

16713

EC4NR AGRICULTURE POLICY NOTE #10

Estonia Agricultural and Forestry Policy Update

**Natural Resources Management Division
Country Department IV
Europe and Central Asia Region**

February 26, 1997

CURRENCY EQUIVALENTS

Currency Unit = Estonian Kroon (EEK)
DM 1 = 8 EK (January 1997)

ESTONIA AGRICULTURAL DATA

<u>Total Population</u>	1.6 million	Agriculture in GDP 1995	8%	Decline of overall agriculture production 1995/86	47%
Rural Population	28%	Food and agriculture in active labor (1995)	12.1%	Decline of livestock sector 1995/86	52%
<u>Total Area</u>	4.52 mill. ha.	Food and agriculture in export (1995)	16%	Share of livestock (1995)	55%
Agriculture area:	1.46 mill. ha.	Forestry share in exports (1995)	16%	Share of independent family farms in total cultivated land (1995)	29%
Arable land	77.5%	Food and Agriculture in imports (1995)	14%	Share of small subsidiary plots in total cultivated land (1995)	23%
Drained	66%	Traditionally net exporter of processed foods: eggs, butter, cheese and flax, in 1995 Estonia became a net importer.			
Orchards	1.0%				
Grassland	21.5%				
Forested	44.7%				

FISCAL YEAR

January 1 - December 31

WEIGHTS AND MEASURES

ha	Hectare
Kg	Kilogram
Kwh	Kilowatt hour

ABBREVIATIONS

ARLCF	Agriculture and Rural Life Credit Fund
CAP	Common Agricultural Policy
CASE	Consumer Subsidy Equivalent
CEFTA	Central European Free Trade Association
EFTA	European Free Trade Association
ENLB	Estonian National Land Board
FAO	Food and Agriculture Organization
FSU	Former Soviet Union
MOA	Ministry of Agriculture
OECD	Organization of Economic Cooperation and Development
PSE	Producer Subsidy Equivalent
WTO	World Trade Organization

CONTENTS

Executive Summary	i
1. Pre-Independence Agriculture	1
2. Economic and Sector Reforms in Aggregate: Progress and Perspectives	1
3. Sectoral Performance in 1995-1996	4
4. Land Reform and Farm Restructuring	7
5. Privatization of Agroprocessing, Retail Trade, and Services for Agriculture	11
6. Reforms in the Forestry Sector	13
7. Maintaining a Liberal Macro Environment for Food and Agriculture	14
8. Government Support Programs and Investments	16
9. Improved Financing for Food and Agriculture	19
10. Creation of Institutions Required by a Reformed Food and Agriculture Sector	20
11. Rural Environmental Situation	21
12. Rural Living Standards	22
13. World Bank Operations	23

The Estonia Food and Agriculture Sector Review (Report #13316-EE) provided a status report on the food and agricultural sector and an assessment of the ongoing sectoral reforms through late 1994 when the final version of the report was completed. This note covers agriculture policy developments in Estonia since then and gives a brief assessment of the sector performance in 1995-96. In this report the agricultural and forestry policy perspectives, and the sector in general, are analyzed in a broader rural development framework. This note was prepared by Csaba Csaki, supported by Florian Grohs, Alan Zuschlag, Nathalie Olsen, and Phyllis Harrison. Messrs. James Harrison and Carlos Cavalcanti provided valuable comments. The recent OECD study on Estonian agriculture and various working notes prepared by the FAO Agricultural Strategy Team were used as background material and Messrs. H. Tullus and M.Tamm at Tartu Agriculture University acted as local consultants for this report.

Boxes:

Box 1	Process of Land Restitution	8
Box 2	Contribution of Various Farming Categories to Ag. Production (1995)	10
Box 3	Rural Poverty in 1995	22

Figures:

Figure 1	Gross Agricultural Output	4
Figure 2	Foreign Trade Balance, 1992-1996	5
Figure 3	Exports of Food and Agricultural Products by Trading Partner	6
Figure 4	Imports of Food and Agricultural Products by Trading Partner	6
Figure 5	Land Distribution at the End of 1995	9
Figure 6	Budget of Ministry of Agriculture - Total Expenditures	17
Figure 7	Budget of Ministry of Agriculture - Public Investments	18

Appendix

Policy Matrix

Statistical Tables:

Table 1	Macroeconomic Indicators, 1992-1995
Table 2	Gross Agricultural Output, 1986-96
Table 3	Per Capita Consumption of Selected Food Products, 1986-95
Table 4	Foreign Trade in Estonia, 1992-96
Table 5	Crop Production in Estonia
Table 6	Yields of Main Agricultural Products in Estonia, 1986-95
Table 7	Livestock Sector in Estonia
Table 8	Estonian Woodlands Resources and Dominant Tree Species in 1996
Table 9	Annual Maximum Volume of Wood Utilization
Table 10	List of Laws with Special Relevance to the Transformation of Agriculture
Table 11	Contribution of Different Types of Farms to Agricultural Production, 1995
Table 12	Development of Family Farming in Estonia, 1991-96
Table 13	Size of Private Farms, January 1, 1996
Table 14	Distribution of Forest Land by Ownership Category (1995)
Table 15	Average Retail Trade Prices of Selected Products, October 1996
Table 16	Total Budgetary Expenditures Associated with Agro-Food Policies
Table 17	Area of Government of the Ministry of Agriculture - Costs in 1995-97
Table 18	The Investment Plan

EXECUTIVE SUMMARY

1. After independence Estonia implemented a rather ambitious and unique program of liberalization and macroeconomic stabilization which brought significant achievements and international acknowledgment. Reform in the food and agriculture sector has also progressed. Achievements in reforming food and agriculture however, are lagging behind those reforms in other sectors of the economy and the macro-economic environment as a whole. The incentive framework for agriculture is almost distortion-free. The liberal environment, however, has not led to growth and recovery in the food and agriculture sector.

2. A liberal policy environment in general, and reduced real prices for agriculture, are supposed to create incentives to make farming more efficient and competitive. Unfortunately in Estonia, the changes of relative prices were combined with slow progress in sectoral reforms. The most critical areas are: a) the land reform and farm restructuring, which is progressing rather slowly due to complicated restitution processes; and b) privatization of agro-processing where the method of privatization has not resulted in transparent ownership at most of the agroprocessing enterprises. As a result, with the exception of a few commercial farms operating on the best land, the bulk of the sector is not able to produce competitively under the given conditions and the sector is in decline and stagnation. The new urban Estonia shows signs of recovery, while rural households are lagging behind.

3. For Estonia, which is a small, open economy, the liberal and non-distortive trade and macro policies have overwhelming advantages. The most appropriate way of preparing the sector for EU accession is also to develop an agricultural system which is competitive on the open market. It is essential therefore, that the policy response to rural social problems and demands of the agricultural sector for more support take an appropriate form and not a form that creates new sources of inefficiencies and distortions in the economy.

4. Therefore, the completion of the remaining tasks in transition need to be treated as the most important short-term priorities. These include:

- a) acceleration of the completion of land reform, including settlement of land ownership issues, acceleration of privatization of unclaimed state-owned land, the accelerated progress in land titling, and improving land legislation (see paras. 18 - 22);
- b) facilitate the creation of more transparent ownership structure in agroprocessing conducive to increased participation of foreign investors together with the increased use of bankruptcy procedures to speed up restructuring, downsizing, and modernization (see paras. 23 - 28);
- c) further progress in institutional reforms and strengthening rural financing and advisory services (see paras. 45 - 46); and
- d) funding and appropriate institutional arrangements to provide a cost effective and

equitable social environment (see paras. 54 - 56).

5. Maintaining a liberal macro environment in the sector has overwhelming short-term and long-term advantages. It is also the most beneficial policy in regard to EU accession. Concurrently, an adequate response to growing pressures demanding an adjustment in the macro environment to promote agricultural growth and the recovery of the rural economy, needs to be found. In addition to the completion of the sectoral transition, the provision of non-distortive budgetary supports, such as the provision of public goods, and improvements in rural infrastructure would enhance agricultural and rural growth while maintaining an overall, undistorted macro environment (see paras. 54 - 56).

6. The attached policy matrix provides an overview of the current status of reforms in areas critical to Estonian agriculture and also includes proposals for further actions.

Estonia Agricultural and Forestry Policy Update

Pre-Independence Agriculture

1. In the pre-Soviet period, agriculture was one of the most significant components of the Estonian economy. During the Soviet era Estonia went through a rapid period of industrialization; the share of food and agriculture in the GDP declining to 20% in the late 1980s. Pre-independence agriculture in Estonia was dominated by dairy and livestock production. Central planners assigned Estonia the role of specialized livestock producer for the Soviet Union. The country supplied dairy products, pork, and beef to neighboring republics, which in turn, provided most of the grain and other needed inputs. Animal products accounted for more than two thirds of total agricultural production. During this period, Estonian agriculture performed well when compared with other Soviet republics. The yields and economic efficiency of livestock production were the best inside the Soviet Union and were comparable to many countries in Central and Eastern Europe. Although Estonian agriculture had many strengths, it was constrained by the well-known shortcomings of socialist agriculture. Quantity was the major objective, while quality and efficiency played only a secondary role. The whole sector required an expensive system of subsidies and the secure markets inside the FSU resulted in little attention being paid to quality improvements. Processing industry and incentives to stimulate the improvement of technology and product development, as required by competitive market economies, did not exist.

Economic and Sector Reforms in Aggregate: Progress and Perspectives

2. After independence Estonia implemented a rather ambitious and unique program of liberalization and macroeconomic stabilization which brought significant achievements and international acknowledgment. The use of a currency board to maintain a fixed exchange rate following a substantial devaluation in 1992, the balancing of the budget, the increase in foreign currency reserves, and the establishment of a completely convertible currency, as well as the complete liberalization of external trade policies, capital transactions, and internal markets, represent the major features of the Estonian macroeconomic reforms. The significant reduction of inflation from initially very high levels, the large inflow of foreign direct investments, the expansion of service sectors and the resumption of overall economic growth are the most important indicators of the success (**Table 1**).

3. Reform in the food and agriculture sector has also progressed. Achievements in reforming food and agriculture however, are lagging behind reforms in other sectors of the economy and the macro-economic environment as a whole. The incentive framework for agriculture is almost distortion-free. The liberal environment, however, has not led to growth and recovery in the food and agriculture sector. According to FAO estimates, cumulative sectoral real income in agriculture, as measured in the national accounts, declined by 24.4% from 1992 to 1995.

4. Reduced real prices are supposed to create incentives to make farming more efficient and competitive, unfortunately in Estonia, the changes of relative prices were combined with slow progress in sectoral reforms. The most critical areas are: a) the land reform and farm restructuring, which is progressing rather slowly due to complicated restitution processes; and b) privatization of agro-processing where the method of privatization has not resulted in transparent ownership at most of the agroprocessing enterprises. As a result, with the exception of a few commercial farms operating on the best land, the bulk of the sector is not able to produce competitively under the given conditions and the sector is in decline and stagnation. The new urban Estonia shows signs of recovery, while rural households are lagging behind. Most of these are in worse economic condition than they were a few years ago. Thirty percent of arable land was left uncultivated in 1996 and some rural areas are losing population.

5. There is an ongoing debate in Estonia to define the future role of agriculture and to adopt a new agricultural strategy for the country. The difficulties of adjustment from the old distorted production system is combined with the problems of coping with the pressure created by the new liberal policies. The social tensions emerging as a result of the increasing regional differences, and by the growing division between the urban and rural segments of the economy, have created new concerns that need to be addressed by the Government. The open trading regime and the liberal macroeconomic policies have been increasingly threatened by growing pressure for the introduction of more protectionist policies to protect farmers' incomes and to bring Estonia's agricultural policy closer to the CAP model. As a result of this pressure, the **Agricultural Producer's Income Law** was passed by the Estonian Parliament in July 1993. It calls for producers and the state to negotiate target prices that would be fixed at levels ensuring income parity between and agricultural and industrial sectors. An income parity objective was also written into the **Agricultural Market Regulation Law**, which was passed by the Parliament in October 1995. The new law allowed the Government to use import duties, commodity reserves, and export marketing support to maintain market prices within 5% of the target prices resulting from the income goals fixed by the Agricultural Producer's Income Law. To administer the new system, the creation of a State Fund for Market Regulation was envisaged. Fortunately the two laws which would have created a highly distortive macroeconomic and trade framework in agriculture have still not been put into effect due to budgetary considerations and the conflict of interest these laws would have on the rest of the economy. The debate on the future of agriculture and the introduction of a more supportive sectoral policy framework, however, is not finished.

6. The development of a **National Agricultural Strategy** is being supported by an FAO team. This strategy is supposed to cover not only primary agriculture, but also forestry, fisheries, and agricultural services, as well as the rural economy as a whole - including the social problems faced by the rural population during transition. The existing policy documents indicate that policy makers are concerned with three principal objectives. These are:

- improving the rural standard of living and the quality of life, including providing an adequate social environment; striving to achieve approximate equality with urban areas in these respects;
- reducing the trend toward depopulation of some rural areas, especially the border regions; and,
- ensuring a degree of food security for Estonia.

7. Unfortunately, creation of an internationally competitive agriculture sector is not receiving the appropriate emphasis. The development of the National Agricultural Strategy, as it is envisaged and managed by the Ministry of Agriculture, is an attempt to modify current policies and to obtain some type of economic compensation to the sector for the negative effects of prevailing macroeconomic policies. It is questionable, however, how far the sector will be able to succeed in modifying the overall liberal trade and macro policy framework, and prevailing exchange rate policy.

8. For Estonia, which is a small, open economy, the liberal and non-distortive trade and macro policies have overwhelming advantages. The most appropriate way of preparing the sector for EU accession is to develop an agricultural system which is competitive on the open market. This system, both in size and structure, needs to be quite different from the system in place during the Soviet era. It is essential therefore, that the policy response to rural social problems and demands of the agricultural sector for more support take an appropriate form and not a form that creates new sources of inefficiencies and distortions in the economy. The quick completion of unfinished reforms in agriculture seem to be the most important means of improving competitiveness and farm incomes. Therefore, the completion of the remaining tasks in transition need to be treated as the most important short-term priorities, these include:

- a) acceleration of the completion of land reform, including settlement of land ownership issues, acceleration of privatization of unclaimed state-owned land, the accelerated progress in land titling, and improving land legislation;
- b) creation of more transparent ownership structure in agroprocessing conducive to increased participation of foreign investors together with the increased use of bankruptcy procedures to speed up restructuring, downsizing, and modernization;
- c) further progress in institutional reforms and strengthening rural financing and advisory services; and
- d) funding and appropriate institutional arrangements to provide a cost effective and equitable social environment.

9. It is obvious that maintaining a liberal macro environment in the sector has overwhelming short-term and long-term advantages, and it is also the most beneficial policy in regard to EU accession. At the same time, an adequate response to growing pressures demanding an adjustment in the macro environment in order to promote agricultural growth and the recovery of the rural economy, needs to be found. To complete the sectoral transition, the provision of non-distortive budgetary supports to enhance productivity and competitiveness, such as provision of public goods, improvement in rural infrastructure, seem to be the most appropriate means for promoting agricultural and rural growth while maintaining an overall, undistorted macro environment.

Sectoral Performance in 1995 - 1996

10. **Growth.** After reaching artificially high levels of production as a result of the highly distorted and inconsistent incentives of the Soviet period in 1986-89, agricultural production in Estonia fell sharply in the early 1990s, and the decline has been slower, but continuous since then. According to official statistics, gross agricultural output, was 47% lower in 1995 than 1986; an additional 1-2% decline is forecast for 1996 (Table 2 and Figure 1). Livestock production dropped by 52% and crop production by 43%, with the result that the share of livestock production in overall gross agricultural output declined from about 70% in 1986 to 55% in 1995. Relative to other sectors, the decline in food processing industries was more modest from 1991 to 1993. However, while most other industries started to grow once again in 1994, food processing industry output continued to decline by another 10% during the last two years, compared to the 1993 level.

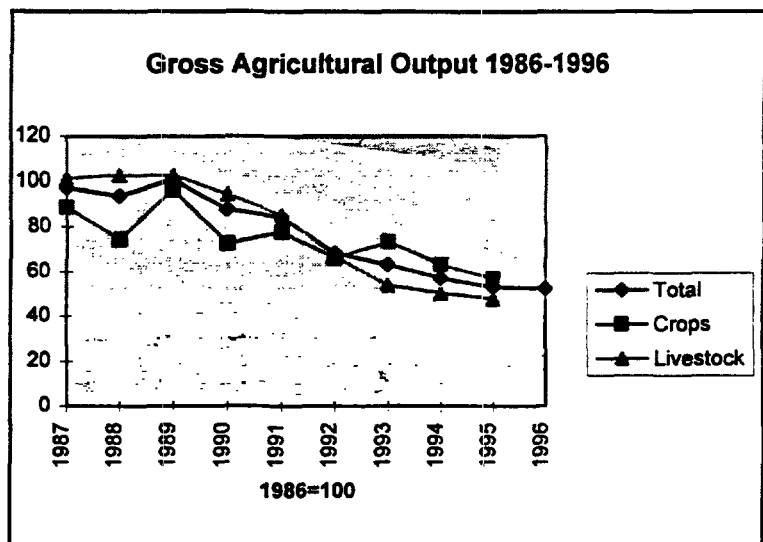


Figure 1

11. As a result of the continued contraction, since 1991 the relative importance of agriculture in the Estonian economy decreased dramatically. The share of agriculture (including hunting and forestry) in GDP fell from about 15% in 1989 to about 8% in 1995. The sector's share of employment has also diminished, dropping from about 12% in 1991 to 8% in 1995. Agroprocessing industry had an additional 4% of total employment in 1995. Investments in agricultural and the forestry sector were low as well, and amounted to no more than 2-3% of total

investment in 1994-95, reflecting the profitability of production and the temporary excess capacity.

12. **Consumption.** In the 1990s the rise in prices, combined with the decline in real incomes, led to a decrease in food consumption. Estonian food consumption in the 1980s, particularly in livestock products, was relatively high, even by Western standards. The lower level of overall consumption as is indicated by **Table 3**, therefore remains adequate. The most important change in consumption was a one third decline in meat consumption between 1990 and 1995. The most significant decline took place in pork and poultry meat consumption. Milk consumption also declined significantly. As a result of decreasing real wages, the average share of income spent on food rose from 28.4% in 1990 to 36.4% in 1991. Since then it fell back to 30% in 1995.

13. **Trade Performance.** Agricultural and food products traditionally played an important role in Estonian foreign trade. Between 1990 and 1995, they accounted for between 17% and 24% of Estonian exports. The country traditionally was a net exporter of food and agricultural products. Imports increased significantly in recent years from 10% of total imports in 1992 to over 15% in

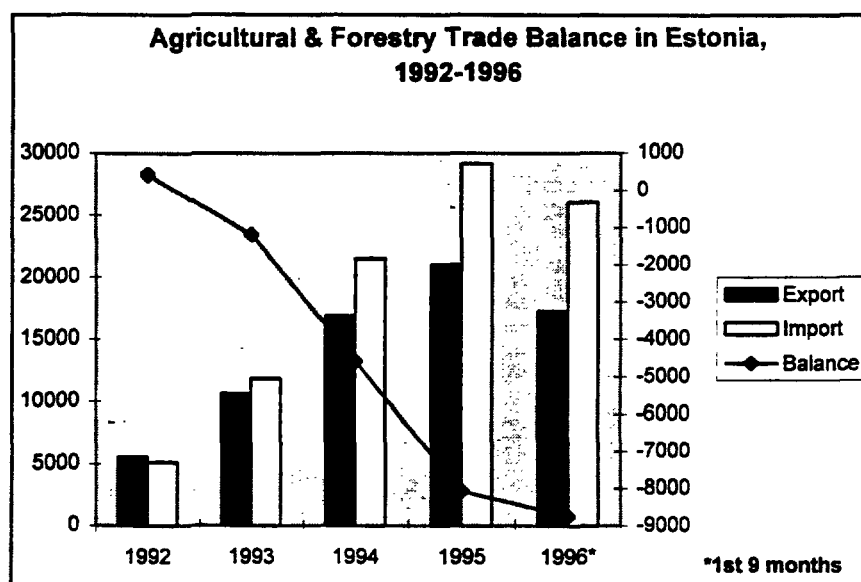


Figure 2

1996. As a result, in 1995, Estonia became a net importer of food and agricultural products (682.5 million EEK net imports). In 1996 the food and agriculture trade deficit increased further, and in the first nine months of the year amounted to -1255.9 million EEK (**Table 4** and **Figure 2**). There has been a significant shift in trade relations, however Russia, Ukraine, and the other Baltic countries have remained the major destinations for Estonian exports (65%) (**Figure 3**). The most important agricultural and food commodities exported were dairy and fish products, sugar, cocoa, and confectionary products. Most imports, mainly sugar, confectionary, cocoa products, grain, and beverages (including alcohol), originate in the EU (**Figure 4**). Sugar and cocoa imports are re-exported to the CIS countries. Forestry is increasingly becoming a source of export earnings. The positive balance of trade in wood and wood-based products increased five-fold from 1992 to 1995 (in 1995 it was 2.6 million EEK), more than offsetting the increased trade deficit in food and agricultural products.

14. P r i m a r y Agriculture. The total size of arable land (1.1 million ha) has changed very little in recent years. Only about 70-80% of this land has been cultivated since 1994; mainly in summer cereals such as barley and oats and also green fodder (Table 5). In 1994-95 of arable land was planted in fodder crops. Due to climatic and soil conditions, and inadequate technologies, yields of major crops are lower than in developed countries with similar climatic conditions (Table 6). The use of fertilizers and chemicals is declining and the state of the drainage systems continues to deteriorate. The decrease in livestock numbers has continued in recent years, reflecting the fundamentally changed conditions for Estonian livestock production (Table 7). Given the geographic and climatic conditions of the country, however, in the long term there are not many viable alternatives for agricultural production, other than livestock - mainly beef and dairy production. The total agricultural area in Estonia now comprises 1.4 million ha, which represents only 30% of the total land area in the country - one of the lowest proportions in all of the three Baltic republics. The more than

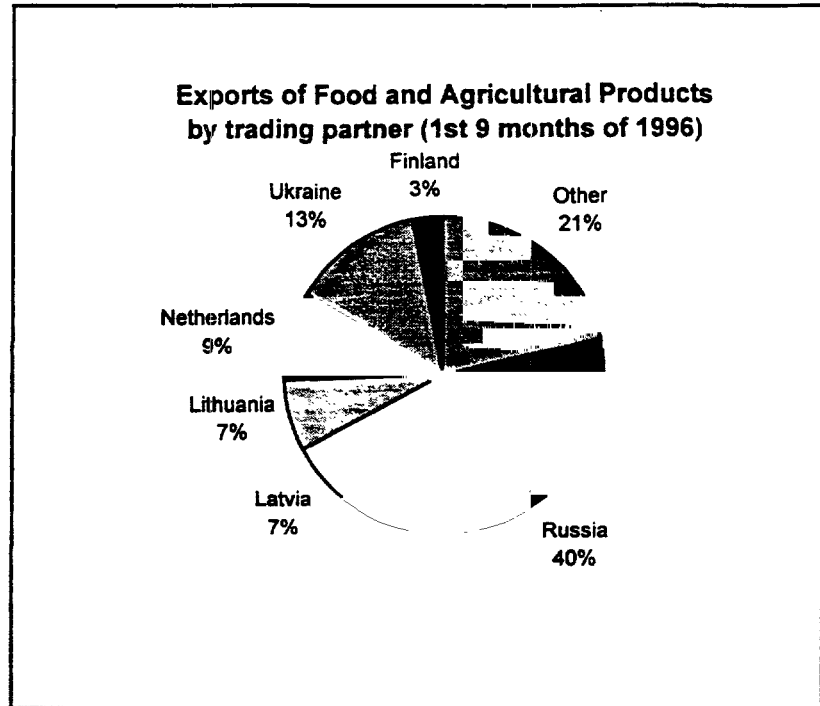


Figure 3

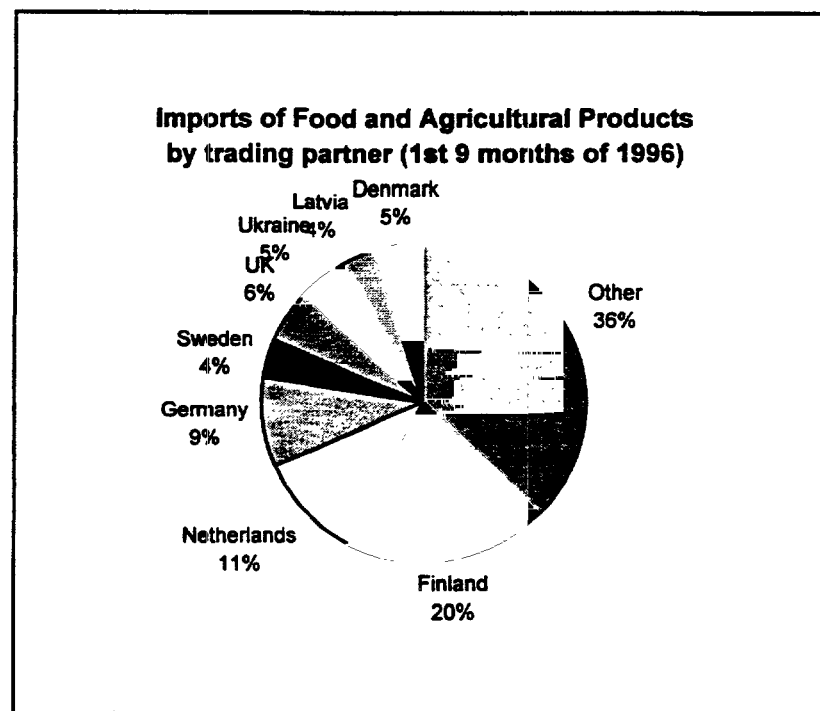


Figure 4

1.1 million ha of arable land, with a comparatively low soil quality and short growing season, has been used to grow cereals and fodder for animals.

15. Agro-processing. The food industry's leading activity is meat processing, which accounted for 22% of the total value of food production in 1995, followed by dairy products (20%) and fish processing (17%). Because of a fall in domestic demand and increased competition from imports, production fell sharply in all branches of food processing in the early 1990s. The capacity utilization rate in the dairy industry ranges from 33% for milk powder to 80% for cheese. In the fish processing sector, activity increased since 1993. The level of inherited technology in food processing is a serious constraint to increased food exports to western markets (in the second half of 1996 none of the Estonian meat processing plants were licensed to export to the EU or the US).

16. Forestry. Forest areas amount to 44.5% of Estonia's land area, and represent one of the most important natural resources of the country (Table 8). The annual increment of growth is around 8 million cubic meters (Table 9), providing a significant export opportunity for timber and wood products. Currently this potential is underutilized, only about 4 million cubic meters were cut in 1996. The annual cutting, however, has increased significantly compared to the pre-reform period. Forestry provides an alternative use of land that is marginal for agricultural use. Commercial reforestation however, is a rather significant investment. Natural reforestation is already in progress on some of the continuously uncultivated agricultural areas.

Land Reform and Farm Restructuring

17. Estonia started early in transforming its agricultural structure and was quick to establish farms based on private ownership. The country opted for a physical restitution of the expropriated property, including land, and this has turned out to be a major problem. Land reform and farm restructuring is clearly lagging behind macroeconomic reforms and overall privatization. The unfinished land reform and land privatization process is probably one of the most critical constraints on increasing competitiveness and sector recovery.

18. Slow Process of Land Privatization. The procedures selected for physical restitution, compensation, and replacement significantly slowed down the process of assigning property rights to all agricultural land in Estonia and the restructuring of the inherited large-scale farms. The restitution process, so far, has not resulted in transparent ownership in the majority of cases, as a result largely unstructured former large-scale farms operate on almost half of agricultural land.

- Only 20% of Agricultural Land has Individual Potential Owners and only 50% is Claimed. The administrative settlement of ownership is a time consuming and expensive process driven by a relatively large number of laws and regulations (see **Table 10** and **Box 1**). It is estimated that restitution claims cover some 50% of agricultural land in Estonia. In about 20% of agricultural land, there are no major contradictions between the previous owners and current operators of the land and buildings, making it relatively easy to return the land to the previous owners. About 30% of land is subject to contradictory claims that will not be easy to settle. About 50% of land has no claimants or previous owners (**Figure 5**). The settlement of disputes is rather slow, due, not only to the complicated procedures, but due also to the lack of resources in the local courts and municipalities for these tasks.

- Only about 10% of Rural Land has been Titled to Private Owners. The Estonian National Land Board (ENLB) was established to implement and oversee the land reform process, including maintaining and updating land cadastre. Individual claims for restitution had to be submitted to the local restitution commissions which made the initial decision on the claim (see **Box 1**). In regards to land restitution, about 160,000

claims were filled, and about 90% of them were evaluated by early 1996. However, only about 20,000 cases, covering about 10% of the agricultural area, were fully processed, including registration in the title book. The Estonian Government, in November 1996, issued regulations to simplify the land privatization process. According to local experts, the new regulations alone will not lead to significant acceleration of this process unless significant additional financial resources are made available. With current procedures and funds (which seeks full physical return of the original property), the completion of the land

Process of Land Restitution

- Applicants presented their claims to the **Restitution Commission**, which was attached to a district government. With the help of archives, the Restitution Commission reviewed each claim and assessed its validity. The rightful owners were identified and registered.
- The claim was then sent on to the **Municipal Authorities**, which confirmed its validity and decided on restitution or compensation. Finally, they determined, together with the applicant, the conditions of return, and established the documentation on the cadastre unit.
- A **Surveyor** determined the boundaries of the cadastre unit if no accurately mapped boundary information existed and passed the documentation on to the Land Board.
- The applicant applied to the **Land Board** for the registration of the cadastre unit and for registration of his ownership rights to the unit.
- The **Land Board** sent a map of the cadastre unit to the applicant who had to apply for the marking out of the land.
- The marked out land was registered in the **cadastre**.
- The **Municipality** presented the cadastre unit for titling to the **Title Office**, which registered the cadastre unit as a property belonging to the owner(s).
- The applicant was informed and received a map of the cadastre unit.

Source: Estonian Land Board

Box 1

restitution process will take an additional five years at best.

- Delays in Privatizing State-owned Agricultural Land.

About 90% of agricultural land is still state-owned and used on a short-term lease basis both by family farms and restructured collectives as well as larger incorporated farms. Assuming the full completion of land restitution, about 50% of agricultural land will remain in state ownership. The local municipalities are entitled to privatize the remaining state owned land for vouchers and through cash auctions. Very

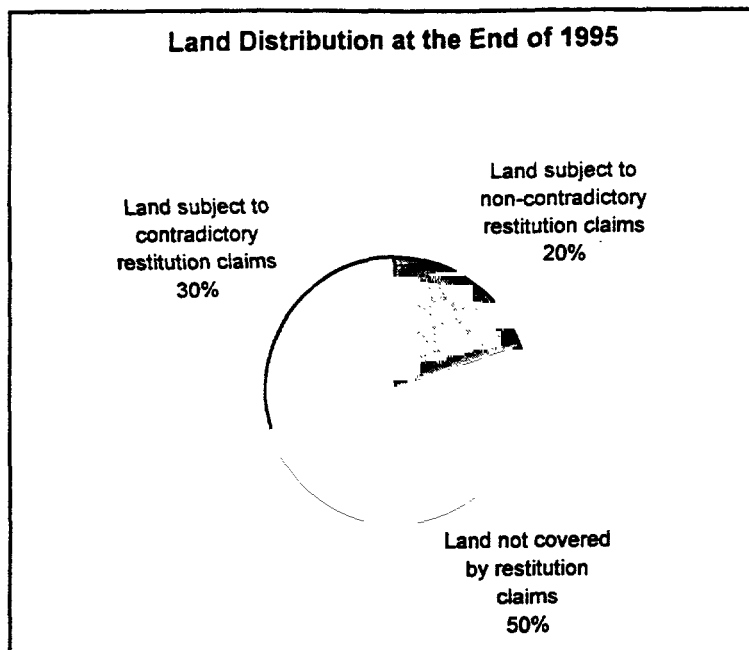


Figure 5

little progress has been made in this area, although since mid-1996, legal persons are also able to obtain and to own agricultural land. Significant portions of the state owned land are used by the successors of former Kolkozoes and Sovkhozoes, which still provide significant employment in rural areas. The acceleration of state land privatization would create additional pressure on these farms, most of which are in a very difficult financial situation, which is not in the short-term interest of the local municipalities.

- Markets for Land are at an early stage of development. There are no legal limits for buying and selling land. Foreign ownership, however, is restricted primarily to construction sites. Only land registered in the land book can be sold. The initial price for state-owned land is 4,000 EEK per ha (on average). As indicated above, there is rather limited interest in buying land. There is a quite active lease market, although fees are rather low due to the fact that the leases for state-owned land are equal to the land tax of US \$2 per ha per year, on average, and there is an abundant supply (30% of the agricultural land remained uncultivated in 1996).

19. Farming Structure Reflects the Unfinished Process of Land Reform. Before independence, agricultural production was organized in 350 large collective and state farms. Nearly all the assets of state and collective farms have been privatized and the farming structure is developing towards smaller sized private farms. The change in the farming structure, however, is still at a rather early stage and about half of the land is still cultivated by barely restructured large-scale farms. In principle the Estonian government does not favor any particular type of farming and the restructuring of the inherited large-scale farms is far from completed. Currently, the farm structure is characterized by three different types of farming

operations (**Box 2**):

- Larger corporatized farming enterprises created as a result of transformation of the Kolkhozes and Sovkhozes. These are joint-stock companies, partnerships and cooperatives, however in a sense, many (about 25% of them) still bearing the features of “Soviet-type” collective farms, or having a rather transitional character. There were 873

	Total Production (%)	Use of Cultivated Land*
Farm Enterprises	51	48
Family Farms	17	29
Household Plots	32	23

Box 2

such farms using 28% of total agricultural land and 48% of all agricultural land under cultivation, contributing 51% of total agricultural output in 1995 (**Table 11**). Since 1994, there has been a continuous decline in the number of these large-scale enterprises as the privatization process continues. They are dividing into smaller entities and many shareholders will take their land and set up their own private farms. The time-consuming process of ownership settlement, as well as the low profitability of agricultural production, and the difficulties in obtaining start-up capital, significantly slows down this process. Only about 20% of these enterprises function relatively well, while 20-30% are in serious financial difficulties.

- In 1996 about 20,000 family farms (**Table 12**) operated with an average area of 21 ha (**Table 13**). Only about 25% of them had registered their land titles as of mid-1996. Twenty four percent of agricultural land was used by family farms in 1996, which equals 29% of the total cultivated area. Their contribution to total agricultural output was 17% in 1995. It is expected that the number of family farms will further increase in the near future, their number increased by over 6,000 in 1995 and at least another 5,000 new private family farms are expected to be established in 1996, indicating an acceleration of land reform and increased interest toward family farming. Full-fledged private family farms concentrate on crop production. According to recent surveys, about 30-40% of family farms are doing well, especially those which were able to obtain land and equipment in the early period of transition.
- There are more than 130,000 small and non-registered subsidiary plots, with an average area of 1.7 ha, often operated by the shareholders of the large farming structures to supplement their wage income. This farming category used 18% of agricultural land, 23% of the cultivated area in 1995, and contributed, by 32% to total agricultural output (**Table 11**).

20. Farmer's Organizations. In the process of land reform, two organizations emerged to represent farmer's interests and provide support services. The Estonian Farmer's Union is the major organization representing private family farmers, with 6,000 members in late

1996. It provides advisory services and information as well as interest representation. The Agricultural Producers Union was created by the larger farming enterprises (about 200 current members). The third organization with agricultural relations is the Estonian Cooperative Union, which is mainly related to consumer cooperatives. All of the these organizations are lobbying for more support for agriculture, however, the Farmer's Union would prefer to get more budgetary support for development and initial capital, while the other two organizations advocate for direct income transfers. The Farmer's Union policy seems to be more consistent with the overall objective of creating competitive agriculture in Estonia.

21. The full completion of land reform in Estonia still requires further action and Government attention. The most critical tasks are as follows:

- a) simplification and acceleration of the restitution process, including the titling of newly privatized land;
- b) development and adaptation of strategies for the privatization of unclaimed state-owned agricultural land together with measures to facilitate a speedy further restructuring of remaining large-scale farms and consolidation in farm sizes;
- c) refinement of the legal framework for service cooperatives in agriculture, providing a framework for the emergence of new support structures to private agriculture; and
- d) the creation of institutions required by land markets and promotion of the emergence of land market agents and appraisers.

Privatization of Agroprocessing, Retail Trade, and Services for Agriculture

22. The privatization of industry and trading was among the major initial objectives of the Estonian economic reform in the wake of independence. This objective was almost fully realized by the end of 1996. The privatization of agroprocessing and upstream and downstream sectors are also close to completion. The privatization of agro-industries, however, has been somewhat delayed and was subject to a privatization methodology different from that applied to other sectors. This method of privatization inhibited foreign investment and did not result in real ownership, or owners with sufficient funds for investment and technical improvements. As a result, both upstream and downstream sectors remain ill-adapted to the needs of new private farming and to the requirements of competitive international markets.

23. The Impact of Article 32 of the Law of Privatization. As a result of political pressure from primary agricultural producers, a separate track was created for the privatization of state-owned grain mills, milk, and meat processing enterprises, and the Estonian Agricultural Machinery Service. So-called "processing cooperatives" were formed by those who produced

- agricultural products for processing or used machinery services. These cooperatives became entitled to buy upstream and downstream enterprises at preferential terms, including the opportunity to pay only 10% of the selling price as a down-payment. At the same time, the processing cooperatives committed themselves to continue production and maintain employment as well as submitting annual business plans for review by the Privatization Agency, until the purchase price has been fully paid. By the end of 1996, practically all industries falling under Article 32 were privatized and converted to processing cooperatives, with the few exceptions of liquidation cases.

24. After the first couple of years of operation, there is considerable evidence that indicates that giving preference to processing cooperatives may not have been the best strategy. The lack of financial resources, and of technical marketing and business skills, clearly hold back the development of most of the industries concerned. Some of these companies are already bankrupt or operating with significant financial difficulties, and are unable to adjust to the new competitive situation. Banks are also reluctant to support the cooperatives financially, due to the vaguely defined cooperative ownership responsibilities. One of the most significant negative impacts is that this procedure has become an impediment to the flow of private domestic and foreign investment. Yet there are no legal obstacles that prevent processing cooperatives from reselling the enterprises, or that prevent implementation of bankruptcy procedures to accelerate changes in ownership.

25. Privatization of Other Food Industry Branches. Brewing, confectionary, baking, tobacco, and other industries not mentioned above were privatized under the general regulations for privatization. As a result, foreign investors have acquired significant interest in these activities and have invested significant amounts since then. There have been new, mainly smaller-scale investments, in the industries privatized under Article 32. For example, according to the Ministry of Agriculture, new entrants have captured as much as 30% of the meat market.

26. Input Supply and Food Trading. During the last five years, the whole domestic trading system in Estonia was completely overhauled and privatized. The former state input supply organization was dismantled and Estonian farmers can now acquire machinery and variable inputs from different private suppliers offering products of both eastern and western origin. Eastern products are still significantly cheaper and are therefore preferred by farmers. The food retail trade system is also fully privatized (the share of state-owned enterprises in total retail trade is less than 5%). There are over 6,000 food retail shops in Estonia. The largest network is run by the Central Society of Estonian Consumers Cooperatives (ETK). The retail trade is becoming dominated by larger shops. Just one-third of the retail shops account for about 70% of total retail trade. Foreign trade of agricultural products is highly competitive, and many trading companies and food processing enterprises are involved in transit trade between Western companies and Russia. Agricultural commodity exchange markets have not yet developed in Estonia.

27. A working and efficient agroprocessing industry capable of producing products for domestic and international markets, and efficient rural services, are critical elements for the recovery of the agricultural sector and of rural Estonia. Further actions are therefore needed to create independent or private owners of agroprocessing industry who can efficiently control management and bring in additional investments. Priority should be given to rural SME development. In order to achieve this:

- a) post-privatization programs, including the revision of initial commitments regarding production and employment, should facilitate the restructuring and consolidation of enterprises privatized by processing cooperatives;
- b) the emergence of secondary markets for cooperative ownership of agroprocessing enterprises should be promoted and facilitated, including the promotion of foreign investment;
- c) competition should be increased by the enactment and enforcement of anti-monopoly legislation;
- d) strictly enforced bankruptcy legislation should be used to consolidate the newly established private sector, especially the segment owned by processing cooperatives; and
- e) the emergence of rural small and medium agroprocessing and service enterprises should be facilitated by improved registration procedures and advice.

Reforms in the Forestry Sector

28. In general, reforms in forestry are more advanced than in agriculture. In 1991, the Government initiated a restitution program to return former private forests to their original owners or their heirs. An institutional reform program has been implemented to change the management of forestry resources in the country and the forests remaining in state ownership. A National Forest Policy, providing a framework for longer term development of the forest sector, and defining the role of the public sector is being developed with Scandinavian assistance.

- Privatization of Forests. As a result of the restitution process, the area of state-owned forest will be reduced to the area owned by the state in 1940. This is approximately 50% of all forest resources. The actual restitution follows similar procedures as in agriculture, and legally it is proceeding relatively slowly. As of July 1996 about 160,000 ha of forest land had become private property, out of about 1,000,000 ha subject to restitution (**Table 14**). The privately owned forests are rather fragmented, the average size of a private woodlot was 11.3 ha in the middle of 1996.

- Role of the Public Sector. The Government intends to reduce the state role in forestry to regulation and use commercial methods in managing state owned forest. The Ministry of Environment is the responsible government body. Under the Ministry of Environment, the Forestry and Fishery Board is responsible for policy development, regulations, and controls, while the State Forestry Management Organization is in charge of managing state owned forest.
- Support to Private Forestry. The Government intends to support the private forestry through forest owner associations, which are now just being created. The Government will provide a first round of forest management plans for the privatized forest land free of charge and an extension service to enable the new owners to use these plans. At a later stage, both forestry management planning and an extension service will be provided on a commercial basis.
- Lack of Wood Processing Industry. The efficient utilization of Estonia's significant forestry resources is greatly constrained by the underdeveloped wood processing industry. Wood processing can be an activity which provides new employment and income to rural areas, therefore it should be encouraged by the Government.

Maintaining a Liberal Macro Environment for Food and Agriculture

29. The creation of an almost distortion-free macro environment has been one of the major achievements of recent Estonian economic policy. Prices are fully liberalized and there is an open trading regime, and government intervention and subsidization in the sector is minimal. This policy however, has had a mixed effect on the food and agriculture sector. While it is obvious that maintaining an overall liberal macro environment for the sector has overwhelming long and short-term advantages, there is growing pressure to make adjustments in the macro environment which would promote agricultural growth.

30. Pricing Policy. There is no Government price intervention in the sector. Both producer and consumer prices are determined freely by supply and demand. Following the macro-economic reforms in 1992, there was a marked deterioration in the agricultural terms of trade. Between 1991 and 1994, input prices increased by a factor of 17, while agricultural producer prices increased only 11 times. In the same period, retail food prices rose by a factor of 29, not only eroding the purchasing power of agricultural revenues, but also reducing the producer's share in the final price of agricultural products. **Table 14** compares major food retail prices in the three Baltic countries.

31. Trading Regime. Estonia has a free trade regime, with no tariffs on exports or imports. Estonia does not subsidize exports of agricultural products, however modest funds are available for export promotion, and the exporters of food and agricultural products are sometimes able receive export financing credit from the Estonian State Fund for Export Credits. At the

same time, Estonia has felt the negative impact of the protectionist policies of both Western and Eastern countries. Current Russian trade policy is particularly disadvantageous for Estonia. Since May 1995 the Russian government introduced double tariffs on Estonian agricultural commodities and Russian non-tariff barriers (such as difficult process of certification and limited inspection service at borders), represent additional significant impediments for Estonian exporters. Western barriers are more subtle, and are mostly in the form of health and quality standards.

32. Taxation. In Estonia, farms are generally subject to the same tax rules as other businesses, with some exceptions. Farmers whose annual turnover is below EEK 25,000 are exempt from income tax. Farmers who established their farm under the provisions of the Law on Peasant Farming, are exempt from income tax during their first five years of operation. Farmers are supposed to pay a dual rate land tax (0.5% of land's taxable value to the central Government and an additional 0.3% to 0.7% to the local authorities). To avoid land tax, many people delayed the registration of newly acquired land, consequently the land tax payable to the central Government was suspended until the end of 1997. In general, the Estonian farming sector is very modestly taxed. According to the Ministry of Agriculture, income tax payments in 1994 amounted to only 11.4 million EEK, while land tax was paid only on about 160,000 ha in 1994 (23.8 EEK per ha or US \$1.80 per ha), yielding a total of 3.7 million EEK in land tax payments.

33. Free Trade Agreements. Estonia has signed free trade agreements with the other Baltic States that include provisions for agriculture. The country has a trade agreement with the EFTA countries as well as with Russia and Ukraine. The agreement with Russia has not become effective. The agreement with Ukraine has already resulted in increased trade in food and agricultural products. While other Baltic countries such as Lithuania are interested in joining CEFTA, Estonia, due to its Nordic orientation, has limited interest in this organization, although the country is currently negotiating free trade agreements with several CEFTA member countries.

34. WTO. Estonia submitted its application for WTO membership in March 1994 and is currently negotiating its entry into the organization as quickly as possible. In the process of negotiations Estonia intends to preserve the option of implementing trade and agriculture policies similar to those applied by other Baltic countries and the EU, and presented tariff ceilings that are close to those applied in other countries in the region, and not the zero rate tariffs currently applied in Estonia. Estonia would also like to retain the option of applying moderate subsidies and export support for agricultural products. As of late 1996, the Estonian proposals were still under discussion and had not been accepted by other WTO members.

35. The European Union. Estonia signed a free trade agreement with the European Union (EU), which came into force on January 1, 1995. The Europe Agreement, signed in June 1995, inherited the trade concessions of the free trade agreement and established a framework for strengthening the cooperation with the EU and envisages Estonia's full

membership in the union. The trade concessions provided by these agreements, compare favorably with the volume of previous food and agricultural exports to the EU-12. However, since Finland and Sweden became members of the EU, these quotas might limit Estonian exports to the Nordic countries.

36. The potential for EU membership has created new opportunities and tasks for the Estonian food and agriculture sector. During the last few years Estonia received significant support from the EU through the PHARE program. Initially, this was in the form of general support for the process of transition, and now it is in the form of preparation support for accession to the EU. The preparation for EU membership is a critical task for the whole sector. The most critical issues which need to be resolved include:

- preparation of a detailed strategy for agricultural policy actions up to the period of accession and a strategy and information base for negotiations;
- harmonization of legislative and regulatory frameworks with EU standards; and
- improvements in institutions and administration of public services to be able to cope with the difficult task of implementation of the evolving Common Agricultural Policy.

Government Support Programs and Investments

37. Estonia has a modest agricultural budget (260 million EEK in 1996 and 301 million EEK budgeted for 1997), compared to the role of agriculture in the national economy. After independence, the agriculture related subsidies were either discontinued or modified. In nominal terms the budgetary allocations have increased since 1992, however, taking into account the inflation rate, the real value of budgetary support has significantly declined between 1992 and 1995. According to OECD estimates, spending on agriculture was relatively high in 1992 (accounting for about 12% of total Government expenditures), but its share fell to 5.2% in 1995 (Table 15). The budgetary relations of Estonian agriculture measured by the Producer Subsidy Equivalent (PSE) indicate a modest overall taxation of agriculture. The percentage of PSE in 1992 was positive at 29%, after a slight increase to 31% in 1993, it continued to decline to - 2% in 1995 according to a recent OECD report. While there is a low level of support to agriculture in Estonia, the comparable PSE indicators reflect a 42% average support level in OECD countries and a 15-20% support level in other Central East European countries (Poland, Hungary, and the Czech Republic). As in producer subsidies, a decline in consumer support in Estonia is reflected by the Consumer Subsidy Equivalent (CASE). The level of implicit consumer subsidies decreased from 77% in 1992 to 4% in 1995.

38. Current Agricultural Related Budgetary Expenditures. Table 16 provides an overview of recent direct government budgetary expenditures to the sector, managed by the

Ministry of Agriculture, while **Table 15** also includes other government expenditures channeled outside the Ministry of Agriculture. The 1997 budget allocation for the Ministry of Agriculture is 295 million EEK, of which 246 million EEK is for recurrent Ministry allocations, and 49 million EEK for public investments (see **Figure 6**).

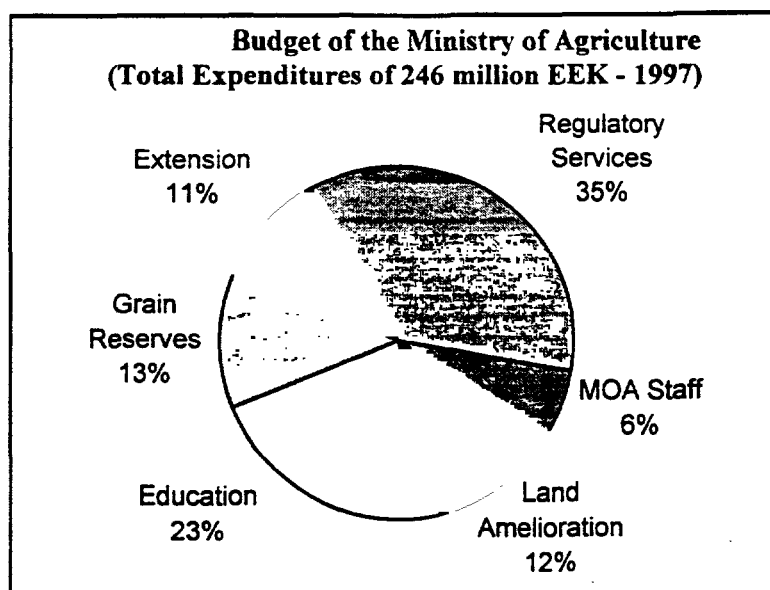


Figure 6

- The agriculture related budgetary expenses cover agricultural administration, the operation of regulatory services, education, research, and public investment.
- The public support programs include several so-called national development programs providing resources for research, development, extension, and training in the major areas of production. The total amount of these programs is about 40 million EEK. These programs do not create any distortions.
- Another significant component of Government expenditures, 20 million EEK in 1995, and 28.5 million EEK in 1996, is related to the maintenance of grain reserves.
- The only direct subsidy to farmers is related to the Agricultural and Rural Life Credit Fund (ARLCF) managed by the Ministry of Finance. In 1993, 125.4 million EEK was provided by the budget, and in 1994 that figure was 83.1 million EEK. On average, each year in 1995 and 1996, 50 million EEK was provided by the budget. These amounts were distributed as loans. If we assume that the annual interest rates were 5% lower than those for commercial credits, the related subsidies can be estimated around only 5-6 million EEK per year.

39. **Policy and Regulatory Functions.** Estonia is an associated member of the EU and has undertaken significant efforts to prepare for accession to the EU. These tasks require highly skilled and motivated public servants in the MOA. Presently, the salary structure is not competitive with the private sector and MOA is already facing difficulties in keeping their high quality staff. This trend is likely to continue if salaries for MOA staff are not increased.

40. **Public Investment Program.** Public investments in the sector are modest and MOA manages about 49 million EEK, about 2% of total public investments in 1997 (**Figure 7** and

Table 17). The PIP estimates that about 160 million EEK or about 3% of the total investments will be invested in the agriculture sector from 1997 to 1999 which includes investments financed by the World Bank's Agriculture Project. The majority of the public investments are provided for investments in existing buildings, drainage rehabilitation, and rural infrastructure.

41. In addition to the Ministry of Agriculture budgetary funds, 52 million EEK is allocated to the Land Board (Ministry of Environment) for recurrent

expenses and to accelerate the land reform in the rural areas and 60 million EEK is budgeted to replenish the Agriculture and Rural Life Credit Fund. Seven million EEK is provided to the Forestry and Fishery Board, which also is under the Ministry of Environment. Considering these additional allocations, the budgetary allocation for the sector is still rather modest compared to the role of the sector in the overall economy.

42. Estonia's agriculture is one of the least protected and subsidized in Europe and compares favorably with Australia's and New Zealand's agriculture. Nevertheless, there are a number of possibilities to reduce expenditures on the one hand, and, on the other hand, to increase certain services to maintain and improve core Government functions. These include:

- a) gradual increase of the user contribution to the drainage rehabilitation costs;
- b) reduction of the strategic grain stocks and possible replacement through a fiscal reserve fund to import grains in years of shortages;
- c) elimination of further budget allocations to ARLCF, but instead promote lending through commercial banks to agriculture;
- d) increase of budgetary allocations to accelerate the issuance of land titles; and
- e) increase the salary level for key public servants in MOA to keep high quality staff.

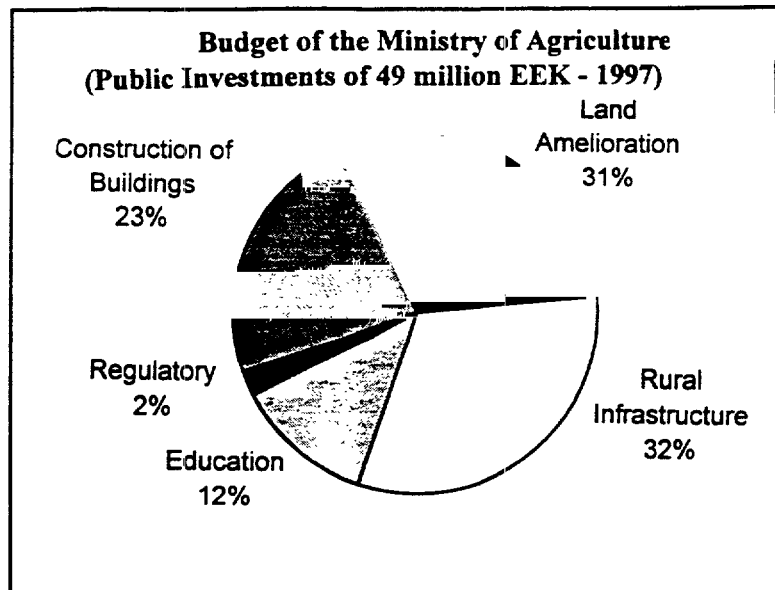


Figure 7

Improved Financing for Food and Agriculture

43. The limited availability of credit, particularly long-term investment credit, has been a major constraint in the rural economy. The Estonian banking system has undergone radical reform since independence. In food and agriculture, first the State Agricultural Bank, which specialized in providing credits to agriculture and agro-industries, was restructured and became the Estonian Land Bank. It was then split into 14 independent commercial banks. Later, three of these formed the new Estonian Land Bank and another 10 merged to become the Union Bank of Estonia, while the remaining bank stayed independent. These banks still play an important role in financing the sector, though in general commercial banks have limited interest in lending for farming and other rural activities.

44. To overcome the general lack of financial resources for the farming sector and the reluctance of the banking sector to provide credits to agriculture, several specialized funds were created to provide affordable credits and grants to agricultural enterprises and rural areas:

- The Agriculture and Rural Life Credit Fund (ARLCF) is mainly funded by the state budget and was established in 1993 to provide credits on favorable terms to the farming sector and to the rural economy. The banks authorized to distribute these funds, receive money from the ARLCF at a 5% annual interest rates, while the ARLCF receives the money interest free from budgetary outlays. The ARLCF is the major financier of the farming sector at the moment, available credit funds in 1996 were auctioned among banks interested in the distribution. In 1996 the banks distributing the credits charged on average a 6% additional mark up on longer term loans and 8% on short-term loans, resulting in overall interest rates of 11%-13%, only slightly lower than current commercial bank interest rates. The Fund's current portfolio is 318 million EEK, including 50 million EEK in short-term loans. Credit is provided mainly to farmers and agricultural service and processing enterprises (75%-80%). The rest is lent to the forestry sector. There is an increased demand for equipment leasing services. In the last four months of 1996, 20 million EEK was provided for this purpose. The percentage of non-performing loans is very low (2%-3% to date).
- Counterpart Funds. The food and agriculture sector has received financial support from counterpart funds from the sale of food aid given to Estonia. The largest project financed from the counterpart funds is the Rural Business Development Fund (RBDF). The fund was created in June 1993 and financed from the sale of grain donated by the EU. The fund has so far received 45 million EEK for the use of capital grants for the purchase of equipment and working capital by small enterprises. The sale of US grain in early 1993 raised about 30 million EEK, which was allocated as credit to farmers by the Union Bank of Estonia.

- The Rural Credit Guarantee Fund is being created based on the transfer of 60 million EEK from the Ministry of Agriculture, and using the accumulated interest from the counterpart funds. This amount will be used by banks selected on a competitive basis to provide guarantees to banks for credits in agriculture and rural development. The fund is not yet operational, it is being organized with technical assistance from EU-PHARE.

Creation of Institutions Required by a Reformed Food and Agriculture Sector

45. Estonia has implemented significant reforms to create the institutional and legal environment required by a market-based privatized agriculture. The quality of services provided by the new or reorganized institutions, however, does not yet fully meet EU standards. The strengthening of public institutions and improvement in the provision of public goods and services, therefore, is one of the most important tasks for the coming years.
46. Public Administration. The Governmental institutions in the sector were fully reorganized in 1993 and again in 1995. The Ministry of Agriculture and the Ministry of Environment became the main institutions responsible for agricultural policy. The Ministry of Agriculture is in charge of developing and implementing agricultural policies while land reform and land registration (Land Board) and the Forestry and Fishery Boards belong to the Ministry of Environment. The Estonian Grain Board, being responsible for the quality control of grain, grain trade, and state grain reserve system, reports to the Minister of Agriculture. There is a plan to set up a State Fund for Market Regulation but no concrete steps have been made to create this institution. The Ministry of Agriculture, under the current structure (see **Appendix 1**), operates according to the needs of a market economy and has regulatory, policy development, and service functions.
47. Information and Statistical Reporting. The information system, including the monitoring of actual developments in the sector, as well as changes in the markets, is currently one of the most critical areas of the institutional framework. The inherited system was fully tuned to the needs and features of the centrally-planned economy and quickly became inadequate, given the conditions of the emerging market economy. The current needs of managing agricultural markets and the EU accession specifically, require a speedy development of a modern, EU-conforming agricultural statistical information system. Some elements of the EU-conforming information system are already in place (German-type farm management system), however, the current situation is far from adequate. The information provided is not fully reliable and not up-to-date, resulting in delayed and inaccurate policy decisions. Immediate improvement is needed and can be achieved by the use of survey methods to get information on evolving farming structures and changes in the supply and demand situation.
48. Extension. No Western-type agricultural extension system existed during the Soviet era. After independence, the first extension service system was established by the Estonian

Farmer's Union, which now provides several advisors in every county. Recently the use of private advisors became possible as well. These services, supposed to be self-financing in the future, now receive only 10% of the advisory service costs from clients, while the rest is covered by the budget. The Government provided 9.5 million EEK for extension services in 1996. Out of that, 2.5 million was allocated to subsidize farmers to pay for private advisory services.

49. Education and Research. The reform of educational and scientific establishments began in 1993. Estonia has gone further in reforming agricultural research and education than any other FSU country. The Estonian Academy of Sciences was fully reorganized and lost all of its research management and fund allocation functions. The Agricultural University in Tartu has become the major institution of higher education and research, integrating all research institutes located in Tartu into the University. The remaining four institutes located elsewhere will be reorganized in the near future. Central research funds are managed by the Ministry of Education. At the University, educational programs have been reformed and both education and research became more closely connected to the world. These changes represent steps in the right direction, since in such a small country, there is a need for a concentration of research and educational activities and a closer integration with major international research centers. As an addition to the Agricultural University, there are 13 agricultural colleges and vocational schools located in the most important agricultural regions of Estonia. These train about 800 - 900 students per year, and in addition to farming, they also teach coastal fishing, timber processing, and agro-tourism.

Rural Environmental Situation

50. In the 1980s the state of the environment in rural Estonia deteriorated markedly. A high concentration of livestock production led to problems with organic fertilizer disposal. Huge quantities of fertilizer and chemicals were used to meet production goals, and combined with inadequate spreading machinery and bad management, resulted in major problems. Soil was compacted by the weight of heavy farm machinery. Groundwater became increasingly polluted and small lakes suffered from putrefaction. As a result of farm restructuring and recent changes, the amount of chemicals and inorganic fertilizers decreased and most of the excessively large livestock farms were broken down or ceased to operate. The decline of agricultural activities in the last five years brought some relief to the environment and resulted in decreased pollution. It is essential that the emerging new private agriculture is surrounded by a proper regulatory framework and receives adequate advisory services to avoid an increase in environmental degradation.

51. About 739,000 ha of agricultural land is drained in Estonia, or two-thirds of the land area under cultivation, as well as some 500,000 ha of forest land. There are nearly 37,500 km of regulated water-pipes and drainage ditches altogether. Almost 90% of arable land under drainage is tile drained, while about 10% is drained by open canals, and the small remaining area

is under pump drainage. The FSU invested heavily in drainage and soil improvement, especially in the 1970s. Since then, almost no maintenance has been carried out on the drainage system, so that it is severely damaged in key sections of fertile areas. The Land Improvement Board of the Ministry of Agriculture is primarily responsible for drainage.

Rural Living Standards

52. The income and employment situation is significantly less favorable in rural areas than in urban Estonia. Employment in rural areas has fallen considerably in recent years. Regional differences are becoming increasingly acute. Tallinn and the coast are relatively prosperous, while there is high unemployment in the north-east (burdened by obsolete Soviet-era industry) and in the south-east (dominated by agriculture). According to some estimates, the rate of unemployment in rural areas may reach more than 20%, particularly in the so-called "agro-cities" of former state and collective farms (Box 3). In those cases, the only source of income is the household plot. Increasing unemployment in non-agricultural sectors of the critical areas has reduced the prospects of finding employment outside agriculture. Also, increasing transportation costs have reduced the relative attractiveness of off-farm activities, and the high prices of accommodation in urban areas have discouraged labor mobility.

Rural Poverty in 1995			
	People below Poverty Line (%)	Share in Total Poor (%)	Share in Total Population (%)
Rural	14.7	44.8	25.7
Urban	6.8	55.2	74.3
Overall	8.9	100.00	100.00

Source: World Bank

Box 3

53. The income of an average rural family is about 80% of a similar urban family. Poverty is more widespread and deeper in Estonia's rural areas. The share of the rural population living below the poverty line is more than two times larger than the urban headcount index. The rural poor tend to be poorer than the urban poor. They have average expenditure levels nearly 45% below the minimum pension. By comparison, the expenditure shortfall is just 27% of the poverty line in urban areas (Box 3). The real welfare gap between the urban and rural poor is probably somewhat smaller, since living expenses tend to be higher in urban areas.

54. Since independence, Estonia has placed considerable emphasis on regional development. Rural development policy remains at an early stage in formulation, and is still regarded as an aspect of regional policy. Few institutions have the role of promoting rural development, including the Rural Development Board, which is attached to the Ministry of Agriculture. As an addition, there are donor-sponsored projects with the objective of promoting

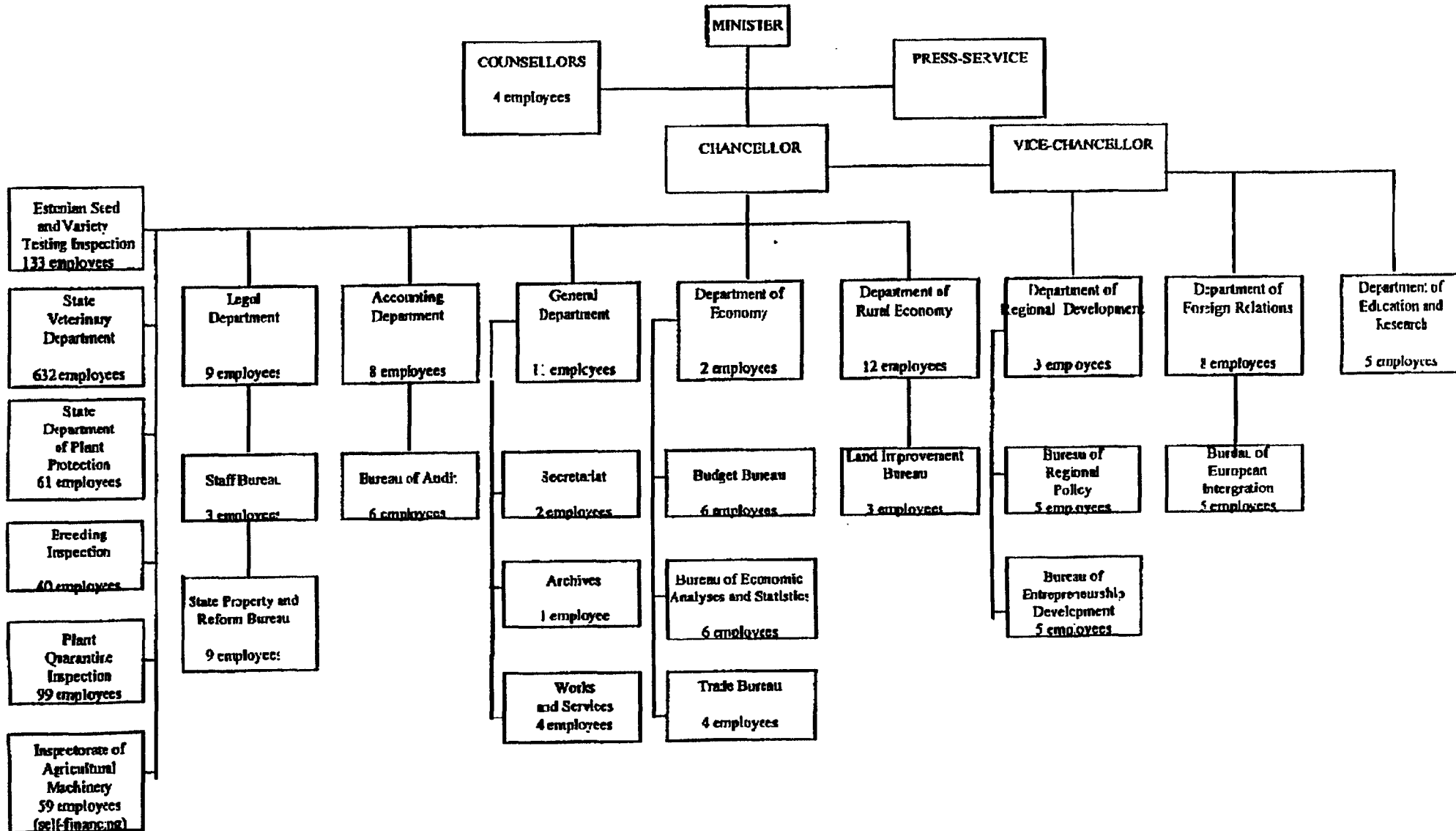
rural local initiatives, such as the Rural Business Development Fund. The central Government provides funds for the development of rural infrastructure. Most of these funds are used for improvement of drainage systems, water supply and improvement of other rural services.

World Bank Operations

55. The World Bank has been active in supporting macro-economic stabilization in the initial phase of reform, while current objectives are focussed on the development of a dynamic private sector, improve the existing public infrastructure, and alleviate the pockets of poverty that have developed during the transition process. The first involvement of the Bank in the sector in 1993-94 was the development of the Estonia Agriculture and Forestry Sector Review, which provides an assessment of potentials and highlights key strategy elements for the development of the sector. The Estonia Agriculture Development Project providing funds for public investments to accelerate land reform and improve the maintenance of rural infrastructure was negotiated in 1996 and is expected to be effective in early 1997. The Government of Estonia would like to continue World Bank involvement in the sector. There is significant interest in the various segments of the sector toward a second World Bank Agricultural Project that would provide credit for rural development, farm consolidation, recapitalization of farms, and improvement in rural financial services. The continued Bank activity in agriculture might include technical assistance and intellectual support to Estonia regarding EU accession issues and improve the provision of public goods, especially strengthening the regulatory institutions.

APPENDIX 1

Ministry of Agriculture



ESTONIA

Total Population	1.6 million	Agriculture in GDP 1995	8%	Decline of overall agriculture production 1995/86	47%
Rural Population	28%	Food and agriculture in active labor (1995)	12.1%	Decline of livestock sector 1995/86	52%
Total Area	4.52 million ha.	Food and agriculture in export (1995)	16%	Share of livestock (1995)	55%
Agriculture area:	1.46 million ha.	Forestry share in exports (1995)	16%	Share of independent family farms in total cultivated land (1995)	29%
Arable land	77.5%	Food and Agriculture in imports (1995)	14%	Share of small subsidiary plots in total cultivated land (1995)	23%
Drained	66%	Traditionally net exporter of processed foods: eggs, butter, cheese and flax, in 1995 Estonia became a net importer.			
Orchards	1.0%				
Natural Grassland	21.5%				
Forested	44.7%				

ISSUE	STATUS OF REFORMS	WORLD BANK PROPOSED ACTIONS/OUTSTANDING REFORMS NEEDED
<p>1. <u>Macro-economic Framework for Agriculture</u></p> <p>A. Prices/Subsidies</p>	<p>Completed price and market liberalization with almost no policy distortion.</p> <ul style="list-style-type: none"> • All prices are freely determined. • No government procurement. • No government price supports. • No deficiency payment systems. • Currency has been successfully stabilized. • Competitive markets have been created based on minimal barriers to entry. • Budget financed rural credit fund providing credit with subsidized interest rates to agriculture and rural areas is still functioning. 	<p>Maintain an open market-oriented agriculture sector.</p> <ul style="list-style-type: none"> • Continue commitment to liberalized prices and markets. • Avoid introduction of government intervention.

ISSUE	STATUS OF REFORMS	WORLD BANK PROPOSED ACTIONS/OUTSTANDING REFORMS NEEDED
B. Trade Policies	<ul style="list-style-type: none"> • No export or import restrictions on agricultural trade. • No tariffs for exports and imports. • In compliance with IMF agreement. • Trade agreements with the EU and EFTA countries. 	<ul style="list-style-type: none"> • Remain a completely open economy and become a trading center for the Baltic states. • Avoid introduction of new protectionist measures.
C. Taxation	<ul style="list-style-type: none"> • Principle of equality is prevailing in the taxation policy. • Exemption from income tax for small private farmers. 	<ul style="list-style-type: none"> • Do not create new distortion by introducing favorable taxation to certain groups.

ISSUE	STATUS OF REFORMS	WORLD BANK PROPOSED ACTIONS/OUTSTANDING REFORMS NEEDED
<p>2. <u>Land Reform and Farm Restructuring</u></p>	<p>Land is being restituted but the speed of reforms is curbed by financial, technical and legal impediments.</p> <ul style="list-style-type: none"> • Nearly all of the assets of state and collective farms have been privatized. • Majority of the land is still held in various larger incorporated farms which descend from the former collective and state farms. • The private farming structure has been developing towards smaller sized family farms with an average size of 24 ha. • Actual process of formal transfer of land titles to the newly established private farms has been slower than desirable. • The lack of security and transferability of leasehold has become a major impediment to the access of financial markets by those farmers that use unregistered lands. • Large proportion of the necessary farm drainage infrastructure is in poor condition. • Maximum land rental is set at 20% above the land tax, which implies an artificial upper boundary at 1.2% of the land value. 	<p>Viable system of independently operated, privately owned farms.</p> <ul style="list-style-type: none"> • Accelerate land reform via increasing resources and coordinating activities like cadastre registration and restitution among involved institutions. • Introduce incentives to register land as soon as possible, e.g. tax breaks or other financial incentives. • Develop framework for a functioning land market especially by clarifying leasehold rights and obligations, establishing market based rental rates for leasehold properties, and facilitating the transactability of leasehold rights. • Include state land into this market and resolve the issue of how it will be disposed (either sale or long-term leases). • Upgrade and increase efficiency of farm drainage infrastructure. • Review present restrictions on foreign ownership and allow for more foreign participation. • Remove controls on land rents.

ISSUE	STATUS OF REFORMS	WORLD BANK PROPOSED ACTIONS/OUTSTANDING REFORMS NEEDED
<p>3. <u>Competitive Agroprocessing and Services for Agriculture.</u></p>	<p>Privatization of agroprocessing has nearly been completed.</p> <ul style="list-style-type: none"> • Companies are in the process of adapting to the market economy, but need significant levels of investment and are highly indebted. • Overcapacities in certain processing industries, e.g. dairy industry. • In some cases, excellent commercial institutions, often with the participation of foreign firms, have emerged. 	<p>Internationally competitive agroprocessing and efficient services for agriculture.</p> <ul style="list-style-type: none"> • Remove preferential treatments and open agro-industry to foreign capital investments. • Foster the establishment of farmers' machine cooperatives. • Facilitate the upgrading of agroprocessing to meet European Union standards in all sectors still lacking behind.
<p>4. <u>Rural Financing</u></p>	<p>Banking system has been largely privatized.</p> <ul style="list-style-type: none"> • Rural financial markets need to be developed further. • Modern banking system is developing. • Rural lending has originated almost entirely from budget financed credit fund at subsidized interest rates. • Lending to agriculture and rural sector has been low, but emphasis has been placed on increasing it. • Lack of an independent lending tradition based on risk assessment and risk taking by banks. 	<p>Sustainable rural financial services.</p> <ul style="list-style-type: none"> • Train staff in financial sector to address the banking and financial requirements of the agriculture sector. • Train farmers in preparation of business plans and credit proposals. • Support the emergence of private banking structure. • Phase-out interest rate subsidies for rural lending. • Develop a rural guarantee fund to give partial guarantee on rural loans on a fee basis.

ISSUE	STATUS OF REFORMS	WORLD BANK PROPOSED ACTIONS/OUTSTANDING REFORMS NEEDED
5. <u>Institutional Framework</u>	<p>Adjustment of the institutional framework is at a fairly advanced stage.</p> <ul style="list-style-type: none"> • Ministry of Agriculture has mainly regulatory functions. • Development of agricultural extension services will receive public funding from the agricultural loan. • Agricultural research and education is constrained by a shortage of funds and lacks market responsiveness. • Food Quality Control do not yet meet international requirements except in few sectors. 	<p>Strategic framework for assistance to the rural sector.</p> <ul style="list-style-type: none"> • Accelerate technological transformation according to the needs of the private sector. • Set up project related research funding system, and demand oriented agricultural education. • Focus on rural poverty and regional development. • Improve public and develop private advisory services. • Establish monitoring and testing capacities for food quality to meet EU standards.

Agriculture Related ESW:

- * Agriculture and Forestry Sector Review. (Grey Cover). 1995
Translated into Estonian in 1995.

WB Lending Projects

- * Haapsalu and Matsalu Bays Environment Project
USD 2m; Project effective
- * Agriculture Project; Expected Effectiveness Date: March 1997
USD 15.3m

Table 1: Macroeconomic Indicators, 1992 - 1995

Indicator	Units	1992	1993	1994	1995
Real change in GDP	percent	-22	-7	-3	3
GDP at current prices	EEK million	13,100	21,918	31,228	40,461
Exchange rate (annual average)	kroons/US\$	12.65	13.24	12.98	11.54
GDP in US\$	US\$ million	1,036	1,655	2,328	3,506
Consumer price index (annual average)	percent	1076	90	48	29
Unemployment rate	percent	1.9	4.7	5.1	5.4
Budget balance	percent of GDP	1	1	3	1
Export growth (goods) in US\$ terms	percent	n.a.	75	61	38
Import growth (goods) in US\$ terms	percent	n.a.	86	70	51
Current account	percent of GDP	9	0	-6	-8

Source: OECD data base, Statistical Office of Estonia, Bank of Estonia, Country Report: Estonia, Latvia, Lithuania, EIU, 1st quarter 1996.

Table 2: Gross Agricultural Output (GAO) Index, 1986-96
(1986=100)

GAO	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996*
Total	97.4	93.8	100.9	87.7	84.2	68.4	63.1	57.0	52.9	52.3
Crops	88.8	74.4	96.6	72.6	77.7	66.1	73.3	63.1	56.7
Livestock	101.4	102.7	102.8	94.6	85.1	67.2	53.9	50.2	47.9

*Projection

Source: Statistical Office of Estonia, Estonian Ministry of Agriculture.

Table 3: Per Capita Consumption of Selected Food Products, 1986-95

Products	Units	1986	1990	1992	1994	1995
Meat (total) of which	kg/head	75	78	59	50	51
Pork	kg/head	44	46	28	20	21
Poultry	kg/head	9	9	5	3	4
Beef	kg/head	21	22	25	26	25
Milk (total)	litres/head	479	502	351	274	295
Butter	kg/head	9	9	7	5	6
Cheese	kg/head	5	6	5	4	5
Eggs	pieces/head	304	290	224	218	224
Sugar	kg/head	46	45	35	31	31
Cereal products	kg/head	82	69	81	82	80
Fruits	kg/head	56	36	25	26	28
Potatoes	kg/head	118	98	99	125	120

Source: Statistical Office of Estonia, Estonian Ministry of Agriculture.

Table 4: Foreign Trade in Estonia, 1992-96
(Million Kroons)

	EXPORT	IMPORT	BALANCE
1992 TOTAL	5548,6	5127,65	+420,95
of which:			
agricultural products (HS 1-24)	973,5	517,2	+456,3
share in total (%)	17,5	10,1	
wood and articles of wood	611,3	48,0	+563,3
share in total (%)	11,0	0,9	
1993 TOTAL	10636,2	11831,0	-1194,8
of which:			
agricultural products (HS 1-24)	2498,6	1741,0	+757,6
share in total (%)	22,1	15,9	
wood and article of wood	2254,5	522,0	+2732,5
share in total (%)	13,3	2,4	
1995 TOTAL	21039,9	29100,7	-8060,8
of which:			
agricultural products (HS 1-24)	3452,0	4,134,5	-682
share in total (%)	16,4	14,2	
wood and articles of wood	3320,8	673,7	+2647,1
share in total (%)	15,8		2,3
1996 JANUARY-SEPTEMBER	17298,0	26039,6	-8741,6
of which:			
agricultural products (HS 1-24)	2780,2	4036,1	-1255,9
share in total (%)	16,1	15,5	
wood and articles of wood	19949,8	406,9	+1542,9
share in total (%)	11,3	1,6	

Source: Estonian Ministry of Agriculture.

**Table 5: Crop Production in Estonia
(thousand tonnes)**

Production	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996*
Total grain	915	904	447	967	958	939	599	811	511	460	675
of which:											
Wheat	67	50	19	44	64	62	89	106	57	63	111
Rye	122	118	97	162	178	127	153	123	41	50	60
Barley	611	654	304	684	600	623	301	477	339	282	331
Oats	71	56	18	58	93	107	44	85	58	51	...
Sugarbeet	0.0	0.0	0.0	0.0	0.0	0.6	8.3	5.0	10.6	15	...
Oilseeds	0.0	0.0	0.0	0.3	0.0	1.1	2.3	1.7	4.2	5.5	...
Potatoes	1146	728	716	864	618	592	669	539	563	551	446

**Preliminary*

Source: Estonian Ministry of Agriculture, *Agriculture 1994*, Statistical Office of Estonia, Tallinn 1995.

Table 6: Yields of Main Agricultural Products in Estonia, 1986-95

	Units	1986	1991	1992	1993	1994	1995	1996*
Wheat	t/ha	2.4	2.6	2.1	2.1	1.7	1.9	2.5
Rye	t/ha	2.3	2.2	2.6	2.0	1.9	1.8	2.3
Barley	t/ha	2.2	2.2	1.1	2.2	1.6	1.5	2.3
Potatoes	t/ha	18.9	11.3	14.5	12.6	14.1	14.9	13.9
Cows (milk yield)	t/animal	4.2	4.0	3.5	3.3	3.5	3.5	2.9

**Preliminary*

Source: Estonian Ministry of Agriculture, *Agriculture 1994*, Statistical Office of Estonia, Tallinn.

Table 7: Livestock Sector in Estonia

	Units	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995 */	1996**/
Cattle	'000 head	840	828	821	819	806	758	708	615	463	419	379
of which:												
cows	'000	303	304	303	301	294	281	264	253	277	191	182
Pigs	'000	1074	1100	1084	1099	1080	960	799	541	424	421	367
Sheep	'000	148	136	136	135	140	139	142	123	83	85	72
Poultry	'000	6912	6906	6776	6897	6923	6537	5538	3418	3226	3400	2977
Milk production	million litres	1267	1290	1289	1277	1208	1093	919	807	772	706	

Source: Statistical Office of Estonia, Tallin, 1996.

*/ On December 31, 1995.

**/ On September 30, 1996.

Table 8: Estonian Woodlands Resources and Dominant Tree Species in 1996

Dominant species	Forest Area		Total Volume of Annual Increment Growing Stock			
	Thous.ha	% of total	mill.m3	%	mill.m3	%
Pine	726.3	38.1	109.8	39.6	3.04	33.7
Spruce	457.6	24.0	71.1	25.6	2.38	26.4
Birch	567.4	29.7	73.5	26.5	2.64	29.2
Aspen	29.6	1.6	6.0	2.2	0.18	2.0
Gray alder	78.5	4.1	10.5	3.8	0.58	6.4
Other	48.3	2.5	6.5	2.3	0.21	2.3
Total	1907.7	100.0	277.4	100.0	9.03	100.0

Source: Statistical Office of Estonia

**Table 9: Annual Maximum Volume of Wood Harvest
in Estonian Forests (million m3)**

	Felled stock		
	State Forests	Private Forests	Total
Clearings	2.70	2.35	5.05
Thinning	0.94	1.25	2.19
Other	0.15	0.42	0.57
Total	3.79	4.02	7.81

Source: Statistical Office of Estonia.

Table 10: List of Laws with Special Relevance to the Transformation of Agriculture

1989	December 6	Law on Peasant Farming */
1990	September 26	Law on Rent
1991	June 13	Law on Principles of Property Reform
	October 17	Law on Land Reform
	December 5	Law on Simplified Proof of Illegality of Alienation of Property
1992	March 11	Law on Agricultural Reform
	June	Law on Land Leasing
	June 11	Law on Dates of Application for Restitution and Compensation of Illegally Alienated Property
1993	January 13	Law on Extension of Restitution of Buildings and Establishments in Rural Areas to the Sisters and Brothers of Previous Owners and their Heirs
	February	Law on Determination of the Value and Compensation of Illegally Alienated Property
	May 6	Law on Privatization of Housing Facilities
	June 2	Law on Set-up of Local Government
	June 9	Law on Real Estate
	June 17	Law on Privatization
	June 15	Law on Land Register
	October 20	Law on Forestry
	October 27	Law on Implementation of Real Estate
	May 6	Law on Land Tax
	December 16	Law on Tax Arrangements
1994	February 9	Law on Land Valuation
	October 12	Law on Land Cadaster
	January 25	Law on Land Registration

*/ The most important laws in the Estonian agricultural reform process are in bold.

Source: The Estonian Ministry of Agriculture.

**Table 11: Contribution of Different Types of Farms to Agricultural Production, 1995
(percentage)**

Type of farms	Use of agricultural land	Total Production	Use of Cultivated Land	Livestock Production	Crop Production
Farming enterprises: corporate farms, state farms and co-operative:	30	51	48		
Family farms	24	17	29		
Household plots	18	32	23		
Uncultivated	28	--			
Total	100	100	100		

Source: Agriculture 1995 Statistical Office of Estonia, Tallin,

Table 12: Development of Family Farming */ in Estonia, 1991-96

	1991	1992	1993	1994	1995	1996
Number of farms	2300	7000	8400	10200	13500	19767
Average size in ha	27	25	25	25	23	21
Yearly increase in number	4700	1400	1800	3300	6267	50 00** /

Source: Statistical Office of Estonia.

*/ Only private family farms are included, not household plots.

**/ Estimate.

**Table 13: Size of Private Farms, January 1,1996
Number of Farms**

Size/ha	1992	1993	1994	1995	1996
0-5	576	659	818	1634	3490
5.1-10	894	1040	1298	1827	2898
20.1 -30	1499	1804	2191	2721	3574
30.1-50	1511	1811	2090	2488	3175
50.1-100	631	784	879	1027	1273
Over 100	37	45	54	66	85
Total	7029	8412	10153	13513	19767
Average area/farms	25.1	25.4	24.8	23.1	20.8

Source: Statistical Office of Estonia.

Table 14: Distribution of Forest Land by Ownership Category (1995)
(thousand hectares)

Country	State Forest Districts		Private Farms		Other Private Agricultural Producers		Other		Total	
	total land area	forest land area	total land area	forest land area	total land area	forest land area	total land area	forest land area	total land area	forest land area
Harju	166,9	119,8	23,4	8,5	196,0	64,2	47,0	12,7	433,3	205,2
Hiiu	53,3	44,0	5,1	2,8	42,6	17,9	1,3	0,1	102,3	64,8
Ida-Viru	195,5	136,3	13,2	6,8	97,6	33,5	30,1	0,0	336,4	176,6
Jõgeva	88,8	67,6	25,2	9,6	142,2	41,3	4,2	0,1	260,4	118,6
Järva	83,6	61,4	22,1	8,5	144,2	41,9	12,4	4,1	262,3	115,9
Lääne	76,6	44,8	13,5	5,3	140,0	41,0	8,2	1,0	238,3	92,1
Lääne-Viru	110,0	91,1	36,6	14,3	188,0	57,5	11,9	0,4	346,5	16,3
Põlva	62,9	48,8	46,0	17,5	103,6	30,3	4,0	0,2	216,5	96,8
Pärnu	216,5	145,4	32,9	12,5	216,6	72,3	14,6	0,6	480,6	230,8
Raapla	110,6	78,7	34,2	13,8	148,2	48,2	5,0	0,4	298,0	141,1
Saare	80,2	61,7	13,1	5,0	187,4	62,0	11,5	2,6	292,2	131,3
Tartu	89,5	59,5	51,7	14,7	144,0	32,9	23,8	0,4	309,0	107,5
Valga	69,3	59,0	27,0	11,4	102,0	34,1	6,4	0,6	204,7	105,1
Viljandi	114,9	79,0	38,9	16,9	179,8	60,4	25,3	0,4	358,9	156,7
Võru	64,7	53,1	29,0	11,8	131,5	44,7	5,3	0,1	230,5	109,7
Total	1583,3	1150,2	411,9	159,4	2163,7	682,2	211,0	23,7	4369,9	2015,5

Source: Statistical Office of Estonia.

**Table 15: Average Retail Prices of Selected Products October 1996
(USD per kilogram)**

	Latvia	Lithuania	Estonia
Beef (I category)	2.72	2.58	2.52
Pork (I Category)	3.07	3.40	3.09
Chicken (I Category)	2.60	2.34	3.01
Sauage/Boiled (I Category)	3.98	3.34	3.20
Butter	3.56	3.01	3.38
Milk, Fat Content 2.5%, 1 Litre	0.45	0.38	0.45
Sour Cream	1.65	1.96	1.58
Curd	1.52	1.65	1.94
Eggs (10)	1.09	0.89	1.07
Rye Bread	0.72	0.47	0.69
Rolls (High Grade Wheat Flour)	0.98	0.69	1.09
Sugar	0.87	0.85	0.67
Potatoes	0.18	0.14	0.21
Vodka, Plain, 1 Litre	6.80	6.03	7.98
Electricity (Kwh)	0.06	0.04	0.03
Minimum Wage, Sept. 1996	69.12	75.81	56.20
Average Old-Age Pensions. (III 1996)	70.54	49.14	80.63

Source: The Baltic Times, No.39, October - November 1996 based on Latvia Statistical Office Information.

Table 16: Budgetary Expenditures Associated with Agro-food Policies in Estonia
(million roubles in 1986-91; million kroons in 1992-95)

Expenditure on	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
1. Direct payments	23.8	28.3	82.6	88.9	114.3	102.2	50.8	2.4	0	0
2. Reduction of input costs	40.8	77.7	21.9	41.1	18.6	32.1	39.3	21.2	22.6	24.3
3. General services	51.3	49.5	49.1	53.1	50.5	93.8	90.6	144.3	160.4	222.2
4. Consumer subsidies	675.1	668.9	630.6	672.6	691.2	85.6	48.3	0	0	0
5. Social measures	6.2	6.8	7.9	0	6.9	15.6	0	0	0	0
6. ARLCF	0	0	0	0	0	0	0	125.4	83.1	100.0
7. Grain Board	0	0	0	0	0	0	0	40.0	35.4	20.0
8. Land Board	0	0	0	0	0	0	7.2	31.4	49.0	48.7
9. Other	52.6	21	41.2	65	42.1	14.1	14.3	10.5	22.7	22.6
10. Total Agro-food Expenditure	849.8	852.2	833.3	920.7	923.6	343.4	250.5	376.9	373.2	437.8
11. Total million US\$	1231.6	1352.7	1388.8	1461.4	1592.4	197.4	19.8	28.5	28.8	37.9

Source: OECD, 1996.

Table 17: Allocation of Annual Budget of Ministry of Agriculture 1995/97
(thousands of kroons)

	1997 draft	1996 budget	1995 report	total	1997/96 %
01 Ministry of Agriculture	14936,4	10171,9	8090,0	4764,5	146,8
11 National Land Amelioration Services	30,040,0	37,309,1	25672,0	-7269,1	-19,5
14 State Research Institutes	2102,1	--	--	2102,1	--
15 Janada Education and Advisory Center	5628,1	5113,8	3713,0	514,3	110,0
16 Agricultural Technical Schools	43,466,4	39,511,5	33,833,2	3954,9	110,0
17 Agricultural University	--	--	37,359,0	--	--
19 Teaching Methodology Center	604,5	494,5	437,0	110,0	122,2
21 Museums of Agriculture	3936,5	3437,3	2770,0	499,2	114,5
35 Restoration of Settled Areas	--	--	25000,0	--	--
41 National Reserve of Dairy and Meat Products	--	--	5040,0	--	--
42 National Reserve of Grain Seed	2000,0	3000,0	1500,0	-1000,0	-33,3
43 National Reserve of Grain for Human Consumption	28721,0	26110,0	--	2611,0	110,
51 National Development Program for Cereal Production	9970,0	9630,0	8014,0	340,0	103,5
54 Other National Programmes	14759,0	9830,0	5900,0	4939,0	150,2
61 Development of Farms	11533,0	6730,0	7363,0	4803,0	171,4
70 National Veterinary and Food Inspectorate	30267,7	--	--	30267,7	--
71 Veterinary Board	--	6303,7	3797,0	-6303,7	--
72 Veterinary Institutions	--	20662,6	20561,0	-20662,6	--
73 Veterinary and Food Laboratory	11827,5	--	--	11827,5	--
75 Plant Protection Inspectorate	--	6115,8	5394,0	-6115,8	--
76 Plant Production	13680,6	--	--	13680,6	--
77 Vegetative Material Control Laboratory	6220,9	--	--	6220,9	--
81 Animal Breeding Inspectorate	14977,0	13342,7	12134,0	1634,3	112,2
82 Plant Quarantine Inspectorate	--	3132,1	2259,0	-3132,1	--
83 Seed and Plant Variety Inspectorate	--	8525,1	7707,0	-8525,1	--
84 Chamber of Agriculture and Commerce	1000,0	1000,0	--	--	100,0
97 Area of Government of Ministry of Agriculture: Investments	49170,0	44458,8	47200,4	4711,2	110,6
98 Area of Government of MOA: other investments	6455,0	5166,0	5328,1	1289,0	124,9
TOTAL	301305,7	260044,9	269071,7	41260,8	115,9

Source: Estonian Ministry of Agriculture

**Table 18: Investment Plan of Ministry of Agriculture, 1997/98
(Current Kroons)**

Site	Total Cost	Previous Allocation	1997	1998
Construction				
1. Suuremoisa Technical School study building	1928000	928000	500000	500000
2. Kuremaa Agricultural Technical School, workshop	1030000	530000	500000	--
3. Vana-Voidu Higher Agricultural School, dairy cattle shed	1940000	1470000	470000	--
4. State drainage support for farms	127500000	70470000	7000000	50030000
5. Jogeve Veterinary Center, Building	2118000	1416000	500000	202000
Capital Investments				
1. Drainage rehabilitation	149510000	6120000	6000000	42640000
2. Power lines and communications systems in rural areas reconstruction	65747000	21747000	11000000	33000000
3. Museums				
4. Research and learning institutions	3412000	1262000	350000	1800000
5. Other budgetary institutions	34841000	9223000	3990000	21628000
6. Ministry of Agriculture, building	13810000	5240000	8570000	--
7. Land Amelioration Bureaus, buildings and equipment	5924000	2154000	900000	2870000
8. Drainage for state companies and budgetary institutions	2650000	21181000	700000	4619000
9. State maintained water pipelines	30300000	15468000	2470000	12362000
10. Regional infrastructure, development	25000000	14208000	2000000	8792000
Purchases				
1. Research and learning institutions	11900000	1563000	2000000	8337000
2. Food labs, upgrading to EU requirements	24700000	3500000	1135000	5585000
3. Land Amelioration Bureaus	2400000	400000	500000	1500000
4. Car leasing payments	257000	108000	85000	64000

	Construction	Capital Investment	Purchases
1997 draft	8,970,000	36,480,000	3,720,000
1996 budget	15,000,000	23,518,000	5,940,800
1995 report	31,100,000	14,900,000	1,200,000

Source: Estonian Ministry of Agriculture

OTHER REPORTS IN THIS SERIES INCLUDE:

EC4NR Agriculture Policy Note #1:
Armenia Agriculture Policy Update - December 1995

EC4NR Agriculture Policy Note #2:
Land Registration and Land Titling Projects in ECA Countries - May 1996

EC4NR Agriculture Policy Note #3:
Latvia Agriculture Policy Update - July 1996

EC4NR Agriculture Policy Note #4:
Current Status of Agricultural Reforms in EC4 Countries - July 1996

EC4NR Agriculture Policy Note #5:
Moldova Agriculture Policy Update - September 1996

EC4NR Agriculture Policy Note #6:
Land Reform and Private Farms in Georgia: 1996 Status - October 1996

EC4NR Agriculture Policy Note #7:
*With Farmer's Eyes: A Grassroots Perspective on Land Privatization
in Moldova - October 1996*

EC4NR Agriculture Policy Note #8:
Land Reform and Private Farms in Armenia: 1996 Status - December 1996

EC4NR Agriculture Policy Note #9:
Land Reform and Private Farming in Moldova - January 1997

Additional copies of this report and the policy notes listed above can be obtained from Ms. Phyllis Harrison at extension 32189.