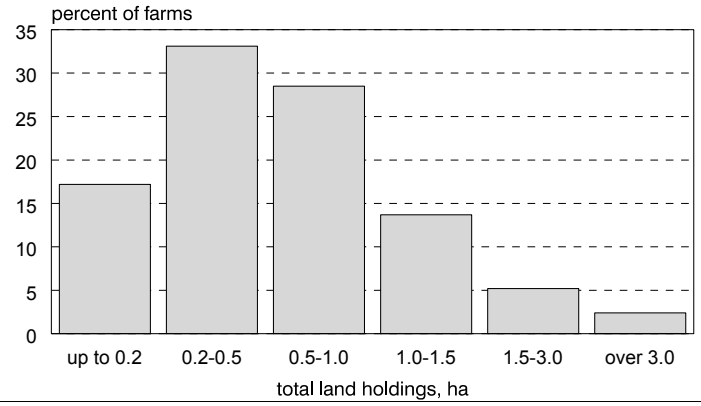


Table 6. Size of Land Plots (ha)

	Number of farms	Total land	Private land	Leased land
All sample	1943	0.90	0.74	0.16
Gardabani	475	0.71	0.45	0.26
Mtskheta	497	0.76	0.53	0.23
Dusheti	490	1.02	1.02	0.00
Sagaredjo	481	1.11	0.95	0.16
Project districts	972	0.74	0.49	0.25
Control districts	971	1.06	0.98	0.08

The amount of leased land averaged over all farms in the sample is small (0.16 ha) because only a very small percentage of farms have any leased land. Thus, only 41 farms, or 2% of respondents, report that they lease land. These farms are much larger than the farms that do not lease land (8.7 ha compared to 0.7 ha). The size difference is attributable entirely to the leased land component: there is no significant difference in the amount of privately owned land in both

farm categories (0.85 ha for farms with leased land and 0.73 ha for farms without leased land), but lessee farmers report on average 7.8 ha of leased land (Table 7). Of course, not every farmer leases almost 8 ha of land: 46% of respondents with leased land lease between 0.3 ha and 1 ha and another 22% lease between 1.1 ha and 5 ha, so that a total of nearly 70% of respondents in this category have up to 5 ha of leased land.

Table 7. Comparison of Farms With and Without Leased Land (ha)

	Farms with leased land				Farms without leased land	
	Number	Total land	Private	Leased	Number	Total land
All sample	41	8.66	0.85	7.81	1901	0.73
Project	22	11.55	0.65	10.90	949	0.49
Control	19	5.32	1.09	4.22	952	0.98

The average lease term for all respondents with leased land is nearly 3 years, but more than half the respondents report that they lease land for a term of only 1 year. These short-term lessees concluded their most recent lease contract in 1995 or 1996. One-third of the respondents lease land for a term of 5 or even 10 years, and their lease contracts were concluded between 1992 and 1995. The remaining 15% of respondents report lease terms of 2-4 years.

Privately owned land is mainly received from the village council, whereas the main source of leased land is the district government (Table 8). This basically implies that leasing of land is done from the state-owned land reserve, which is managed by the district authorities. The collective or state farm where the farmer worked previously is also identified as an important source of privately owned land (9% of all private land in an average farm), probably because it provided the original small household plot many years ago.

Table 8. Sources of Land (percent of total holdings in an average farm)

Source	For privately owned land	For leased land
District government	15%	75%
Village council	73%	19%
Local collective/state enterprise	9%	2%
Other enterprises	1%	4%
Private individuals	2%	0%

The structure of land in an average farm is shown in Table 9: 67% of average total holdings is arable land, 21% is under orchards and vineyards, and the remaining 11% is hay meadows and pasture. Leased land is mostly arable land: of 8.7 ha average total holdings in farms with leased land, 7.2 ha is arable land. The proportion of arable land in farms with leased land is 83% of total area, compared to 63% in farms that do not lease land (Table 9).

Table 9. Structure of Land

	Percent of total land		
	All sample	Farms with leased land	Farms without leased land
Arable	67%	83%	63%
Orchards	8%	6%	9%
Grapes	13%	5%	14%
Hay meadows	8%	3%	10%
Pasture	3%	3%	3%
Other land	1%	0%	1%

Privately owned land is usually divided into two parcels: a plot around the house and another plot at the perimeter of the village. Leased land is typically also divided into two plots, so that farms with leased land (2% of respondents) have a total of four land parcels.

Half the respondents indicate that they would like to enlarge their holdings by 1.8 ha on average, thus trebling the current size of their farm from 0.9 ha to 2.7 ha. The demand is almost exclusively for privately owned land; there is virtually no interest in enlarging the farm through leasing (among all respondents, as well as among those who currently lease land).

Fully two-thirds of the respondents identify privately owned land as the most desirable form of land ownership. Another 25% prefer to have land in permanent use. Virtually nobody identifies leasing as the most preferred form of land tenure. Despite the preference for private ownership of land, the respondents are on the whole against permission to buy and sell land: 65% of respondents have a negative attitude to buy-and-sell transactions, and only 25% support the proposal to allow buying and selling of land. This attitude may be a reflection of the prevailing legal restrictions that prohibited buy-and-sell transactions in land at the time of the survey. Alternatively, this may be evidence of deep-seated fears among the rural population that buying and selling of land is bound to lead to speculation and accumulation in the hands of new "kulaks" and absentee landowners.

Less than 40% of respondents have an official document certifying ownership of their land. Those with a document paid on average 12 lari for the certificate of ownership. The reported payments range from 0.80 lari to 100 lari, probably because they span a number of years during which the rates changed. Among those who do not have a certificate of ownership, only 12% report that they did not want to pay for the document, while 40% blame the local authorities for not issuing the certificate. Nearly half the respondents without a certificate of ownership failed to identify the reason for the lack of documents.

Respondents feel quite secure in their ownership of private land: over 70% are confident that they will keep their land in the future. There is no difference in reported sense of security for those with and without official ownership documents. Although this suggests that Georgian

farmers do not attach much importance to formal certificates of ownership, three-quarters of respondents are willing to pay for title to their land, if title documents and appropriate registration procedures are instituted in the future. The respondents are prepared to pay on average 15 lari for title and registration, with half the respondents indicating willingness to pay between 5 lari and 10 lari. The full range of acceptable amounts reported by respondents is between 0.50 lari and 250 lari.

Only half the respondents paid land tax in 1995. The average amount paid was 18 lari, which works out at 24 lari per hectare based on 0.74 ha as the average amount of privately owned land. The information about lease payments is too unreliable to make any conclusions.

Farm Production

Georgian farms are diversified producers, producing crops and livestock in almost equal proportions. Averaged over all respondents, crops account for 55% of production and livestock for 45%. All livestock farmers also grow crops, and among farmers with crops only 20% are specialized crop producers that do not have any livestock.

Crops

Practically all farmers in the sample (94%) grow crops. Corn and beans are the main field crops, grown respectively by 62% and 42% of respondents (Table 10). Wheat is much less important: only 20% of farmers report that they grow wheat. Garden crops, such as potatoes, vegetables, fruits, and grapes, are quite widespread among the farmers in the sample (40%-60% of respondents). Farmers do not specialize: fully 80% of farms grow between 2 and 5 different varieties of crops.

On an average farm, half the land is under garden crops (potatoes, vegetables, fruits, and grapes) and another 40% is under field crops (corn, wheat, beans). The small remainder is sown to barley, sunflower, melons, and animal feed crops. The detailed cropping structure of an average farm in the sample is shown in Table 11.

The average area sown to different crops by respective producers and the 1995 output of each crop per producer are given in Table 12. The quantities in this table are interpretable as the average harvest that a farmer can expect once a decision is made to grow a particular crop on a corresponding plot of land.

Table 10. Frequency of Producers by Crop
(percent of farms reporting production of each commodity)

	Entire sample	Project districts	Other districts
Number of respondents	1946	975	971
Wheat	20%	14%	27%
Barley	6%	6%	7%
Corn	62%	63%	61%
Beans	42%	43%	42%
Sunflower	5%	0%	10%
Potatoes	55%	46%	63%
Vegetables	59%	71%	47%
Melons	11%	9%	14%
Fruits	42%	56%	28%
Grapes	47%	52%	41%
Hay	9%	3%	16%

Table 11. Cropping Pattern
(percent of land under each crop over all respondents)

	Entire sample	Project districts	Other districts
Number of respondents	1619	827	792
Wheat	10%	6%	14%
Corn	22%	26%	18%
Potatoes	11%	9%	13%
Vegetables	12%	18%	6%
Fruits	8%	12%	5%
Grapes	16%	14%	18%
Beans	7%	8%	6%
Barley	2%	2%	2%
Melons	1%	1%	1%
Sunflower	2%	0%	3%
Hay	5%	1%	10%

Farmers overwhelmingly report that they have no intention of reducing crop production in the future. Some 25%-35% of respondents actually indicate that they intend to increase production, and another 50% or more intend to keep production at the current level (Table 12). The number of farmers intending to reduce production does not exceed 10% for any of the crops. In some instances, plans for the future are related to yields: farmers with higher yields reveal a greater tendency to increase future production of potatoes, vegetables, fruits, and grapes. For other crops (wheat, corn, barley, and melons), farmers who currently have more land under a particular crop (and not those with higher yields) are more likely to plan future expansion. It thus seems that total harvest, and not always yield per hectare, is the intuitive measure of success that motivates farmers in the sample.

Table 12. Sown Area and Output by Crops per Producer Farm

Crop	Number of producers	Sown area per farm, ha	Output per farm, kg	Percent of producers planning	
				to increase production	to keep production unchanged
Wheat	397	0.7	1250	39%	38%
Barley	125	0.6	1400	30%	43%
Corn	1210	0.3	700	30%	51%
Beans	818	0.2	150	26%	57%
Sunflower	101	1.1	1100	25%	47%
Potatoes	1062	0.2	740	36%	49%
Vegetables	1154	0.2	570	36%	48%
Melons	219	0.1	540	27%	56%
Fruits	816	0.2	640	35%	52%
Grapes	904	0.3	1200	33%	52%
Feed crops	178	1.5	1850	16%	57%

Table 13. Mean Crops Yields
(centner/ha, for farmers reporting respective crops)

Crop	Project districts	Control districts	Entire sample	Country mean#
Wheat	24.9*	20.7	22.0	18
Barley	25.3*	14.0	19.1	21
Corn	34.5*	30.0	32.5	25
Beans	14.1	13.2	13.7	9
Sunflower	NA	20.1	28.0	5
Potatoes	92.1*	73.4	81.1	112
Vegetables	73.1*	61.2	68.4	133
Melons	49.8	65.3*	59.2	NA
Fruits	71.4	67.2	70.0	73
Grapes	65.1*	50.4	58.5	59
Feed crops/hay	47.3	28.1	30.5	NA

* Yields significantly higher than in the other districts (at 5% level of significance).
# Averages for 1985-1994 based on official Georgian statistics.

Crop yields per hectare calculated from the survey responses are generally higher in the two project districts than in the control districts (Table 13). The only exception is melon, which produces lower yields in the project districts. The yields calculated from the survey are on the whole comparable with long-range average yields for Georgia (last column in Table 13), except for vegetables, which achieve substantially lower yields in the sample. Since vegetables is a composite category, the difference in yields may be due to the fact that farms in the survey districts grow vegetables in a mix which is substantially different from the overall national average.

Livestock

Around 70% of respondents in the sample keep livestock, and animal products account for nearly half the total value of production on these farms. The livestock profile of an average household among those with any animals includes two cows, one young animal, one pig and one piglet, three sheep, and 12 chickens. All farmers with livestock also engage in crop production, and their mix of crops is not different from the overall pattern.

Cows and chickens are particularly popular among Georgian farmers: over 60% of households have cows and chickens, which provide a natural source of milk and eggs for home consumption and sale. Other animals are reported by a much smaller proportion of households (Table 14).

Table 14. Frequency of Livestock Producers and Herd Size

Livestock	Percent of farms with animals	Number of head per farm*
Cows	62%	2.1
Heifers	32%	1.6
Calves	28%	1.6
Bulls	17%	1.9
Pigs	39%	2.6
Piglets	18%	6.0
Sheep	24%	10.0
Goats	5%	4.0
Horses	4%	2.4
Chickens	63%	13.4
Other fowl	15%	7.4
Rabbits	5%	6.3
Bee hives	5%	8.3

* Average number of animals for a farm that keeps animals of the corresponding kind.

Number of animals and production of animal products per farm in each livestock category are summarized in Tables 14 and 15. Households with cattle produce 200 kg of beef per year, and those who keep pigs produce around 150 kg of pork per year. This is roughly equivalent to slaughtering one young bull or one pig a year. Households with cows average 1500 kg of milk per year from their 2 cows.

Milk yields in the sample are very low, averaging 750 liters per cow per year, and only 1% of respondents report yields of 2000 liters and higher. The yields in the project districts are somewhat higher than in the other districts (850 liters compared to 650 liters), but the difference is not statistically significant.

Over 80% of farmers use green fodder and hay as animal feed. The same proportion report that they graze their animals on common pastures. Concentrated feed is used by 40% of farmers. Only 15% of respondents report that they use grain for feed, and among these more than one-third of the grain they produce is fed to the animals. Hay for animal feed is generally produced on farm, although 20% report that they supplement about half their hay requirements from outside sources and another 20% purchase almost their hay from the outside. Concentrated feed, on the other hand, is mostly purchased. Among farmers using concentrated feed, 60% purchase all their feed and another 15% purchase up to half their feed requirements; only 10% report that they produce all their own concentrated feed.

Table 15. Livestock Production

Products	Percent of producers among all farms	Production, kg	Percent of producers		
			reporting that production is profitable	planning to increase production	planning to keep production unchanged
Milk	63%	1500	83%	59%	23%
Beef	28%	190	77%	60%	23%
Pork	41%	160	79%	53%	27%
Mutton	15%	90	90%	71%	15%
Wool	21%	50	76%	64%	18%
Eggs	62%	1000	80%	61%	23%
Poultry meat	35%	35	84%	69%	19%
Honey	5%	100	87%	67%	27%

Around 80% of producers in each product category report that livestock production is profitable (Table 15). More than half the respondents in each product category indicate that they plan to increase livestock production and another quarter intend to keep production at the same level as the previous year. The percentage of farmers who plan to reduce livestock production is very low, usually not more than 5% in each product category. The tendency to increase production is significantly more pronounced among farmers who regard livestock as profitable than among those who report that livestock is unprofitable: the proportion of farmers reporting that they plan to increase livestock production is 60%-80% in the “profitable” category versus 20%-40% in the “unprofitable” category. Yet even among farmers reporting that livestock is unprofitable not more than one quarter intend to reduce production, and the overall tendency is to keep the volume unchanged or increase it.

The view of livestock as profitable or unprofitable generally does not depend on the volume of production or the size of the herd, probably because the variability in livestock production volume and particularly the herd size is so small among the farms. It is only for eggs and milk that the percentage of farmers who regard these products as profitable clearly increases with the quantity produced.

Sales of Farm Products

Despite the small size of the plots, Georgian farmers do not produce entirely for family consumption. Farmers report that they sell 30%-40% of the output of their main products (grain, potatoes, vegetables, fruits, grapes, milk, meat, and eggs), and only the rest is consumed by the household (Table 16). Recent prices received by farmers for sale of their products are shown in the last column in Table 16. Grain fetches around $300 per ton, milk $650 per ton, meat $2000 per ton. Although these are basically retail prices, as Georgian farmers sell directly to the consumer (see Table 17 below), they are nevertheless quite high compared to world prices.

Table 16. Proportion of Output Consumed and Sold by Farms

Product	Number of producers	Average percent of output		Range of prices received, lari/kg
		Consumed	Sold	
Grain	961	75	25	0.3-0.5
Potatoes	742	71	29	0.3-0.4
Vegetables	809	62	38	0.4-0.7
Fruits	594	64	36	0.3-0.8
Grapes	613	70	30	0.3-0.8
Milk	905	64	36	0.7-1.0
Eggs	848	71	29	0.15-0.20/10 pcs
Meat	869	54	46	2.5-3.0
Wool	304	53	47	1.0-2.2
Melons	157	67	33	0.4-0.6
Honey	71	56	44	--
Sunflower	62	63	37	0.5-1.0
Hay	294	98	2	0.1-0.5

Sales income is divided equally between livestock and crop products, and about 5% of cash income is derived from other farm activities. Average sales income in 1995 was 1500 lari ($1250), with 50% of respondents reporting revenues between 450 lari and 1800 lari ($375 and $1500). Median sales income was 900 lari ($720), and the average income was pushed upward by more than 20% of respondents reporting revenues in excess of 2000 lari ($1700 and up). The distribution of sales income by farms is shown in Fig. 4.

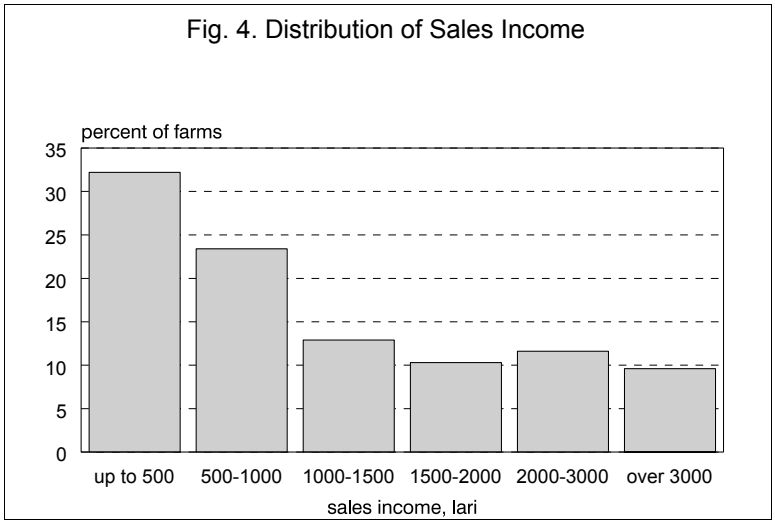


Table 17. Main Sales Channels by Commodity
(percent of commercial farmers identifying each channel as main sales channel)

	Number of farms with sales	Traditional channels*	Private trade	Direct to consumers	Other
Grain&legumes	473	1.9	7.2	84.1	5.5
Potatoes	400	2.3	4.3	82.8	10.3
Vegetables	472	1.8	2.8	83.9	10.8
Fruits	350	1.4	3.4	89.1	4.9
Grapes	334	3.0	2.4	90.4	1.5
Milk	608	4.2	3.1	88.5	2.8
Meat	598	3.3	3.0	89.6	2.7
Eggs	462	1.0	3.2	92.6	1.5
Wool	176	0.6	0.4	96.6	0.6
Melons	78	1.3	7.7	66.7	23.1
Sunflower	36	--	--	83.3	8.3
Honey	45	--	2.2	93.3	--

* Include state procurement, consumer coop network, and collective enterprises.

Georgian farmers sell directly to consumers in the local market. This is obvious from Table 17, where 85%-95% of "commercial" farms, i.e., farms reporting commercial sales, identify direct sales to consumers as their main channel. Traditional Soviet-period channels (i.e., government procurement, state-affiliated consumer coops, and local collective enterprises) continue to play a certain role only in sales of grapes, milk, and meat, the three products that require processing. Even for these products, however, only 3%-4% of commercial farmers rely on traditional sales channels. The decline in the importance of traditional channels may be associated with the abolition of state orders in Georgia: all respondents report that they are not subject to any state

orders or obligatory quotas, and are free to sell to any buyer. The role of private trade channels, on the other hand, is increasing. Overall, the private trade channels have caught up and in some cases surpassed in importance the traditional state channels, although they still play a very small role compared to direct sales in the market.

Since most farmers sell directly for cash in the market, accounts receivable and collection do not constitute a problem (Table 18). Farmers mainly complain about difficulties with transport, which is a particularly important factor when one of the family has to carry the produce to the market in town. Thus, nearly 50% of farmers who sell their products (averaged over all commodities) report difficulties with transport and deliveries to the market. Once the produce has reached the market, however, there are apparently no difficulties with selling it: less than 20% of farmers on average report difficulties with finding a buyer. One-third of the "commercial" farmers make the usual complaint that the prices received for farm products are too low, although this complaint is not entirely consistent with the fairly high prices reported in Table 16. Perhaps the most remarkable conclusion to be drawn from Table 18 is that basically more than 40% of the "commercial" farmers do not complain of any difficulties with sales of their farm products.

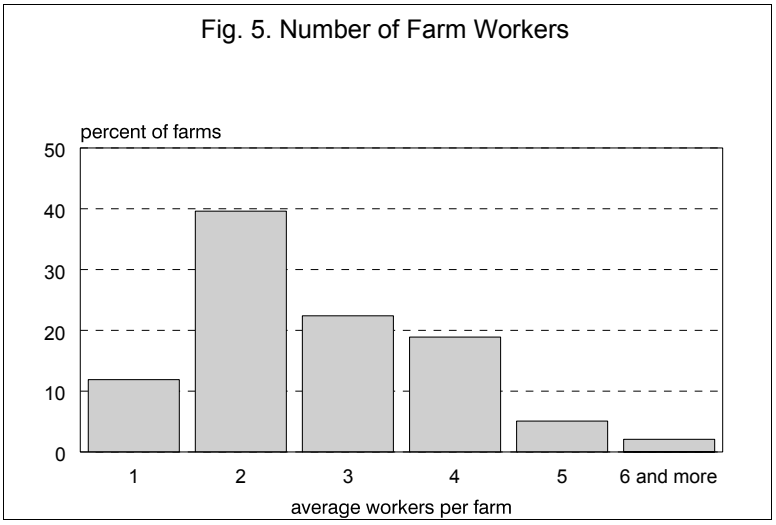
Table 18. Difficulties with Product Sales by Commodity
(percent of commercial farmers reporting difficulties in each category)

	Number of farms with sales	Late payment	Low prices	No buyer	No transport	Other	No problems
Grain&legumes	473	5.7	45.0	18.2	59.4	3.4	26.4
Potatoes	400	7.3	34.8	16.0	47.0	3.8	42.3
Vegetables	472	7.2	29.9	18.0	40.7	2.8	47.5
Fruits	350	3.7	33.7	16.0	45.7	3.7	44.4
Grapes	334	12.9	43.1	33.2	49.7	5.7	34.8
Milk	608	7.1	37.2	18.4	55.1	6.6	33.3
Meat	598	4.5	34.4	16.4	56.9	6.7	33.8
Eggs	462	5.4	34.4	18.2	49.8	3.0	40.2
Wool	176	9.1	42.6	23.3	48.3	2.8	41.6
Melons	78	2.6	32.1	10.3	37.2	1.3	56.4
Sunflower	36	19.4	50.0	27.8	47.2	5.6	35.9
Honey	45	8.9	13.3	17.8	33.3	6.7	53.3
Average*		**7.8**	**35.9**	**19.5**	**47.5**	**4.3**	**40.8**

* Arithmetic average of percentages across commodities in each column.

Farm Resources and Inputs

A typical farm in the survey operates with 2-3 workers on average year round, and only 7% of the farms surveyed employ 5 workers and more (Fig. 5). Practically all farm workers are members of the immediate family, often working part-time on farm, and 10% of respondents also use relatives and friends on their farm. Hired hands (permanent or seasonal) are employed only by 17 farms (i.e., less than 1% of respondents). These farms are relatively large, however: they



have 11 ha of land (of which 10 ha is leased) compared to only 0.8 ha on average in farms without hired labor, and they employ 4-5 workers compared to 2-3 on farms using only family labor. In large farms with hired labor, the basic labor force including on average 2 family members and 2 permanent hired workers is reinforced as needed with 3 seasonal hired hands.

Table 19. Farms Reporting Machinery

Machine	Percent of farms	Machine	Percent of farms	Machine	Percent of farms
Minitractor	15.4	Tractor	2.4	Hay mower	0.8
Sprayer/duster	15.7	Plough	1.7	Combine	0.4
Potato digger	3.1	Seeder	1.6	Milking machine	0.2
Truck	2.9	Cultivator	1.1	Other machinery	8.5

Two-thirds of the farmers surveyed have no farm machinery of any kind, and one-third report at least one piece of mechanical equipment. The frequency of farmers with at least one machine is lower in the project districts: 25% compared to 40% of farmers with machinery in the other districts. The two most popular pieces of farm machinery are the mini-tractor and the sprayer, each owned by 15% of farms surveyed. All other types of farm machinery are reported by only 1%-2% of farms (Table 19). Despite the large proportion of farms with dairy cows (62% of farms in the sample), milking machines are virtually nonexistent. Tractors, mini-tractors, and

trucks are the only machines of which some farms (a very small number) own more than one unit.

The traditional supply sources, including state supply organizations, local collective farms, and the state-controlled consumer cooperative network, no longer play a major role as suppliers of farm inputs to Georgian farmers. The emphasis has shifted to private individuals and private commercial firms, which are now clearly the main source of farm inputs (Table 20). State organs continue to play a certain role in supplying veterinary services and drugs, mechanical field services (mainly through service centers based on machinery previously owned by collective and state farms), farm machinery, fertilizers, and extension services (consulting). However, even in these areas, private suppliers are used by a much higher percentage of farmers. Private farmers themselves generally do not act as suppliers of inputs to other farmers. A small proportion of farmers report that they sell to other farmers seeds and seedlings (9%), young animals (4%), consulting services (4%), and animal feed (3%). Less than 1% of farmers are involved in sales of each of the other inputs.

Table 20. Sources of Farm Inputs
(percent of farms using each source)

Input	State organs*	Private individuals	Private firms	Other sources	Percent of farms that purchase each input#
Seeds/seedlings	2.0	68.4	3.6	5.2	75.0
Animal feed	2.4	40.8	2.7	4.1	47.1
Young animals	0.9	16.3	0.8	0.8	18.3
Organic fertilizer	1.5	16.1	1.5	2.1	20.2
Mineral fertilizer	3.2	22.4	2.8	0.7	27.5
Herbicides/insecticides	1.9	30.5	1.7	0.6	33.9
Farm machinery	3.7	10.4	1.1	0.2	14.7
Repairs/maintenance	0.7	8.6	1.1	8.3	9.9
Spare parts	0.9	11.9	1.3	0.2	13.3
Fuel	1.8	36.8	2.3	0.7	39.9
Mechanical field works	5.9	28.3	3.9	0.1	34.5
Veterinary drugs	5.8	14.0	1.2	0.4	20.0
Veterinary services	7.4	12.3	0.5	0.1	19.3
Construction materials	2.1	6.6	2.4	0.4	8.6
Construction services	2.1	6.6	2.4	0.2	8.2
Consulting	3.3	7.3	1.1	0.5	9.5

* Includes state firms, collectives, and the consumer coop network.
# This percentage may be less than the sum across all channels because some respondents report more than one channel for purchase of farm inputs.

For some services only a small percentage of farmers identify the supply channel. These services include purchase of farm machinery, maintenance and repairs, spare parts, construction, and veterinary services and drugs. The low overall percentage of responses is apparently an indication of considerable difficulties with general access of farmers to these services. The low use of veterinary drugs and services is particularly worrisome because of the very high proportion of farmers with livestock in Georgia. Inadequate veterinary care of the herd may be one of the reasons for very low milk yields reported in the sample.

Farmers were asked about their difficulties in purchasing farm inputs. Availability is obviously not a problem (Table 21), but high prices are. Despite understandable complaints about high prices and other difficulties in an imperfect market environment, a not insignificant percentage of farmers (more than 15% on the whole) reported that they did not experience any problems with purchase of farm inputs. Still, two-thirds of the respondents believe that for them access to farm inputs is more difficult than for collective farms, although in practice collective farms hardly function as producers and do not play a major role as suppliers of inputs to private farmers.

Table 21. Difficulties with Access to Farm Inputs
(percent of respondents identifying each difficulty)

Input	High prices	Not available	Other	No problems
Seeds/seedlings	26.7	1.1	11.7	60.5
Animal feed	39.3	1.3	29.8	29.6
Young animals	42.7	1.3	43.2	12.8
Organic fertilizer	38.0	4.0	41.2	16.8
Mineral fertilizer	42.8	4.7	35.2	17.3
Herbicides/insecticides	42.5	3.4	25.4	28.6
Farm machinery	55.1	3.1	33.8	8.1
Repairs/maintenance	51.3	3.5	39.3	5.9
Spare parts	52.0	3.4	37.4	7.2
Fuel	42.8	2.8	35.6	18.9
Mechanical field works	44.2	2.8	34.7	18.3
Veterinary drugs	45.7	2.9	41.6	9.7
Veterinary services	43.1	2.8	43.0	11.1
Construction materials	55.3	2.6	38.0	4.1
Construction services	52.1	2.6	41.2	4.1
Consulting	36.3	2.0	47.6	14.1
Average*	**37.4**	**2.8**	**36.2**	**16.7**

* Arithmetic average of percentages across inputs and services in each column.

Finance, Investment, and Credit

In 1995, farmers invested on average 400 lari in their farm (about $330). The amount invested by half the farmers did not exceed 200 lari, however, and only 10% invested 800 lari and more. A small number of farmers (about 2%) invested between 2000 lari and 30,000 lari in 1995. There is a fairly high correlation between the amount invested in 1995 and the size of the farm as measured by sales revenue and by land (correlation coefficient 0.5 and 0.6, respectively). Farmers with higher levels of investment tend to have more land and generate a higher level of sales revenue (Table 22). They also employ a larger number of workers and use a larger capital asset base. Moreover, return on assets (i.e., profitability) is higher in farms that make larger investments, which perhaps provides the impulse for investing.

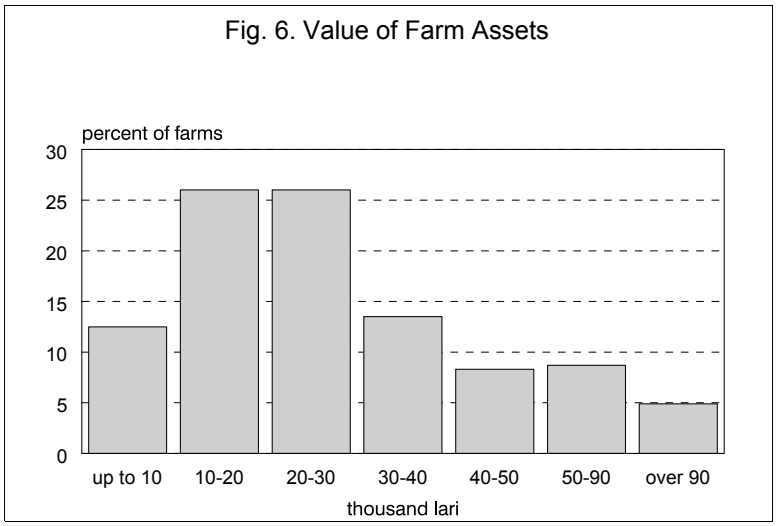
Table 22. Current Farm Investment Versus Various Size Measures

Invested in 1995	Percent of farms	Sales Revenue, lari	Land, ha	Number of employed	Capital assets, lari	Return on assets, %
Over 2000 lari	2%	4950	6.1	4.1	71,500	9.3
800-2000 lari	8%	1900	1.5	3.3	33,200	6.7
400-800 lari	17%	1230	1.0	3.1	36,700	6.3
200-400 lari	29%	1030	0.7	2.8	36,600	6.5
Sample mean	100%	1160	0.9	2.8	36,200	5.8

The source of funds invested in the farm was predominantly own savings: 78% of total investment in 1995. Another 21% of funds was borrowed from relatives and acquaintances, but nothing was raised in the form of bank credit or received as support from government sources. The asset share received on exit from the former collective enterprise accounted for less than 1% of the investment in 1995. This investment component could have been relevant only during the early phase of private farm establishment, in 1992; those who received an asset share from the collective farm on exit would have long since used it by 1995. The investment patterns were practically the same in project districts and other districts.

Farm assets are valued by respondents at 36,000 lari ($30,000) as of the end of 1995, and more than half the farms report assets between 10,000 and 30,000 lari (Fig. 6). The capital base in the project district is about 15% higher than in the other districts: 39,000 lari compared to 34,000 lari (the difference is statistically significant). The reported value of capital assets is roughly 100 times the investment in 1995 and 40 times the current net income (see the section on profitability below). The capital assets typically include the value of the house, as well as the value of vineyards and orchards. The house was built 10-20 years ago; the orchards and vineyards were planted gradually over many years, or acquired without any payment as a distribution from the collective farm. The formation of the capital base is thus largely unrelated to ongoing investment or retention of earnings since 1992, which explains the large differences noted above. The reported value of capital assets is close to the value of an apartment in Tbilisi, and it apparently represents the actual investment that will be required to start a new farm from nothing.

Although the number of farms that specialize in livestock (without any crops) is very small (39 out of 1946 farms, or 2%), they have a larger capital base than farms that grow crops without any



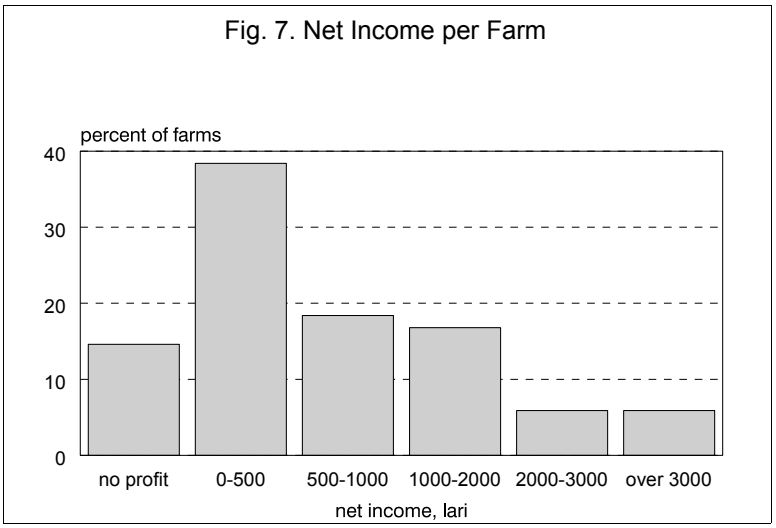
livestock (20% of the sample) or mixed farms (the majority of respondents, 67% of the sample). Thus, livestock-specialized farms report an average capital base of 53,000 lari compared to 36,000 lari for other farms, and an investment of 630 lari in 1995 compared to 400 lari for other farms. These differences, however, are not statistically significant because of the small number of livestock-specialized farms.

Profitability

Annual sales revenue in 1995 averages 1500 lari ($1250), and production costs (excluding charges for family labor and return to land and capital) are around one third of sales. An average household had 860 lari ($715) of net farm income in 1995, and fully 25% of respondents report profits of more than 1200 lari ($1000). At the other extreme, 15% of farms report losses or zero profit (Fig. 7). Yet despite these unprofitable farms, the overall picture in the sample is one of respectable profitability.

Farms in the project districts achieve higher sales revenue and higher profit than farms in the control districts. The sales revenue is 1650 lari per farm in project districts and 1200 lari in control districts. The average profit is 1000 lari in project districts compared to 750 lari in control districts. Farms specializing in livestock have a higher level of sales and a much higher profitability than mixed farms and farms specializing in crops. Thus the average sales revenue in 1995 for livestock-specialized farms was 2000 lari compared to 1400 lari for other farms, and the profit was 1600 lari compared to 1000 lari for mixed farms and only 160 lari for farms that specialized in crops without any livestock. Livestock was thus be highly profitable in Georgia in 1995, both for specialized and mixed farms. This higher profitability of livestock probably explains the willingness of livestock farmers to invest more in their farms.

Among the farms reporting profits (more than half the farms in the survey), the average margin of profit on sales is 70% and the average return on capital assets is 6%. The profitability rates are



the same for project districts and other districts. Livestock-specialized farms achieve a substantially higher return on assets (12%), while the profit margin is practically the same.

Impact of Purchased Inputs on Profitability

A substantial proportion of Georgian farmers purchase various farm inputs and services from outside suppliers, mainly private individuals and firms (see Table 20). Some purchased inputs, such as fertilizers, can be expected to improve crop production. Other purchased inputs, such as veterinary drugs and services, or high quality animal feed, can be expected to improve the health of the animals and thus increase livestock production. By improving crop and livestock production, purchased inputs should have a positive impact on output and profitability of farms.

The percentage of profitable farms (i.e., farms for which sales revenue exceeds production costs) is indeed higher among farms that purchase some selected inputs (Table 23). Thus, 54% of farms that purchase fertilizers from some source are profitable, compared to 44% among those that do not report purchasing fertilizers. The farms that purchase inputs consistently report higher revenues than farms that do not purchase inputs, and perhaps most importantly the net income (calculated as the difference between revenues and production costs) is consistently higher for farms that purchase inputs compared with farms that do not report purchase of inputs.
The difference in revenues and profits is observed although there is no significant difference in size: farms in both categories have 0.9-1.0 ha of land on average. Use of some purchased inputs thus indeed has a substantial positive impact on farm performance and hence on farm profitability.

Table 23. Impact of Selected Purchased Inputs

	Fertilizer	Veterinary drugs/services	Animal feed
Percent of farms that purchase inputs	28%	25%	47%
Percent of profitable farms			
among farms that purchase inputs	62%	64%	66%
among farms that do not purchase inputs	55%	55%	49%
Sales revenue per farm (lari)			
for farms that purchase inputs	1600	1620	1520
for farms that do not purchase inputs	1300	1300	1240
Net income per farm (lari)			
for farms that purchase inputs	1170	1140	1060
for farms that do not purchase inputs	740	760	640

Credit

The respondents provided very little information on their outstanding debt and recent borrowing. If the survey results are accepted at face value, they imply virtually total absence of borrowing, whether formal or informal, among the farmers in the four districts. Another possible interpretation of the remarkable paucity of responses is farmers' reluctance to discuss financial matters in general, and loans in particular.

Table 24. Borrowing in 1995 by Farmers in the Sample

District	Loan amount, lari	Term	Source of loan	Monthly rate
Dusheti	200	up to 3 months	Private individual	6%
Sagaredjo	200	up to 3 months	Private individual	--
Sagaredjo	500	up to 3 months	Relatives	--
Dusheti	1000	up to 3 months	Relatives	--
Dusheti	1000	up to 3 months	Relatives	--
Dusheti	1000	up to 3 months	Relatives	--
Dusheti	1000	up to 3 months	Relatives	--
Dusheti	1500	up to 3 months	Relatives	--
Dusheti	2500	up to 3 months	Relatives	--
Gardabani	4000	longer than 3 months	Relatives	--

A total of 19 farmers (1% of respondents) reported that they had outstanding debt in amounts ranging from 50 lari to 10,000 lari (Table 24). For 50% of the respondents the amount of outstanding debt was between 100 lari and 500 lari, with median debt at 400 lari. None of this debt originated from banks: the loans were provided by relatives and friends.

Only 10 farmers (0.5% of respondents) provided information on recent borrowing. Table ... lists the loans taken by these 10 farmers in 1995. The loans ranged between 200 lari and 4000 lari, with median loan of 1000 lari. All the loans except one were for a term of less than 3 months. They all originated from informal sources (relatives, not banks), and usually did not carry any interest (a figure for interest rate, 6% per month, is reported for one loan only). The loan with maturity of over 3 months was also the largest loan in the sample: 4000 lari borrowed from relatives at zero interest.

Even fewer farmers (only 4 in total) report that they have accounts receivable, i.e., moneys owed to them by customers. This probably indicates that farmers sell their products for cash, and is consistent with the previous observation that the market, and not processors and other commercial organizations, is the main channel of sales for individual farmers.

Table 25. Farmers' Demand for Credit in 1996

	Number of respondents	Percent of all surveyed	Percent of those who expect to need credit
No credit required	962	49.4	--
Expect to need credit	984	50.6	100.0
1,000-2,000 lari	246	12.6	25.0
2,000-5,000 lari	492	25.4	50.0
5,000 lari and more	246	12.6	25.0

Although farmers in the survey have virtually no debt, 50% of respondents indicate that they will need credit for farm operations in 1996; the other half indicate that they will not need to borrow for the farm in the coming year (Table 25). The required amount of credit is between 1,000 lari and 2,000 lari for 25% of respondents in need of credit (i.e., 12.5% of all respondents), and between 2,000 and 5,000 for another 50% of respondents in need of credit (i.e., 25% of all respondents). Thus, 75% of farmers in need of credit (or 37.5% of all farmers in the survey) expect they will need to borrow up to 5,000 lari ($4,000) in 1996 for their farm.

Farmers generally express interest in borrowing for a period from 12 to 24 months (over 70% of those who expect that they will need to borrow in 1996). Less than 10% indicate that they will want to borrow for a term shorter than one year, and about 15% seek long-term loans for a period from 2.5 years to 5 years and even 10 years. The acceptable interest rate is generally 1%-2% per month (60% of potential borrowers), but nearly one-third indicate that acceptable interest rates should be below 1% per month.

Since farmers do not borrow from banks, issues of collateral are totally irrelevant at present. Farmers were nevertheless asked their opinion about the possibility of a future law that will allow using land as collateral for bank loans. Only 15% of respondents supported the idea, while 45% were outright opposed. The remaining 40% were indifferent or had no opinion. Consistently with this attitude, only 17% of respondents indicated that they would be prepared to mortgage their land, while 56% rejected this option even if there were no other way to obtain

credit. Some 40% of respondents, however, indicated that it probably would be easier to obtain bank credit if they could offer as security an official title document to their land. The remaining 60% did not think that a title document would improve their access to credit.

There is neither pronounced pessimism nor clear optimism among the farmers concerning the financial prospects of their farms in the coming year. The respondents are equally divided among those who believe that the financial situation of the farms will improve, remain unchanged, or deteriorate. While 50% think that the financial situation in 1996 will not be worse than in 1995, the other 50% think that it will be worse or are unable to decide. Some indication of a lack of confidence in government policies and the economy in general can be inferred from the fact that two-thirds of respondents intend to sell their privatization voucher, rather than invest it in one of the available options for future growth.

Social Sphere

The rural population in Georgia appears to have lost virtually all the social services that traditionally characterized Soviet collective agriculture. Gone is the assistance with construction, house repairs, utilities, heating fuel, purchase of food and consumer goods at subsidized prices, and vacations in enterprise-coordinated resorts (Table 26). The access to transport services is also drastically reduced.

A significant proportion of respondents continue to enjoy only those social benefits that have always been provided by the government, and not necessarily by the local enterprise. These include salary and pension adjustment for price increases and children allowances. Medical care, on the other hand, appears to be no longer available to the rural population, although it is also basically the responsibility of the government. Respondents who enjoyed medical care in the past report that they have no access in the medical care in the present. Access to medical care is also high on the list of explicit difficulties reported by farmer households: 41% of respondents complain of difficulties with access to medical care. A similar proportion of respondents report difficulties with purchase of food, construction, repairs, and access to transport. There are fewer complaints about access to day care and schools (Table 27).

Over 70% of families report that their material situation has deteriorated during the last 2-3 years, with 45% reporting essential deterioration. At the other extreme, 12% report that their situation now is better than in the past and 11% indicate that there has been no change in their material situation. More than half the respondents complain that their income is insufficient even for food and another 40% report that they can only afford to purchase food and the basic necessities. The proportion of respondents whose income is sufficient to purchase clothing in addition to food and the basic necessities is around 5%, while nobody admits being able to afford such luxuries as furniture, home appliances, or a car. The grim realities of existence in rural Georgia today affect the respondents' perception of the future, and there is little optimism among the farmers: one third of the respondents do not anticipate any changes in the economic situation of their families within the next 2-3 years, and nearly 25% expect the conditions to deteriorate. Less than one quarter of the respondents envisage a certain improvement in the material situation

of the family. Roughly the same distribution of opinions characterizes the expectations concerning the conditions for private farming in the local region.

Table 26. Provision of Social Services to Farmer Households

	Enjoyed in the past	Enjoy currently	Provider of service today (percent of respondents)
Salary adjustment for price increases	42	28	Government (37%)
Pension augmentation	21	16	Government (25%)
Children allowances	29	17	Government (26%)
Subsidized day care	8	3	Government (6%)
School subsidies	3	0	--
Student stipends	3	0	--
Help with housing construction and repairs	12	0	--
Heating fuel	9	0	--
Consumer goods at subsidized prices	11	0	--
Help with purchase of manufactured goods	9	0	--
Subsidized community services	4	0	--
Provision of health care	13	0	--
Subsidized vacation resorts	17	0	--
Enterprise housing	1	0	--
Subsidized rent, utilities	4	0	--
Transportation	11	2	Collective enterprise (1%)

Table 27. Difficulties with Social Services for Farmer Households

	Percent of respondents reporting	
	Difficulties	No difficulties
Day care	11	21
Schools	15	22
Use of enterprise housing	19	14
Use of community services and subsidized utilities	22	11
Access to medical care	41	10
Access to transport	47	9
Construction and repairs	48	8
Heating fuel	48	8
Purchase of food	45	8
Other	40	7