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World Bank Discussion Papers

Land Reform and Farm Restructuring in Ukraine

Zvi Lerman
Karen Brooks
Csaba Csaki

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Zvi Lerman is a professor in the Department of Agricultural Economics, Hebrew University of Jerusalem, Israel, and a consultant to the World Bank. Karen Brooks is principal economist in the Agricultural Policies Division of the Bank's Agriculture and Natural Resources Department. Csaba Csaki is senior agricultural adviser in the Natural Resources Management Division, Country Department IV, of the Bank's Europe and Central Asia Regional Office.

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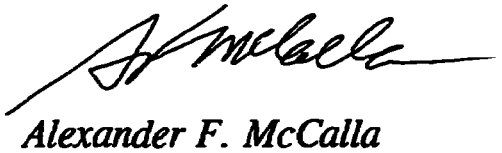
Foreword

The World Bank undertakes studies of various aspects of reforms in transition economies in order to evaluate progress, advise member governments, and design lending for investment and development. Of special interest are changes in agriculture, both because agriculture is an important sector in former socialist countries and because agricultural privatization involves the dual task of land reform and restructuring of farm enterprises.

The present study surveys and evaluates the status of privatization in Ukrainian agriculture. It complements studies of land reform and farm restructuring undertaken by the World Bank in Albania, Bulgaria, Hungary, Poland, Romania, and Russia. Like other studies in this larger effort, the present study presents an empirical picture of the transition as viewed at the farm level, through the eyes of private farmers,managers of reorganizing farm enterprises, and employees of these enterprises.

The status of agricultural reform in Ukraine at the beginning of 1994 is similar in many respects to that of Russia a year earlier. Although important preliminary steps have been made, most of the work of creating farms able to function in a market environment lies ahead. The renewed commitment to economic reform undertaken by the Ukrainian government in fall of 1994 provides an opportunity to move beyond the first steps.

The present study should provide a useful tool for Ukrainian decision makers in assessing accomplishments and identifying the next steps in agricultural privatization. It will also be useful to international institutions designing financial and technical assistance, and to scholars seeking to understand the unprecedented process of transformation in transition economies.

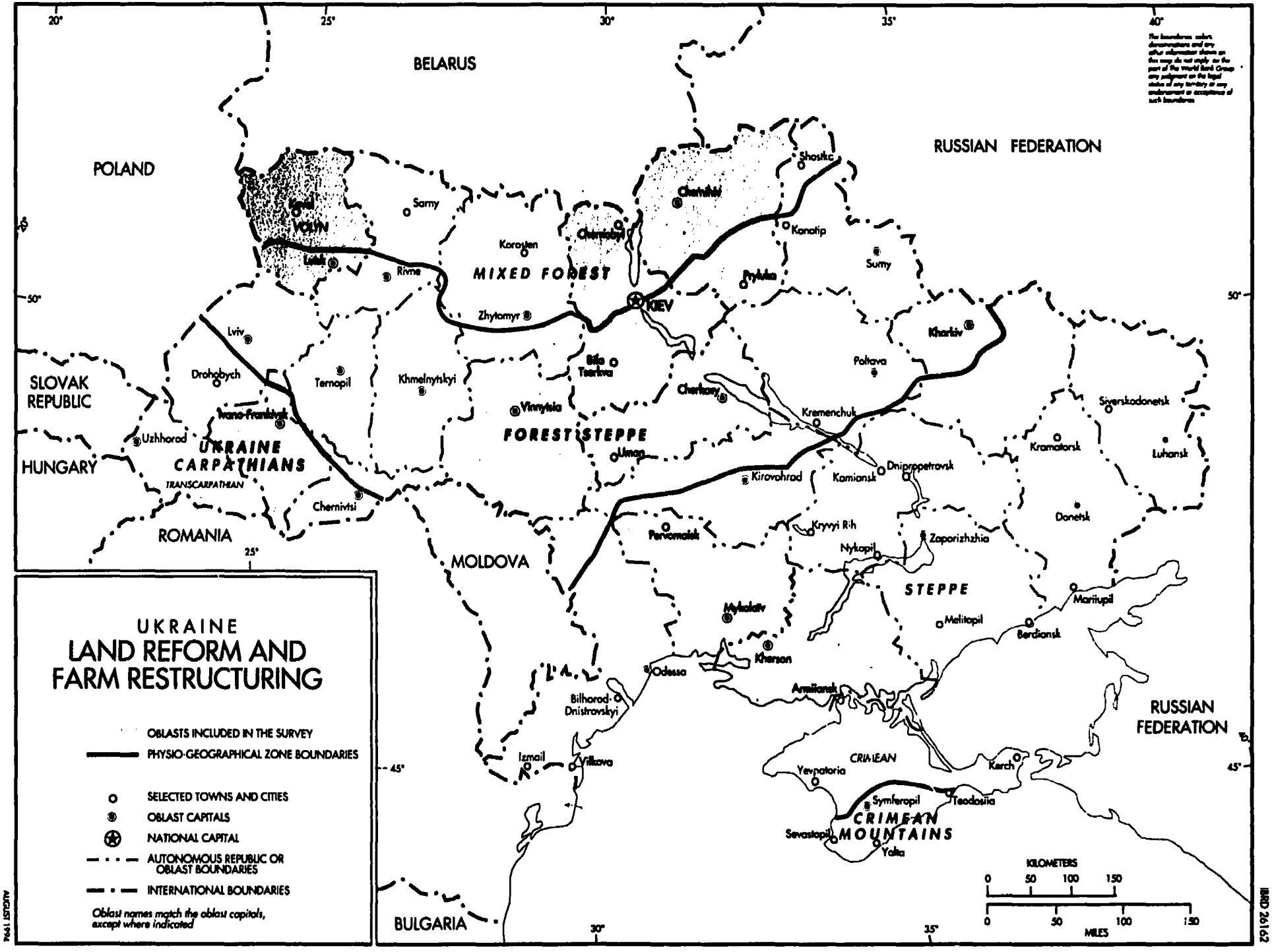


Alexander F. McCalla

Director
Agriculture and Natural Resources
Environmentally Sustainable Development

Basil G. Kavalsky

Director
Country Department IV
Europe and Central Asia


UKRAINE
LAND REFORM AND FARM RESTRUCTURING
OBLASTS INCLUDED IN THE SURVEY
PHYSIO-GEOGRAPHICAL ZONE BOUNDARIES
SELECTED TOWNS AND CITIES
OBLAST CAPITALS
NATIONAL CAPITAL
AUTONOMOUS REPUBLIC OR OBLAST BOUNDARIES
INTERNATIONAL BOUNDARIES
Oblast names match the oblast capitals, except where indicated
BELARUS
POLAND
RUSSIAN FEDERATION
SLOVAK REPUBLIC
HUNGARY
ROMANIA
MOLDOVA
BULGARIA
MIXED FOREST
FOREST STEPPE
STEPPE
UKRAINE CARPATHIANS
TRANSCARPATHEAN
CRIMEAN MOUNTAINS
CRIMEAN
KIEV
Lviv
Ternopil
Khmelnytskyi
Vinnytsia
Rivne
Zhytomyr
Chernivtsi
Uzhhorod
Ivano-Frankivsk
Drohobych
Kharkiv
Poltava
Sumy
Kremenchuk
Dnipropetrovsk
Kamiansk
Kirovohrad
Kryvyi Rih
Zaporizhzhia
Nykopil
Donetsk
Kramatorsk
Luhansk
Melitopil
Mariupil
Berdiansk
Kherson
Mykolaiv
Odessa
Izmail
Bilhorod-Dnistrovskyi
Kerch
Yevpatoria
Simferopil
Sevastopil
Yalta
Teodosiia
KILOMETERS
MILES
IBRD 26162
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Preface

This report is the outcome of a field survey conducted in Ukraine between November 1993 and March 1994 by the Agrarian Institute in Kiev, with the support of the World Bank. The objective of the survey was to obtain empirical data about the restructuring of Ukrainian agriculture in the process of transition to a market-oriented economy. The survey addressed three major groups of agricultural producers in Ukraine: managers and employees of large-scale farm enterprises as representatives of the traditional agricultural structure in the process of transition, and individual farmers as representatives of the new private sector. The survey covered nine provinces in the three main agro-climatic zones of the country. The composition of the sample is given in Table A, and the geographical distribution of the provinces participating in the survey is shown on the attached map of Ukraine.

Table A. Sample Structure

			Farm Managers	Farm Employees	Private Farmers
Total number of respondents			**846**	**878**	**810**
Zone	*Province*	*Location*			
Mixed Forest	Ivano-Frankovsk	SW	4.4%	4.3%	1.7%
	Volyn	NW	8.4%	9.2%	9.5%
	Chernihiv	NE	14.4%	14.7%	13.5%
Central	Kiev		11.6%	9.6%	24.1%
Forest-Steppe	Vinnitsa	SW	15.0%	10.6%	10.4%
	Cherkassy	SE	15.6%	18.0%	13.1%
	Kharkov	E	9.1%	9.0%	9.6%
Steppe	Mykolaiv	S	9.7%	11.0%	9.4%
	Kherson	S	11.8%	13.6%	8.8%

The project was managed as a cooperative effort by a team of Ukrainian researchers in Kiev and a World Bank task team. The Ukrainian team conducted the field work, carried out data processing and analysis, and developed a comprehensive Russian-language report based on aggregate information and survey data. The World Bank team provided support in areas of survey design, computer software, data processing, and analytical methodology. The World Bank team also produced the present English-language report, based on information provided by the Ukrainian counterparts and on independent analysis of the survey data. The survey instruments used in Ukraine were modeled on the questionnaires previously utilized in similar World Bank surveys in Russia and in five Central and Eastern European countries. The questionnaires were

modified and adapted to Ukrainian needs by the researchers in Kiev with assistance from the World Bank task team.

The Ukrainian team included researchers from two institutes, the Agrarian Institute of the Ukrainian Academy of Agricultural Sciences and the Institute of Economics of the Ukrainian Academy of Sciences. The team was headed by Peter T. Sabluk, Director of the Agrarian Institute, and Ivan I. Lukinov, Director of the Institute of Economics. The project coordinator in Kiev was Anatolii A. Fesina from the Agrarian Institute. The Ukrainian team members were (in alphabetical order) Peter I. Haidutskii, Aleksei I. Onishchenko, Boris I. Paskhover, and Vladimir V. Yurchishin. Data entry and data processing were carried out at the Department of Computerization of the Agrarian Institute by Maya G. Beitlin and Galina N. Pustovit under the direction of Nikolai A. Pekhota. The project was endorsed by Academician Aleksei A. Sozinov, President of the Ukrainian Academy of Agricultural Sciences. The Ukrainian Ministry of Agriculture and Food, and Minister Yurii A. Karasik personally, were highly supportive of the project and provided the necessary administrative clearances for its execution. The findings and conclusions of the Ukrainian team are summarized in a separate publication in Ukrainian.

The World Bank team included Karen Brooks, Csaba Csaki, and Zvi Lerman. Zvi Lerman was the primary author of the English-language report. Karen Brooks served as task manager of the World Bank team. Csaba Csaki provided guidance throughout, and coordination with the Ukrainian counterparts. Data processing support was provided by Apparao Katikineni. The report was written when Zvi Lerman was on leave from the Department of Agricultural Economics, The Hebrew University of Jerusalem, Israel. Valuable comments were received from Gershon Feder and Geoffrey Fox.

The study was funded by the World Bank (EC4NR and AGRAP) and by the Ukrainian Agrarian Institute.

The report starts with an introductory chapter, which provides a rationale for the study and presents a summary of the findings (Chapter 1). The overview of Ukrainian agriculture in Chapter 2 is followed by a discussion of the legal framework for land reform and farm restructuring (Chapter 3). Chapters 4 through 8 are the empirical core of the study, presenting the survey data. The presentation covers the new private sector (Chapter 4), the reorganizing farm enterprises (Chapter 5), the effect of reorganization on farm employees (Chapter 6), development of market services and infrastructure (Chapter 7), and rural social services (Chapter 8). Tables presented in the text without an explicitly identified source are based on survey data. The data for all charts and diagrams are derived from the survey or from official aggregate statistics provided by the Agrarian Institute (the specific source is always clear from the context).

Abstract

Under legislation adopted in 1992, Ukrainian law recognizes private ownership of agricultural land, as well as collective and state ownership. Also in 1992, a program to transfer land from state ownership to collective and individual ownership was initated on a large scale, along with procedures to restructure collective and state farms. The transfer of land ownership and restructuring of traditional farms create opportunities for private farming to develop in Ukraine after decades of collective management of agriculture. The impact of these developments at the farm level is examined in the present study by evaluating responses of 2500 participants in the process.

In July 1994, Ukraine had approximately 30,000 private farmers cultivating 2% of agricultural land in 20-ha farms, with another 12% of farmland cultivated individually by families of employees in the form of 0.5-ha subsidiary household plots in large-scale farms. In the sampled farms, almost one-third of the land in these two forms of individual cultivation was privately owned, with the remaining two-thirds still in the traditional forms of lifetime possession and usership. Functioning land markets have not begun to develop in Ukraine due to slow documentation of individual ownership and a moratorium on sales.

The share of state-owned land shrank from 100% in 1991 to only 35% in January 1994, but most of the land remains in collective tenure: 75% of agricultural land is managed by collective farms and by state farms that are subject to privatization in the future. Three-quarters of large farm enterprises in Ukraine reorganized, but the preferred new form is that of limited liability partnership or collective enterprise, which in many cases involves little change from the predecessor, the state or collective.

Most employees at present do not seek to leave the collective to start a private farm. The main obstacles reported by the respondents are insufficient capital, difficulty obtaining machinery and farm inputs, and legal and political uncertainty. Loss of social benefits is not an overriding concern, as private farmers do not experience particular difficulties in access to social services. Distribution of farm products is still dominated by state procurement, which is the main outlet for both large-scale farms and private farmers. Alternative trade channels are not well developed. Input supply is similarly dominated by the state, although private suppliers are beginning to emerge.

Further progress toward improved efficiency in Ukrainian agriculture requires continued restructuring of farm enterprises into smaller autonomous units based on private ownership of land and assets, clear formulation of procedures that allow exit of individuals and small groups with shares of land and assets, development of land markets, and establishment of functioning market infrastructure for competitive input supply, marketing services, and financial services.

Executive Summary and Recommended Actions

Why monitor land reform and restructuring of farms in Ukraine?

Transfer of agricultural land and assets to private ownership and the creation of more productive farms are essential components of agricultural reform in Ukraine. Unless strongly market-oriented private commercial farms can be created, Ukraine's labor intensive agriculture will orient toward the subsistence needs of producers and local markets, rather than specializing to take advantage of export opportunities. The Government of Ukraine is responsible for designing and implementing a program through which producers will receive ownership of land and assets and create new kinds of farms. The task of privatizing land and restructuring farms is intrinsically complex. The pace at which it proceeds depends on a number of factors, each of which will likely require remedial intervention from the government. Identification of the constraints and concrete opportunities for Government action and international support requires information on developments at the farm level.

The present study is based on three extensive surveys carried out in Ukraine in the winter of 1993-1994 by the Ukrainian Agricultural Academy of Sciences and the World Bank. The objective of the study has been to conduct ***a rigorous empirical and analytical assessment of changes in land ownership and farm structure from independence through spring 1994.***

Does the process of reform in Ukraine reflect a clear commitment to private ownership of land and assets?

The overall objective of the agricultural reform is to create an internationally competitive sector with high returns to the rich endowment of land and skilled agricultural labor. The legal framework and implementation of reforms in Ukraine are still ambiguous as to whether agriculture in the future will be based predominantly on private ownership of land and assets, or on collective ownership under new and different management. This ambiguity is reflected in the laws and procedures that give equal legal status to private ownership and collective ownership, but constrain the activities and transactions necessary to make private ownership fully functional. A stronger articulation of commitment to privatize ownership of land and assets, rather than reform collective ownership, is needed. Collective enterprise in a variety of forms will continue because many new owners will choose it, but the new collective enterprises should be based on clear private ownership. The new government's strong endorsement of the general reform program, as evidenced by the fall 1994 agreements with the International Monetary Fund, provides an opportunity for articulation of commitment to private ownership as the basis for agricultural reform.

Why restructure and not simply privatize?

Privatization in industry in most countries stops at the transfer of ownership and explicitly leaves restructuring to the new owners. Except for the case of parastatal monopolies that must be reconfigured prior to privatization, enterprise level restructuring is not in general a feature of industrial reforms. Privatization in agriculture follows a different path. The collective and state farms, like the parastatal monopolies, must be reconfigured as part of the privatization process, because they have no analogue in agriculture in market economies. While it is sometimes argued that a collective or state farms could be privatized directly as a corporate farm, there is no ready counterpart in market economies for a 3,000 ha farm with 400 owner-employees. A simple transfer of ownership to members and employees of state and collective farms would not directly create viable and competitive production units. For this reason programs of land reform and farm restructuring include additional mechanisms through which owners can create new farming units, either within the former farm, or through exit. Privatization thus proceeds immediately into restructuring.

What is the current status of the reform?

The process of fundamental restructuring to improve the performance of Ukrainian agriculture has begun. Over 70% of all farm enterprises in Ukraine formally reorganized. The share of state owned land in farms in the survey dropped from 100% before 1990 to 35% in 1992, but 62% of the land on surveyed large farms is in collective, not individual ownership. The average size of subsidiary household plots almost doubled from less than 0.3 ha to 0.5 ha, and approximately 30,000 private farms were registered. Over 13% of farmland in Ukraine is now cultivated by users of household plots and private farmers. A state reserve of land intended for distribution to future private farmers was initially created by transfer of 10% of the land of collective and state farms. Most of this land (nearly 2.5 million ha at its peak) is still cultivated by the large farms under loosely defined lease arrangements. The process of restructuring; that is, changing the internal form and organization of farms, is still in a preliminary phase, and has not moved beyond the creation of shareholding farms. The shareholding farm is similar to the traditional collective and state farms, and can be adopted with relative ease simply by registering the existing farm under a new category of organization.

- ***The New Collective Sector:*** The sector is now in a kind of equilibrium of a low level of restructuring. There is no clear mechanism for creation of new production units other than the shareholding large farm or the individual family farm. According to the survey, not many employees desire to leave the collectives and create new business units. A minimally reorganized new collective agriculture is unlikely to be internationally competitive. It continues to suffer from the inherent economic weaknesses of production cooperatives and labor-managed firms, which include a tendency toward overemployment, poor labor discipline, and failure to meet financial obligations. The incentive structure in new collectives remains incompatible with market signals.

- ***Private Farming:*** Private farming is growing, but remains a distant third player in contribution to aggregate production, after the new collective sector and traditional household subsidiary farming. Private farmers are engaged in commercial production for markets, and are not subsistence farmers. In response to changing market conditions, private farmers have chosen a production mix that emphasizes crop production to a greater extent than on farms that remain collective. Private farmers are better educated than employees on collectives. Private farmers report that own savings is the most important source of start up capital, and that availability of financing for working capital and investment is a major problem.

The Ukrainian private farmers provide evidence that when the legal framework created opportunities for producers to function outside collectives, individuals welcomed the opportunity, and acted upon it. Private farmers at present are functioning between systems, and are using any possibilities that arise to keep their operations functioning. That they exist at present and that their numbers are increasing is testament to the firmly held belief that land will in the future have value, and that private production has a future. Private farming can survive and prosper in Ukraine in an appropriate institutional environment. It is unlikely that private farming will be substantially strengthened as long as private farmers are forced to operate in the narrow and inhospitable gap between the command and market systems.

- ***Market services:*** Private suppliers of market services are emerging in Ukraine, but a functioning market infrastructure still has not developed. Collective farms and private farmers continue to rely largely on state channels for input supply. Farm managers and private farmers report that inputs are available, but that prices are high. Purchased inputs, particularly fuel and chemicals, are more expensive relative to output than prior to the reforms, and farms have greatly reduced input use. Barter transactions to secure inputs have increased. Employees who intend to remain in collectives fear that as private farmers they would not be able to secure inputs, would face high risks, and would have difficulty securing sufficient capital. These concerns are much more prominent in the decision to remain in collectives than the fear of losing access to social services. State channels are also still dominant in marketing of output, particularly for the important cash crops, such as grains and oilseeds. Private farmers and managers of large farms are dissatisfied with the prices and services they receive from state marketing firms. Financial services are reported to be the most severe problems for private farmers and for those considering private farming.

- ***Social Services and Benefits:*** There has been little change in the way in which social services are provided in rural areas. The new collective farms continue to be major providers for services other than health and education, for which they play a secondary role after the state. By law enterprises can elect to transfer responsibility for provision of social services to the local council, along with ownership of assets in the social sphere. Farm managers report that very little transfer to local councils has taken place, and that they continue to provide a wide range of social benefits. The majority of employees, however, report that they do not receive many among the sixteen enumerated benefits provided by their enterprises, suggesting that except for health and education provision of social services even under the traditional system may have been less than universal. For example, less than one half of the employees reported that they

enjoyed the use of subsidized vacation facilities, while 90% of farm managers stated that they provided this benefit. While 85% of managers indicated providing heating fuel to their employees, only one third of the employees reported that they received this benefit.

Why have the accomplishments been so modest?

Initial accomplishments in the reform have been modest for a variety of reasons:

- ***Political and legal uncertainty:*** Controversy over the outline of the general reform program has distracted from the sectoral agenda, and frequent changes of legislation have created a sense of uncertainty about the future course of reform.

- ***Lack of a supportive environment:*** Functioning markets for farm inputs and products have not yet emerged, impeding successful operation of new privatized agriculture. The financial sector is in disarray, few banks are able to give mortgages, and few land owners are willing to offer land as collateral. Mortgage finance is an important instrument of agricultural lending for private investment, but its development requires security of tenure, legal title to land that can be used as collateral, and existence of land markets to give objective valuation of land. Land markets do not function at present because sales of privately owned land are subject to a moratorium of six years, although draft legislation being considered proposes to reduce this period to two years. Fully functioning land markets, including unconstrained purchase, lease, and mortgage will be necessary if Ukraine is to develop the high yielding, high value agriculture consistent with its endowment and needed to support rural incomes.

- ***Inadequate mechanisms for restructuring and exit:*** Procedures for further restructuring at the farm level are inadequately developed, and individuals and farm managers lack basic information about the options open to them. According to respondents in the study, the mechanism of exiting collectives with land and assets is not yet operational. Mechanisms will have to be developed through which a group of shareholders can present a proposal of separation, including specification of the land and assets they would like to take with them. Procedures for adjudication of disputes that arise when the remaining shareholders do not approve a separation proposal will have to be devised.

- ***High risk and lack of instruments for risk management:*** Political uncertainty, lack of clarity in design of programs, and macroeconomic instability create a risky environment for private farming, and even such basic instruments as secure savings and insurance are lacking. Continued high inflation increases risk for agricultural producers, and exacerbates the retreat from markets into internal distribution and accumulation of inventory. Participants in land reform and farm restructuring are likely to choose to remain within larger units, where non-cash distributions provide a hedge against erosion of money incomes.

What must yet be done?

The current procedures for land reform and farm restructuring do not yet provide a complete framework within which implementation can proceed. Nor is the environment created by the macroeconomic reform program yet supportive of strong agricultural reform. A number of changes in law and procedures should be considered.

- ***Improvements in the market environment are of highest priority:*** Although creation of fully functioning market institutions will take time, the regulatory environment can be improved quickly by removing remaining export barriers and remnants of the state order system. Agreements in the fall of 1994 with the International Monetary Fund and the World Bank lay the foundation for the creation of a better market environment. Privatization of input supply, agricultural processing, and marketing should be accelerated to provide an environment in which private producers and firms can function effectively. Formally privatization of processing and marketing is outside the purview of land reform and farm restructuring, but is essential for the success of the latter. Reform in the financial sector should accelerate, and financial services for rural clients should be much improved. Strict financial discipline should be imposed on all farms, as well as all other enterprises, so that accumulating arrears do not undermine the reforms and distort incentives to which managers respond.

- ***Distribution of ownership shares should continue.*** Clear individual ownership should be established for land and productive assets. Distribution of share certificates is the first stage of this process, and it should be completed expeditiously. Land in the state reserve should be transferred to private ownership, not held indefinitely for future applicants. With removal of the moratorium on sales, future entrants into farming will be able to buy land through normal commercial transactions.

- ***A number of changes should be made in the legal framework governing land ownership and transactions.*** The moratorium on sale of land should be removed. The current prohibitions are an obstacle to creation of market-oriented farming through regrouping of land and assets. Prohibitions on transactions in land also inhibit financing and investment. Leasing arrangements should be formalized and lessees should pay for land. At present, many lessees use land and pay for it indirectly or not at all. Much of the land leased comes from the state reserve fund, and the lease is in practice simply permission to use the land, rather than a commercial agreement.

- ***Upper limits on size of private farms should be eliminated*** after a short transition phase. Under present law private farmers cannot own more than 50 ha of arable land. Market mechanisms such as taxation should be used to prevent large-scale accumulation of land by absentee owners for speculative purposes.

- ***Restrictions on use of land only for agricultural purposes should be relaxed.*** Land owners should decide on the optimal use of land based on economic criteria, subject to environmental regulations.

- ***Land tenure should be documented and made secure.*** Where land currently in private use can legally pass into private ownership, this process should be accelerated and the land titled. Land in private use that cannot legally pass into private ownership should be leased to the user for the period during which its tenure status can reasonably be expected to be clarified. Operators who lease land should pay for it.

- ***Procedures for exiting collectives with land and asset shares should be clarified and made operational.*** Procedures for individual exit exist in theory, but virtually no respondents in the study reported exit with land or assets. Procedures for exchanging and grouping shares among individuals prior to exit have not yet been developed, and are needed. The experiences in Russia under the Nizhnii Novgorod restructuring pilot and in Hungary under the Cooperative Transition Act should be examined for relevant lessons. An approach to exchange and grouping of shares prior to exit should be developed for Ukraine. This is particularly needed because land shares are so small.

- ***Pensioners***, who are recipients of nearly half the land and asset shares in former collectives in the sample, ***should receive special guidance on how to manage their land and asset shares***, including options other than leaving shares under management of the existing collective. Mechanisms must be developed to enable pensioners to sell their asset shares and lease their land to active producers in return for payment.

- ***Restructuring of rural services currently provided by the collective sector should be treated as an independent process, rather than an adjunct of farm restructuring.*** Public services that will remain in the public sector should be transferred to local governments in a mandatory process, after enhancement of the administrative and financial capacity of the local governments. Farms should be required to divest a portion of the assets used in provision of services that belong in the private sector. The rights and interests of farm shareholders should be protected in the divestiture process, and the ultimate objective of divestiture should be to enhance competition in provision of private services in rural areas.

- ***Technical assistance and information programs should be implemented in order to guide the rural population through the transformation.*** Much of the rural population at present is poorly informed about their rights and options, and farm managers also report a need for more information.

As these issues are addressed effectively, Ukrainian agriculture will be able to advance to the second stage of the overall land reform and farm restructuring program, which involves ***creation of market-oriented, profit-motivated structures based on clear individual ownership of land and assets and an incentive system encouraging individual responsibility and rewarding effort.*** The

new farm structures may take a variety of forms. Some persons will exit individually with shares of land and assets and establish private farms. Others will pool their shares and create small partnerships or cooperatives for farming. Yet others may choose to lease their land to more enterprising producers and assume the role of "inactive investors" or alternatively focus on development of private farm-support services. The former collectives will thus gradually break up into individual farms or small farming groups, where production will be based on privately owned land and assets. These new producers will be supported by market services, some of which will be provided by new private entrepreneurs (again individually or in groups) while others may be based on former collective management structures that will redefine their role as service firms or cooperatives.

Full implementation of the program already initiated (with changes indicated above) will thus result not in complete fragmentation of existing farms, nor enforced corporatization of the large traditional units. Instead farms of a range of sizes reflecting the judgment and decisions of new owners of land and assets will emerge over time. Because this will be a dynamic process with internal mechanisms for adjustment in farm size, it is especially important that leasing, purchase, sale, and mortgage of land be protected by law.

1

Rationale for the Study and Summary of Findings

Ukrainian agriculture has faced severe shocks since 1991, including loss of traditional markets, reduction in sectoral support, deterioration in agricultural terms of trade, reduced access to credit, and serious drought in 1994. The sector has started on a course of fundamental reforms that will eventually position Ukraine to be a strong competitor on international agricultural markets within the former Soviet Union and throughout the rest of the world. The reforms will encompass creation of new enterprises (in primary production, processing, marketing, services, and finance), enactment of policies consistent with competitive functioning of markets, and introduction of new technology.

Why Restructure and Not Simply Privatize?

Enterprise reform, policy reform, and technological renewal are interlinked. None alone will be sufficient to launch sustainable recovery in agriculture, and none can be fully accomplished without progress in the others. ***Design and implementation of programs of land reform and farm restructuring are needed for the agenda of sectoral reform to move forward in all its dimensions.***

Interlinkage of enterprise restructuring and the larger reform agenda is not unique to agriculture. The interlinkage is the basis for emphasis on industrial privatization as a priority in the general reform program. Privatization in industry in most countries, however, stops at transfer of ownership and explicitly leaves restructuring to the new owners. Enterprise level restructuring is not in general a feature of industrial reforms except in the case of parastatal monopolies that must be reconfigured prior to privatization.

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

The new owners of farm assets do in fact manage the restructuring, and they need a legal framework in which to proceed and advice on alternative structures to choose. New owners will ultimately have to implement a change in their firms more fundamental than in most industrial

enterprises, because the organization of the traditional farm in Ukraine diverges more from farms in market economies than the structure of a typical industrial enterprises differs from its foreign counterparts.

Industrial enterprises in both types of economies are characterized by separation of ownership and management. Privatization in industry usually involves creation of a shareholding company, and transfer of ownership of shares from the state to new owners. The industrial firm owned by shareholders represented by a Board of Directors and managed by professionals accountable to the shareholders is one of several viable firm types seen in market economies. The industrial privatization thus creates a direct analogue to a type of firm organizationally equipped to survive or change further in a competitive environment.

The parallel process in agriculture would be creation of a shareholding company out of a state or collective farm, and transfer of the shares to new owners. In much of Eastern and Central Europe, land is subject to restitution claims. Where land is subject to restitution and nonland assets are not, shares of intact farms cannot be passed to new owners. Even where restitution is not an issue (and it is not part of the program in Ukraine), creation of shareholding farms may start the process of restructuring, but it is only a beginning.

The shareholder farm created out of a collective or state farm does not have an analogue in market economies. It is sometimes argued that the corporate farm in North America is the analogue of the shareholder farm in countries in transition. There is a further misconception that corporate farms dominate American agriculture, and that they are superior performers in terms of profitability. If corporate farming dominates agriculture in developed market economies, then why not simply corporatize collective and state farms to improve efficiency? If corporatization were the solution in agriculture, then no special attention to farm restructuring would be needed, since a modification of the industrial privatization program would be adequate.

Corporate farms do not dominate agriculture in North America, and corporate farms that exist do not resemble the collective or state farm newly registered as a joint stock company. Most corporate farms are family farms incorporated for tax reasons, not companies with many shareholders. Family corporations owned 12% of farmland in America in 1990, while other corporate farms owned 2% of farmland. The closest analogue of the American corporate farm in Ukraine is the multifamily private farm with five or fewer families. A shareholder farm with 3000 hectares and 400 owner-employees has no ready counterpart in market economies. The fact that this is not a naturally occurring kind of farm in market economies suggests that the organizational form is not suited to a competitive environment.

Economic theory offers a number of reasons why large farms owned and operated by groups of people might be uncompetitive. The strongest argument is that most agricultural operations require high quality labor and good judgment, yet it is costly to observe which workers within large groups are performing well and which poorly. The efficiency of labor will thus tend to be low, and costs high. Individual shareowners may also feel little personal responsibility for debts incurred by the group, and the incentive to increase debt will be high. Financial

institutions may be wary about accepting jointly owned assets as collateral, and thus commercial lending to group farms may be restricted. Shareholder farms may thus seek a high level of borrowing for investment, but receive little commercial financing. Unless the government steps in with special programs of credit, shareholder farms may be undercapitalized; yet government programs of credit have been shown in many contexts throughout the world to entail high risks of default and poor allocation of credit.

A simple transfer of ownership to members and employees of state and collective farms would not directly create viable and competitive production units. For this reason programs of land reform and farm restructuring include additional mechanisms through which owners can create new farming units, either within the former farm, or through exit. Privatization thus proceeds immediately into restructuring.

Why Monitor Land Reform and Farm Restructuring?

Creation of new farms and enterprises is a complex process that is proceeding rather slowly, not only in Ukraine, but throughout the former Soviet Union. Entitlement to land and assets must be determined, usually by the political process. Land to remain in the public domain must be identified. Boundaries of farms, villages, and districts within which land will be privatized must be confirmed, and boundaries are often disputed. The legal framework governing land transactions during and after privatization must be specified. Recipients of land and asset shares must have a mechanism for regrouping resources to form new farms, either through individual exit from the collective or regrouping within or outside the collective. Participants in the process must understand their obligations, rights, and options. Land in private ownership must be titled and registered, and new business entities given appropriate legal status.

Many problems arise. Problems may result from unforeseen difficulties or delays in implementation. Other problems may derive from laws or decrees that constrain the process in ways that lead to economically undesirable outcomes. Problems that result in delays or economically undesirable outcomes will require action on the part of government. The Ukrainian government is responsible for designing and implementing programs. In order to carry out its responsibility, the government needs current and accurate information about developments at the farm level.

There has been much speculation about the impact of land reform and farm restructuring in Ukraine, but prior to the present study, there has been little rigorous empirical investigation. The findings reported below result from a study undertaken jointly by the Agrarian Institute of the Ukrainian Agricultural Academy of Sciences and the World Bank. The objectives of the study have been to assess changes in land ownership and farm structure as of early 1994, and recommend additional measures to facilitate the process. The Ukrainian Agricultural Academy of Sciences has an intimate knowledge of the inherited agricultural structure, and a network of institutions in the provinces capable of undertaking field investigations. The World Bank has knowledge of the problems and successes encountered in land reform and farm restructuring in

the twenty three countries of the region now undergoing the process. Both sets of participants bring analytical skills and a commitment to understand the process in order to advance it.

The key finding of this study is that as of early 1994, Ukrainian land reform and farm restructuring had moved to the first stage; that is, creation of shareholding farms, but not beyond it. Ownership of land and assets has been transferred jointly to farm employees and pensioners. This is an important development. Individual private ownership of land is rare, and collective ownership is common. Very little restructuring of farms has taken place, and the economic behavior of large farms, as reported in the sample, remains much as in the past. The transfer of ownership has so far resulted in a new but essentially unchanged collective sector, comprising the former collective and state farms. Private farming is growing, but it remains a distant third player in contribution to aggregate production, after the new collective sector and traditional household subsidiary farming.

Participants in the land reform and farm restructuring (managers, employees, and private farmers) do not report a momentum of reform that will carry the process naturally beyond this first stage. ***A minimally reorganized new collective agriculture is unlikely to be internationally competitive.*** Renewed efforts on the part of the Ukrainian government with assistance of international organizations will be needed to assure that the farm restructuring and land reform does not stagnate before viable and competitive farms are created.

The Endowment and Present Environment

Ukrainian agriculture has rich natural resources and proximity to markets. It also has a very high density of labor to land. When land subject to privatization is divided among entitled recipients, the average land share is only six hectares per recipient.

Ukrainian agriculture will remain labor intensive in the near future. Restructured farms may appear in a variety of sizes, but choice of farm size will not affect the labor intensity of production until alternative employment opportunities outside agriculture increase. High value, high yielding agriculture is consistent with this resource endowment, particularly in the short run when opportunities for employment outside agriculture are limited. If land is to yield a good return to labor under these conditions of intensive farming, land must be well managed and producers must have access to high quality, high yielding inputs and financial services to purchase them.

Without good management and good access to markets for inputs and output, labor intensive agriculture will orient toward the subsistence needs of producers and local markets, rather than specializing to take advantage of export opportunities. With the economic disruption of the early transition, Ukrainian farms have already turned inward. Exports have fallen, and production for own needs has increased. The study confirms that distribution in kind within state and collective farms is high. One of the factors that has inhibited further progress in farm restructuring is the belief, widely held throughout the former Soviet Union, that large-scale

farms are inherently more commercially oriented than small farms. There is a common fear that land reform and restructuring of traditional large farms will exacerbate the trend away from commercial production for markets, particularly if the process results in creation of many small and medium sized farms.

Insularity of production units is not a function of farm size. The inward or outward orientation of producers depends on managerial skills, access to markets, incentives, and financial services. The assumption that small farmers will produce for themselves and large farms will produce for markets assumes either that there are substantial economies of size, or that the land to labor ratio on large farms will be more favorable than on small farms. Neither of these assumptions is valid in Ukraine. Although the original decision to collectivize was predicated in part on the assumption that economies of size are substantial, experience and research indicate that scale has little if any effect on efficiency except when farms become very small or very large. The Ukrainian program of land reform and farm restructuring does not appreciably change the ratio of land to labor, since recipients of land shares are the original members and employees (plus pensioners) of the existing farms. The average farm of 3000 hectares and 400 employees can be reconfigured in a number of ways, but there will still be approximately 7.5 hectares per employee.

Farms of a variety of sizes and forms can function effectively, depending on how they are managed, how they are linked to markets, and how they are affected by the government's policies with regard to prices, trade, and the currency. The legacy of the past has created weak links to markets and poorly developed marketing services. Respondents to the study (managers and private farmers) indicated that they still sell most of their marketed output through state channels. Continued high inflation increases risk for agricultural producers, and exacerbates the retreat from markets into internal distribution and accumulation of inventory. If economic conditions are such that monetary transactions become unattractive for agricultural producers (because, for example, there is no safe store of earnings from the end of one season to the beginning of the next, or because output prices are controlled while input prices are free, so that the internal value of output as a consumption good becomes greater than its market value), participants in land reform and farm restructuring are likely to choose to remain within larger units, where the distribution in kind is more varied in composition.

As the economy stabilizes and marketing institutions improve, a growing number of farm managers and employees are likely to judge that returns to their land and asset shares would be higher outside the traditional collective. These entrepreneurial producers are key to the development of modern, export oriented, high value agriculture in Ukraine. The central economic objective of land reform and farm restructuring should be to provide entrepreneurial producers with a mechanism to regroup land and asset shares into production units of their choosing, and to facilitate their registry as new firms. At present, members and employees have rights to land and asset shares, and many have received them on paper. The more entrepreneurial among them do not yet have a ready mechanism for creating new business units, except the individual family farm. Nor do many at present have a perception that they would do appreciably better outside the collective than within it.

The sector is now in a kind of equilibrium of a low level of restructuring. There is no clear mechanism for creation of new production units other than the shareholding large farm or the individual family farm. Nor are there many entrepreneurial producers desiring to leave the collectives and create new business units. To break this equilibrium, incentives for agricultural production and marketing more generally will have to improve, through privatization and new entry in marketing and processing, removal of trade barriers and discriminatory price controls, and improved financial services for agriculture. Mechanisms will have to be developed through which a group of shareholders can present a proposal of separation, including specification of the land and assets they would like to take with them. Procedures for adjudication of disputes that arise when the remaining shareholders do not approve a separation proposal will have to be devised.

As procedures are developed further and incentives improve, the pace of restructuring will increase. Ukrainian agriculture has known and high potential, and the effect on performance can be expected to be substantial. Because of the high intensity of labor in agriculture, it is essential that performance be improved if long term problems of rural poverty are to be avoided.

The Legal Framework for the Land Market

Ukrainian law recognizes land ownership by the state, collective, and individual. All citizens are entitled to own land for farming and designated other uses. To enable land to be allocated to new users, up to 10% of the land cultivated by state, collective, and other farm enterprises was set aside in the first stage of land reform and allocated to a state land reserve. Applicants for land for private farming, gardens, vegetable plots, and dacha plots can seek land from the reserve by applying to their local council.

Land remaining in collective and state farms after extraction of land for the reserve is subject to further allocation. Fifteen percent of this land is used to augment household subsidiary plots of farm employees and members. The remainder passes transitionally into collective ownership of the farm. Some of this land, usually the land in common use or under public buildings, is declared indivisible by the general assembly of members. This land remains in collective ownership. The remainder of land is available for distribution to members and pensioners.

Land in the reserve is temporarily in state ownership, and will eventually be passed to collectives or individuals. Forests and land under reservoirs and lakes will remain in state ownership. Six percent of agricultural land is intended to remain in state ownership indefinitely. This land is used for research and experiment stations, as well as for production of hops, ethereal oils, medicinal plants, and some fruits and grapes. The remainder of land is intended to be owned by collectives and individuals, with the share of individual ownership rising over time. At present, however, much of the reserve land is cultivated by the same collective and state farms that used to manage it before the reform. ***The continued use of reserve land by collectives may be an obstacle to rapid reallocation of land to new users.***

Land holding and land ownership diverge in Ukraine, as in most countries. In developed market economies use and ownership diverge because leasing and other contractual arrangements are well developed through market transactions. ***In Ukraine use and ownership diverge largely because the transfer of ownership is still in process.*** A number of land holders who will eventually have individual private ownership are still holding their land in the traditional tenurial forms of usership (*pol'zovaniye*) or possession (*vladeniye*). Formal leasing through contractual agreements is still rare. On January 1, 1994, collective and state farms subject to privatization held 75% of agricultural land (Table 1.1). Household subsidiary producers held 12% and private farmers 1.5% of agricultural land, although not all of it was individually owned. The state intended to keep 6% of agricultural land in state farms that are not subject to privatization. Another 3% of land is currently in state and village reserves pending allocation to individual users.

Table 1.1. Distribution of Agricultural Land Among Users as of Jan. 1, 1994

Land Users	*Percent of all agricultural land*
Collective farms	61%
State farms subject to privatization	14%
State farms not subject to privatization	6%
Other new structures	1%
Subsidiary household plots	12%
Private farms	2%
Other users (e.g., municipalities)	4%

The land held by state and collective farms on January 1, 1994 was in various forms of tenure. Sixty one percent of land in large farm enterprises was in collective ownership (Table 1.2). Most of this land (55% of land in large farm enterprises) was in collective joint ownership without physical designation of individual land shares. The remainder of collectively owned land in these large farms was divided into land shares. Thirty five percent of land in these farms was still in state ownership (Table 1.2). Two percent of land in large farm enterprises was owned individually, and this comprised part of the land in household plots.

Although land in individual ownership within large farms is usually land of household gardens, most household land is not yet individually owned. Farm employees in the sample reported that on average 29% of household plot land was privately owned (Table 1.2). The remaining 71% are still in the traditional forms of usership and possession.

Among private farms in the sample, slightly more than 30% of farmers own at least some of their land. On an average private farm of 26 hectares, 52% of land is held in lifetime possession, 17% in usership, 2% is leased, and 30% is privately owned by the operator (Table 1.2).

Table 1.2. Forms of Land Tenure in Ukraine (Sample Data)

Form of tenure	*Private farms*	*Household plots*	*Collective enterprises*
Average farm size	**26 ha**	**0.5 ha**	**3,000 ha**
Total farm	**100%**	**100%**	**100%**
Of which:			
Owned by producers	**30%**	**29%**	**65%**
Individual ownership	30%	29%	2%
Collective shared	--	--	6%
Collective joint	--	--	55%
Owned by the state	**70%**	**71%**	**35%**
Usership*	17%	45%	--
Possession*	52%	26%	--

* Usership (*pol'zovaniye*) and possession (*vladeniye*) are traditional Soviet forms of land tenure that recognize right to use state-owned land without payment. Usership is less secure of the two forms, as possession is usually inheritable, although neither form allows transfer of use rights.

The status of land use and ownership in Ukraine in early 1994 thus reflects an ongoing process. ***Most agricultural land is used by the collective sector and is held in collective joint ownership.*** A significant portion is still formally owned by the state, presumably because the farms holding that land have not yet formally registered new status. A small amount of land is held by private farmers, and less than one third of that land is privately owned. Most land in private farms is at present in less secure tenure status than private ownership, either lifetime possession or usership.

Ukrainian law places a number of constraints on land ownership and on transactions. In a private farm the portion of privately owned land cannot exceed 50 hectares of agricultural land and 100 hectares of total land. Privately owned land in a household subsidiary plot cannot exceed 0.6 hectares, although additional land up to 1 hectare can be held in usership, and with special permission the plot can be expanded to 2 hectares.

Buying and selling of privately owned land is subject to a moratorium of six years; i.e., the recipient of land through land reform must hold land for six years prior to sale. Legislation currently under consideration would reduce this period to two years. Recipients of land do not pay for it and are restricted to use agricultural land for agricultural purposes. Members and employees of collective and state farms receive their shares without payment, and have the right to leave the collective with the land. Applicants to the state reserve can also receive up to the average land share of the region without payment, but must lease any additional land from the reserve.

At present private farms in the sample average 26 hectares, close to the national average of 20 hectares. Most of these farms are larger than the formal entitlement of land without payment (two to three land shares per farm, depending on how many family members contributed shares), yet farmers do not report paying for land at present.

Fully functioning land markets, including unconstrained purchase, lease, and mortgage will be necessary if Ukraine is to develop the high yielding, high value agriculture consistent with its endowment and needed to support rural incomes. Land transactions allow land to move from management where returns are low to management where returns are higher. Active land markets give commercial lenders confidence that they can observe land values and accept land as collateral for much needed agricultural investment. The present situation with regard to land law and tenure reflects progress toward creation of conditions for land markets, but much needs to be done.

Legal restrictions on land sales and purchase are an impediment now, but their effect is dampened by the disarray in the financial sector and rarity of individual private ownership of land. At present there are few banks able to give mortgages, and few land owners desiring to offer land as collateral. The fact that land values are unobserved and transactions few does not constrain investment much at present, because investment is low for other reasons. ***Private agricultural investment will be key to development of the sector, however, and mortgage finance is an important instrument of agricultural lending.***

Mortgage finance requires unconstrained buying and selling of land, and the six-year moratorium prevents this. The stated reason for the moratorium is to prevent concentration of land holdings and proliferation of absentee ownership. Given the restriction on size of owned land, the prohibition on purchase and sale of land is redundant as a precaution against excessive concentration of holdings. It will be desirable to remove the upper limit on size of private land ownership, after a short period of transition. At present, however, the highest priority should be placed on allowing purchase and sale of land. Large-scale accumulation of land by absentee owners for speculation should be regulated through taxation, not limits on farm size.

The tenure status of private farmers at present is ambiguous, since they own less than one third of land privately farmed, and may not have long term rights to land in excess of the average shares of operators. Tenure status should be clarified administratively, and land that can legally be owned should be registered and titled in private ownership.

Collectively owned land over which members of the collective retain the right of withdrawal is not a form of tenure consistent with a competitive market-oriented agriculture. Financial institutions will be reluctant to accept this form of land as collateral. ***Procedures for voluntary conversion of collectively owned land into individual ownership should be further developed.*** One mechanism for conversion is included in the current legal framework; i.e., individual exit with a single land share. This mechanism is sufficient for those who wish to farm as individuals, or as individual members of a new association, although at present it is not

operational. Additional mechanisms should be developed through which individuals can separate as a group with jointly owned asset shares and contiguous land shares.

It would be undesirable to have land presently in collective ownership reregistered in corporate ownership within existing farms. This would be equivalent to expropriating the land rights of members and employees, and would not solve the problem of excessive farm size that currently characterizes the collective sector. ***Individuals must be able to retain ownership of their land regardless of the fate of the larger unit that they joined as long as the land is not formally mortgaged.*** It is only under these conditions that hard budget constraints and bankruptcy regulations can be enforced during the transition.

In the future, when mortgage finance is developed, mortgaged land will pass to the lender if the borrower defaults on the loan. During the transition when land is not mortgaged, land should pass to shareholders in cases when the traditional collective falls into bankruptcy.

The New Private Sector

In July, 1994 there were 30,895 private farms in Ukraine, farming 1.6% of agricultural land, and with an average size of 21.3 hectares. Most of these farms are new; in the sample 80% of farms were registered in 1992 and 1993. Most (65%) private farmers are former employees of collectives, but few report that they used land or asset shares from the collective to start their farms. These early farmers created farms with allocations of land from the reserves managed by village and district councils. Twenty percent of private farmers who left collectives reported that they received a land share on paper, but a larger number report that allocation of land shares on their former collectives is still underway. ***The sample suggests that at least up to early 1994 the mechanism of exiting collectives with land was not yet operational.***

Private farmers have chosen a production mix that differs considerably from that on farms that remain collective. While in the collective and state sector output is evenly divided between crop and livestock products, private farms derive 75% of sales revenue from crop products, and less than 20% from livestock products (the remaining five percent deriving from services and non-farm activities). Private farmers may be reacting to the higher profitability in the crop sector, or avoiding the capital intensity of livestock production. Whatever the reason, they are responding to incentives in the current economic environment. The sample suggests that private farmers are more responsive to new economic incentives than are the collectives, which have modified their traditional product mix less.

Private farmers are neither subsistence farmers nor recreational gardeners. Private farmers produce for markets and consume a residual, unlike household subsidiary producers, who produce for their own use and market a residual. Private farmers rely on the farm for 70% of family income. Of potatoes, vegetables, fruits, milk, and eggs private farmers consume more than half their production, but even for these products the proportion sold is greater than on household plots. Grain, sugar beet, and sunflower are cash crops, with sales of 75% to 90%

of production. Private farmers use a variety of marketing channels, but the state is still dominant, particularly for the important cash crops.

Over 80% of farms are single family farms, and around 10% are formed by two to three families. ***Private farmers are better educated than employees on collectives***: about 40% have higher education, compared to 22% of employees in the sample. The average private farmer is 42 years old and the spouse is 40 years old. Family size is relatively small at 3.7 persons. Extended family provides the labor for farm operations. Only 3% of private farms in the sample employed permanent hired labor, and 17% employed seasonal hired labor.

Farmers report that the initial investment in their farms was about $4000-$5000. ***Own savings was the most important source of start up capital.*** Although the share of start up capital provided by savings declined between 1990 and 1993 as inflation eroded the value of savings, even in 1993 savings were more important than loans for new farm starts. Farmers in early 1994 reported that they had access to credit, and some long-term borrowing continued despite high inflation rates. The interest rate on loans was reported to be less than 150% per annum in most cases, when inflation was running at about 2000% annually. Although many farmers reported using credit, many also reported problems with finance. ***Problems with finance included the perception that interest rates were too high, and that credit was in short supply.***

Private farmers report a number of problems in addition to credit, but ***on balance the private farmers' outlook is more optimistic than pessimistic.*** Approximately 40% of private farmers are optimistic about their prospects for the future, and only 10% are pessimistic. Even among farm employees, few of whom (21% in the sample) expressed intention to become private farmers, the long term outlook for private farming is considered better than the short term. Among those who intend to become private farmers, the main motivation to do so is to ensure their children's future.

The 78% of ***employees who intend to remain in collectives fear that as private farmers they would not be able to secure inputs, would face high risks, and would have difficulty securing sufficient capital.*** Private farmers report problems purchasing inputs, but in general the problem is one of high prices, rather than physical shortages. Private farms and collective producers appear to be subject to the same price policies for sale of output; the median reported price for sales of grain in fall of 1993 was 460,000 coupons per ton, or about $23 at the exchange rate prevailing at the time (20,000 coupons to $1). The farm level price in neighboring Hungary at the time was about $80 per ton, at in the U.S. the price at the Gulf ports minus the export subsidies of the Export Enhancement Program was between $80 and $90 per ton.

Access of private farmers to social services is more restricted than access of farm employees. On the whole, private farmers do not experience problems with social services provided by the state, but services provided by the farms are less frequently retained when a private farmer exits. Transport and home maintenance were cited as problem areas.

The Ukrainian private farmers sampled in early 1994 provide evidence that ***when the legal framework created opportunities for producers to function outside collectives, individuals welcomed the opportunity, and acted upon it.*** The evidence offers insight into the behavior of private farmers under current conditions, and the problems they face. It does not yet provide a basis on which to generalize about the future performance of private farming in Ukraine. Private farmers at present are functioning between systems, and are using any possibilities that arise to keep their operations functioning. They are not private farmers in a market environment. They cannot turn with confidence to well functioning input and output markets. They cannot engage in much financial planning, nor avail themselves of any but the most rudimentary financial services. Their property rights are not secure or fully documented. The macroeconomic environment in which they function is highly unstable. That they exist at present and that their numbers are increasing is testament to the firmly held belief on the part of at least part of the population that land will in the future have value, and that private production has a future.

The success or failure of the present private producers is thus not a test case for private farming on a large scale in Ukraine. That case need not be tested; ***private farming can survive and prosper in Ukraine in an appropriate institutional environment.*** It is unlikely, however, that private farming will be substantially strengthened as long as private farmers are forced to operate in the narrow and inhospitable gap between the command and market systems. The test that private farming presents is whether or not the institutional environment supportive of full and functioning markets can be created.

Farm Restructuring

Almost three quarters of collective and state farms in the sample had reorganized by the end of 1993. At the end of 1993, 60% of farms were collective and cooperative enterprises or partnerships. The main distinction between the new collectives and their predecessors is that upon registry as a new collective, land passes from state ownership to collective ownership.

This outcome is consistent with the findings of a study of the first stage of Russian farm restructuring, as shown in Table 1.3. In the Russian case as well, approximately three quarters of farms formally reorganized during the first year, and only three percent of farms registered under the more radical form of reorganization, the association of peasant farms. The remainder chose collective forms of organization similar to each other and to their predecessor, the collective farm or state farm.

Employees of reorganized farms perceive little difference between the old and new farms, and some appear not to be aware of the reorganization. In a matched sample of employees and managers of the same farms, eighteen percent of employees said that no decision to reorganize had been taken, while their managers reported the opposite. On farms that had registered as a new collective, fully 43% of employees responding thought that they were still in a collective or state farm.

Table 1.3. Restructuring of Farm Enterprises in Russia (early 1993) and Ukraine (early 1994)*

	Russia, %	*Ukraine, %*
Not reorganized	**22**	**28**
Reorganized	**78**	**72**
Keeping old form with new charter	27	9
Collective enterprises and limited-liability partnerships	32	55
Join-stock societies	9	2
Agricultural production cooperatives	6	2
Associations of peasant farms	3	2
Other forms	1	2

* Data for Russia as of Jan. 1993, based on K. Brooks and Z. Lerman, *Land Reform and Farm Restructuring in Russia*, World Bank Discussion Paper 233 (1994); data for Ukraine as of Jan. 1994, based on the present survey.

The greatest reported change within farms is augmentation of household plots. The average size of the household plot increased from 0.36 ha in 1990 to 0.53 ha in 1993, and both managers and employees report consistent information on the size of plots. With regard to collective lands, preparation for distribution of land shares had begun on about 50% of farms. Lists of beneficiaries had been drawn up. ***Land shares had been determined on paper in about one third of farms surveyed***, and distribution of some land had taken place on 12% of farms.

On farms in the sample for which conditional (paper) shares of land had been calculated, the number of entitled recipients is on average 700 per farm, and shares average 3.7 hectares. These land shares are significantly smaller than the average ratio of land to labor on the farms (about 7.5 hectares). The difference is accounted for in part by the number of pensioners entitled to shares (45% of claimants), and to a much lesser degree by collective lands retained in the nondivisible fund.

The very small size of land shares of active employees draws immediate attention to the importance of pensioners in the Ukrainian reform. Since a large proportion of land is going to pensioners, they should receive special guidance to understand the range of options they face in managing their land shares. Procedures for leasing should receive special attention. Rights of pensioners to pensions independently of their disposition of land shares should be clarified. ***Pensioners should have full freedom to lease their lands to operators who can pay a competitive rent, whether in the collective or private sector.*** Without public education specifically designed for this group, pensioners are likely to leave the land with existing collectives simply for lack of understanding of alternatives. The economic return to land is likely to be incorporated in wages for active employees, and pensioners will receive little for the use of their land other than provision of social services.

Although the proportion of land in indivisible collective ownership, that is, not allocated even on paper to employees and pensioners, does not appear to be large in the sample, the methodology for designating land in this category should be reviewed. Only land with a public purpose should remain indivisible, and much of this should be transferred either to local, province, or national governments for management, depending on the reason for keeping it indivisible. For example, land under buildings used for social services should be included as the social services are either privatized or transferred to government responsibility. Stewardship of indivisible land should not be retained by the collective indefinitely.

Calculation of asset shares is proceeding somewhat faster than calculation of land shares. ***Conditional asset shares based on the book value of assets have been calculated for 50% of farms surveyed.*** The value of an average asset share at the end of 1993 was around $400. Among 846 farms in the sample, in fewer than 7 cases did some individuals receive physical assets for their shares, and in 28 cases individuals received money for shares.

Employees of the new collectives continue to work for wages, and to cultivate their (expanded) household plots. ***Payment for work on the collective is both in money and in kind, and the incentive system reflects the increase throughout the economy in transactions in kind.*** For example, the median cash salary for a month's work in the collective in October, 1993 was reported at 160,000 coupons, or $8. Distributions of grain, feed, sugar, vegetable oil, and other basic commodities were substantial; the median distribution of grain to households was 1.2 tons. Respondents indicated that payments in kind as a proportion of annual wages had roughly doubled since 1990, reflecting both the decline in real money wages and decreased monetization of the economy.

In 80% of farm enterprises no one had left to become a private farmer during the reorganization to date. Twenty-one percent of employees expressed an intention in the future to become private farmers, and 78% indicated that they did not intend to do so. Expectation of high earnings is not the factor keeping employees within collectives. On the contrary, respondents give several indications that incomes are perceived to be lower on collectives than in the private sector. For example, among private farmers 10% report that their incomes are insufficient to meet daily needs, while among farm employees the proportion rises to 30%. A majority of both those who plan to leave and those who plan to stay report that incomes would be higher in the private sector. According to respondents, it is not the attraction of collective production, or even a desire to retain a known and customary way of life that keeps people in collectives. Rather, ***it is the absence of what is considered the minimal prerequisite for effective operation in the private sector; i.e., working input and financial markets and strategies for risk management, that deters people from becoming private farmers.***

Reported reasons for remaining in collectives in Ukraine are similar to those reported by Russian employees (see Table 1.4). Ukrainian respondents cited on average a greater number of reasons, as reflected in the higher average responses for all reasons, but the distribution of responses is roughly comparable to the Russian case. Most frequently reported reasons for remaining in collectives are problems obtaining finance and inputs. Ukrainian respondents put a somewhat

greater relative weight on deficiencies in the legal environment than do their Russian counterparts.

Strikingly absent in most employees' attitudes about collectives is a perception that changes within the collectives will make them effective and dynamic enterprises on which to be employed. Neither employees nor managers express indication that they share a vision of a revitalized collective sector. One third of managers expect reorganization to have a positive impact on future development of the enterprise, while 20% do not expect any change, 25% are undecided, 7% expect a negative impact, and 15% have no opinion or did not answer.

Table 1.4. "Do You Intend to Become a Private Farmer?" (percent of respondents in each category)*

Reasons given by those answering "NO"			*Reasons given by those answering "YES"*		
	Russia	*Ukraine*		*Russia*	*Ukraine*
Lower earnings	11	30	Higher earnings	58	81
Less secure earnings	16	48	Independence	51	66
Too risky	41	72	Children's future	64	86
Don't want change	31	58	Creativity, initiative	29	61
Insufficient capital	62	71	Higher status	18	54
Difficulty obtaining machinery and farm inputs	65	84	Forced by liquidation of old farm	10	24
Insufficient skills	17	43			
Insufficient legal guarantees	36	65			
Loss of social benefits	18	46			
Restrictions on buy/sell of land	12	34			

* The proportion of respondents reporting they did not intend to become a private farmer was 85% in Russia and 78% in Ukraine. Data for Russia based on K. Brooks and Z. Lerman, *Land Reform and Farm Restructuring in Russia*, World Bank Discussion Paper 233 (1994); data for Ukraine based on the present survey.

Among employees who intend to remain in the collective sector, 80% plan to stay on their existing farms, and 20% intend to join a new farming entity; e.g., a new producers' cooperative, joint stock enterprise, or partnership. This small group of employees (about 15% of all employees) did not answer consistently with regard to intentions for their land and asset shares and future plans, and some probably intend to remain with their existing collectives. The number of employees who actually intend to form new enterprises thus appears at present to be very small.

Although these entrepreneurial individuals appear now to be few in numbers, they may be a key to changing the collectives. By their separation they will effect a substantial change in the asset structure of the existing collectives, and consequently will catalyze change in the operation of the farms they leave. They will moreover provide an example for other more active employees

who do not wish to move to the individual private sector. It is possible that the number of these potential entrepreneurs is small because people do not yet perceive exit as a small group with consolidated assets to be a current option. Despite the small number of people ready at present to act on this option, ***procedures should be developed and public education pursued, since creation of new intermediate sized firms out of the existing collectives will be an essential part of Ukrainian farm restructuring.***

Marketing Services and Infrastructure

Large farms continue to be substantially self-sufficient in many inputs, and to rely on state channels for provision of the remainder. Although the system of input supply for large farms remains much as it was prior to the reform, there are three significant changes. Purchased inputs, particularly fuel and chemicals, are more expensive relative to output than prior to the reforms, and farms have greatly reduced input use. Barter transactions to secure inputs have increased. Moreover, sale and trade of inputs between and among farms is reported, suggesting that local secondary markets are developing. In the past, when inputs were abundant and cheap, farms had little incentive to sell to each other instead of to hoard.

Private farms rely on the state and large farms for most input supply, although private suppliers are beginning to emerge, particularly for spare parts and fuel. A number of private farmers sell or trade machinery services, equipment, and spare parts to other private farmers.

With the exception of organic fertilizer, few inputs are reported to be in short supply. ***Farm managers and private farmers report that inputs are available, but that prices are high.***

State procurement augmented by the state-controlled consumer cooperative network remains the dominant marketing channel for both large-scale and private farmers in Ukraine. Private farmers sell their cash crops primarily through state channels, and use more diversified marketing channels, including direct marketing, for horticultural and livestock products. Both farm managers and private farmers are dissatisfied with the state marketing channels, and report that prices are too low and payment often late. Data on reported prices received suggest that ***private farms and farm enterprises were subject to the same pricing rules. If monopsony is a problem, it appears to be equally problematical for the collective and private sectors.***

Social Services

The traditional collective or state farm provided a comprehensive range of services for members and employees and other rural residents. Even in areas of education and medical care, which by law were the responsibility of the state, the farm enterprise had a significant role, maintaining facilities, providing housing for staff, and assisting in cultivation of employees' household plots. The farms' contributions to rural social services came from the operating profits or accumulated debt of the enterprise.

Although farms provided an array of services, a surprising proportion both of farm employees and private farmers who were formerly farm employees reported that as employees they did not receive particular benefits. Day care and school subsidies are naturally nonuniversal benefits, since not all families have children. Heating fuel, home maintenance, and medical care would be expected to be more universal; i.e., provided either to all or to none. Yet only a third to a half of respondents reported receiving these particular services through collectives in the past. This preliminary evidence suggests that the traditional system of social services may have been less than fully comprehensive, and that informal rationing may have been present.

By law enterprises can elect to transfer responsibility for provision of social services to the local council, along with ownership of assets in the social sphere, such as clubs and sports facilities, not already owned by the local council. Transfer is not mandatory, however, and budgets of local councils are not yet prepared to take on additional obligations. ***Farm managers report that very little transfer to local councils has taken place, and that they continue to provide a wide range of social benefits.*** Managers report little urgency with regard to the problem of social services.

Farm employees anticipate that they would lose some benefits if they left the collective. Problems related to education and medical care are not anticipated by many, since these are state services and a tradition of open access prevails. Nor would housing be a problem for many respondents, since most rural housing in Ukraine is already privately owned. ***Many expect difficulty with transport, construction, home maintenance, and provision of home heating fuel.*** About half of private farmers who previously worked on collectives report that they retained a number of benefits when they left, and by implication the other half lost the benefits. For most services, however, the employees who reported receiving services were a minority.

Social services have not yet been adequately included in the framework for restructuring. The objective with regard to social services should be to improve provision of services, strengthen the financial base for the service sector, and allow the private sector to take on a major role. The current approach; i.e., voluntary transfer from farm enterprises to local councils when both parties agree to the transfer does not address any of these objectives. ***The appropriate disposition for many of the social services is privatization, not transfer to local government.*** This is true for transport, communications, home construction and maintenance, provision of heating fuel, and vacation facilities. Local governments may choose to take on sports and recreational facilities, and fund them on the basis of partial cost recovery, although privatization is also an option for these services.

The lack of attention to rural social services until now may derive from an implicit assumption that the traditional system was fairly comprehensive and worked reasonably well. Reform and restructuring of social services has been conceived as an adjunct to farm restructuring; only when farm reorganization progressed to the point that something had to be done about social services would measures be considered. In fact, ***there are reasons independent of farm restructuring to address the issue of rural social services.*** Data in the study raise questions as to the openness of access to social services under the traditional system even before private

farmers appeared. Many of the activities considered social services are in fact economic services provided by small businesses in market economies. Retention of these services under the umbrella of the new collective sector is likely to inhibit competition, impede improvement in the quality of services, and retard growth of rural small business. ***Programs to strengthen local bodies of representative government in rural areas and transfer to them responsibility for rural social services should be undertaken to complement the farm restructuring. Services that belong in the private sector should be privatized.***

Lessons for the International Community

The process of land reform and farm restructuring in Ukraine, as in many other former command economies, has proven more complex than originally anticipated, and results to date are more modest than initially expected. The rather disappointing performance to date derives in part from lack of sufficient attention to needed reforms in the economic environment in which farms must operate. Even an excellent technical program will not work well if the macroeconomic and sectoral environment is hostile to private initiative in farming.

Progress in land reform and farm restructuring requires simultaneous attention to improving the economic environment and improving the design of the program. In policy dialogue on agricultural issues between the Ukrainian government and the international community, a number of points should be stressed:

- ***Land markets should be fully functioning, with a strong legal framework and few restrictions on transactions.***

- ***The economic environment for the sector must be improved***, through full price liberalization, removal of trade barriers, removal of marketing restrictions, reduction in inflation, and enforcement of bankruptcy regulations. The reform measures announced by the Ukrainian Government in the fall of 1994 and supported by the IMF and the World Bank provide a foundation for a better market environment.

- ***Agricultural services and marketing should be privatized and anti-monopoly legislation should be enforced.***

- ***Farm restructuring should proceed on the basis of legal enactments***, rather than guidelines and recommendations.

Within the framework of a stronger legal and sectoral environment, the international community can offer technical assistance and investment for improved design of the program of farm restructuring, for land titling and registration, for training and market information, and transferring rural public services to municipal governments. At a later stage, when market institutions are stronger and sectoral incentives improved, recapitalization of the new farming sector will be needed.

A phased approach would thus put early emphasis on policy dialogue, then assistance in program design and implementation and institution building, and finally investment in on-farm production. A phased approach to assistance would facilitate the three components of the Ukrainian agricultural reform; i.e., creation of laws, policies, and institutions to support markets, land reform and farm restructuring, and technological improvement.

2

Ukraine: The Country and Its Agriculture

Historical Background

Ukraine is the second most populous and third largest in area (after Russia and Kazakhstan) among the former Soviet republics. The Ukrainian Soviet Socialist Republic was declared on December 25, 1917. In December 1919, Lenin published an open letter to workers and peasants of Ukraine suggesting a treaty of alliance, which was concluded a year later, in December 1920. This treaty in effect reaffirmed a 400-year old union between the two largest Slavic peoples, as in practice Ukraine had been a part of Czarist Russia prior to the Revolution.

Ukraine: Basic Country Statistics

Territory	603.7 thou. km^2	
Population	52.2 million	
Urban	35.4 million (68%)	
Rural	16.8 million (32%)	
Nationalities		
Ukrainian	73%	
Russian	22%	
Other	5%	
Administrative divisions		
Oblasts		24
Districts		486
Village councils		9796
Main agroclimatic zones		
Steppe (south, 40% of territory)		
Forest-steppe (central, 33%)		
Mixed forest (north, 18%)		

The first years after the Bolshevik Revolution were a period of political and military turmoil in Ukraine, even more than in the rest of the new socialist state. Because of its proximity to Europe, Ukraine became a marching ground for invading Western armies. Resistance by Ukrainian opponents of the Revolution was strong. In 1918-19, Ukraine was invaded by German and Austrian forces following a pact with the "nationalist-bourgeois" Parliament (Rada) that opposed Soviet rule. This invasion was repulsed by the Red Army and led to the signing of a military treaty with Russia. In 1920, Poland invaded Ukraine, and Polish forces advanced as far east as Kiev. They were also eventually driven out by the Red Army, but according to the terms of the Riga Treaty of 1921 Ukraine lost its western territories to Poland, and Ukraine's western border until 1945 extended east of Lviv. After World War II, the territory of Ukraine increased substantially through annexation of the Western provinces from Poland (the provinces of Volyn, Rivne, Lviv, Ternopil, and Ivano-Frankovsk), Czechoslovakia (the western-most province of Uzhhorod in the Carpathian Mountains), and Romania (Chernivtsi north of Moldova and the Izmail part of Odessa Province south of Moldova). The latest territorial acquisition was the addition of the Crimean Peninsula in 1954 in commemoration of 300 years

of the unification of Russia and Ukraine in the time of Bogdan Khmelnitsky. Following the dissolution of the Soviet Union, Ukraine became an independent country in its post-1954 boundaries: the independence of Ukraine was declared by the Supreme Soviet on August 24, 1991, and an independent sovereign state was created after a national referendum on December 1, 1991.

Ukraine was one of the founding members of the Soviet Union, which was established in December 1922 as a federation of Russia, Ukraine, Belorussia, and the Transcaucasian republics. The establishment of the Soviet Union was followed by a period of Ukrainization: the Ukrainian language was recognized as the first language over Russian, native literature and arts flourished, Ukrainian emigrés began returning from the West. The principles of a new political system crystallized: the schools were separated from the church and the church was separated from the state. Ukraine was among the strongest supporters and beneficiaries of Lenin's New Economic Policy (NEP) in mid-1920s, which encouraged private business initiative. NEP was very important for the restoration of the Ukrainian economy, helping the country to recover from virtual economic destruction in 1921 almost back to pre-World War I levels of agricultural and industrial production in 1925: while in 1921 the Ukrainian gross product was a mere 12% of its 1913 level and grain production was down 38.5% from 1913, in 1925 agricultural production was back to 91% and industrial production back to 85% of the 1913 levels (Soviet Encyclopedia). This phase in Ukrainian history, however, was brought to an end when Stalin stopped the NEP and launched the forced collectivization drive in 1928.

Inherited Economic Structure

The structure of the Ukrainian economy in general, and of its agricultural sector in particular, developed according to the same pattern as in Russia. Russia and Ukraine provided the template for what became generically known as "Soviet agriculture". However, only "Eastern" Ukraine was a Soviet republic from the start: the seven Western provinces that were annexed to Ukraine after World War II began to adapt to the Soviet pattern 25 years later, at the same time as the new socialist regimes of Central and Eastern Europe.

Soviet agriculture was shaped by two fundamental political decisions: nationalization of land and collectivization of agricultural production. Land was nationalized within days of the accession of the Bolsheviks in October 1917, while collectivization of farming came more than ten years later, in 1928-1929. Church land and the estates of the nobility and large landowners were quickly confiscated and distributed to the peasants. During the first decade of the Soviet regime, over 97% of agricultural land was farmed individually. Although the Land Decree of October 1917 vested ownership of all land in the state, the peasants viewed the land they were farming as their "property".

With the abandonment of the NEP in 1928, private initiative was judged to be inconsistent with the goals of the Communist state, which primarily aimed at rapid industrialization and modernization of a very large and technologically backward country. Collectivization of

agricultural production was promoted as a means of achieving central management and transfer of resources from agriculture to support industrial development. It also ensured political control of the rural population. Collectivized farms could be forced to deliver food at a low price, which was an essential component of maintaining a policy of low wages for workers throughout the nation. A corollary purpose of collectivization was to capture supposed economies of scale in farming through mechanization and modern capital-intensive technologies. Individual farming thus came to be regarded as an obstacle to socialist construction.

On the eve of collectivization, in 1928, there were 5.2 million peasant farms in Ukraine. The Ukrainian rural population displayed a considerable and even violent resistance to the collectivization drive. According to a Western author based on Ukrainian sources (Robert Conquest), there were 40,000 "rebels" in Ukraine in 1930. Insurgent bands were formed not only by kulaks but also by former anti-Soviet partisans in the Civil War. Ukrainian women played a particularly strong role in active opposition to collectivization. The women apparently feared that the transformation of the village would deprive them of their traditional dominant role on the farm and in the home. The so-called Women's Revolt (*babskii bunt*) began in Ukraine and later spread to Russia.

The opposition to collectivization was crushed. Between 1929 and 1932, individual farmers (mainly kulaks) were persecuted, dispossessed, and exiled to Siberia, where they died in large numbers. This period became known as "dekulakization" of Ukrainian agriculture. Despite widespread opposition, by 1932, 70% of peasant farms and 80% of land in Ukraine had been incorporated in collective farms (*kolkhozes*). Collectivization of Soviet agriculture was virtually complete by 1940, with 97% of all farms in the USSR worked collectively. Ukraine, however, underwent another collectivization phase after World War II, when the Western provinces had been annexed and their traditional private agriculture and private land ownership was socialized.

Collectivization was accompanied by the development of the administrative command system of agricultural production. Each farm was required to deliver a certain target quantity of assigned products in the form of obligatory state procurement orders. The existence of central agricultural production targets and state procurement orders necessitated central allocation of inputs (such as fertilizers, herbicides, fuel, machinery, and spare parts) to meet production goals. Central planning soon enveloped both industry and agriculture, providing intermediation for commodity flows between the main segments of the agricultural economy: farm producers, input suppliers, agro-manufacturing, and consumers. The state thus established a near-monopoly in trade to and from the rural areas. All other trade in farm or consumer products, similarly to individual farming, was labelled "speculative", presented as a burden upon rural people, and declared illegal. The elimination of true markets as the interface between producers and consumers imposed the role of price creation on the central planners; prices lost their allocative role and became accounting conveniences, normally adjusted only to cover actual production costs and eliminate losses.

The command system with its production and delivery targets had an adverse effect on the development of distribution and storage systems in agriculture. State procurement was based

on the concept of direct shipment of agricultural products from the farms to the cities. As a result, no intermediation or wholesaling network developed in the Soviet Union; the government alone was responsible for assembling the products from the farm level, processing them, and dispatching them to urban storage and distribution depots. Consequently, very little storage capacity was built in rural areas, and the major storage facilities were concentrated in cities.

The command system also undermined the evolution of sound banking and credit policies in the Soviet economy in general and in agriculture in particular. Farms did not apply for credit; credit was allocated by the central planners, together with all other physical inputs. This directed credit was given at low interest rates: from less than 1% to perhaps 2% per annum. Moreover, credit was allocated without any considerations of the borrower's creditworthiness. Farms were often unable to service their loans and massive writeoffs were instituted periodically. As a result, individuals and institutions in Ukraine today have little experience with the discipline of honoring debt contracts. Furthermore, the banking institutions do not have skills for evaluating credit requests or the creditworthiness of farmers.

In summary, the administrative command system has produced the following negative legacy in the agricultural sector in Ukraine:

- suppression of individual initiative and creative diversity on the part of producer;
- dependence of producers on centrally allocated and centrally supplied inputs;
- reduction of incentives for efficiency improvement;
- excessive consumption of some basic food commodities due to consumer subsidies;
- destruction of economic intermediation mechanisms and total reliance on government distribution systems;
- concentration of storage capacity in cities;
- subversion of financing systems through centrally directed use and subsidization of credits.

Ukrainian Agriculture: Physical Conditions

With one-third of the world's richest chernozems, Ukraine occupies a leading place among the countries by proportion of high-quality fertile soil. Virtually 30% of all agricultural and arable land in Ukraine is chernozem, and an additional 10% are other highly fertile soils. The composition of Ukrainian soils is shown in Fig. 2.1

Agricultural land accounts for nearly 70% of the total area in Ukraine. Of this, arable land represents 55% of the total area, pasture 9%, hayland 4%, and orchards and plantations less than 2% (Fig. 2.2). The terrain in Ukraine is highly favorable for agriculture: nearly 60% of the agricultural land is practically flat and another third has slopes between 1° and 3°. Thus, nearly 90% of arable land in Ukraine is suitable for all agricultural crops, and only the remaining 10% with slopes in excess of 3° is difficult to cultivate. The use of these lands can be changed to pasture and haylage, thus improving soil protection without affecting output. Land

use patterns reflect the prior system's pressure to keep land in intensive cultivation, while optimally some of the land should be managed less intensively. Ukrainian soil experts argue that less productive arable lands should be laid idle and converted to pasture, while low-productivity pastures should be afforested or flooded to reduce soil erosion.

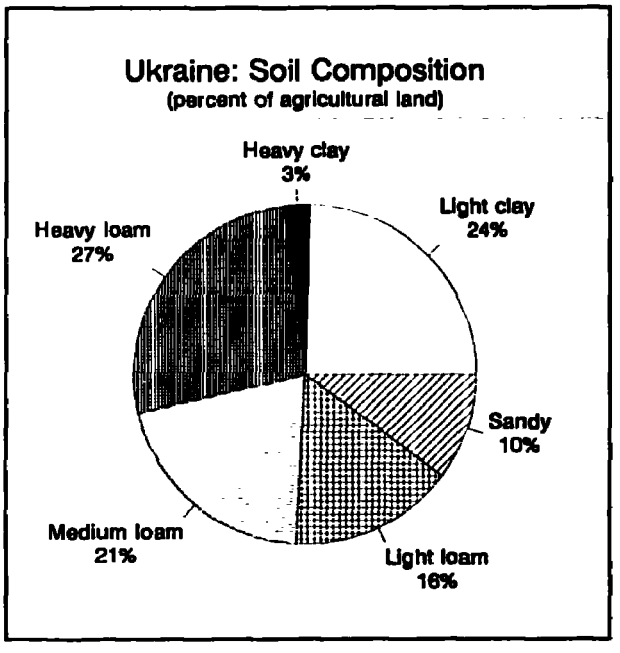

Figure 2.1. Soil Composition in Ukraine

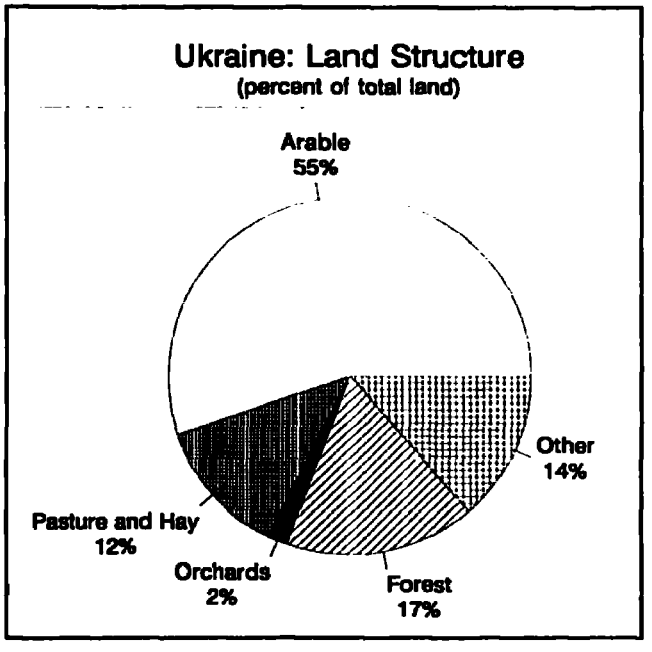

Figure 2.2. Structure of Land Use in Ukraine

The average land endowment in Ukraine is 0.80 ha of agricultural land or 0.64 ha of arable land per person. This figure, however, shows a considerable variability over regions and also over time, reflecting differences in population density and migration patterns. In the Western provinces of Ivano-Frankovsk, Chernivtsi, Lviv, and Uzhhorod (Trans-Carpathia), in the industrial heartland of Dnipropetrovsk, Donetsk, and Luhansk, and also in Crimea the per-capita land endowment is much below average, whereas the Eastern and Central provinces of Kirovohrad, Kherson, Mykolaiv, Poltava, Sumy, and Chernihiv are characterized by arable land endowments of over 1 ha per person. Overall, the land endowment per person decreased substantially between 1960 and 1993 due to population growth (the arable land decreased from 0.80 ha per person in 1960 to 0.64 ha in 1993). This process, however, also differed across provinces. In the relatively less populated provinces of Crimea, Kherson, Mykolaiv, and Zaporizhzhia the decrease in land endowment was much more pronounced because of immigration, whereas in Kiev and Chernihiv provinces land endowment actually increased because of emigration.

Agricultural Production

Agricultural production in Ukraine, as in the rest of the Soviet Union, was organized in two types of centrally controlled large-scale socialized farms, the collective *kolkhozes* and the state-owned *sovkhozes*. Private farming and private services were virtually nonexistent after 1932 in the Central and Eastern provinces of Ukraine (private farming in the Western provinces was eliminated later, following their annexation after World War II). The only concession to individual initiative were the small subsidiary household plots of rural residents and garden and vegetable patches cultivated by urban workers outside the cities. The output of these plots belonged to the individual, although the land was state-owned.

Table 2.1. Agricultural Production by Type of Farms in Ukraine
(total production in billions of constant 1983 rubles)

Year	*Total production*	*Socialized sector*	*Private and household sectors*
1982	44.7	71.4%	28.6%
1985	47.1	71.5%	28.5%
1988	48.4	74.6%	25.4%
1990	49.0	73.3%	26.7%
1991	42.5	69.6%	30.4%
1992	39.0	62.7%	37.3%
1993	39.6	60.0%	39.9%

Source: Data for 1982-1988 from Ukrainian Ministry of the Economy, *Analytical Documents for the World Bank*, Kiev (1992); data for 1990-1993 from Ukrainian Agrarian Institute, Kiev (1994).

Despite their small size, these individual subsidiary farms have always been an important part of agricultural production in Ukraine, traditionally contributing well over 25% of gross agricultural product – similar to Russia and the USSR average (Table 2.1) . Historically, there is a close and symbiotic cooperation between the subsidiary household farms and the large-scale socialized farms. The household farms have always received a large proportion of their inputs, especially animal feed, young livestock, fertilizers, and mechanical services, from the large-scale farms, free or as payment in kind for work done. In return, the household farms sell a substantial part of their output to the large-scale farm, which resells to state procurement channels (in the past, the large-scale farm used these products as part of its obligatory deliveries to the state). The establishment of full-fledged private farming represented by independent family farms and agricultural cooperatives outside the kolkhoz/sovkhoz system has been made possible only by recent legislation passed in 1991 and 1992. The period after 1990 also reveals a significant increase in the contribution of the private and household sectors to agricultural

product in Ukraine (Table 2.1), mainly due to distribution of additional land for augmentation of subsidiary household plots (and to a certain extent also to the establishment of new private farms).

Table 2.2. Profile of the Main Agro-Climatic Zones in Ukraine (percentages of the total in each category)

	Steppe	*Forest-Steppe*	*Mixed Forest*
Location	South	Central	North
Soil	Chernozem, chesmut	Chernozem, podzol	Sod-podzolic, sandy loam
Rural population	21%	40%	31%
Agricultural land	46%	35%	19%
Agricultural production			
Grain	46%	40%	14%
Technical crops	76% (sunflower)	72% (sugar beet)	90% (flax) 17% (sugar beet)
Potatoes	15%	44%	42%
Vegetables	52%	33%	15%
Grapes	96%	--	--
Fruits&berries	48%	32%	20%
Meat	40%	38%	21%
Milk	35%	40%	25%
Eggs	46%	38%	17%
Processing	Flour milling Vegetable oil Fruit canning Meat and dairy	Sugar Vegetable canning Meat and dairy	Flax Meat and dairy

Source: Ukrainian Agrarian Institute. The Trans-Carpathian Mountains in the south-west of Ukraine and the Crimean Mountains at the south-eastern edge of the Crimean Peninsula are classified as two independent agro-climatic zones, which are, however, without agricultural significance and are not shown in this table.

Agricultural production in Ukraine is mainly concentrated in the central and southern agro-climatic zones (steppe and forest-steppe), which account for over 80% of agricultural land in Ukraine and where all the Ukrainian chernozem is located. These two regions accordingly produce over 80% of Ukrainian grain, meat, and milk production (Table 2.2). The southern steppe region produces over three quarters of the sunflower harvest and nearly the entire grape harvest of Ukraine. The central forest-steppe region specializes in sugar beet and sugar processing: it produces over 70% of sugar beet and processed sugar in Ukraine. The relatively small northern mixed-forest (*polesye*) region has less fertile soils (sod-podzolic and sandy loam),

a high concentration of marshlands (50% of all Ukrainian marshes), and is heavily afforested (forests cover 30% of the area). The main crops in this region are flax (90% of Ukrainian production) and potatoes.

Ukrainian agriculture has been traditionally characterized by an evenly balanced mix of crop and livestock production, with a slight bias in favor of livestock products (around 45% crops vs. 55% livestock, except in 1993, when the balance shifted to crops). The emphasis on livestock is reflected in land use: fully 38% of the sown area in 1993 was under feed crops and another 45% was under grain, much of which is also used for feed (state purchases of grain are on average 30% of the quantity produced, and the rest is consumed on farm). The remaining areas are evenly divided between technical crops (sugar beet, sunflower, and very small areas under flax) and potatoes and vegetables (Fig. 2.3).

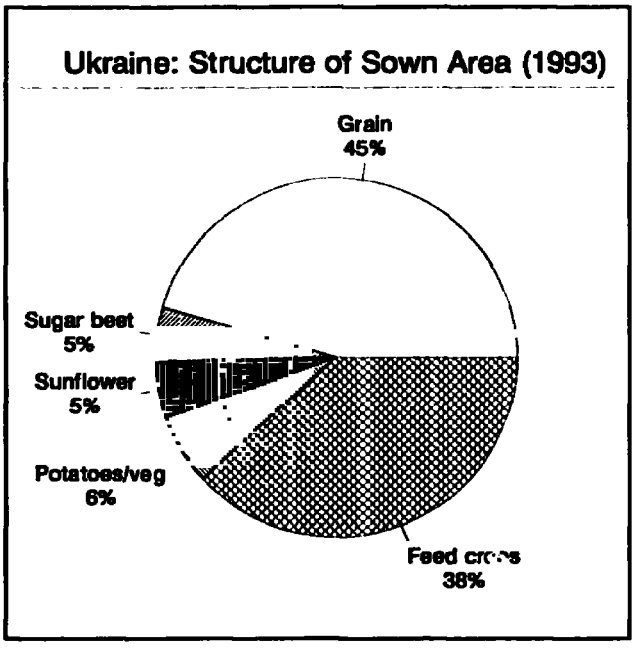

Figure 2.3. Structure of Sown Area in Ukraine

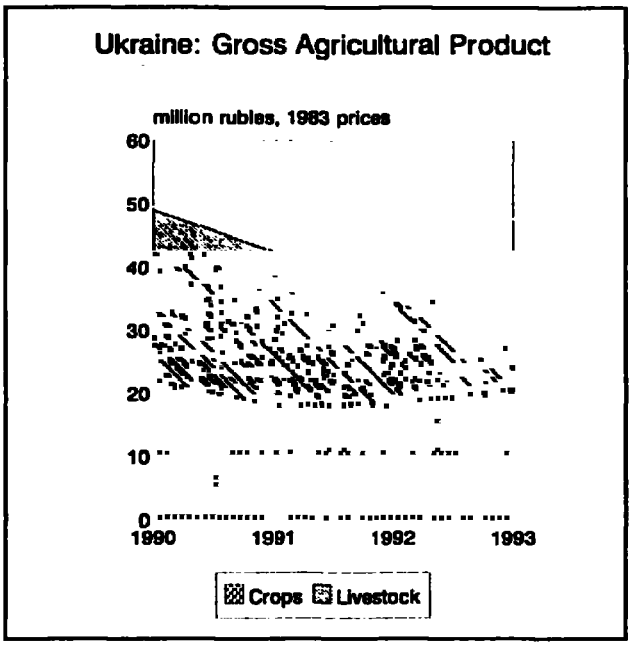

Figure 2.4. Gross Agricultural Product: 1990-1993

Agricultural production has decreased significantly since 1990. Agricultural gross product (in constant 1983 prices) declined 19% from 1990 to 1993 (Fig. 2.4). The decline in production affected only the socialized sector (collective and state farms), where the output dropped by 34%. The output of the private and household sectors, which account for more than one-third of gross product, in fact increased by 21% between 1990-1993 (Table 2.3). The overall decline in gross product was mainly due to a precipitous drop of 30% in livestock production, which declined in both the socialized and the private sector. Crop production declined by 5% compared to the 1990 level, which is the resultant of a 25% decrease in the socialized sector and a 60% increase in the (much smaller) private sector. These differential production trends contributed to the increased weight of the private and household sectors noted previously in Table 2.1.

Table 2.3. Agricultural Gross Product by Sector in Ukraine: 1990-1993
(million rubles, 1983 prices)

	1990	1991	1992	1993	1994 (projected)	% change 1990 to 1993
All farms	**48954**	**42493**	**38966**	**39559**	**42000**	**-19**
Crops	21952	18191	18460	20651	21500	-6
Livestock	27003	24302	20506	18908	20500	-30
Socialized farms	**35864**	**29625**	**24438**	**23772**	**28728**	**-34**
Crops	17185	13469	11907	12954	17211	-25
Livestock	18679	16156	12530	10818	11517	-42
Private and household farms	**13091**	**12868**	**14529**	**15787**	**13272**	**+21**
Crops	4767	4722	6553	7697	7120	+61
Livestock	8324	8146	7976	8090	6152	-3

Table 2.4. Crop Yields and Livestock Productivity of Ukrainian Agriculture, 1990-1993

	1990	1993	Percent change
Crop Yields			
Grain	33.5	32.1	-4
Spring wheat	29.8	24.1	-19
Corn	37.8	28.1	-26
Sugar beet	317	222	-30
Sunflower	15.3	13.8	-10
Potatoes	131	137	+5
Feed crops	372	320	-14
Livestock Productivity			
Milk, kg per cow per year	2863	2212	-23
Weight gain:			
cattle, gram per day	421	299	-29
pigs, gram per day	229	174	-24
Average weight:			
cattle, kg per animal	393	353	-10
pigs, kg per animal	127	115	-9
Eggs per layer per year	214	174	-19

Source: Ukrainian Agrarian Institute.

Examination of gross product time series (Table 2.3) indicates that production bottomed out in 1992, and a slight increase was registered in 1993. This increase was due to improved performance of the crop subsector, while livestock production continued to decline. Projections for 1994 anticipate return to 1991 levels of gross product, although with a substantially changed product mix: the proportion of crop products is expected to increase from 43% in 1991 to 51% in 1994, accompanied by a corresponding drop in the proportion of livestock products from 57% to 49%.

The decline in production exceeded the decrease in the physical resource base of Ukrainian agriculture. While the sown area contracted by 3% between 1990 and 1993, grain production dropped 10% and the quantity of other crop products decreased by around 30% (with the exception of potatoes, for which production did not change). The number of cattle and cows decreased by around 10% each and the number of pigs by 25%, while the production of livestock products dropped by around 30%. These changes were the result of large decreases in yields and productivity (Table 2.4), presumably due to insufficiency of fertilizers, herbicides, and insecticides in crop production and difficulties with animal feed in livestock operations.

3

Land Reform Legislation

The current land reform initiated as part of the overall economic transition following the demise of the Soviet Union is the fourth in Ukraine in the last 130 years. The first two reforms were carried out when Ukraine was part of Czarist Russia (Alexander III's reform of 1861 and Stolypin's reform of 1907-1913). The third reform was based on the October 1917 Land Decree, one of the first two decrees passed by the new Bolshevik government practically on the day of its accession to power (the second decree put an end to World War I). It affected Ukraine as a constituent part of a much larger country. Unlike the earlier reforms, the 1917 reform was an integral part of an overall economic program, which eliminated private ownership of all means of production in general, and of land in particular. It was the prelude to the establishment of socialist economic order, culminating in total elimination of smallholder farms, millions of which had emerged after the earlier reforms, and eventually (in late 1920 and early 1930s) leading to the establishment of large collective and state farms (kolkhozes and sovkhozes).

The fourth reform, begun in 1990-1991 on the verge of Ukrainian independence, was motivated by the recognized need to increase productivity and economic efficiency in agriculture. This reform is again an essential element of an overall program of economic change, the declared goal of which is to move Ukraine toward a market-oriented economy.

Principles of Land Privatization

The first land reform legislation was passed in December 1990 in the form of the Ukrainian Land Code. The objectives of the current land reform were defined in the resolutions adopted by the Ukrainian Supreme Soviet on December 18, 1990:

> The task of this reform is redistribution of land and its transfer to lifetime inheritable possession of individuals, permanent possession of kolkhozes, sovkhozes, and other enterprises, ..., and also usership, with the purpose of *creating equal conditions for the development of different forms of farming* [emphasis supplied].

The legitimization of lifetime inheritable *possession* of land by individuals and permanent *possession* by farm enterprises is a fundamental departure from the Soviet system of land relations, which had only recognized usership rights to state-owned land. It should be stressed,

however, that in former Soviet terminology possession ["vladeniye" in Russian] is not ownership ["sobstvennost'"], and it does not entail the right to sell or encumber the land. Proposals to allow collective and private *ownership* of land were rejected by the majority in the Ukrainian Supreme Soviet at that time. In the first stage, land legally remained state-owned, but the users were elevated one step up to the status of "possessors", who could decide on their own how best to use the land, without any instructions from above. Also the right of possession could be passed to heirs.

Land remained untradeable: the producers were prohibited from buying and selling land, and the state could not alienate land through commercial transactions. The only concession to land markets in the 1990 Land Code is the provision allowing the state to lease land to producers.

The December 1990 legislation, with all its restrictive shortcomings, was the first step on the road to new land relations. It took more than a year, however, for additional milestone legislation to be adopted: the Law on Private Farmers passed in December 1991, the Law on Forms of Land Ownership passed in January 1992, and the new Land Code adopted in March 1992. These laws explicitly addressed the issue of "denationalization" of agricultural land by recognizing private and collective ownership and stipulating that land should be privatized "to the tiller".

According to this legislation, the bulk of the state-owned land was to be transferred into collective ownership of farm enterprises, which at that time cultivated most of the farm land in Ukraine. Entitlement to land ownership was not restricted to current land users, however: all citizens were entitled to own land for farming and other designated uses. The list of approved farming uses included establishment of independent private farms, subsidiary household plots, gardens and vegetable patches. Legitimate nonfarming uses of private land included construction of dachas (second homes in rural areas) and garage or storage space. The list of farming uses covers two categories of eligible persons: individuals who are members and employees of farm enterprises (they are entitled to own land for subsidiary household plots) and individuals outside the existing farm enterprises (private farmers, owners of gardens and vegetable patches).

To enable land to be allocated to new users, up to 10% of the land cultivated by collective, state, and other farm enterprises was extracted into a state land reserve (before transfer of land into collective ownership). This reserve, or redistribution fund, is intended as a pool of land for distribution to individuals who are not members or employees of existing farm enterprises. "Outsiders" receive land from the redistribution fund for the establishment of private farms, gardens and vegetable patches, and dacha plots. "Insiders", i.e., members and employees of farm enterprises, receive land for subsidiary household plots from a special reserve created by extracting an additional 15% of the remaining farm land in collective and state farms.

The land remaining after the extraction to the state reserve and augmentation of household plots is transferred to collective ownership. Collective land ownership is viewed as a transitory category between state ownership and individual ownership of land. In principle, collectively owned land is intended for distribution among the members of the collective, including the

pensioners residing in the village. In practice, however, not all the collectively owned land is available for distribution: some of this land is declared (by general assembly of the members) indivisible (this is usually the land in common use or under public buildings), and only the remaining land is available for distribution to members.

Land reform legislation thus recognizes land rights of the three main groups of land users; namely, the farm enterprises, the subsidiary household farmers, and the new private farmers. It recognizes different forms of land tenure: private ownership, state ownership, collective ownership, possession, and usership. It establishes the principle of equal rights for diverse organizational forms operating under any of the recognized types of land tenure. It does not explicitly encourage the formation of private farms, nor does the legislation discourage the continued existence of collective farm enterprises.

Land and the General Privatization Program

The principles of land privatization described above are based on 1991/1992 land legislation that applies specifically to agricultural land. A parallel and conflicting set of principles were developed as part of general privatization legislation, including the Conception of Denationalization and Privatization of Enterprises, Land, and Housing adopted as early as November 1991 (predating the relevant land legislation), the Law on Privatization Securities passed in March 1992, and the State Program on Privatization of Assets of State Enterprises approved in August 1992. According to general privatization legislation, all adult citizens of Ukraine have an equal right to own a parcel of land of a constant size, equal to the national per-capita average. This right is to be certified by distribution of special privatization securities (so-called coupons or "bons") to the entire adult population.

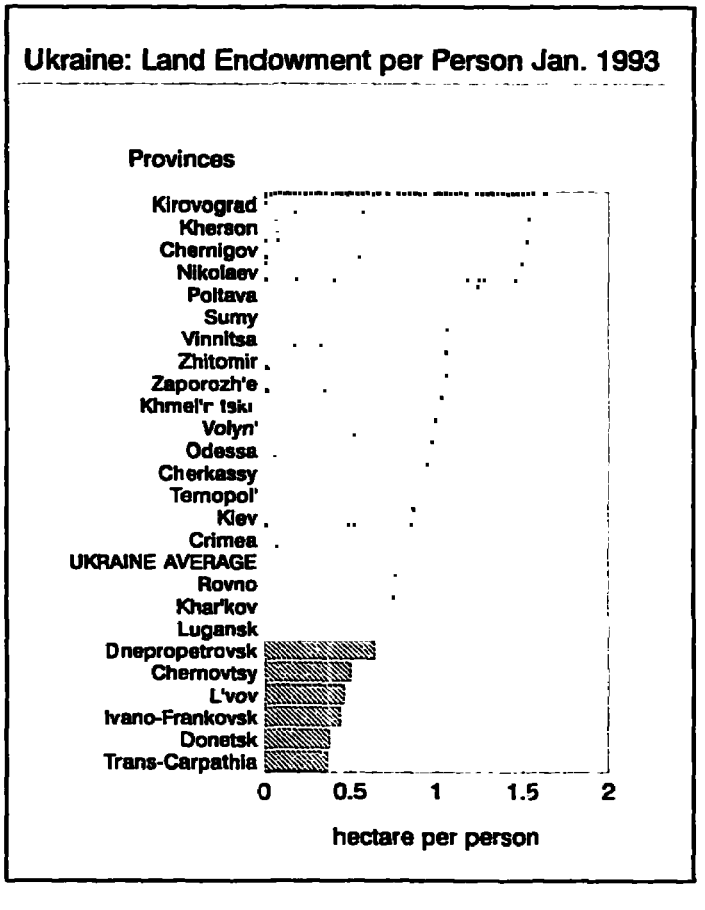

Figure 3.1. Land Endowment per Person by Province

In Ukraine today, the average area of agricultural land per capita is too small to be of much practical use for farming. The national average is 0.8 ha per person, and it drops to less than 0.4 ha per person in the Western provinces (Fig. 3.1). Therefore, although the principle of equal

division of land ownership to entire adult population remains in force as part of the general privatization legislation, current thinking with regard to its implementation appears to have abandoned the idea of proceeding with actual distribution of land along these lines.

Forms of Land Ownership

The January 1992 Law on Forms of Land Ownership recognizes three forms of land ownership:

- state ownership;
- collective ownership;
- private ownership.

Table 3.1. Distribution of Agricultural Land Among Users as of Jan. 1, 1994

Land Users	*Percent of all agricultural land*	
Collective farm enterprises	60.8	
State farms subject to privatization	14.2	
State farms not subject to reorganization	6.4	
Agricultural cooperatives	0.2	
Partnerships and joint-stock societies	0.5	
Households	11.9	
including:		
subsidiary household plots		8.2
gardens and vegetable patches		1.1
pastures and haylage		2.6
Private farmers	1.5	
Other users	0.5	
Common use land	0.6	
State land reserve (agricultural land component)	2.6	
Village reserve (agricultural land component)	0.8	

Source: Dinamika zemel'nogo fonda Ukrainy, State Land Committee, Kiev (1994); Zemel'nyi kadastr Ukrainy, State Land Committee, Kiev (1994).

The categories of land in each form of ownership are specified by the March 1992 Land Code. The distribution of agricultural land among users as of January 1994 is shown in Table 3.1. This distribution is the basis for the ongoing transfer of land ownership from state to collective and private ownership, based on land reform legislation. Thus, acc ding to Table 3.1, 13.4% of agricultural land is used by households and private farms, and is ultimately intended to be in private ownership. This, however, is not the current ownership status of this land, as the process of privatization of land has not progressed very far.

The state intends to retain ownership of the following categories of agricultural land:

- research and experiment stations, including the land of their associated farms;
- variety-testing stations;
- elite-seed and seed-selection farms;
- pure-bred livestock farms;
- farms growing hops, ethereal-oil crops, medicinal plants, fruits, and grapes.

These lands represent over 6% of all agricultural land, and they will remain in cultivation by state farms designated as "state farms not subject to reorganization". Reserve lands and the redistribution fund also remain in state ownership, but only transitionally: the final intention is to distribute these lands to private ownership of individual users. Large tracts of forest land and water bodies continue to be state-owned permanently.

All land currently used by collective and state farms and other farm enterprises, excluding the land extracted to the reserve and the land in state farms not subject to reorganization, becomes collectively owned (without any payment). This accounts for 75% of agricultural land used by all farm enterprises prior to the land reform (excluding the land in subsidiary household farms, see Table 3.1).

The land transferred to collective ownership in turn consists of

- common use land;
- agricultural use land.

It is only the agricultural use land that is intended for eventual distribution among members. Common use land is to remain undivided. This is the land under internal farm roads, public buildings, land amelioration facilities, soil protection plantations, etc. During a complete reorganization of a farm into constituent business entities or an association of private farms, common use lands are transferred to the local council, and some new units could be denied ownership of the land on which they are built if this is common use land.

Agricultural use land is first divided among individuals in the form of land shares, which are paper certificates of entitlement. Physical assignment of specific land parcels to individual shareholders is the second stage of the distribution process. It is not obligatory, and it is envisaged only in cases when individuals leave the collective in order to establish a private farm. Once collectively owned land is divided into individual shares, even without physical assignment of land plots, it effectively becomes an agglomeration of privately owned land shares. Although not explicitly stated in the Land Code, this is quite clear from the fairly broad rights of holders of individual land shares specified in Article 5 of the Land Code:

- the right to bequeath the land share to successors;
- the right to receive the land share in kind for the establishment of a private farm, a small production cooperative, an association, etc.;

- the right to use the land share for collateral;
- the right to sell the land share after a six-year moratorium.

The distribution of land shares in a collective thus takes the members part of the way toward private ownership of their land.

Restrictions on Land Ownership

Land tenure of subsidiary household plots, individual gardens and vegetable patches, and also private farms is being converted to private ownership, although subject to limitations on size (Table 3.2). In a subsidiary household plot, for instance, privately owned land may not exceed 0.6 ha. The household plot may be expanded to a maximum of 1 ha with land received in usership, and with special permission from the authorities the household plot may be increased even up to 2 ha. In a private farm, the portion of privately owned land may not exceed 50 ha of agricultural land or 100 ha in total (including forest, for example).

Table 3.2. Allowed Uses and Size Restrictions of Privately Owned Land

Use	*Maximum size*	*Payment for land*	*Source*
Private farm	50 ha agricultural land, 100 ha total area	Free up to the average land share in the region, for payment in excess of average land share	Land share of former collective member, state reserve
Subsidiary household plot	0.6 ha	Free	Land set aside by farm enterprise
Residential construction	0.25 ha rural areas, 0.1 ha in towns	Free	State reserve
Garden plot	0.12 ha	Free	State reserve
Dacha plot	0.1 ha	Free	State reserve
Garage plot	0.01 ha	Free	State reserve

Source: Ukrainian Agrarian Institute, Kiev.

In the current stage of reform, recipients of land actually do not pay anything for their allotments. Land for all household uses (subsidiary household plots, gardening, household construction) is allocated without any payment. Land for farming outside the collective farm is also distributed free, although current legislation stipulates that private farmers are entitled to receive without payment only up to the average land share of a farm member or employee in the region (the national-average land share is 6 ha). A farm member who intends to leave the collective in order to start a private farm is entitled to take his or her share of collective land

without any payment. Land in excess of the statutory limit may be received in usership or leased from the state reserve. In the future, private farmers will be allowed to buy land from the state or from other land owners up to the maximum legal limit on private holdings. The currently prevailing moratorium on buying and selling of land prevents purchase of land for six years.

Thus, in a typical 20 ha private farm in Ukraine, all land may legally be in private ownership (the farm is smaller than the statutory maximum of 50 ha). However, the private farmer may have to pay for the part of the land in excess of the family's land shares. In a family of three or four adults, the land shares probably will be sufficient to ensure that all land is free. In a two-adult household, if both the farmer and spouse were entitled to a share of land from their former collective, then based on the national average they will be entitled to 12 ha free and will be required to purchase the remaining 8 ha from the state. As today farmers actually receive their entire land from the state without any payment, established farmers may be required in the future to pay the state for some of the land that up to that time they considered free. There does not seem to be an absolute limit on the allowed size of private farms, so that farmers may increase their holdings beyond the limit of private ownership by leasing land from the state, the local collective enterprise, or from other individuals, e.g., pensioners in farm enterprises where the land has been physically distributed to owners.

ANNEX: Ukrainian Land and Farm Legislation
(as of March 1, 1994)

Abbreviations:

UL	Law of Ukraine
G	Government Resolution
SS	Resolution of the Supreme Soviet of Ukraine
PD	Presidential Decree

GENERAL REFORM-RELATED LEGISLATION		
Priority Development of Rural Areas and the Agro-Industrial Complex	10/17/1990	UL
Property in Ukraine	2/07/1991	UL
Enterprises in Ukraine	6/15/1991	UL
Business-Oriented Societies	9/19/1991	UL
Changes and Additions to the Law on Priority Development of Rural Areas and the Agro-Industrial Complex	5/15/1992	UL
Specific Features of Privatization of Property in Agro-Industrial Complex	5/17/1993	G
Privatization of Construction in Process	10/14/1993	PD
Privatization of Gas Stations Selling only to the Population	12/29/1993	PD
Changes and Additions in Some Ukrainian Laws	5/05/1993	UL
STATE ORDERS		
State Contract and State Order for 1993	1/22/1993	G
Reforms in the System of Procurement, Storage, Processing, and Use of Farm Products	4/23/1993	G
State Contract and State Order for 1994	10/28/1993	PD
State Contract and State Order for Farm Products, Raw Materials, and Food in 1994	11/12/1993	G
Immediate Measures for Spring Field Works, Spring Sowing, and Crop Harvesting in 1994	1/03/1994	PD

LAND LEGISLATION		
Resolution of Problems Connected with the Right of Land Ownership	12/05/1990	SS
Land Reform	12/18/1990	SS
Ukrainian Land Code	12/18/1990	UL
Law of Private Farms	12/20/1991	UL
Forms of Land Ownership	1/30/1992	UL
Law of Collective Farm Enterprise	2/14/1992	UL
Forms of State Documents on Right of Land Ownership and Right of Permanent Land Use	3/13/1992	SS
Changes and Additions in Ukrainian Land Code	3/13/1992	UL
Law of Payment for Land	7/03/1992	UL
Changes in the Law of Collective Farm Enterprise	5/04/1993	UL
Changes and Additions in the Law of Private Farms	6/22/1993	UL
Privatization of Land Plots	12/26/1992	G
Additions to the Law of Payment for Land	12/16/1992	UL
Procedures for Introduction of State Land Cadaster	1/12/1993	G
Immediate Measures for Preparation and Implementation of Land Reform	5/07/1993	G
Approval of Land Monitoring Program	8/22/1993	G
Assessment of Losses and Compensation of Land Owners and Land Users	4/19/1993	G
Some Issues of Development of Private Farms	3/14/1993	G
Procedure for Establishment of Land Tax Rates	9/16/1992	G

4

The New Private Sector

National Perspective

Private farming outside collective structures was formally recognized in Ukraine by the December 1991 Law on Private Farmers. While the first private farms began to emerge as early as in 1990, the main wave of registrations came in 1992 and 1993, after the enabling legislation had been passed in parliament (Table 4.1). On July 1, 1994 there were over 30,000 private farmers in Ukraine with total holdings of about 650 thousand ha of agricultural land. The average size of a Ukrainian private farm today is 21 ha (compared to 40 ha in Russia). Despite the impressive growth in numbers during the last three years, private farmers still account for only 1.6% of all agricultural land in Ukraine (July 1994 data), up from 0.8% in January 1993.

Table 4.1. Growth of Private Farming in Ukraine 1990-1993

	Jan.1991	Jan.1992	Jan. 1993	Jan.1994	July 1994
Number of private farms	82	2098	14,681	27,739	30,895
Agricultural land in private farms, thou. ha	2.0	39.7	292.3	558.2	657.5
Percent of total agricultural land in private farms	--	--	0.8%	1.5%	1.6%
Average farm size, ha	24.4	18.9	19.9	20.1	21.3

Source: Ukrainian Agrarian Institute, Kiev.

Although memories of private land ownership and family farming are relatively vivid in the Western provinces, which were fully collectivized only in the 1950s, growth of private farming in these areas is relatively slow. It is the Central and Eastern Steppe provinces that are today the leaders both in the number of private farms and the proportion of agricultural land allocated to private farming (Table 4.2). The seven Western provinces account for only 13% of all private farms in Ukraine, while 50% are in the seven south-eastern provinces (Zaporizhzhia, Donetsk, Dnipropetrovsk, Luhansk, Kirovohrad, Mykolaiv, and Kherson). The low population density in the Steppe provinces allows creation of relatively large private farms (over 30 ha per farm in Zaporizhzhia, Kirovohrad, Luhansk, Kharkov, and Kherson provinces). The Western provinces, on the other hand, are densely populated and private farms are smaller (10 ha on average in Lviv

Province, 5.6 ha in Trans-Carpathia, 7.6 ha in Ivano-Frankovsk, and 15.8 ha in Volyn). The last column in Table 4.2 shows the distribution of average farm size by province.

Table 4.2. Distribution and Size of Private Farms by Province (July 1994)

Province	*Private farms, percent of total number of farms*	*Agricultural land in private farms, percent of total agricultural land*	*Average farm size, ha*
Mykolaiv	15.3	3.9	16.5
Odessa	11.1	1.8	13.9
Kherson	8.1	4.1	32.2
Dnipropetrovsk	6.6	2.2	26.9
Donetsk	6.0	1.9	21.3
Kirovohrad	4.7	2.5	35.1
Zaporizhzhia	4.5	1.9	31.1
Poltava	4.1	1.1	19.6
Luhansk	4.0	2.3	36.2
Lviv	3.6	0.9	10.3
Crimea	3.4	0.8	13.8
Kharkov	3.2	1.3	32.1
Sumy	2.9	1.4	26.6
Trans-Carpathia	2.7	1.0	5.6
Vinnitsa	2.6	0.8	21.0
Kiev	2.5	1.0	22.9
Ivano-Frankovsk	2.2	0.8	7.6
Ternopil	2.2	0.9	14.6
Chernivtsi	1.9	0.6	5.2
Chernihiv	1.9	0.8	28.1
Volyn	1.8	0.8	15.8
Khmelnitsky	1.5	0.6	20.9
Cherkassy	1.4	0.7	23.3
Zhitomir	0.9	0.3	18.3
Rivne	0.9	0.5	14.9
Ukraine	**100.0**	**1.6**	**21.3**

Source: Ukrainian Agrarian Institute, Kiev.

The new private farming sector showed considerable gains in 1992 and 1993, but its contribution to gross agricultural product is still low. The agricultural land in all private farms, at 600 thousand ha (1.6% of the total), is around one-eighth of the land in subsidiary household plots, which currently stands at 5 million ha, or 11% of the total. The number of cattle and pigs in private farms increased 50% from 1992 to 1993, but it is still merely half a percent of the number of animals in subsidiary household plots. Table 4.3 gives some idea of the small weight of agricultural production on private farms in relation to other sectors of Ukrainian agriculture.

Table 4.3. Production of Private Farms Compared to Other Sectors of Ukrainian Agriculture

	Physical data		1993-to-1992	Percent of 1993 total	Percent of household plots 1993
	1992	1993			
CROPS					
Sown area, thou. ha	113.7	355.3	3.12	1.1%	
Production volume, thou. ton					
Grain	115.9	571.8	4.93	0.8%	
Sugar beet	69.4	389.6	5.61	1.2%	
Sunflower	18.8	51.8	2.76	2.6%	
Potatoes	14.9	50.0	3.36	0.3%	
Vegetables	13.5	30.7	2.27	0.6%	
Feed crops	32.1	56.7	1.77	NA	
LIVESTOCK					
Number of animals, '000					
Cattle	14.1	21.5	1.52	0.1%	0.6%
Cows	5.6	10.5	1.88	0.1%	0.4%
Pigs	16.9	24.8	1.47	0.2%	0.5%
Sheep&goats	10.4	20.7	1.99	0.3%	1.3%
Production volume					
Meat, thou. ton slaughter weight	2.9	5.0	1.72	0.2%	0.4%
Milk, thou. ton	7.9	16.5	2.09	0.1%	0.3%
Eggs, million	2.7	4.4	1.63	0.0%	0.1%
Wool, ton	16.0	33.0	2.06	0.1%	0.8%

Source: Ukrainian Agrarian Institute, Kiev.

According to national statistics, only 4% of the land in private farms is in private ownership (Jan. 1994); the remainder is in the two traditional forms of tenure; lifetime usership (over 50%) and inheritable possession (over 40%). Although current legislation restricts the portion of privately owned land to the average land share of a collective member in the same region (the national-average land share is 6 ha), this is still far below the maximum area that can be held in private ownership. The allocation of land to new private farmers is not immediately accompanied by its transfer to private ownership, although the traditional forms of land tenure are probably transitional and will be ultimately converted to privately owned land up to the allowed maximum. The whole process of land registration is thus in its earliest stage, even on private farms.

Private farmers have access to two sources of land:

- the individual land share that each collective-farm member or state-farm employee is entitled to take out in order to establish a private farm;

- the state-owned land reserve, which is a source of additional land for former members and employees wishing to augment their land share and the only source of land for applicants who are neither members of collectives nor employees of state farms and thus do not have land shares.

In principle, land from both these sources is obtained in private ownership and without payment up to the size of the average land share in the region. Additional land can be leased or acquired in other forms of tenure for an appropriate payment (although in reality payment for land has not been instituted so far, with the exception of land taxes). Purchase of farm land from the state or other owners will be allowed only after a 6-year moratorium.

The state-owned reserve is currently the main legal source of land for allocation to new private farmers. It was created in 1992-1993 by extracting around 10% of the land cultivated by collective and state farms. Today the reserve contains about 1.1 million ha of agricultural land (down from 2.5 million at its peak). The fact that movement of land out of the state reserve (about 1.4 million ha) exceeds land in private farms (.7 million ha) indicates that land leaves the reserve for purposes other than establishment of private farms. Much of the land that has left the reserve is probably leased back to collective users, and could legally in the future be reclaimed by the reserve. Land currently in the reserve should be sufficient to accommodate another 50,000 private farmers keeping the same average farm size as at present. If all this land is distributed as intended, the number of private farms in Ukraine will increase almost three-fold compared to the level in January 1994. This, however, will exhaust all the available land reserves for private farming, and there are no legal mechanisms in place for sustained creation of private farms beyond that point. Members of collectives who desire to become private farmers will still be able to leave the farm enterprises will their land shares, but these are much smaller than the average farm size of 22 ha. This mechanism, (i.e., exit), does not apply to "outsiders" who need land from other sources to establish a private farm. If private farming in Ukraine continues to develop at a fairly fast rate, additional source of land will have to be made available to new private farmers, either by sanctioning market transactions prior to expiration of the six-year moratorium, or by transferring additional land from collective and state farms into the reserve.

The disparity between the average size of private farms established to date and the smaller future allotments raises questions of security of tenure. Will the established private farmers be able to keep land in excess of the combined shares of farm owners? The question is far from academic in view of the fact that only a small fraction of the land in private farms is registered as privately owned, and the rest is still in usership or possession. Speeding up the transfer of land to private ownership and accelerating registration and titling will certainly benefit the existing

farmers, although it may exacerbate future problems with new farmers, who are expected to receive much smaller allotments.

Private Farms and Private Farmers in the Survey

Consistently with the national distribution of new farm registrations, over 80% of the farms in the sample were registered in 1992 and 1993, and less than 15% are older farms established in 1991. The annual pattern of new farm registrations, similarly to that in Russia, shows a distinct seasonality, with most new registrations occurring in the winter and early spring, when the farmers are relatively free from work in the fields (Fig. 4.1). Over 80% of private farms in Ukraine are single-family farms, and around 10% are farms formed by 2-3 families. This is in contrast to the Russian survey, where the incidence of multi-family farms is substantial.

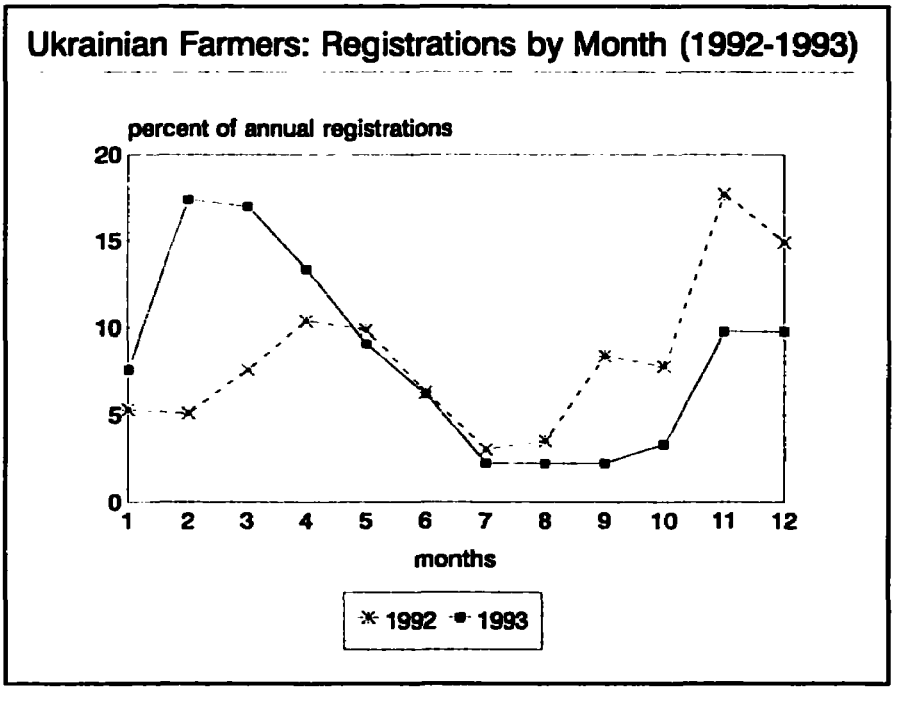

Figure 4.1. New Registrations of Private Farms by Month in 1992-1993 (percent of annual registrations each month)

Private farmers are mainly former employees of collectives (65% of respondents), where most of them worked as managers, specialists, or skilled workers. A significant proportion of private farmers, however, are former urban residents (20%) and non-agricultural rural workers (10%). Private farmers are relatively well educated: over 40% have higher education and only 4% have 9 years of schooling or less (the respective percentages among farm employees are 22% and 12%). The average private farmer is 42 years old and the spouse is 40 years old. The average family is 3.7 persons, but fully 5% of private farmers are single. The average family lives in

a privately owned detached home built 10 years and more ago, although 14% of the private farmers live in apartment blocks.

Ukrainian private farmers rely on their farm for 70% of family income, compared to around 40% in households of farm employees. As is to be expected in a highly uncertain environment, private farmer households diversify their sources of income through part-time and non-farming employment, especially by the spouse. Nevertheless, they are more dependent on farm income than employees' families, where a much higher proportion of income derives from salaries received in the collective.

Land in Private Farms

The land holdings in private farms range from around 1 ha to 100 ha, with an average of 26 ha (which is not significantly higher than the national average). While 65% of the farms in the sample have less than 30 ha, a relatively high proportion of farms (over 20%) report land holdings between 40 and 50 ha, which is much larger than the Ukrainian average (Fig. 4.2). Most of the land in private farms (23 ha out of 26 ha in an average farm) is arable. Areas under gardens, hayland, and pasture are very small on average (Fig. 4.3).

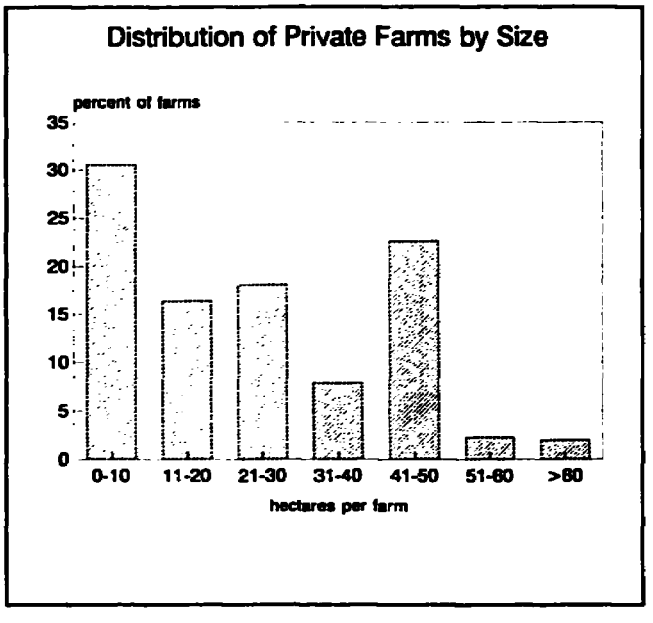

Figure 4.2. Distribution of Private Farms by Size

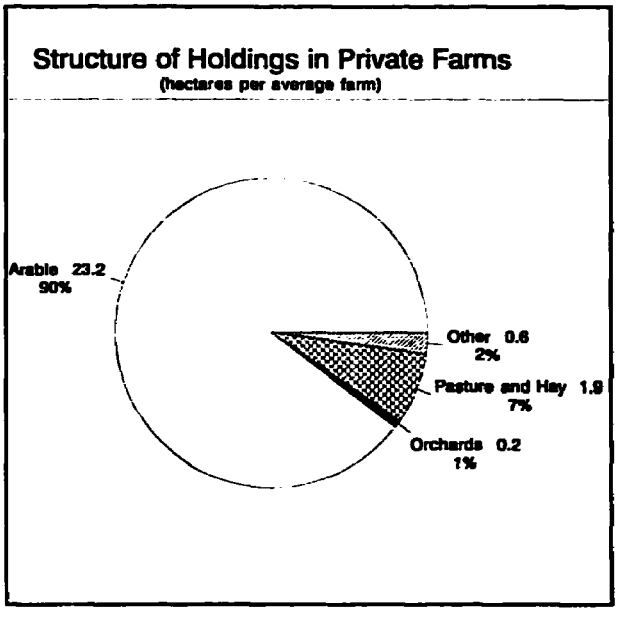

Figure 4.3. Structure of Holdings in Private Farms

Significant differences are observed in farm sizes and farm structures across the different provinces (Table 4.4). Consistently with the national picture presented in Table 4.2, the sample farms in the densely populated Western provinces (Ivano-Frankovsk and Volyn) are much smaller than the average (10 ha and 18 ha, respectively). The farms in the Eastern provinces (Kharkov, Kherson, and Mykolaiv) are much larger (30-35 ha). In four provinces (Kiev,

Cherkassy, Vinnitsa, and Mykolaiv), arable land constitutes more than 90% of the average farm. In the other provinces (both Western and Eastern), arable land accounts for only 80%-85% of the farm and another 10% is hayland and pasture.

Table 4.4. Ukrainian Private Farmers: Average Farm Size and Structure of Land Holdings in the Sample

	Farm Size, ha	*Farm Structure, percent*		
		Arable	*Pasture and Hay*	*Orchards, Forest, and Other*
All sample	**26.1**	**88.9%**	**7.1%**	4.0%
Kharkov	32.7	80.5	8.7	10.8
Kherson	37.0	80.8	13.3	5.9
Chernihiv	24.6	83.8	14.4	1.8
Ivano-Frankovsk	10.5	84.7	9.2	6.1
Volyn	18.2	87.0	8.8	4.2
Kiev	23.7	91.1	5.5	3.4
Cherkassy	20.4	94.4	3.3	2.3
Vinnitsa	28.2	95.0	2.4	2.6
Mykolaiv	34.6	98.0	1.0	1.0

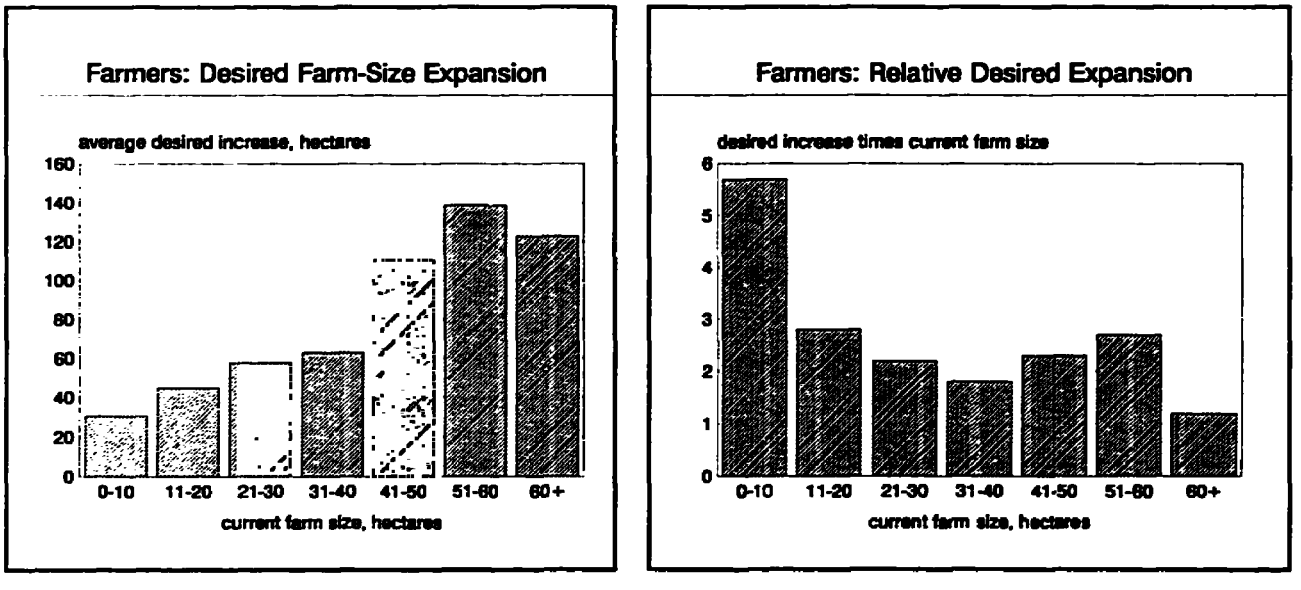

Figure 4.4. Desired Expansion as a Function of Current Farm Size: absolute expansion, in hectares (left panel) and relative expansion, in times present farm size (right panel)

The private farmers on the whole are dissatisfied with the size of their holdings. Over 60% of the farmers would like to increase their holdings by anywhere between 1 ha and 600 ha. Three-

quarters of these seek an increase of up to 50 ha. The average desired increase is 60 ha, two and a half times the average farm size today. Although farmers with larger holdings desire a larger absolute augmentation, it is the smaller farmers with up to 10 ha who seek the greatest relative increase (Fig. 4.4). These smallholders would like to increase their land by more than a factor of 5, compared to merely a factor of 2 for land holders with more than 10 ha. Nearly 60% of farmers state that they would like to use their vouchers to buy land, although at present it is unclear whether vouchers can be so used.

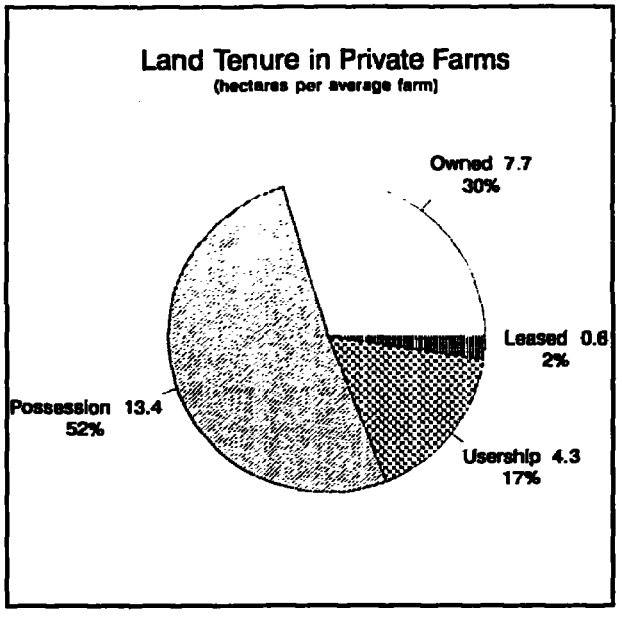

Figure 4.5. Land Tenure in Private Farms

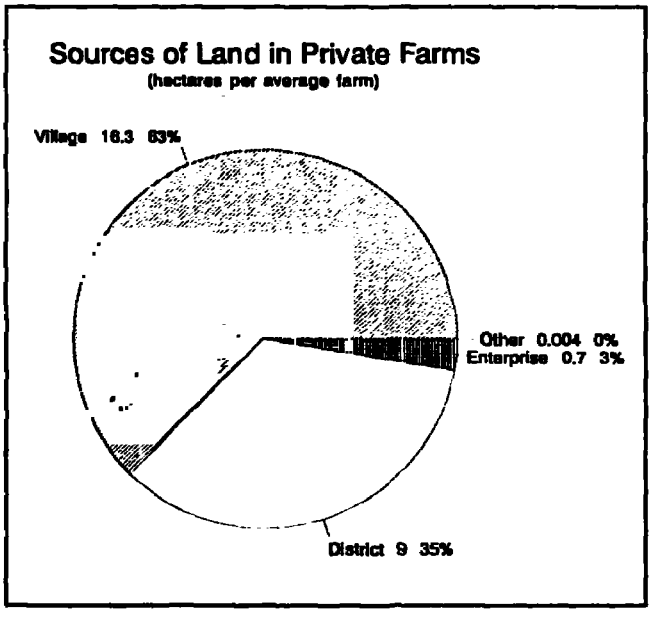

Figure 4.6. Sources of Land in Private Farms

Slightly more than 30% of the farms in the sample own at least some of their land. In most cases, however, land is in traditional old forms of tenure: lifetime inheritable possession (50% of farms) and usership (13%). Even in farms with privately owned land about 10% of holdings is in these two forms of tenure. The land tenure structure of an average 26-ha farm is 51% in lifetime possession, 17% in usership, 30% in private ownership, and 2% leased land (Fig. 4.5). Only 12 of 810 farms in the sample lease land, but these farms are larger than average (59 ha compared to 25-26 ha for farms other land tenure categories) and the leased area is relatively large (42 ha on average). To the extent that leasing is practiced, it clearly serves its intended function of allowing farmers to increase their holdings even in the absence of free selling and buying of land. There are no significant shifts in size of holdings or form of tenure depending on the year of creation of the farms. Virtually all the farmers (96%) have an official document certifying their right to the land, and nearly 60% express confidence that they will keep the land in the future. Only 8% of the respondents have no confidence in security of tenure, and most of the remaining farmers (over 30%) are undecided. There are no differences in the feeling of security of tenure across farmers in different land tenure categories (private ownership, lifetime possession, or usership). Farmers are apparently not aware of the potential tensions and

pressures that may arise if the land reserve is exhausted in the future and all newcomers are restricted to the size of the average land share.

The main sources of land for private farmers are the local village council (62% of holdings) and the district council (35%). Privately owned land, land in inheritable possession, and land in usership originates from these sources. Although farmers are supposed to receive a share of land on exit, collective farms are a source of a very small amount of land in the sample. Indeed, only 20% of former collective farm members among the sampled private farmers received a physical plot of land on leaving the farm enterprise (9 ha on average). Over 40% of former collective members stated, however, that land distribution had not been completed on their former farm, so that in the future more land may pass from collective farms to their former members. Collective farms are the main source of leased land: they provide nearly 30% of leased land to private farms (the rest is leased from the state). Leasing from private individuals or other enterprises is not practiced yet. The structure of sources of land is shown in Fig. 4.6.

Land use appears to be free for private farmers in Ukraine. Over 95% of farmers pay nothing for the use of their land, not even taxes. This is in a striking contrast to the responses of farm employees, where 65% of respondents pay land tax. Farmers may have misinterpreted the 5-year exemption from income taxes granted under the Law on Private Farms to include exemption from land tax also. Legally, private farmers are required to pay land tax like all other land users.

Farmers expressed an overwhelmingly positive view (90%) of private ownership of productive assets other than land. Regarding land, 50% prefer the familiar old form of "lifetime inheritable possession" (without buy and sell rights), and only 30% prefer private ownership with immediate buying and selling rights. Nearly 90% of respondents, however, are of the opinion that land should be held individually, and not collectively. The respondents also believe that it should be possible to buy and sell land, even if it is state owned (50%) or collective (80%). According to respondents, foreign residents should not be allowed to buy land (90%), but the answers are evenly divided regarding the advisability of permitting foreigners to lease land. Finally, half the respondents believe that land should be bought and sold without any intermediaries, through direct negotiation between buyer and seller. The remainder are divided between those who believe that the district or village council should act as intermediary in buying and selling of land and those who think that a land bank is needed to fill this function.

Production on Private Farms

The private farmers have chosen a production mix that sharply deviates from the traditional Ukrainian pattern of 55% livestock products and 45% crop products. Nearly 90% of the private farmers in the sample grow crops, and only 35% produce livestock products. Consistently with this product mix, over 75% of farm sales derive from crop products and less than 20% from livestock products (the remaining 5% derive from non-farm activities). The incidence of

livestock production is higher than average in the West (around 80% of the farms in Ivano-Frankovsk and Volyn provinces) and in Kiev Province (50% of farms).

One of the two main reasons given by private farmers for not keeping animals is insufficient land (over 20%), the other being low prices of livestock products (40%). The link between land and livestock is underscored by the finding that over 85% of farmers who keep livestock produce their own animal feed, and fewer than 10% purchase up to one half of feed requirements from outside sources. On the other hand, low profitability resulting from low prices discourages investments in farm structures and equipment, which are necessary for livestock enterprises to a much greater extent than for crop cultivation.

The main crops on private farms are cereals (50% of the farms in the sample, growing mainly barley, wheat, and buckwheat), potatoes (25%), and sugar beet (20%). Feed crops (beets, annual and perennial grasses) are produced mainly by farms with livestock. Thus 80%-90% of farms that produce these crops also keep animals.

Table 4.5. Ukrainian Private Farmers: Crop Production and Mean Yields

	Percent of producers in a sample of 810 farmers	Average area, ha	Average output, ton	Yield, ton/ha	
				sample	overall
Rye	4	8.8	17.2	2.4	1.8**
Wheat	30	12.5	37.2	3.0	3.0**
Barley	65	13.0	35.7	2.8	2.9**
Oats	9	5.5	10.3	2.2	1.4**
Corn	12	6.2	16.0	2.9	3.4**
Buckwheat	25	6.7	8.0	1.3	0.6**
Millet	3	9.9	16.3	1.4	1.1**
Grain	50	19.1	49.7	2.7	3.1*
Sugar beet	21	4.8	125.5	25.8	28.8*
Sunflower	12	7.1	8.9	1.3	1.7*
Potatoes	25	1.7	27.8	16.0	12.1*
Vegetables	13	1.8	28.3	14.0	14.2*
Fruits	2	6.4	23.5	6.2	–
Feed beets	14	1.0	34.5	37.7	31.2**
Hay	19	3.8	28.8	8.9	–

* Average yields for Ukraine for the period 1986-1990 from Narodnoye Khozyaistvo SSSR 1990 g.
**Average yields for former Soviet Union for the period 1986-1990 from Narodnoye Khozyaistvo SSSR 1990 g.

The average harvest was 50 ton of grain per farm, 125 ton of sugar beet, over 25 ton of potatoes, 30 ton of hay and grasses, and 30 ton of beets for feed. These averages are calculated

separately for farms growing the specific crops, and a single farm would not produce each of these in average quantities. Relatively few farms (around 10%) grow vegetables and corn, but these farms harvested on average 30 ton of vegetables and 15 ton of corn. The yields of various crops achieved by private farmers are not higher than the average historic yields for Ukraine and the former Soviet Union (Table 4.5).

The farms that keep livestock have on average 5 head of cattle (including 1.5 cows), 5 pigs, 2 sheep, and 20 chickens. Not each farm, however, raises all these animals. While 35% of the private farms have some form of livestock, cattle is raised by 30% of farms, pigs by slightly more than 30%, and fowl by 25% (Table 4.6). Sheep are raised by farms in the sample practically only in one province, where pasture is a relatively large component of farm holdings (Kherson Province in the southeast, with pasture representing 13% of an average farm size).

Table 4.6 provides some data on livestock in Ukrainian private farms. The distribution of the number of animals in each livestock category is highly skewed toward very small herds or flocks. Thus, while some farms have more than 50 head of cattle or more than 50 pigs, 75% of farms have up to 4 head of cattle, up to 2 cows, or up to 5 pigs. The means therefore are not a reliable characteristic of the number of livestock in private farms, and Table 4.6 correspondingly shows the median number of animals in each livestock category with the upper and lower quartiles. To interpret these numbers, it should be recalled that by definition the number of animals does not exceed the lower quartile in 25% of farms, the median in 50% of farms, and the upper quartile in 75% of farms. Half the farms thus fall below the median and similarly half the farms fall between the upper and lower quartiles.

Table 4.6. Livestock on Private Farms in Ukraine
(animals per farm in each category)

	Percent of farms*	Min	Max	Mean	Lower quartile**	Median**	Upper quartile**
Cattle	30%	1	60	5.7	2	3	4
Cows	28%	1	12	1.9	1	1	2
Pigs	34%	1	60	5.2	2	3	5
Sheep	7%	1	200	8.6	2	4	8
Fowl	26%	2	500	27.4	15	20	30

* Farms with animals in the respective category out of 810 farms in the sample.
** 25% of farms fall below the lower quartile, 50% below the median, and 75% below the upper quartile.

The farms that report livestock production are in fact mixed crop-livestock operations, and there is practically no difference in overall farm size between them and the farms that specialize in crop products only. The arable land area is only slightly smaller in mixed crop-livestock farms (22 ha compared to 24 ha in specialized crop farms), but they have double the area under hay (1.2 ha compared to 0.6 ha in farms without livestock) and somewhat more pasture (1.2 ha compared to 0.8 in crop farms).

Main livestock products in Ukrainian private farms are beef, pork, milk, and eggs, which are produced by 20%-25% of all farms in the sample (Table 4.7). Poultry, mutton, and wool are produced by a very small proportion of farms. Production of livestock products is fairly low (1993 figures): around 1,000 kg of beef per farm, 500 kg of pork, 3,000 eggs, and 5,000 kg of milk. Milk yields range between 1,200 and 9,000 kg per cow per year with an average of 3,400 kg. This is much higher than the Ukrainian average of around 2,500 kg per cow per year achieved during the last decade. The yield patterns in Ukraine are on the whole similar to those observed in Russia: no clear edge in crop products on the one hand and significantly higher milk yields on the other, possibly due to the greater care that private farmers can devote to their very small herd.

Table 4.7. Livestock Production on Private Farms in Ukraine

	Percent of farms*	Average, ton per farm
Beef	23%	1.1
Milk	25%	5.3
Pork	28%	0.5
Eggs	21%	3.2
Poultry meat	5%	0.14
Mutton	2%	0.6
Wool	1%	0.10

* Farms producing the respective product out of 810 farms in the sample.

Farmers producing livestock products uniformly claim that these products are profitable (80% to 90% of the producers). Neither crop nor livestock farmers intend to change dramatically their product mix in the future. There are no indications that farmers who did not produce certain crops in 1993 are planning to expand into these crops in 1994.

Human Resources

Ukrainian private farmers rely mainly on extended family labor: family members work in over 90% of the farms, while relatives work during holidays and vacation in 60% of the farms. An average farm employs 2.5 family members (1.5 family members full time and 1 family member part time). Only 3% of the farms employ permanent hired labor, but another 17% use seasonal hired workers. Farms employing hired labor (whether permanent or seasonal) are significantly larger than the average: 34 ha compared to 24 ha for farms that depend on family labor only. The difference in animals is not significant between the two categories of farms. Despite the striking size difference, which would seem to suggest a greater tendency to crop production, the

proportions of crop producers (as well as livestock producers) are not significantly different between farms that rely on family labor and farms that augment family labor with hired labor.

Because of the reliance on family labor it is significant to note that there are practically no unemployed people in the sample, and 80% of family members work on the farm (45% full time and 35% part time). Of the 20% who do not work at all on the farm, almost everybody is a student. Even among the pensioners (family members older than 55) over 90% work full-time or part-time on the farm.

Women contribute much more to income diversification of farmer families than men. Among the first two members of the family (the husband and wife team), 80% of men are full-time farmers, while only 40% of women work full time on the farm and the remaining 60% have off-farm jobs (part- or full-time). Typical female occupations off-farm include unskilled work on the collective farm and employment in administration or social services on the collective farm or in the village.

Finances and Credit

Farmers report initial investment of $4000-$5000 in their farms, and farm assets of $6000-$8000 at the end of 1993. Farm assets appear to be fairly efficiently utilized, as each value unit of assets generates 2 units of sales. Analysis of costs and revenues reported by private farmers reveals a gross profit of around 20% over all activities. Over 40% of the farmers believe that their profit margin will increase next year, and less than 20% are pessimistic about future profits.

Ukrainian farmers finance a relatively high proportion of their farm assets using equity capital in the form of own savings (Fig. 4.7). The share of equity capital in investment naturally decreases over the years (from 80% of assets in 1990 to 55% in 1993) as savings are eroded by galloping inflation, and the reliance on borrowed funds correspondingly increases (from 20% debt in capital structure in 1990 to over 40% in 1993). Yet the proportion of own financing provided by private farmers remains surprisingly high. The share of funds received from the state, either in the form of grants or in the form of discretionary loans from the State Farmers Support Fund, is very small. The asset share received by the farmer upon leaving the collective farm is a negligible part of the total

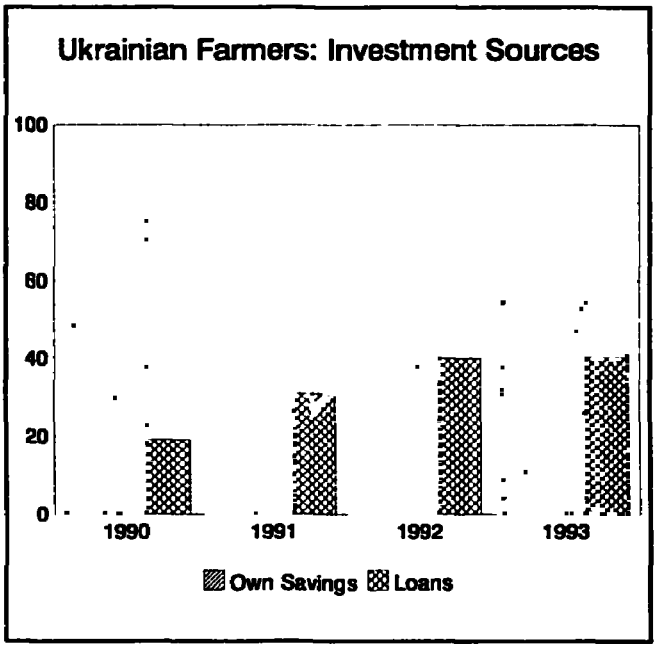

Figure 4.7. Sources of Investment Capital by Start-Up Year for Private Farms

value of farm assets (Table 4.8). This is consistent with the finding that less than 20% of former collective farm members among the sampled private farmers were allocated asset shares, and only half of them were able to obtain physical assets on exit (10%) or to redeem the asset share for cash (2%). Over 40% of former collective members stated, however, that land and asset distribution had not been completed on their former farm, so that in the future more assets may pass from collective farms to their former members.

Table 4.8. Sources of Farm Investment*

	1990	1991	1992	1993
Own savings	81.0%	51.3%	56.2%	55.2%
Asset share	--	--	0.5	0.2
Loans				
from relatives	4.7	3.3	5.3	5.8
from collective farm	--	3.7	0.5	1.0
from bank	14.3	24.0	34.6	34.3
State grants	--	--	0.1	0.1
State Support Fund	--	--	1.0	0.6
Other sources	--	7.7	1.8	2.9
Number of farms	7	32	237	555

* -- stands for absolute zero (no reported amounts).

Receivables do not appear to be a problem among private farmers. Although the level of customer debt in relation to sales is quite high for farms with accounts receivable (their receivables represent on average 8 months of sales), only 10% of respondents have accounts receivable. Most of this debt is owed by state-procurement channels for farm products sold (70% of total accounts receivable). Other debtors include processing enterprises, collective and state farms, commercial trading firms, and other private farmers (Fig. 4.8).

Farmers have access to credit, and long-term borrowing continues to be available despite high inflation rates. Around 30% of the farmers borrowed long term in 1993, and the same percentage borrowed short term. Nearly half the farmers borrowed in some form in 1993, and yet only 15% say that they have outstanding debt. The borrowing in 1993 and also the reported level of outstanding debt were around 40% of farm assets. Long-term debt is somewhat more expensive than short-term loans: the average short-term rate is 80% compared to 100% for long-term borrowing. In most cases, the borrowing rate is less than 150% per annum (Fig. 4.9) and the highest rate does not exceed 400%. Annual inflation during this period was in excess of 2,000%.

Debt is not collateralized for over 50% of farmers who borrowed short term and for 40% of farmers borrowing long term. Main forms of collateral for both short- and long-term loans

include guarantees of the Ukrainian Farmers' Association and the State Farmers Support Fund (about 30% of the cases in each category). Machinery and equipment is used as collateral by around 10% of the borrowing farmers. The house (which is privately owned in most cases) and farm stocks (animals and grain) are not used as collateral. Nor is land mortgaged to the bank, although around 30% of farm land in the sample is already in private ownership (see above, Fig. 4.5). Farmers are divided on the legal issue of mortgage of land, and fully 50% of respondents do not intend to mortgage their land even if this is the only way to borrow money.

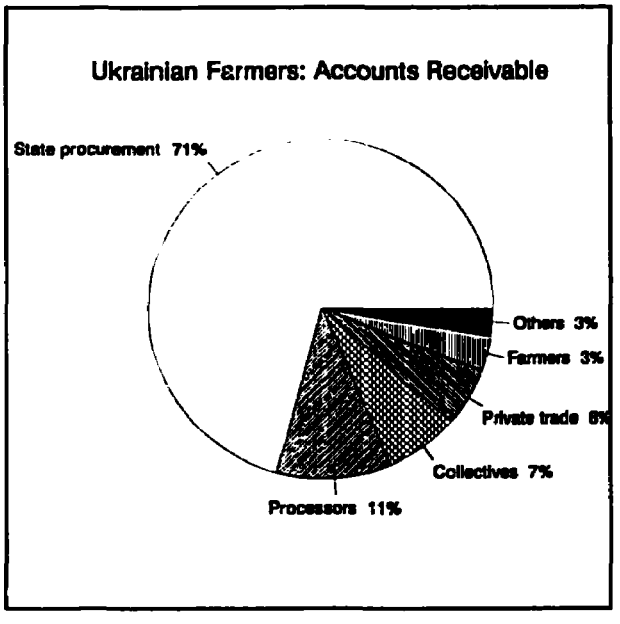

Figure 4.8. Accounts Receivable of Private Farms

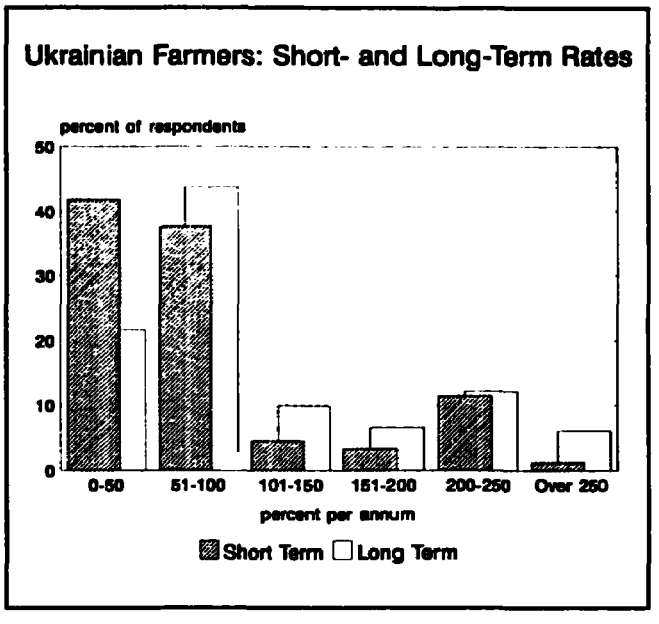

Figure 4.9. Borrowing Rates of Private Farmers

Around 80% of farmers complain of difficulties with borrowing, both short and long term. Although the real interest rates are deeply negative, 40% of the farmers feel that high interest rates are a constraint to borrowing, and another 40% feel that there is a shortage of credit regardless of the interest rate. Despite this pessimistic outlook on credit markets, around 40% of farmers feel that they can borrow from the bank in case of need. This inconsistency in answers possibly suggests that the new private farmers do not really understand credit and banking, which is not surprising in an environment that had no commercial banking services for decades. Another relatively important source of borrowing for private farmers is the State Farmers Support Fund (15% of respondents). Only about 20% of farmers fear that they have no sources of borrowing in case of need.

Cooperation

Nearly 80% of the farmers participate in farmers' associations, mostly in the local farmers' association and to a much smaller extent in the Ukrainian Association of Private Farmers (70% and 20%, respectively). About 10% of the farmers state that they are members of a farmers'

cooperative, which may account for the role of these structures in input purchasing and marketing (see the chapter on *Marketing Services and Infrastructure* below). Cooperative activities include most of the main farming activities, such as shared use of agricultural machinery and equipment (45% of the farmers), joint agricultural production (34%), marketing (24%), input purchasing (20%), and cooperative credit (16%). Cooperation is particularly prominent in the area of professional consulting (64% of the farmers). Cooperative processing is relatively less important (6%), probably because there is still very little secondary processing activity among the emergent private farmers.

Standard of Living and General Attitudes

Over 60% of private farmers say that family income is adequate for daily needs, but does not permit purchase of durable goods. Less than 10% complain that their income is insufficient to meet the minimum standard of living. Against this group of low-income farmers, there is another 10% group who say that they do not experience any material difficulties. Only 10% of the respondents have a pessimistic view of the future. Around 40% are optimistic and another 50% have no opinion.

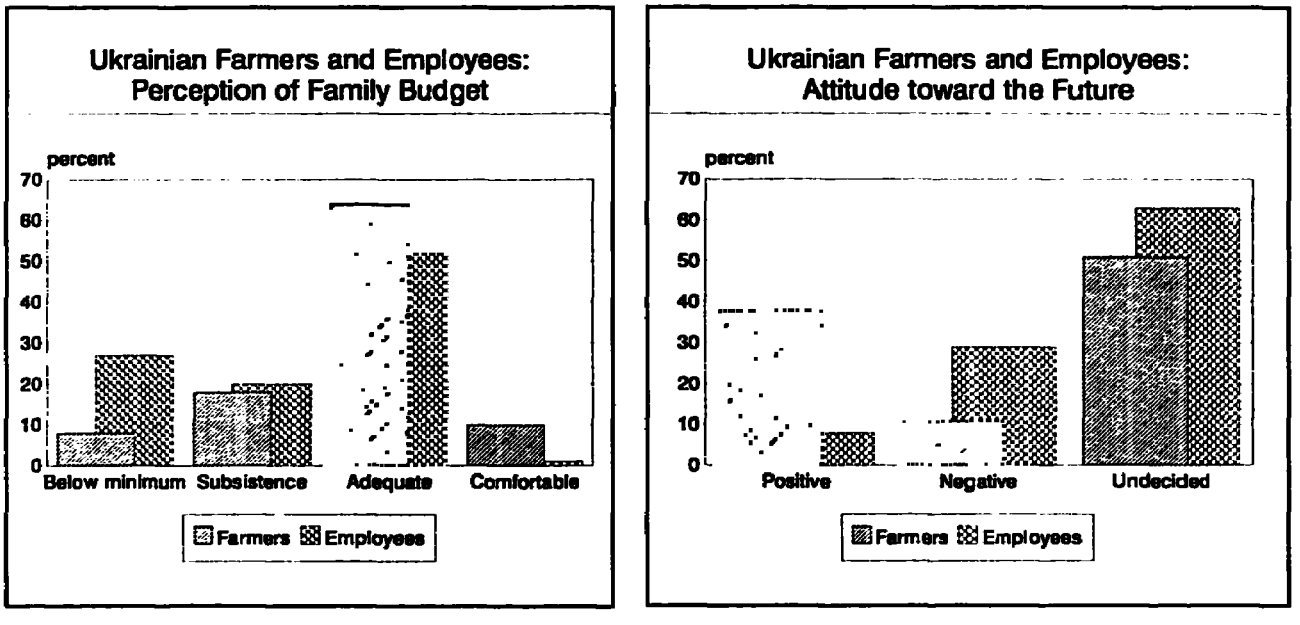

Figure 4.10. Perception of Family Budget and Attitude toward the Future: Comparison between Private Farmers and Farm Employees

Satisfaction with the standard of living among private farmers in the sample appears to be substantially higher than among farm employees. In the latter category, nearly 30% report that their income is insufficient to meet the minimum standard of living and only 1% admit that they do not experience any material difficulties. As a result, only 8% of farm employees are

optimistic about the future and nearly 30% have a pessimistic view. Fig. 4.10. presents a comparison of private farmers and farm employees by standard of living and optimism.

5

Reorganization of Farm Enterprises

Land Use and Production

The farms in the sample were formerly organized in the traditional socialized forms as collective farms (kolkhozes, 67%) and state farms (sovkhozes, 30%), with some interfarm and other enterprises. These proportions were practically identical to the Ukrainian average prior to the beginning of reforms. On an average 3000 ha farm, 80% of land is arable and over 10% is pasture and hayland (Fig. 5.1). Land is cultivated directly by the farm enterprise, although one third of the managers state that they lease out land to employees or work groups. Leasing to non-workers is practiced by less than 5% of the managers, while mortgaging and selling are universally absent.

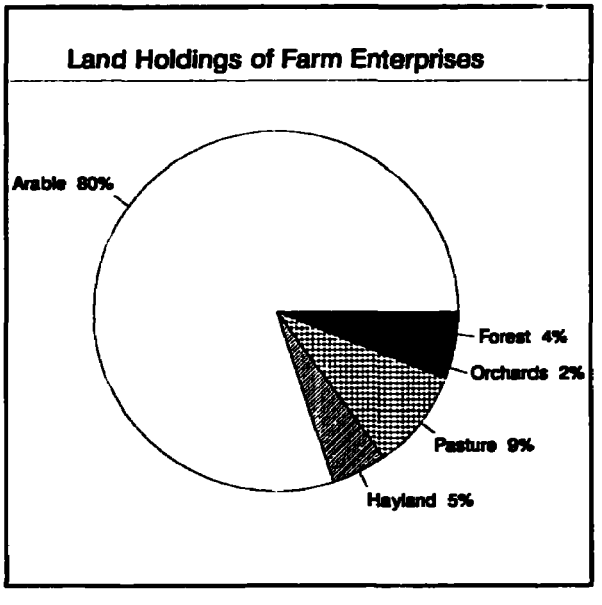

Figure 5.1. Structure of Land Holdings in Farm Enterprises in the Sample

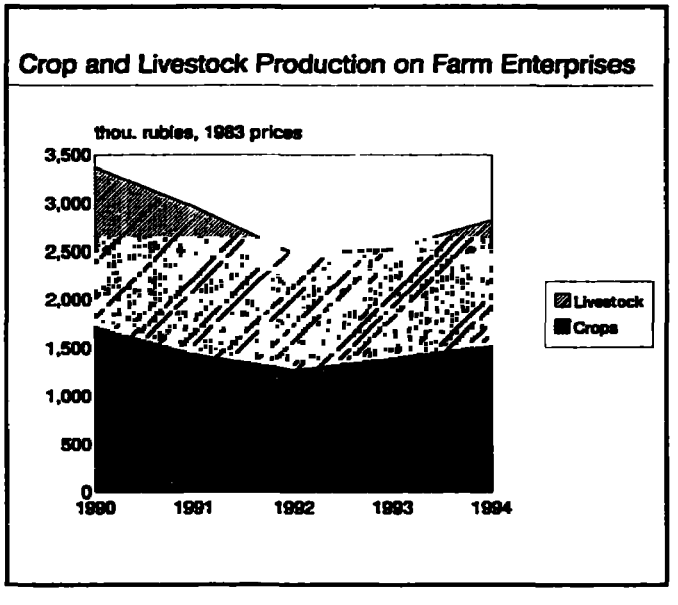

Figure 5.2. Crop and Livestock Production on Farm Enterprises: 1990-1993 (actual) and 1994 (projected)

The large-scale farms in Ukraine are mixed crop-livestock operations, with their output evenly divided between crops and livestock products. The gross product of the farms in the sample declined nearly 30% (in constant prices) between 1990 and 1992, reflecting the general economic

decline and uncertainty during the first years of transition. The production recovered slightly in 1993, and the managers participating in the survey expect a further increase in the immediate future: the 1994 product is expected to be 15% above the 1990 level (Fig. 5.2). The improvement in 1993 and the expectations for 1994 are mainly due to an increase in crop production, with the proportion of crop products in 1993-1994 rising to 55%.

Table 5.1. Structure of Crop Production in Farm Enterprises

Crop	Percent of total area under crops	Grain	Percent of area under grain
All crops	100	All grain	100
Grain	58	Wheat	50
Sugar beet	7	Barley	30
Sunflower	5	Corn	7
Potatoes	2	Rye	4
Vegetables	2	Oats	4
Fruits	1	Buckwheat	3
Feed beets	2	Millet	1
Annual and perennial grasses	24		

Grain is the main crop in farm enterprises, accounting for nearly 60% of cultivated land (Table 5.1). Perennial and annual grasses for animal feed are the other major use of land, occupying nearly one quarter of the cultivated area. Sugar beet and sunflower combined occupy less than 15% of cultivated land, and on the remaining area the farms grow potatoes, vegetables, fruits, and beets for feed. Wheat and barley are the main cereals grown in farm enterprises: they respectively account for 50% and 25% of the area under grain (Table 5.1). Average production volumes per farm and the corresponding yields of various crop products are given in Table 5.2. The yields of different crop products generally follow the national average, except for grain, where the sample farms appear to be doing somewhat better than the average.

An average farm has 1600 head of cattle, one third of which are cows. In addition, there are 650 pigs, 350 sheep and goats, and over 6000 birds. Virtually every farm has cattle (both beef and dairy), and nearly 90% of the farms raise pigs. Sheep and goats, however, are raised only by 30% of the farms and poultry by less than 20% of the farms. Some of the poultry farms are relatively specialized operations, with over 150,000 birds each.

Nearly 85% of the farms produce their own feed, and the rest produce at least half of their feed requirements. The managers choose to produce their own feed because (a) feed prices are too high (70% of respondents) and (b) there is a shortage of feed at any price (20%). Almost 90% of the managers intend to increase feed production as a means of improving livestock profitability.

Table 5.3 gives the volume of livestock production in farm enterprises. The average milk yield is 2300 kg per cow per year. This is comparable to the Ukrainian average, but lower than the yields reported by private farmers and by farm employees with cows on their household farms (3400 kg and 3200 kg, respectively). Farm managers are aware of inadequate efficiency of their livestock operations: over 95% of the respondents would like to improve the productivity of their animals and 85% intend to improve the breed. One third of the respondents are considering adoption of advanced Western technologies.

Table 5.2. Ukrainian Farm Managers: Crop Production and Mean Yields

Commodity	Number of producers	Average		Yield (ton/ha)	
		area, ha	output, ton	sample	overall
Rye	610	64	175	2.3	1.8**
Wheat	822	522	2050	3.4	3.0**
Barley	810	321	973	2.9	2.9**
Oats	734	50	163	3.0	1.4**
Corn	458	135	376	2.8	3.4**
Buckwheat	582	46	67	1.4	0.6**
Millet	362	30	57	2.2	1.1**
Grain	794	1115	3840	3.5	3.1*
Sugar beet	616	171	4405	24.2	28.8*
Sunflower	457	174	235	1.4	1.7*
Potatoes	623	40	495	11.1	12.1*
Vegetables	693	41	488	11.2	14.2*
Fruits	186	94	441	3.2	--
Feed beets	775	43	1565	36.5	31.2**
Hay	665	436	7579	17.0	--

* Average yields for Ukraine for the period 1986-1990 from *Narodnoye Khozyaistvo SSSR 1990 g.*
**Average yields for former Soviet Union for the period 1986-1990 from *Narodnoye Khozyaistvo SSSR 1990 g.*

Table 5.3. Livestock Production in Farm Enterprises

	Percent of farms	Average number of animals per farm	Lower quartile	Median number of animals	Upper quartile	Product	Average output, ton per farm
Cattle	98	1624	860	1353	2102	Beef	210
Cows	97	506	278	410	650	Milk	1189
Pigs	89	753	125	427	864	Pork	62
Sheep/goats	33	1083					
Fowl	17	33091	1000	1740	4037	Eggs	6017

Despite the relatively low efficiency, half the managers are of the opinion that the main livestock products (beef, pork, milk, and wool) are profitable. Eggs and poultry are judged to be profitable by less than 40% of the respondents, while mutton is at the bottom of the profitability scale, with 24% of the respondents reporting it to be profitable. Sales to state purchasing organizations are uniformly judged to be less profitable than overall sales of the corresponding products, revealing a definite price advantage of alternative marketing channels. A fairly high proportion of farm managers (around 40%) are planning to increase the production of the relatively profitable products in 1994 (beef, pork, and milk), while with regard to the less profitable products (eggs, poultry, and mutton) the managers who plan to increase production are closely balanced by those who intend to cut production.

Labor

A typical farm enterprise in the sample employs over 400 workers, three-quarters in agriculture and the rest divided evenly between non-agricultural occupations (such as processing, construction, repairs) and administration and social services (Fig. 5.3). The total labor force per farm declined by more than 10% between 1990 and 1993 (Fig. 5.4, the change from 460 to 410 workers per farm is statistically significant). This reduction of labor closely matched the decline in the available land (see above).

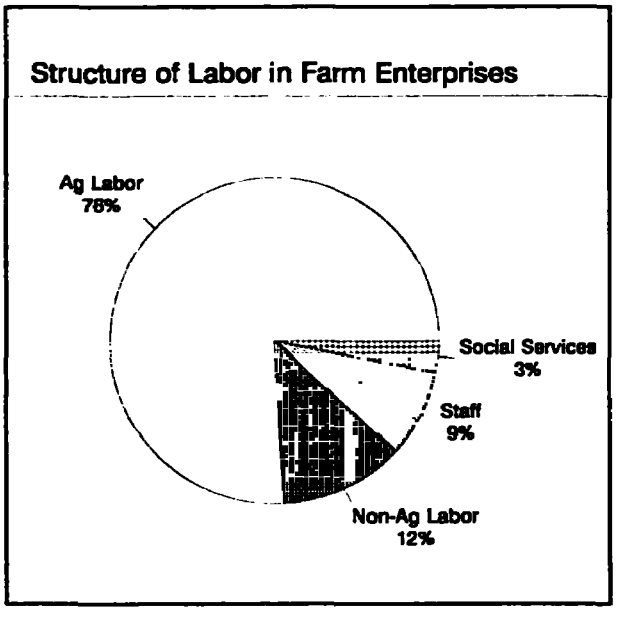

Figure 5.3. Structure of the Labor Force in Farm Enterprises in the Sample

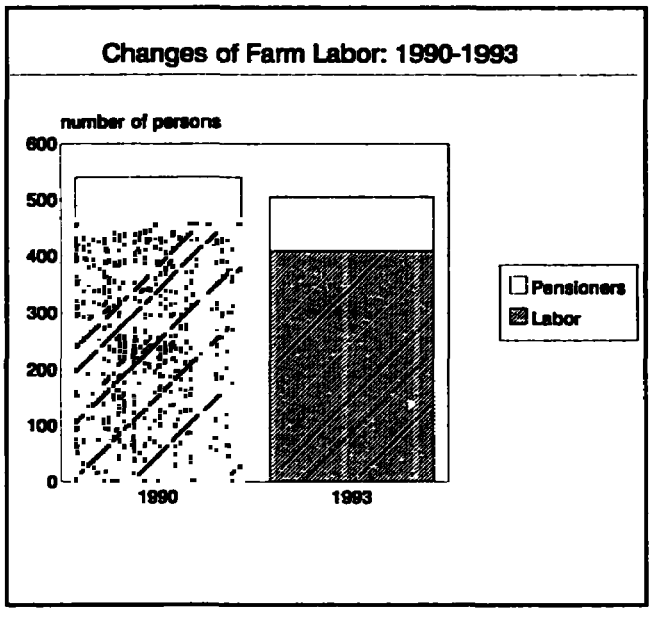

Figure 5.4. Changes in Labor Force and the Number of Pensioners in Farm Enterprises: 1990-1993

Part of the decline in labor is due to a process of natural attrition: new retirees were not replaced with active workers and the proportion of pensioners increased slightly (from about 15% to 19% of the total population, see Fig. 5.4). Another part may be an outcome of the increase in household plots through distribution of former collective lands. The household plots in the

sample increased between 1990 and 1993 by 45% (from 0.36 ha to 0.53 ha), which may have encouraged some individuals to take early retirement from active employment in the farm enterprise and to devote their energies to cultivating the enlarged family plots. The decline in labor may continue in 1994: the managers are evenly divided between those who expect the labor force to decline further and those who expect no change.

Few managers report that they have redundant farm labor. In the past, collective and state farm managers reported chronic labor shortages, and these are no longer perceived. Fewer than 20% of managers in the sample report labor shortages. About 40% are satisfied with the availability of labor and another 40% suffer from shortages only in peak time. These shortages are resolved by hiring temporary labor, a common practice adopted by over 70% of the managers.

Although more than half the farms were unable to meet the payroll on time at least on one occasion in 1993, mainly due to insufficient balance in the farm's account, managers chose not to reduce the labor force or to introduce pay cuts (70%-80% of the respondents). Managers are also averse to the idea of shifting farm labor to income-generating off-farm jobs (65% of respondents). The preferred strategy in case of insufficient funds for payroll remains borrowing from the bank (50% of respondents) or delaying payment (80%).

Change of Organizational Form

Almost three quarters (72%) of the farms in the sample had formally reorganized by the end of 1993. The proportion of kolkhozes and sovkhozes among the sampled farms dropped from nearly 100% in 1990 to 30% in 1993, and 60% of the farms registered as collective enterprises and production cooperatives (Table 5.4). None of the farms in the sample broke up into a number of smaller farms or independent business entities, and the percentage of radically new structures (such as small partnerships or associations of private farmers) remained negligible.

Table 5.4. Distribution of Organizational Forms in 1990 and 1993 (as reported by farm managers)

	All farms in the sample		Farms that reorganized	
	1990	1993	1990	1993
Traditional Farm Structures				
Kolkhoz	66.7%		76.4%	
Sovkhoz	28.9%	31.1%	21.2%	6.4%
Interfarm enterprise	0.8%		0.2%	
New Farm Structures				
Partnership*	--	60.6%	--	82.9%
Joint stock company	--	2.5%	--	3.3%
Farmers association	--	1.2%	--	1.3%
Agro-firm	0.4%	1.2%	0.3%	1.5%
Other	3.2%	3.4%	2.1%	4.7%

*Including collective and cooperative enterprises.

The number of employees leaving in the process of reorganization to establish private farms is still very small. In over 80% of farm enterprises nobody has left to become a private farmer. In more than half the remaining farms, the number of exits was between 1 and 3, and there were only few instances in which more than 20 private farms were established by former employees (Fig. 5.5).

Fully 26% of the sovkhozes in the sample changed their status to kolkhozes (an additional 53% transformed to collective and cooperative enterprises). The change from sovkhoz to kolkhoz involves transfer of ownership in land and assets from the state to the local collective and is a prerequisite for further restructuring of the former state farm.

Over 80% of the kolkhozes in the sample have adopted a decision to reorganize, compared to only two-thirds of the sovkhozes. In either group, reorganization is probably a question of time, as over half the farms that so far have not decided to reorganize give the reasons as "the question has not been discussed yet" (22%) and "the question has been discussed, but no decision has been reached" (31%). Only 12% of the farms that have not reorganized so far are not subject to reorganization according to existing legislation (these are mainly sovkhozes) and 22% state that they intend to keep their existing form (both kolkhozes and sovkhozes).

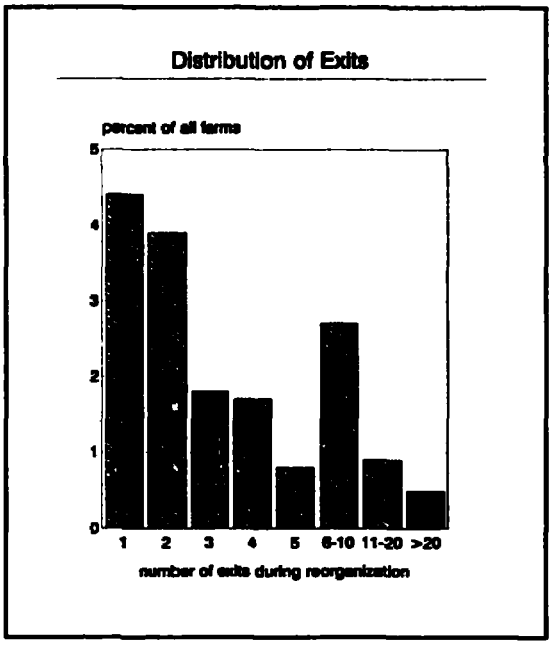

Figure 5.5. Distribution of the Number of Employees Leaving to Start a Private Farm

The process of farm reorganization has produced a certain confusion among the rank and file. In a matched sample of 756 managers and employees from the same farm enterprises, only 82% of farms that have decided to reorganize are recognized as such by employees. The remaining 18% of employees believe that no reorganization decision has been passed on their farm. Both groups of respondents provide a consistent characterization of the organizational form of the enterprise in 1990, before the reform. There is much less consistency in the characterization of the organizational form of the enterprise by managers and employees in 1993, after reorganization. Thus, nearly three-quarters of managers (74%) identify the reorganized farm as "collective enterprise" and only 15% report that the farm retained its "previous form". Among the employees in the same farms, however, only 54% are aware that the farm has changed its status to collective enterprise, whereas fully 43% believe that they are still in a kolkhoz or a sovkhoz organization. This finding points to difficulties with dissemination and flow of information within the farms. Apparently, farm reorganization often proceeds without full involvement of the employees, and the managers make crucial organizational decisions on their own, as they used to under the traditional system.

Land Tenure

Land ownership is usually transferred from the state to the collective. The share of state-owned land in the farms surveyed dropped from 100% before 1990 to 35% in 1993 (Fig. 5.6). The remaining land is now mostly in collective ownership. The predominant form of land tenure (55%) is joint collective ownership, without physical designation of individual shares, and only 6% of land is reported to be in shared collective ownership, with land shares determined and assigned to individuals. The small proportion of land reported to be in individual ownership (2%) represents land in subsidiary household plots. Despite widespread reorganization and transfer of land ownership, only 20% have an official document certifying their right to the land.

Land reform and farm reorganization has been accompanied by processes that involve extraction of land from collective and state farms and its transfer to new holders. Over 85% of the traditional land holders lost some of their land between 1990 and 1993. The average farm size (over all farms in the sample) decreased by more than 10% between 1990 and 1993, from around 3,300 ha to less than 3,000 ha (the change is statistically significant). Over 20% of the difference was allocated for augmentation of employee household plots and for gardens and vegetable patches. Another 20% went to private farmers. Most of the difference, however, has been extracted to the state land reserve and the local redistribution fund (Fig. 5.7), which are intended as sources for future distribution of land to individual users (the state reserve for private farms and the redistribution fund for household plots).

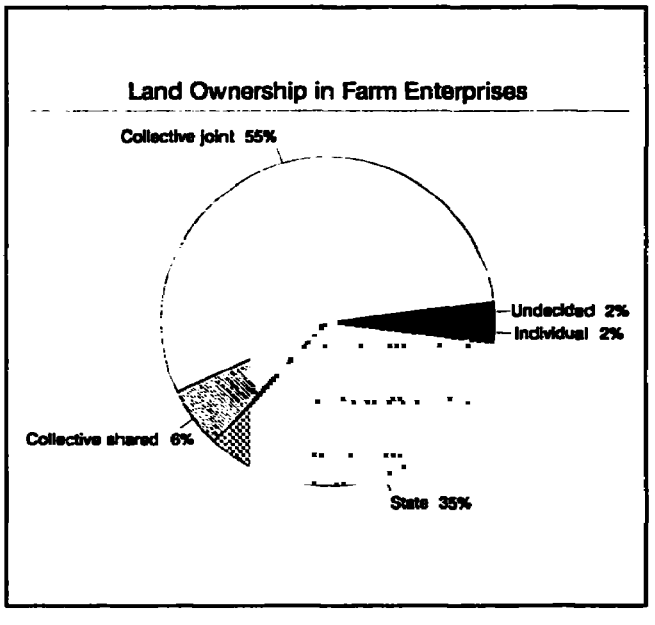

Figure 5.6. Ownership of Land in Farm Enterprises in the Sample

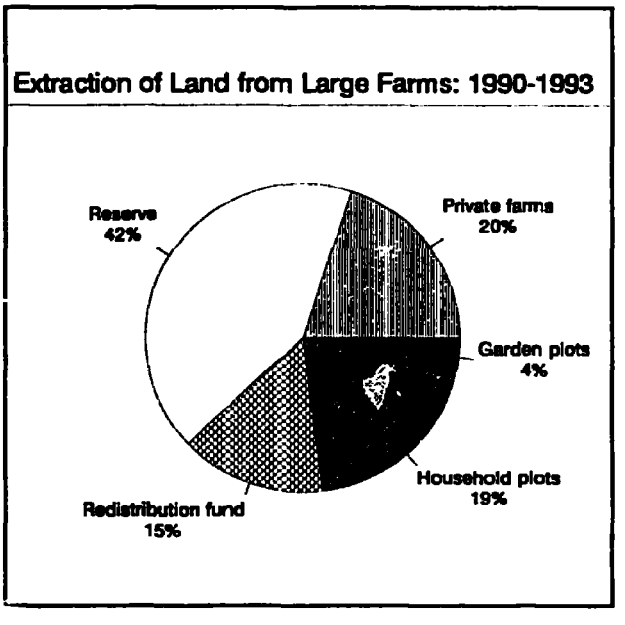

Figure 5.7. Land extracted from farm enterprises for various uses between 1990 and 1993

Managers do not appear to try to offset the decrease in farm size and augment their cultivated area by leasing land from the state reserve. Less than 5% of managers report that they use leased land. This, however, may be a false impression resulting from a peculiar double counting of the state reserve land. On the one hand, this land has been extracted from farm enterprises, while on the other hand the farm enterprises have been allowed to continue using the reserve land for their purposes until such time that it is allocated to private farmers. Since no formal lease documents have been drawn up between the state and the farm enterprise for the use of reserve land, managers do not count it as "leased land", although it has been definitely excluded from the pool of "collectively owned land". The actual decrease of cultivated area thus may be less than the decrease in land owned by the farm enterprise.

Around 70% of managers state that they pay a tax on land. The average land tax reported by these managers is around 3700 coupons, or 20 cents, per hectare. There appear to be significant differences in the level of land taxes across provinces (Table 5.5).

Table 5.5. Land Tax by Province as Reported by Farm Managers

Province	Number of sampled farms that pay tax	Tax, coupons
Ukraine	**70%**	**3700**
Kherson	45	6390
Kiev	84	4330
Chernihiv	73	4290
Mykolaiv	54	3813
Vinnitsa	92	3659
Kharkov	75	3598
Ivano-Frankovsk	34	3288
Volyn	50	3058
Cherkassy	84	1523

Distribution of Land and Assets

Land in subsidiary household plots is the first to be distributed in the process of land reform. Subsidiary household farms have always been an important productive subsector in Soviet agriculture, and the general process of land reform in Ukraine and other FSU countries is preceded by various programs for augmentation of the household plots. Fig. 5.7 shows that of around 10% of agricultural land that has been extracted from collective and state farms, 20% has been used to augment household plots. The average size of a household plot increased from 0.36 ha in 1990 to 0.53 ha in 1993 (the increase is statistically significant). Both farm managers and farm employees provide consistent information on the size and the increase of household

plots. The total area cultivated by households correspondingly rose between 1990 and 1993 from 200 ha per average farm (about 6% of all farm holdings in 1990) to 265 ha (about 9% of all holdings in 1993). Although this is a significant increase, it is not as large as the full 15% of farm area intended for augmentation of household plots through the internal reserve.

Once the land cultivated by a farm enterprise is transferred from state to collective ownership, the next step toward internal restructuring is to distribute shares of collectively owned land and assets to individuals. The distribution is first done in the form of "conditional shares", which are merely certificates or entries in the farm enterprise accounts signifying entitlement of specific individuals to a certain amount of land and a certain value of nonland assets. In a more advanced stage, the land and assets underlying the conditional shares may be physically distributed to the individuals in the form of plots of land and physical assets (or their cash equivalent). The survey accordingly focuses on the two distinct stages of the process: distribution of conditional shares and physical distribution of land and assets.

Preparations for distribution of land shares have begun in around 50% of the farms, where lists of beneficiaries have been assembled. The number of individuals entitled to receive land shares is around 700 per farm, about half of them active employees and 45% pensioners. Land shares have been actually determined only in about one third of the farms surveyed and some sort of land distribution has taken place in 12% of the farms.

In those farms where conditional land shares have been calculated, the average land share for a farm employee is 3.7 ha (farm managers and farm employees in matched farm enterprises provide consistent information about the size of land shares). The pensioner's share is only slightly smaller (3.4 ha, and the difference is not statistically significant). The number of farms that allow land shares to workers in social services is substantially smaller: 15% of farms included those employed by the farm in social services among eligible recipients of land shares, and 10% included workers in rural social services employed by the village. Employees of the social sphere received an entitlement to 3.0 ha of land on average.

On the few farms where land distribution has taken place, around 70% of total farm land has been distributed to share holders. The rest apparently remains indivisible, consisting of land under social assets and other common property, forest land, etc. All distributed land, however, continues to be worked collectively. There has been virtually no distribution of land for individual cultivation, except the land to household plots.

Conditional asset shares have been determined in 50% of the enterprises in the form of paper certificates indicating the money entitlement of each individual. The process of determination of asset shares is not synchronized with the determination of land shares: land shares have been actually calculated only in half the enterprises that have already calculated the asset shares, and even lists of individuals entitled to receive land shares have been prepared in 70% of the enterprises that have calculated the asset shares. It seems that the process of land distribution, even in the form of conditional shares, is more difficult than distribution of assets, based as it is on objective balance-sheet figures.

In all farms, asset shares are distributed both to active employees and to pensioners. Former employees participate in the distribution of assets in only 15% of the farms, while workers of social services are not entitled to asset shares. Asset shares are not equal for all: the value of an individual share depends on labor contribution as reflected by salary (96% of farms), seniority (57%), and number of days worked (36%); in most farms, it does not depend on the level of skills or qualifications other than as reflected in the salary. The average asset share revalued to end of 1993 is between 8 and 8.5 million coupons, or around $400-$450. Surprisingly, despite hyperinflation and large errors in money figures, this result is comparable to the value of $540 obtained for the average asset share in the survey of Russian farm managers in 1992. The value of asset shares reported by employees is about two-thirds of that reported by managers in the same farm enterprises. This is fully within the margin of error, given that managers reported revalued asset shares based on farm records while employees gave a mix of historic and revalued figures from memory.

In virtually none of the farms was the allocation of conditional asset shares followed by physical distribution of assets, redemption of cash value, or assignment of replacement assets (such as exchange of asset share for housing). Among 846 farms, there were only 7 instances (less than 1%) where some individuals received physical assets for their shares (the number of individuals ranged from 2 to 48) and 28 instances (3%) where some individuals received the cash value of their shares (between 1 and 58 individuals with an average of 13 per farm).

Table 5.6. Rights Associated with Land and Asset Shares
(percent of managers stating that the corresponding right applies in their farm enterprise)

	Land shares	Asset shares
Dividends from farm profits	32	58
Distribution in kind	21	--
Sell share to enterprise	14	28
Sell share to other worker	5	14
Sell share to others	--	4
Receive value of share on retirement	10	36
Receive value of share when leaving job	8	28
Receive share in kind on leaving to become private farmer	23	39
Receive share in kind when changing jobs	6	--
Exchange land share for asset share or vice versa	5	4
Use share to buy the house	--	27
Bequeath the share to anybody	8	12
Bequeath to farm member only	25	37

Employees and managers differ in their understanding of the share distribution process, just as they differ in their understanding of the farm reorganization process (see above). In a matched sample of managers and employees from farms that have passed a decision to reorganize, 60% of employees report that their family received nothing as a result of reorganization and 35% state

that they do not know to what their family is entitled as a result of reorganization. On the other hand, two-thirds of the managers in these farms report that farm assets have been distributed to individuals in the form of conditional asset shares, a similar proportion of the managers report that lists of individuals entitled to received land shares have been drawn up, and over 40% of the managers indicate that the size of the individual land share has been calculated. These findings again provide evidence of inadequate communication between managers and employees regarding crucial aspects of the reorganization process.

The rights associated with land and asset shares are summarized in Table 5.6. Asset shares on the whole appear to be relatively more "mobile" than land shares: a larger percentage of farms allows asset shares to be sold, cashed in, or withdrawn in kind by the exiting member. Land shares appear to suffer from greater "fixity", and even prospective private farmers are allowed to take their land share with them only by 23% of the farms (in clear contravention of the legal provisions on the subject). Although dividends figure prominently on the list of shareholder rights, the dividend rate has been determined by less than 30% of farms. When given, the average dividend rate is around 15% of profits.

Table 5.7. Managers' View of Difficulties in the Process of Reforms
(percent of managers for each perceived difficulty)

	Serious	Moderate	None
Access to information about new laws	24	31	24
Employees do not understand new laws	30	40	9
Distribution of land shares	43	23	12
Determination of asset shares	25	34	18
Physical distribution of assets	34	31	12
Debt repayment	33	18	24
Subsidies for social services	32	19	21
Distribution of shares to pensioners	22	31	23
Distribution of shares to leaving empl	31	22	21
Distribution of shares to workers in social services	31	23	20
Transfer of social services to local council	24	25	25
Privatization of housing	19	21	34

Difficulties in the Reorganization Process

Ukrainian farm managers report problems in all stages of the restructuring process (Table 5.7). On the implementation level, there are difficulties with distribution of land and asset shares, disposition of social services, and settlement of outstanding debt. On a more fundamental level, many managers (55%) complain of difficulties with access to information about the new laws and even a greater number of managers (70%) report that their employees have difficulties

understanding the new legislation. One area with a relatively smaller frequency of complaints is privatization of housing. In all other areas, fewer than 25% of the respondents feel that there are no problems. This general feeling of pervasive difficulties in the process of reform is in contrast to the findings in a parallel survey conducted in Russia, where managers complained mainly of information problems (access to and understanding of new laws).

Managers' Attitudes

Farm managers overall do not have a clear opinion regarding the future of private farming in Ukraine: they are evenly split between those with a positive view, those with a negative view, and those who are undecided. Among the managers of farms that have decided to reorganize, however, fully two-thirds have a positive view of the future of private farms.

Half the managers in the sample support private ownership of land and production assets, while 35%-40% are firmly opposed. The same proportions are observed among managers of reorganized farms. The managers' perception of private property does not encompass the full set of rights necessary for the development of land markets. Among the managers who endorse private property only 60% support buying and selling of privately owned land. Nor does the manager's attitude toward private property appear conducive to faster distribution of land and asset shares to farm employees: among farms run by managers who endorse private property, land and asset shares have been distributed in roughly the same proportions as in the entire sample (asset shares in about half the farms and land shares in one-third of the farms).

One third of managers expect reorganization to have a positive impact on future development of the enterprise, while 20% do not expect any change and 25% are undecided. Only 7% of managers have a pessimistic view of reorganization outcomes. The expected effect of reorganization on various managerial components is summarized in Table 5.8.

In a matched sample of managers and employees in the same farm enterprises, nearly 70% of managers believe that economic stabilization is the most important factor that is likely to influence the standard of living of farm employees. Other factors are completely ignored, except for higher salaries, which are viewed as important by 15% of managers. Farm employees, on the other hand, place the emphasis on salaries as one of the main factors that may influence their standard of living (90%). The same percentage of employees identified economic stabilization as highly important, and 50%-60% of employees selected a whole range of other factors, such as improvement of housing conditions, entertainment and culture, medical care, trade and food services, transport. This diversity of factors identified as highly important for improving the standard of living may indicate that employees are on the whole dissatisfied with their present conditions in many dimensions, and there is not one single factor that can really change the situation.

Table 5.8. Managers' Views of Expected Changes Following Reorganization (percent of respondents)

	Increase	*Decrease*	*Unchanged*	
Number of administrative staff	1	56	27	
Number of production employees	3	39	43	
	Improve	*Deteriorate*	*Unchanged*	
Work discipline	51	8	33	
Input supply	19	35	35	
Credit	12	39	38	
Marketing	23	30	37	
Subsidiary household farms	42	12	35	
	Increase	*Decrease*	*Unchanged*	*Undecided*
Economic freedom of farm	45	5	20	23
Production volume	31	18	26	17
Tax burden	53	3	10	25

Contrary to the large role that household plots play in family budgets and in the overall economy, neither managers nor employees in the sample view increase of household farming as highly important for improvement of their standard of living. Only 4% of managers attach considerable importance to this component of the system. Although half the employees are of the opinion that increase of household plots is important, this percentage is not different from the frequency with which all the other factors mentioned above are cited as important.

Regional Variation in Reorganization

Nationally, two-thirds of the farms decided to reorganize. A higher percentage of farms decided to reorganize in Vinnitsa, Ivano-Frankovsk, and Chernihiv provinces (over 80% of farms), while Mykolaiv, Kherson, and Kharkov provinces lag behind with around 40% of farms having passed a reorganization decision. Although Vinnitsa and Ivano-Frankovsk are among the Western provinces that were collectivized only after World War II, this sample does not support the hypothesis that the West is moving faster on reorganization than the Center and the East. In the third Western province (Volyn) the number of reorganization decisions matches the national average, while Chernihiv (where 85% of farms have decided to reorganize) is a central province, located north-east of Kiev on the border with Belarus and Russia. These findings on reorganization of farm enterprises in the sample are consistent with the previously cited statistics on the creation of private farms (see the chapter *The New Private Sector*), which is not particularly rapid in the Western provinces.

Some 85% of the reorganizing farms in the sample registered as "collective enterprise", which is basically the traditional kolkhoz structure under a new name. The West does not differ notably from other regions in the kinds of farms created during reorganization. Thus, in Vinnitsa virtually all the farms reorganized as collective enterprises (99%); in Volyn 65% became collective enterprises while 11% "retained the previous organizational form"; in Ivano-Frankovsk, two-thirds of the farms are collective enterprises, but 20% listed themselves as "other" (unidentified) organizational forms. The southern province of Kherson appears to be the only with a significant diversity of organizational forms among the reorganizing farms: 60% collective enterprises, 15% associations of private farmers (virtually the only province reporting this organizational form), and 13% closed joint-stock companies.

Mykolaiv and Kherson have the highest frequency of large-scale farms whose former employees left to start private farming (45% and 32% of the farms in the sample, respectively). The frequency with which members and employees left to start private farm is relatively low in the West (8% in Ivano-Frankovsk, 11% in Vinnitsa, and 21% in Volyn).

In 50% of the cases, 1-2 employees left to establish a private farm, and in 90% of the cases the number of individuals leaving the large-scale farm does not exceed 10. It is only in 3% of the cases that 20-30 individuals are reported to have left the collective or state farm with the purpose of becoming a private farmer. These cases are in Mykolaiv Province (3 out of 5 cases) and also in Kherson and Chernihiv. The average number of private farms established by former employees is 4 per large-scale farm in the sample. It is the Southern provinces of Mykolaiv and Kherson that have the highest number of farms established by former employees (respectively 9 and 5 per large-scale farm). In the Western provinces, the number of private farms established by former employees ranges from 1 in Ivano-Frankovsk to 3 in Volyn.

Despite the relatively slow creation of private farms in the West, Ivano-Frankovsk stands out among the other provinces both by the decrease of land area and by the reduction in labor force in farm enterprises. Farm enterprises in Ivano-Frankovsk lost 35% of their land and 20% of their labor between 1990 and 1993 (the average decrease in the sample is around 10% for both land and labor). Most of the change in land (three-quarters compared to one-third in the entire sample) went to augmentation of subsidiary household plots, the average size of which in the province nearly doubled from 0.35 ha in 1990 to 0.68 ha in 1990 (the average increase of household plots in the sample was 45%, from 0.36 ha to 0.53 ha). The survey does not provide any evidence as to why farm labor declined in Ivano-Frankovsk, but it can be speculated that these are mainly older people who retired from active employment in the collective and decided to concentrate on their enlarged household plots.

Some regional variation is evident in managers' views of the prospects of private farming in their region. Managers in Kiev Province appear to be the most optimistic with regard to the future of private farming (55% of positive views), while the managers in the Eastern and Central provinces of Kharkov, Kherson, Cherkassy, and Chernihiv are relatively pessimistic (around 40% of negative views). The Western province of Ivano-Frankovsk stands out by its low percentage of negative views (less than 15%), but the percentage of optimists is about average,

while nearly half the managers are undecided. Among the other Western provinces, the managers in Vinnitsa share the national views, while those n Volyn are slightly more optimistic than the national average (over 40% of positive views).

Distribution of asset shares across provinces roughly follows the distribution of farms that decided to reorganize. While nationally around 50% of the farms distributed asset shares (almost exclusively in the form of paper certificates of entitlement), the frequency is well above the average in Vinnitsa (75%), Ivano-Frankovsk (virtually 100%), and Chernihiv (70%). In Volyn, the third Western province where the frequency of reorganization decisions is relatively low, only 60% of all farms distributed asset shares. Among the farms in Volyn that did decide to reorganize, however, asset shares have been distributed in over 80% of the cases. The frequency of asset share distribution is well below the national average in Kiev (38%), Mykolaiv (24%), Kharkov (30%), and Kherson (14%) provinces.

There does not appear to be a strong relationship between the frequency of distribution of asset shares and the managers' attitude toard private property. The highest percentage of managers who support private property is observed in Ivano-Frankovsk (86%), Kiev (77%), and Volyn (68%). Of these three provinces, only Ivano-Frankovsk has an above-average rate of distribution of asset shares. On the other hand, in Chernihiv and Vinnitsa, where the asset distribution rate is above average, the frequency of managers supporting private property is below average.

6

The Effect of Reorganization on Farm Employees

Members and employees of large-scale farms, in addition to their jobs at the farm enterprise, cultivate household plots, which in the past were limited to a maximum of 0.6 ha per family. Subsidiary farming on household plots has traditionally accounted for 25%-30% of gross agricultural product in Ukraine. The production on household plots is mainly intended for family consumption, providing up to a third of the family budget, but a portion of the output is sold commercially, either to the local farm enterprise or through farmers' markets in nearby towns. The large-scale farms support these subsidiary household farms by providing farm inputs and marketing channels for products when necessary. Subsidiary household farming has been an important adjunct to collectivized agriculture since the introduction of collective farms in the early 1930s, and especially since Khrushchev's reforms in the 1960s.

Profile of a Farm-Employee Family in Ukraine

The average farm employee is married with 1.7 dependents, 42 years old, has lived in a rural area since birth, and has secondary or higher education. The spouse is 40 years old and is similarly educated. The family lives in a privately owned detached home built 10 years ago or older. Half the household members (counting children and pensioners) are employed full-time in agriculture, another 10% are employed part-time in agriculture, and the remaining 40% do not work in agriculture at all. These are mainly children and students, with a small proportion of pensioners, social workers in the village, and other off-farm workers. The proportion of people occupied in housekeeping is negligible. The over-55 age group consisting of 60% women and 40% men (compared to half and half in the sample) contributes on average 0.3 older individuals per household. While more than half this age group are pensioners, they are still actively employed in agriculture (full- or part-time).

Land in Household Plots

The individual household plots in Ukraine are quite small and do not exceed 2 ha. Nearly 80% of household plots in the sample range up to 0.6 ha and fully 20% are smaller than 0.2 ha. The average plot size was 0.50 ha in 1993, up from 0.33 ha in 1990 (the increase is statistically significant).

There is considerable regional variability of plot sizes and size increases across provinces. In the Western provinces of Volyn and Ivano-Frankovsk, the average household plot increased by 75% between 1990 and 1993, much more than the national average increase of 50%. As a result, the average plot size in these provinces became significantly larger than the Ukrainian average in 1993 (Table 6.1). In the third Western province of Vinnitsa, the plot size and the size

increase were about average. In the East, in Kharkov Province, the household plots more than doubled in size, and the originally very small plots approached the national average in 1993.

The reported increases are consistent with the general policy of allocating and distributing additional farm land for augmentation of household plots. In addition to enlargement of existing household plots, the number of land holders increased by 3.5% between 1990 and 1993 as some formerly landless employees received plots averaging 0.40 ha.

Many farm employees feel that their household plots are too small. Nearly half the respondents expressed a desire to increase their plot by an average of 4 ha (compared to an average holding of 0.50 ha in 1993!). The individuals who wish to increase their land holdings currently have plots that are slightly smaller than the sample average (0.40 ha compared to 0.50 ha in the sample). Otherwise, there is very little correlation between the additional hectarage desired and the land holdings in 1993.

Table 6.1. Size of Household Plots by Province: 1990-1993

Province	Number of respondents	Plot size (ha)		1993/1990
		1990	1993	
Ukraine	**878**	**0.33**	**0.49**	**1.49**
Vinnitsa	93	0.38	0.50	1.32
Volyn	81	0.43	0.74	1.75
Ivano-Frankovsk	38	0.37	0.65	1.78
Kiev	84	0.31	0.45	1.45
Mykolaiv	97	0.26	0.39	1.50
Kharkov	79	0.23	0.47	2.07
Kherson	119	0.18	0.28	1.51
Cherkassy	158	0.40	0.49	1.25
Chernihiv	129	0.39	0.58	1.47

The land in household plots is held primarily in a mixture of two traditional forms of tenure, usership (*pol'zovaniye*, 45%) and lifetime inheritable possession (*vladeniye*, 26%). Privately owned land accounts for less than one third of the total (29%), but this in itself is a considerable step forward from total state ownership of land only three years ago. The proportion of leased land in household plots is negligible (Fig. 6.1).

Although nearly one third of the land in household plots is privately owned, 70% of farm employees view inheritable possession as the preferred form of land tenure; less than 20% identify private ownership as the preferred form. On the other hand, over 50% of respondents have a positive attitude toward private ownership of production assets. These views suggest that few holders of household plots at present foresee major change in their disposition of the plot or their relations to the collective.

Among households holding land in private ownership or in inheritable possession, only 30% have documents certifying their right to the land. Among those whose land is in usership, less than 10% have documented use right. Security of tenure is relatively high for households where land is in private ownership and inheritable possession: over 50% of respondents in these households are convinced that they will keep the land in the future, compared to less than 30% for households holding land in usership.

Most land in household plots (74%) has been received from the village council (Fig. 6.2). The local farm enterprise is the source for another 22% of land, with the district council providing the remaining 4%. There is no clear relationship between form of tenure and the source of land: the farm enterprise is cited as the source for a somewhat higher proportion of land held in usership (27% of land in usership compared to 22% of all land in the sample), and all leased land is received from the village council.

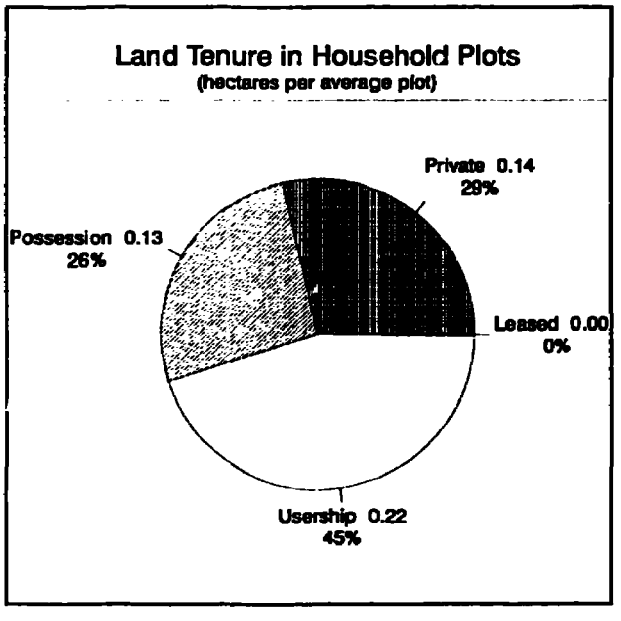

Figure 6.1. Land Tenure in Household Plots

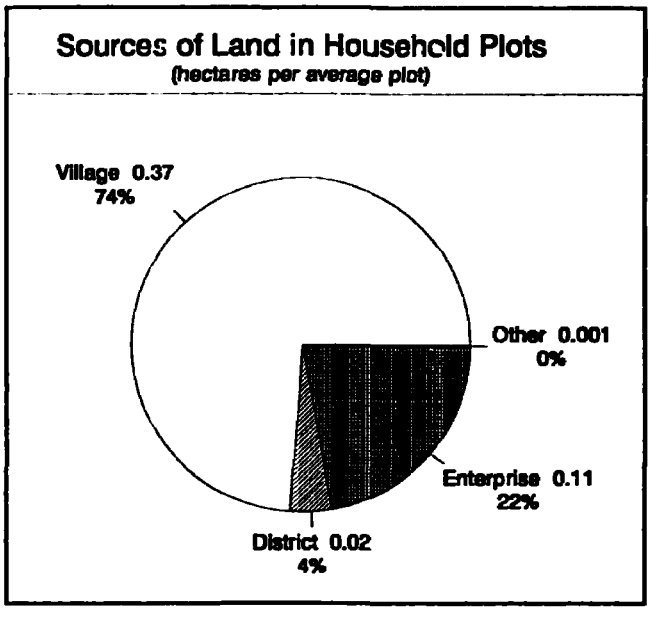

Figure 6.2. Sources of Land in Household Plots

Although 65% of employees in the sample pay land tax, another 20% report that they do not pay anything for land. The tax rates per 1 ha quoted by the respondents fall within a very wide range (from tens of coupons to tens of thousands of coupons, with an average of around 5,000 coupons, i.e., 20-25 cents, per ha). Given the intrinsic difficulties with assessment of nominal sums in a hyperinflationary environment, the land tax rates reported by farm employees are consistent with those reported by managers of farm enterprises, who indicate an average rate of 3,700 coupons per ha (see above).

Production on Household Plots

The household plot provides on average over 40% of reported family income in the sample. Livestock products account for two-thirds of earnings from subsidiary farming and crop products account for one-third. A recent survey conducted in Russia indicates that Russian farm employees similarly derive around 40% of family income from the subsidiary household plot, but livestock products in Russia account for a higher proportion (over 80%) of income than in Ukraine. Both farm employees and private farmers draw income from a variety of sources, including wages, transfers, and earnings from private agriculture. Employee households derive a higher proportion of their income from wages than do households of private farmers, and in Ukraine private farmers report that they depend on their farm for over 70% of family income (see the chapter on *The New Private Sector*).

Average production volumes per household farm are shown in Table 6.2. The production volumes for grain and livestock products are close to production volumes of household plots in Russia. Potatoes, however, are produced in much greater quantities by Ukrainian households (2.6 ton per year per household compared to 1.6 ton in Russia). Potatoes and meat are produced by over 85% of subsidiary household farms in the sample (Table 6.2). Vegetables and eggs are produced by 75% of the household farms, and fruit and milk by more than half the households. Some household farms also grow grain (25%) and sunflower (8%), despite their small size. These are used mainly as feed for animals.

Table 6.2. Average Production Volume per Household Plot and Average Proportions Consumed and Sold*

Commodity	Number of producers	Production (kg)	Consumed (%)	Sold (%)	Plots with commercial sales	
					Number	Production (kg)
Grain	252	1465	92	8	40	3672
Sunflower	75	184	91	9	10	689
Potatoes	752	2648	83	17	361	3649
Vegetables	674	385	94	6	80	707
Fruits	534	272	93	7	79	654
Meat	751	437	62	38	503	519
Milk	505	3622	66	34	374	3806
Eggs (pcs)	672	1948	91	9	159	2216
Wools	58	36	36	64	36	52

* Average production is calculated for the producers of each commodity. Production of commercial plots is the average production for plots that sell some of the corresponding commodity. Total number of households in the sample 878.

Virtually all households in the sample keep some livestock, with over 90% of the households reporting pigs or poultry in 1993 and two-thirds of the households reporting cattle. An average

household in the sample has 1.4 head of cattle, 0.8 cows, 2.3 pigs, 22 chickens, and half a sheep. Different households keep different combinations of livestock, however, and the actual averages per household for each kind of livestock (Table 6.3) are naturally different from the sample-wide averages cited above. The distribution of the number of animals in households is very tight: 1-2 head of cattle, 1-2 cows, and 1-3 pigs for over 95% of the households. Comparison of 1993 to 1990 shows that the number of cattle and cows per household increased by 30%, the number of pigs increased by 25%, and the poultry flock grew by more than 15% (Table 6.3). All these differences are statistically significant.

Table 6.3. Livestock in Households of Farm Employees

	Number of households*		Average number of animals		% change** 1993 to 1990
	1993	1990	1993	1990	
Cattle	590	487	2.0	1.9	+31
Cows	533	440	1.3	1.2	+29
Pigs	821	772	2.5	2.1	+25
Sheep	108	84	4.2	4.4	+23
Fowl	805	780	23	21	+16

* Number of households reporting that they had animals of the corresponding kind in a sample of 878 households.

** Change in the total number of animals reported in the sample.

The average milk yield in the sample is 3,200 kg per cow per year. This is comparable to the yields achieved by private farmers (3,400 kg, see the chapter on *The New Private Sector*) and much higher than the nation-wide Ukrainian average of 2,200 kg in 1993. Perhaps more significant than the comparison to the national average is the comparison to the milk yields achieved in collective production by the same farm enterprises where the sample households are located: these collective farms achieved milk yields of 2203 kg per cow in 1993, compared to 3161 kg in households. Livestock production on the whole appears to have been profitable in 1993. Around 70%-80% of producers report that production of milk, pork, poultry, and eggs was profitable, and a somewhat smaller proportion (50%) report that beef production was profitable.

Fully 60% of employee households use common pasture in the village, which according to responses ranges from less than 10 ha to 2,000 ha (the average common pasture area in a village is less than 200 ha). In addition to common pastures, feed for livestock is entirely produced on the household plots in over 30% of the cases. Yet nearly 60% of households depend for half or more of their feed on the collective enterprise. Farm employees do not use any other sources of feed supply outside the collective farm and own production.

Farm employees appear to be satisfied with the production mix in the household plots and the prices they receive for their products. The general tendency is to keep the production unchanged

in 1994 (between one-half and three-quarters of the respondents, depending on product), but 20%-30% of the respondents actually state that they plan to increase the production of their current products. Grain and meat appear to be the most popular candidates for increase in production (40% of producers).

Commercial Sales from Household Plots

Subsidiary household plots are not limited to providing subsistence to employee households. They augment commercial production, supplementing the supply of food products from the traditional large-scale farms and the new private farmers. Although most of the output from the subsidiary household plots is consumed by the family (Table 6.2), over three-quarters of households in the sample report some sales of one or more commodities that they produce. Meat, milk, and potatoes are the main commercial commodities of Ukrainian household plots, sold by 50%-75% of the producers. Commercial sales of livestock products exceed 30% of the volume produced, and potato sales run at 17% of the output (Table 6.2). Farm employees in Ukraine sell a higher proportion of their main commercial products (meat, milk, and potatoes) than their counterparts in Russia, but they are less commercially oriented than private farmers.

Plots with commercial sales have a higher level of production than the average in the sample (Table 6.2). These commercial plots are also significantly larger: they average 0.54 ha compared to 0.31 ha for plots that produce only for household consumption.

The products from subsidiary household plots are sold through a variety of marketing channels. In addition to using farmers' markets, households sell their output to the local farm enterprise, to the state-controlled consumer cooperative network, and to other state channels (see Table 7.5 in the chapter on *Market Services and Infrastructure*).

Labor and Earnings

Employees report that they work 7 hours a day on the collective farm and 5 hours a day on the household plot (median responses). The number of working days on the collective farm is 290 per year. The median cash salary for work on the collective farm was 160,000 coupons in October 1993, or $8, which is comparable to the national average in agriculture. On the whole, salaries were paid on time, but 30% of employees complain of 1-2 month delays and 10% complain of 3-4 month delays.

Nearly three-quarters of the respondents make enough for a living, although they cannot afford many durables, such as furniture, a refrigerator, a television set, or a car. Over 25% of the employees state that their income is not enough for a living minimum, although the families in this group are not distinguishable by any relevant measure (such as size, age, salary, working hours, etc.) from the rest. Nearly 90% of the respondents believe that the main factor that can influence their standard of living is a higher salary. The same percentage of employees identify

economic stability as highly important for their welfare. More than half the respondents would like to see improvements in working and living conditions, in consumer services, in trade and food services, in transportation, and even in medical care. The same proportion of employees perceive increase of household farming as an important factor for welfare, but unlike salary and economic stability household farming does not stand out among a whole range of other factors.

Only 8% of the employees have an optimistic view of the future. Fully 30% have a pessimistic view and over 60% are undecided. Their expectations about the future are notably more pessimistic than those of managers or private farmers (see Fig. 4.10).

Table 6.4. Payments in Kind Received by Farm Employees

Commodity	Households receiving the commodity as payment in kind, %	Annual quantity received, kg		
		Median	Lower quartile	Upper quartile
Grain	85	1250	700	2400
Sugar	59	100	50	240
Feed	28	1500	800	2000
Vegetable oil	15	9	4	15
Meat	7	30	12	68
Potatoes	5	500	200	1350
Vegetables	5	200	100	300
Honey	4	2	1	4
Fruits	3	260	100	700
Milk	3	280	200	500
Fish	2	7.5	5	10

The monthly earnings of farm employees are augmented with payments in kind, mainly grain (received by 85% of the respondents), sugar (59%), feed for animals (28%), and vegetable oil (15%). The median quantities of these commodities received annually are 1250 kg of grain, 1500 kg of feed, 100 kg of sugar, and 9 kg of vegetable oil (Table 6.4). The median value of payments in kind is estimated by the respondents at 500,000 coupons a year in 1993, i.e., between 25% and 50% of the annual salary, allowing for rapid inflation. The respondents themselves estimate the payments in kind at 20% of annual salary in 1993, up from 10% of the salary in 1990.

Reported Participation of Employees in Farm Restructuring

In addition to increase of household plots, reorganization of farm enterprises also involves distribution of collectively owned land and other productive assets to individual members and employees. The first step in the transfer of ownership from collective to private is distribution

of conditional shares in land and assets. Conditional shares are paper entitlements of individual members and employees to a share of land and a share of the value of nonland assets, which are initially noted in the books of the farm enterprise, and subsequently may be distributed in the form of certificates. Physical distribution of land and assets represented by the conditional shares may come at a later stage, and sometimes not at all: the individual can take physical possession of his share of land and assets only by leaving the collective to establish a private farm.

The distribution of conditional shares is proceeding much more slowly than the registration of reorganizing farm enterprises. Nearly three-quarters of farms in the sample have decided to reorganize. Yet only 27% of the employees in farms that have decided to reorganize report that the individual land shares have been determined and 54% report that asset shares have been determined. The number of individuals who received their share of assets in kind or in cash is negligible. The proportion of individuals who report having received a physical plot of land is surprisingly high: nearly one quarter of those to whom land shares had been assigned received physically an average of 2 ha of land (this, however, is less than 4% of the individuals in the sample).

The average land share assigned to farm employees is 4 ha, and it does not depend on the date when reorganization decision was made. The share of assets, on the other hand, is denominated in coupons and the average varies with the year of reorganization: it steadily increases from 1989 to 1994, although much more slowly than Ukrainian inflation (Fig. 6.3). The average asset share of around 3 million coupons reported for farms that reorganized in 1992-1993 is equivalent to about $300, which is consistent with the average value reported by farm mangers ($400 revalued to the end of 1993).

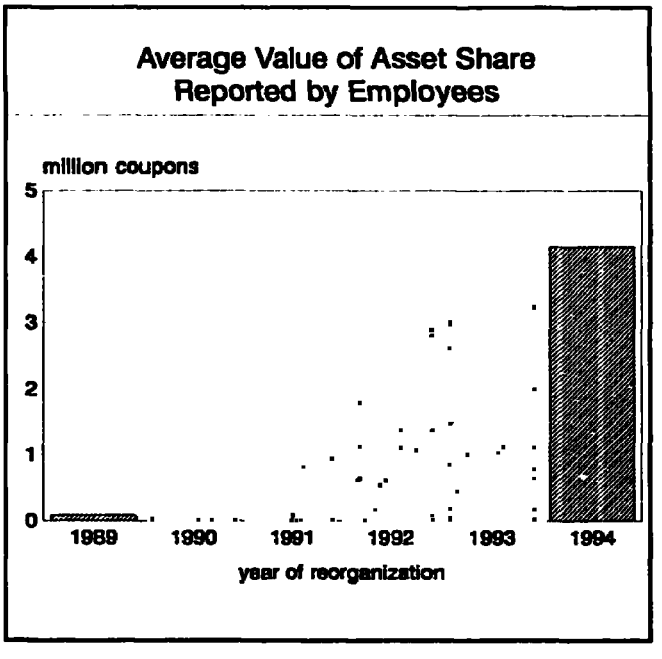

Figure 6.3. Average Value of Asset Shares by Year of Farm Reorganization

When asked about future intentions, 40% of the employees report that they intend to leave their land and asset shares in the collective enterprise and enjoy dividends and another 40%-50% are still undecided. Other relatively popular options include investment of the shares in a new farming entity (6%) and augmentation of the household farm (3%). Around 5% of the employees intend to pass the shares to their heirs, although they are not older than the average age in the sample. The employees' intentions with regard to the privatization check that they expect to receive from the state are different: 40% intend to buy shares in a privatized agricultural processing enterprise, 25% propose to buy land (either from the state or from the local farm

enterprise), and 10% propose to exchange the voucher for farm assets. Only 6% of the respondents report intention to sell their voucher.

In line with the intention to leave their land and asset shares in the collective enterprise, nearly 80% of the employees declare that they do not intend in the future to become private farmers. The willingness of employees to consider the possibility of becoming a private farmer shows substantial regional variation (Fig. 6.4), but it is not observed to be positively correlated with the growth of private farming in the various provinces. Thus, the number of respondents who report that they intend to become private farmers is much below the national average of 20% in Mykolaiv Province (14%), although the number of private farms and the proportion of agricultural land in private farms in this province are the highest in Ukraine (see Table 4.2). It is higher than the average in Kiev and Volyn provinces (30% and 32% of respondents, respectively), where both the number of private farms and the land in private farms are relatively low.

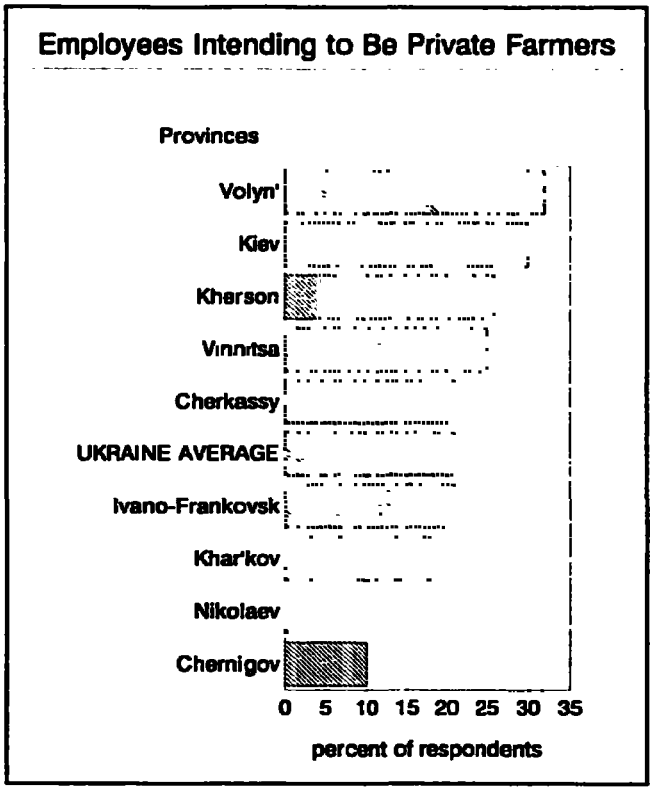

Figure 6.4. Distribution of Employees Intending to Become Private Farmers, by Province

The main factors that deter members of collective farms from becoming private farmers are shortage of capital, difficulties with purchase of machinery, equipment, and inputs, and the risks involved in such a change. These factors are cited as important or very important by over 70% of the employees who do not intend to become private farmers (Table 6.5). The danger of losing various social benefits is much less of a deterrent to becoming a private farmer than the other considerations (it is cited by around 45% of the employees). For 20% of the employees who are considering the possibility of becoming private farmers, the main perceived attractions of private farming are a better future for their children and a potential of higher earnings (Table 6.5).

Among those who do not intend to become private farmers, the preferred occupation is to continue to work in the existing collective enterprise (cited by 80% of the respondents in this group). A distant second in preference ranking (20%) is to join a new farming entity (a producers cooperative, a partnership, a joint stock company). More independent occupations, such as owning or leasing a service enterprise, becoming a hired farm or off-farm worker, are preferred options for less than 5% of the respondents.

Table 6.5. Views of Private Farming Expressed by Members and Employees of Farm Enterprises

Why Not Become a Private Farmer? Main reasons cited by those who do not intend to become private farmers (78% of the sample)		*Why Be a Private Farmer?* Main reasons cited by those who intend to become private farmers (21% of the sample)	
Difficulties with farm inputs	84%	Ensure children's future	86%
Afraid of risk	72%	Increase earnings	81%
Insufficient capital	71%	Independent, no supervision	66%
No full legal guarantees	65%	Personal fulfillment	61%
No wish to change life style	58%	Increase prestige	54%
More stable income in collective	48%	Necessity: collective is breaking up	24%
Afraid to lose social benefits	46%		
No economic and legal skills	43%		
Reasons of age and health	34%		
Restrictions on buying/selling of land	34%		
Insufficient land	34%		
Family does not want to farm	33%		
Higher income in collective	30%		
Negative attitude in the village	28%		

The two groups of employees, namely the 80% who do not intend to become private farmers and the 20% who are considering this option, do not differ by any of the relevant dimensions, such as family size, age, area of household plot, employment in agriculture, type and ownership of housing. Even the education profile of the two groups of employees is quite similar. The analysis does not thus provide insight into what distinguishes those more inclined to stay in collectives from those inclined to leave. Those who have actually left collectives, however, are on average more educated than farm employees.

7

Market Services and Infrastructure

Farms in the former Soviet Union traditionally relied on the administrative command system to supply all the farm inputs necessary for production and to collect the products at the farm gate. At present, the state still maintains a dominant role in Ukraine in both input supply and product marketing, although some private alternatives appear to be emerging.

Supply of Farm Inputs

Large-scale farms rely to a large extent on own production for inputs that can be produced on the farm, such as seed, feed, breeding stock, and for many services. Inputs and services not produced on farm are purchased from state channels and from other enterprises. Private suppliers play a negligible role in supplying the large-scale farms (Table 7.1). Animal feed, young animals, seeds and seedlings, and of course manure are produced on the farm in 80%-90% of cases. Farm services, including maintenance and repairs, mechanical field works, construction services, and veterinary services, are also produced internally (60%-70% of respondents). Mechanical field works are carried out using own machinery (75% of farms), with temporary help from hired equipment in peak times (the remaining 25%). The high degree of self-sufficiency of farms in input supply has changed little from the Soviet period, nor has the importance of the state as a supplier of purchased inputs diminished. Interfarm trade in inputs and services, which now occupies a prominent position alongside state supply channels (Table 7.1), appears to be a relatively new phenomenon. In the past, farm enterprises tended to hoard inputs that were in short supply and had little incentive for trading or exchanging with other farms.

Barter trades have also become more important in supply of purchased inputs than they were in the past. Barter deals are particularly important for fuel and construction materials (70% and 60% of farms, respectively). Around 40%-50% of farm managers have barter deals for insecticides and herbicides, farm machinery, and spare parts. A quarter of farm managers get their fertilizers and seeds through barter arrangements.

Private farmers are too small to rely on homemade inputs and services, although they are largely self-sufficient in animal feed. The state remains a major supplier of inputs to the private sector, and the local large farms are another important source of farm supplies (Table 7.1). A distant

third in the ranking are the emerging private suppliers. Thus 60%-70% of the farmers use state channels to purchase seeds, herbicides and insecticides, agricultural machinery, and spare parts. Nearly 80% of the farmers buy both fertilizers and fuel through state channels. Collective farms, on the other hand, supply these inputs to 10%-40% of the farms. Repairs and maintenance of farm machinery are split equally between state facilities and collective farms (30% from each source). Collective farms play a much more prominent role than the state in providing mechanical field services to private farmers: over 40% of the farms go to collectives for these services and less than 25% purchase them from the state (probably packaged together with fertilizers, herbicides, and insecticides, which are mostly purchased through state supply channels).

Table 7.1. Access of Farms to Supply Channels for Inputs and Services
(percent of 846 farm enterprises and 810 private farms using the respective channels)

	Farm Enterprises				*Private Farms*				
	State channels*	Other enterprises	Private	Own production	State channels*	Collective farm	Private	Farmers Coops	Other
Seeds, seedlings	26	60	2	78	63	45	11	14	4
Feed	4	26	1	93	12	13	2	0	2
Young animals	2	39	20	85	7	15	10	0	1
Organic fertilizer	4	4	1	92	14	21	12	11	3
Mineral fertilizers	69	42	1	0	78	9	11	11	1
Insecticides	68	50	1	0	73	8	4	3	2
Farm machinery	89	54	2	2	67	37	9	15	3
Maintenance, repairs	55	54	4	66	33	30	20	11	6
Spare parts	93	65	18	13	70	29	36	4	6
Fuel	90	72	21	1	78	25	41	13	6
Mechanical field services	30	48	4	62	24	42	19	7	3
Veterinary drugs	63	43	1	2	23	13	3	0	1
Veterinary services	22	29	1	62	20	24	3	0	1
Construction materials	44	79	8	21	49	26	20	10	4
Construction services	9	49	25	66	22	12	18	10	2
Extension	9	23	2	9	16	3	3	12	2

* Includes the state-controlled consumer cooperative network.

Private farmers with livestock purchase veterinary medicines mainly from state sources (over 50% of livestock producers), but for veterinary services they go primarily to the local collective farm (40%) and to a lesser extent to state sources (30%). Private farmers do not report any difficulties with access to veterinary services: 70% of livestock producers say that there are "no

problems" in this category. With regard to veterinary medicines, however, 50% complain that the prices are too high.

Private suppliers, including farmers' cooperatives, play a substantial role in supplying farmers with seeds, fertilizers, farm machinery, spare parts, and, surprisingly, fuel (these two channels combined serve over 50% of the private farms). Private agents also make a major contribution to providing maintenance and repair of machinery and mechanical field services: 25%-30% of the private farms purchase services in these two categories from private suppliers and farmers' cooperatives. They also act as an important source of construction materials and services, competing with state sources and collective farms (Table 7.1). Over 20% of livestock producers among private farmers purchase young animal stock from private suppliers and 40% from the local collective farm: the role of the state as a supplier of young animals does not exceed 15%.

Table 7.2. Farms Acting as Suppliers of Farm Inputs
(percent of 846 farm enterprises and 810 private farms)

	Farm Enterprises			*Private Farms*
	To other enterprises	To private farmers	To household plots	To others
Seeds, seedlings	44	35	78	23
Feed	27	12	89	5
Young animals	40	17	89	2
Organic fertilizer	11	10	59	11
Mineral fertilizers	3	7	14	11
Insecticides	5	7	65	11
Farm machinery	23	23	46	30
Maintenance and repairs	10	13	25	22
Spare parts	14	7	12	21
Fuel	11	8	24	19
Mechanical field services	37	34	86	26
Veterinary drugs	5	7	50	1
Veterinary services	6	14	84	1
Construction materials	14	12	83	2
Construction services	10	10	64	1
Extension	4	6	16	6

Both collectives and private farms play a role as suppliers of farm inputs, supplementing the traditional state supply channels (Table 7.2). Managers of large-scale farms report that they sell various inputs to other farm enterprises. In addition, farm managers report that they supply farm inputs and farm services to private farmers in their area. Sale of seeds and seedlings, farm machinery, and especially mechanical field services are the main channels of interaction through which large-scale farms help local private farmers. Over 20% of farm managers report that, at

one time or another, they have sold used farm machinery to private farmers. Farm enterprises are also suppliers of feed, young animals, repair services, and veterinary services to private farmers, as well as an important source of construction materials and services. Virtually all farm enterprises provide inputs and input services to the household plots of their employees.

Some private farmers also act as suppliers of inputs to other farmers (Table 7.2). The main categories reported by 20%-30% of the farmers are mechanical field services, maintenance and repair, supply of seeds and seedlings, spare parts, and most prominently farm machinery. Nearly 20% of farmers supply fuel and oil, which reflects the importance of private fuel suppliers noted previously.

Managers and private farmers do not report serious physical shortages of farm inputs. All the respondents, however, complain about high prices of inputs, especially for farm machinery, spare parts, fuel, chemical products, and construction materials (Table 7.3). Around 15%-20% of farm managers and 10% of private farmers report that they do not have any problems with farm inputs. Even this group, however, is concerned about the high prices of farm machinery. Affordability and financing constrain use of purchased inputs, while physical shortages in general are not a problem.

Table 7.3. Reported Difficulties with Purchase of Farm Inputs and Services (percent of users for each input/service)

Input/Service	*Farm Enterprises*			*Private Farmers*		
	Price too high	Not available	No problems	Price too high	Not available	No problems
Seeds, seedlings	44	6	50	41	15	44
Feed				29	14	57
Young animals				31	10	59
Organic fertilizer	32	44	24	21	49	30
Mineral fertilizers	71	8	21	68	21	10
Insecticides	74	11	16	78	8	13
Farm machinery	88	6	7	90	5	5
Maintenance and repair				57	5	39
Spare parts	65	19	15	73	19	8
Fuel	67	17	17	81	14	5
Mechanical field services				43	19	39
Veterinary drugs	50	26	24	43	14	43
Veterinary services				17	11	73
Construction materials	72	17	11	78	9	13
Construction services				50	17	33
Extension				13	8	79

Only a small percentage of private farmers use extension services from any source (Table 7.1), yet 80% state that extension is no problem (Table 7.3). This may be an indication of lack of

understanding of what extension services are and how important they are for modern farming. Extension also appears to be a relatively neglected service among large-farm managers: a relatively small percentage of managers report use of this service. In addition to the standard range of sources listed in Table 7.1, 14% of farm managers report that they obtain extension services from "other" sources, presumably directly from research institutions.

Product Marketing

Hyperinflation, breakdown of distribution infrastructure, and decreased confidence in the monetary unit impede marketing in Ukraine. Ukrainian producers continue to sell farm products commercially despite the diminished confidence in money.

Table 7.4. Producers and Commercial Producers of Various Farm Products

	*Producers**			*Commercial Producers**			*Percent of Output Sold***		
	Large farms	Private farms	House-hold plots	Large farms	Private farms	House-hold plots	Large farms	Private farms	House-hold plots
Grain	98	83	29	87	73	5	45	76	8
Sugar beet	72	21	–	61	18	–	92	92	–
Sunflower	53	14	9	46	12	1	75	90	9
Potatoes	73	26	86	51	17	41	37	38	17
Vegetables	82	17	77	66	10	9	65	39	6
Fruits	30	5	61	25	1	9	71	20	7
Meat	98	32	86	88	25	57	83	53	38
Milk	95	26	58	86	20	43	81	46	34
Eggs	16	22	77	13	5	18	74	10	9
Wool	31	2	7	27	1	4	99	59	64

* Percent of respondents among 846 large farms and 810 private farms.
** Average proportion of output sold calculated for the producers in each product category.

Large-scale farms are inherently commercial producers, and it is not surprising that 80%-90% of producers in each commodity category report commercial sales of their products (Table 7.4). Ukrainian private farms (at least those in the sample) also have a strong commercial orientation. The main cash crops of private farmers are sugar beet and sunflower (90% of the harvest is sold), followed by grain (three-quarters sold). A higher proportion of potatoes and vegetables are consumed in the family, but still around 40% of the crop is sold. In livestock products, half the milk and meat is sold.

Household plots of farm employees, which account for 30% of gross agricultural product in Ukraine, are also significant commercial units. Most of the output from subsidiary household

plots is consumed by the family, and yet over three-quarters of the household farmers in the sample sell at least one of the commodities produced on their family plots (Table 7.4). Livestock products - meat and milk - are the main commercial commodities: over 30% of these products is sold. Potatoes are another significant cash crop, with sales running at 17% of the product. Eggs, grain, sunflower, and vegetables are sold less often (less than 10% of the product). Sheep's wool is mostly sold (64% of the output), but it is produced by a very small proportion of households (about 7%).

State procurement, augmented by the state-controlled consumer cooperative network, remains the dominant marketing channel for both large-scale farms and private farmers in Ukraine (Table 7.5). Over 90% of large-farm managers identify state procurement as their main marketing channel for grain, sugar beet, sunflower, meat, milk, and wool. Only one farm in the sample indicates that it sells grain on the commodity exchange. A distant alternative to state procurement is provided by the state-controlled consumer cooperative network, which is used as the main marketing channel by around 20% of managers for potatoes, vegetables, and fruits. Direct sales to consumers through farmers' markets and to other trade organizations are very infrequent and, to the extent that they exist, are limited to potatoes, fruits and vegetables, and also eggs.

Private farmers use a greater variety of marketing channels for their products. While grain, sugar beet, sunflower, and wool are also marketed predominantly through state procurement, many private farmers sell other products directly to the consumer through farmers' markets and trade organizations. Private farmers also use the state-controlled consumer cooperative network to a greater extent than the large-scale farms do (Table 7.5). Sales of potatoes, vegetables, and meat are split between state purchasers, the state-controlled consumer cooperative network, and farmers' markets. The local collective farm plays a role only in milk sales: 30% of the farmers sell milk to the collective farm, in addition to selling to the state and to consumers on farmers' markets. Private farmers do not perceive special obstacles in access to marketing channels: nearly 70% of private farmers report that they do not experience more difficulties in marketing than large-scale farms.

Subsidiary household farms are the only group of producers in Ukraine who are not heavily dependent on state channels for marketing, probably because the quantities available for commercial sale are very small. They sell their products through a variety of marketing channels (Table 7.5). Direct sales to consumers on farmers' markets are the preferred channel for products that are not highly perishable (meat, potatoes, eggs, fruits and vegetables). The collective farm and other enterprises buy most of the milk (a highly perishable commodity) and wool (a product with a very specialized use). Very few households sell surplus grain (5%), but those that do sell are relatively large, producing more than two times as much grain as the average in the sample (3.7 ton compared to 1.5 ton) and selling nearly half their output. The main marketing outlet for this grain is the state. The state also provides an important marketing channel for 20%-30% of all other commodities and over 40% of the potatoes.

Table 7.5. Main Marketing Channel by Commodity for Different Categories of Producers (percent of farms that produce and sell the respective commodity)

Commodity	Number of producers	State procure-ment	Consumer coop network	Collective and other enterprises	Consumers and others
Farm Enterprises					
Grain	694	95	–	2	2
Sugar beet	519	96	–	1	2
Sunflower	385	94	1	3	1
Potatoes	432	68	19	7	5
Vegetables	556	65	22	6	6
Fruits	208	58	27	8	5
Meat	745	98	0	1	1
Milk	729	97	0	1	2
Eggs	112	73	7	8	10
Wool	229	92	5	0	1
Private Farms					
Grain	590	91	0	5	2
Sugar beet	147	92	–	3	5
Sunflower	97	85	2	4	7
Potatoes	136	29	36	18	14
Vegetables	77	31	20	8	36
Fruits	10	10	–	20	70
Meat	199	27	31	10	32
Milk	165	24	2	52	21
Eggs	41	5	46	–	49
Wool	10	70	–	10	20
Household Plots					
Grain	40	65	3	17	15
Sunflower	10	20	0	40	30
Potatoes	361	23	19	7	47
Vegetables	80	6	8	5	77
Fruits	361	3	19	6	60
Meat	503	17	5	27	50
Milk	374	25	1	53	19
Eggs	159	5	23	8	59
Wool	36	25	6	61	0

There is a striking difference in the way private farmers and managers of large farms view their marketing opportunities in the new environment. Although both groups of producers are highly dependent on state marketing channels, as represented by state procurement and the consumer cooperative network, private farmers on the whole feel that they have a choice of alternative

channels should they decide to switch. Farm managers, on the other hand, are much less optimistic in this respect: a significantly lower proportion of managers believe that they can find a buyer other than the state for their products (Table 7.6). A probable reason for this is the difference in the volume of production: large farms cannot hope to dispose of their entire output through the farmers' markets and new trade channels that are just now beginning to emerge. These channels may provide a reasonable alternative for the small volume of products offered for sale by the private farmers, and also by subsidiary household plots, whose owners similarly perceive a choice of alternative channels (Table 7.6). Large-scale farms, on the other hand, need a relatively steady and well-organized marketing network to dispose of their products. Such a network is apparently provided only by state procurement at this stage, and managers of large farm accordingly do not see any alternatives to volume marketing of their products.

Table 7.6. Perception of Availability of Alternative Marketing Channels by Commodity (percent of commercial producers in each product category answering 'yes' to the question "Can you choose a buyer for the given product?")

Commodity	*Farm Managers*		*Private farmers*		*Household Plots*	
	Number of producers	Percent of 'yes' answers	Number of producers	Percent of 'yes' answers	Number of producers	Percent of 'yes' answers
Grain	740	33	596	62	40	73
Sugar beet	519	21	147	59	--	--
Sunflower	386	40	97	44	10	80
Potatoes	424	51	136	74	361	66
Vegetables	549	54	77	65	80	63
Fruit	203	61	101	90	79	68
Meat	741	28	197	84	503	71
Milk	716	22	165	67	374	52
Eggs	106	48	41	78	159	70
Wool	226	23	10	30	36	47

While over 90% of large-farm managers claim that they are subject to state orders on all products, private farmers report state orders only on grain (over 60% of respondents) and to a much smaller extent on sugar beet (less than 20%). Although Ukrainian producers are certainly familiar with the concept of state orders, there is a potential for misinterpretation of this question. Farm managers may have interpreted the question not as "obligatory" state orders but rather as all purchase orders from the state or all sales to the state. The pervasiveness of state orders in Ukraine should be further examined. Both farm managers and private farmers say that prices received from the state are not better than prices from other channels. The main incentives to fulfill state orders include easier access to farm inputs, preferential credit, and good relations with the authorities (40% to 60% of both private farmers and farm managers).

Table 7.7. Marketing Problems by Commodity for Farm Enterprises and Private Farms (percent of farms that produce and sell the respective commodity)

Commodity	Number of producers	Reported Problems				
		Late payment	Low price	No buyer	Delivery difficulties	Other
Farm Enterprises						
Grain	826	73.6	89.3	8.1	37.7	7.9
Sugar beet	612	77.5	82.7	11.9	46.9	8.7
Sunflower	449	70.8	82.6	8.0	40.8	9.6
Potatoes	618	51.1	75.6	36.1	38.5	8.6
Vegetables	693	53.8	80.4	37.7	38.2	8.4
Fruits	253	46.6	70.8	31.6	36.0	10.3
Meat	830	83.6	90.6	22.3	36.6	8.2
Milk	807	78.3	91.8	19.2	34.8	7.8
Eggs	134	44.0	66.4	20.1	23.9	8.2
Wool	266	62.4	77.8	19.5	34.6	8.6
Private Farms						
Grain	588	67.7	66.5	19.7	56.1	4.3
Sugar beet	147	55.8	81.6	17.0	72.1	2.0
Sunflower	96	56.3	72.9	8.3	44.8	2.1
Potatoes	136	22.1	64.0	33.1	41.2	2.9
Vegetables	77	13.0	59.7	37.7	54.5	1.3
Fruits	10	10.0	30.0	20.0	20.0	–
Meat	197	23.9	60.9	7.6	32.0	–
Milk	164	19.5	68.9	7.9	16.5	0.6
Eggs	41	9.8	48.8	7.3	12.2	–
Wool	10	10.0	10.0	10.0	–	–

Farm managers are on the whole dissatisfied with the marketing situation in Ukraine: over 80% complain that the prices they receive for farm products are too low. The dissatisfaction with prevailing prices is a universal complaint among both farm managers and private farmers, and it strikes across all commodities (Table 7.7). Farm managers also suffer from late-payment problems from their customers, while this problem is much less acute for private farmers. It is apparently the state procurement organizations that do not pay promptly, as there is a definite correlation between late payment and the reliance on state procurement as the main marketing channel (see Table 7.5). Indeed, private farmers complain of late-payment problems specifically for those commodities that they sell mainly to state procurement, such as grain, sugar beet, and sunflower. Finding a buyer for products or transportation and delivery do not appear to be serious problems even for private farmers, although arranging transportation for grain and sugar beet is relatively more problematic for private farmers.

Prices Received by Farmers

Analysis of prices received by farmers is very difficult in a hyperinflationary environment, not only because of objective price variability but also because subjective recollection of rapidly changing prices by individuals is highly unreliable even after a very short time. Private farmers and farm managers participating in the survey were asked to report the price received for the last sale of each commodity and to record the month when the sale took place. The results for the months with the largest number of responses ("peak sale" months, between August and December 1993) are summarized in Table 7.8.

Table 7.8. Prices Received by Producers
('000 coupons, PF=Private Farms, FE=Farm Enterprises)

Commodity	Month of sale	Median		Mode		Mean		Number of responses	
		PF	FE	PF	FE	PF	FE	PF	FE
Grain	8.93	420	438	500	500	398	378	172	214
	9.93	418	420	418	487	401	415	174	261
	10.93	486	460	500	450	520	434	84	96
Vegetables	9.93	300	198	300	198	334	224	15	149
	10.93	250	200	200	200	273	377	28	240
Potatoes	9.93	300	300	300	300	295	328	59	151
	10.93	300	283	300	190	369	291	31	198
Sugar beet	10.93	150	150	150	150	13	168	65	251
	11.93	150	150	150	150	151	153	18	160
Sunflower	10.93	1500*	1000*	1500	1500	1532*	1121*	65	241
	11.93	1500	1468	1500	1500	1481	1433	12	55
Milk	12.93	555*	1200*	555	1500	881	1393	116	554
Meat	12.93	6700*	6650*	6700	9000	16635*	6222*	133	463

* Statistically significant difference in estimates of prices received by private farmers and farm enterprises.

The raw price data suffer from gross errors, as the respondents often gave the price in thousands, omitting the trailing zeros, or alternatively quoted the price per kilogram instead of the price per ton. Because of these errors and the small number of respondents in some months and some product categories, the mean sales price is an unreliable indicator, even though it was calculated for each month of sales separately. Table 7.8 accordingly gives the median price for each month (i.e., the price such that 50% of the reported sales transactions did not exceed this figure) and also the mode of the price distribution, i.e., the most frequently reported price. Both these non-parametric statistics are known to be more reliable under the given circumstances.

The data in the table suggest that private farmers and farm enterprises were subject to the same pricing rules; if monopsony is a problem, then it is a problem for all types of sellers. Grain, the main cash crop with the maximum frequency of sales transactions among all products, was sold at practically the same prices by private farms and large farm enterprises in the three peak months of sales (August, September, and October 1993). Identical prices were also received for sugar beet, potatoes, and vegetables. Milk prices received by private farmers were significantly lower than those received by large farms (in December 1993), while the prices of meat (December 1993) and sunflower (October-November 1993) were slightly higher (the difference is statistically significant despite its small magnitude). Better price data are needed, however, to reach firm conclusions on differential pricing between private farms and large farm enterprises. The survey seems to indicate at this stage that on the whole different producers receive comparable prices for the same products.

Export

Fully 20% of farm managers report that they export food products to other countries in the former Soviet Union, while only 3% export to countries outside the FSU. The main export item for Ukrainian farms is sugar. Virtually all the farms receive sugar from the processors in partial payment for their sugar beet, and they in turn export it on barter terms. This arrangement applies to 17.5% of sugar-beet producers in the sample. Other barter-based exports include fruits and vegetables, as well as sunflower (around 4% of the producers of each product). Money-based exports are negligible. Nearly 90% of exporters complain about difficulties with export licenses, and 55% complain of severe difficulties.

Processing

Vertical integration of production and processing is not a widespread phenomenon in Ukrainian farm enterprises, which continue to rely mainly on regional processors. Around 20%-25% of producers in the sample have processing capacity for sunflower, buckwheat, and millet. Processing of meat, milk, fruits and vegetables is reported by less than 10% of producers in each category.

The relationships with processors are partially based on payment in kind. The producers receive processed commodities in part payment for the raw materials they deliver to the processor. The main processed commodities received by farms in this way are sugar (over 90% of sugar-beet producers), vegetable oil (55% of sunflower producers), and milk products (40% of producers). Meat products, canned fruits and vegetables, and alcohol are also received by some farms from the processors in exchange for raw materials.

8

Rural Social Services and Restructuring of the Collective Sector

Large-scale farms traditionally played a prominent role in provision of social services in rural areas in Soviet Ukraine. The village council was almost totally dependent for its budget on the local farm enterprise. The farm enterprise virtually took over the functions normally fulfilled by local government, building roads, supplying water, gas, and electricity, and providing some housing. The farm enterprise traditionally provided access to a comprehensive range of services and benefits for its members and employees, and also for other rural workers, including teachers, doctors, postoffice employees, etc., who in fact were on state payroll and not employed by the farm. These social services ranged from daily necessities, such as house maintenance and repairs, heating fuel, or various products at subsidized prices, to culture and recreation, such as clubs and sports facilities. Even in areas of education and medical care, which in law were the responsibility of the state, the farm enterprise had a significant role, maintaining the schools and the clinics in good repair, or providing the teachers and the medical staff with housing and with support for their household plots. The budget for all these benefits and services came from the operating profits of the farm enterprise, and the farms in effect combined production functions with overall responsibility for social services in the rural area.

Social Benefits of Farm Employees

The rural social sphere in Ukraine today is still a reflection of the traditional Soviet practices. In the present survey, farm managers report that they provide a wide range of social benefits and services to their employees. The main items reported by 80%-90% of farm mangers include compensation for prices increases, child allowances, provision of heating fuel and food at subsidized prices, use of vacation facilities, and especially transport (Table 8.1).

The responses of farm employees are on the whole consistent with those of farm managers regarding the range and relative frequency of the services and benefits that they receive from the farm enterprise. However, the percentage of employees who report enjoying the various benefits is systematically lower than the percentage of managers reporting that the farm provides these benefits to its employees (Table 8.1; the analysis is based on a matched sample of managers and employees from the same farms). Reports of managers and employees differ because a manager would list a particular service or benefit if it is provided by the farm to a

single beneficiary, but that beneficiary is not necessarily included in the subsample of respondents from among farm employees.

Table 8.1. Social Benefits and Services Provided by Farm Enterprises*

Benefit/service	Managers providing service (%)	Employees receiving service (%)
Compensation for price increases	88	86
Pension augmentation	35	10
Child allowances	86	40
Day care	76	19
School subsidies	80	26
Student subsidies	85	16
Construction, house maintenance, repairs	70	36
Heating fuel	85	34
Subsidized food	81	52
Subsidized consumer goods	44	19
Subsidized communal services	48	13
Medical care	53	32
Use of vacation facilities	86	45
Housing	58	12
Subsidized rent and utilities	47	16
Transport	91	62

* Based on a matched sample of 756 managers and employees from the same farms.

An important benefit that families derive from their membership or employment in a farm enterprise is the generous assistance with the running of subsidiary household farms. Farm enterprises supply the whole range of farm inputs to their employee households (see Table 7.2 in the chapter on *Marketing Services and Infrastructure*). In addition, managers report that they supply households with equipment and machinery for cultivating their plots (98%), transport services (99%), assistance with marketing of their farm products (73%), and fuel for domestic needs (56%). This comprehensive support by the large-scale farm is an essential component in the success of subsidiary household farming in Ukraine, as elsewhere in the former Soviet Union.

Farm employees anticipate loss of some of the present social benefits if they leave the collective to become private farmers. The employees do not expect to lose the access to medical care and schooling if they leave the collective. Although provided on the farm, these are basically state services, with equal access for all in the rural areas. Potential difficulties with housing are also foreseen by a relatively small proportion of employees (17%), probably because so much of the

housing in the village is already privately owned. Over 40% of employees indicate, however, that they would anticipate difficulties with transport and with construction, house maintenance, and repairs if they were to leave the collective. Transport appears to be a particularly important benefit that farm enterprises provide to their employees (see Table 8.1). Around 30% of employees expect to have difficulties with supply of heating fuel and with purchase of food at low prices outside the collective framework.

The overall importance of enterprise-provided social services to households can be inferred from a finding presented previously in Chapter 6, *The Effect of Reorganization on Farm Employees*. Among employees who do not intend to become private farmers just under 50% cite potential loss of social benefits as one of the main reasons for their decision to remain in the collective (see Table 6.5).

Social Services for the Private Farmer

The access of private farmers to social services and benefits is more restricted than the access of farm employees. A whole range of benefits, such as compensation for price increases, pension augmentation, subsidized consumer goods, subsidized communal services, and help with housing, are virtually lost when the family leaves the farm enterprise to start a private farm. Some members, however, retain various benefits also as independent farmers. The reported decline in access to social benefits is particularly small in two categories: subsidies for school children (including busing and meals) and subsidized medical care decline from around 50% recipients in the collective to 34% after exit (Table 8.2). Other services that are retained by more than 20% of private farmers after leaving the collective include child allowances, day care, as well as help with house maintenance and repairs, heating fuel, and transport.

Some of these services, such as medical care, schooling, and child allowances, are supplied by the state, and not by the collective, so in principle there is no reason for them to decline after the family's exit. The relatively high level of retention of these services is therefore understandable. Other services and benefits (house maintenance and repairs, heating fuel, transport) are traditionally supplied by the farm enterprise, and the private farmers retaining these benefits indeed identify the farm enterprise as the source that continues the delivery. The continued provision of some social benefits and services by the farm enterprise to private farmers may be due to the fact that one member of the family (perhaps the spouse) did not leave the collective when the private farm was established and continues to be entitled to these benefits. It thus seems that private farmers do not sever all their links with the farm enterprise and maintain a partial relationship as a kind of insurance policy.

Managers confirm that their farms deliver various services to private farmers. Nearly half the enterprises in the sample supply private farmers with some service for farming or household needs. Over 30% of farm enterprises provide transport services to private farmers, and more than 10% sell heating fuel and construction materials.

Table 8.2. Access of Private Farmers to Social Benefits and Services*

Benefit/service	Enjoyed the service as farm employee (%)	Retained the service as private farmer (%)	Main source of retained service (%)
Compensation for price increases	43	7	--
Pension augmentation	7	1	--
Child allowances	45	23	state
Day care	40	21	state
School subsidies	49	34	farm
Student subsidies	6	2	--
Construction, house maintenance, repairs	40	20	farm
Heating fuel	44	25	farm
Subsidized food	51	13	farm
Subsidized consumer goods	12	1	--
Subsidized communal services	22	3	--
Medical care	46	34	state
Use of vacation facilities	43	17	labor union
Housing	11	3	--
Subsidized rent and utilities	22	11	state
Transport	48	25	farm

* Based on the responses of 522 private farmers who previously worked on collective or state farms.

When asked directly about difficulties with access to benefits and services after leaving the collective farm, private farmers complain about transport (40%), construction, house maintenance and repairs (30%), and heating fuel (25%) as the main problem areas. Fewer than 15% also complain about difficulties with purchasing of food. There are no complaints about access to day care, schooling, medical care, and even housing and communal services. The dividing line between the categories matches the division of responsibilities between the farm enterprise and the state. On the whole, private farmers have no problems with access to state-supplied services and benefits, but by their very independence they are naturally prevented from enjoying the social services originating in the farm enterprise. Managers of farm enterprises do not perceive that private farmers have difficulties with access to services: only 10%-15% of managers who deal with private farmers in their area think that farmers face difficulties with access to various services, whether provided by the state or the farm enterprise

The Burden of Social Services

Ukrainian legislation, similarly to the legislation in Russia, recognizes the need for separation of the social sphere from the production activities of farm enterprises. The responsibility for all

social services and social assets is intended to be transferred to the village council, and enterprise-owned housing is to be privatized. Transfer of responsibility for the social sphere, however, requires appropriation of considerable local-government budgets, which are still not in place. While privatization of the small proportion of housing that was enterprise owned appears to be advancing, the social assets and services still largely remain within the purview of the farm enterprise.

Table 8.3. Disposition of Social Assets According to Farm Managers' Responses

	Transferred or intend to transfer	No decision yet	Do not intend to transfer	Council not ready to accept	Never had
Housing	7	11	27	4	21
Nursery schools	18	13	14	8	19
Schools	15	7	4	2	41
Clubs	20	12	6	5	30
Clinics	15	8	5	4	39
Shops	9	6	6	3	45
Sports facilities	4	7	7	3	45
Water mains	4	9	16	6	34
Power system	4	8	14	5	37
Telephone	6	8	13	4	37
Local roads	6	12	25	12	14

In the present survey, farm managers do not appear to be pressed to transfer the responsibility for social assets to the local council. In many cases, the farms report that they have never had social assets on their balance sheet. Thus, much of the housing in Ukraine was always privately owned, whereas schools, clubs, clinics, shops, sports facilities, water mains, power supply, and the telephone system are not acknowledged by many managers as the farm's responsibility to start with (Table 8.3). Where managers acknowledge responsibility for social assets, either their future has not been discussed or a decision has been made to keep them within the farm. Thus, around 15% of the farms intend to retain responsibility of the water pipes, the power supply, the telephone system, and the nursery schools, and 25% will remain responsible for the local roads and the housing to the extent that it is farm owned.

The lack of urgency in relinquishing the responsibility for social assets may in part be attributed to the managers' perception of the relatively low cost of maintaining these assets. The Ukrainian managers report that on average maintenance of social infrastructure accounts for 8.5% of current farm costs, and less than half of them expect the percentage to go up next year. This figure is consistent with the findings in Russia, where managers place the cost of social services at 11% of current expenses.

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