The Lithuanian Agricultural and Food Industry: The Setting for Economic Reforms

Natalia Kazlauskiene, William H. Meyers, and Kyle J. Stephens

October 1991
Report 91-BR 3
(Formerly CARD Staff Report 91-SR 56)

Lithuanian Institute of Agrarian Economics
Vilnius, Lithuania

Center for Agricultural and Rural Development
Iowa State University
Ames, Iowa 50011

Natalia Kazlauskiene is lead scientist and head of the Research Group, Lithuanian Institute of Agrarian Economics. William H. Meyers is professor of economics and associate director of the Center for Agricultural and Rural Development (CARD), Iowa State University. Kyle J. Stephens is a research data analyst with CARD.

The Lithuanian Institute of Agrarian Economics, Vilnius, and CARD, Iowa State University, are collaborating on a number of research projects related to all facets of economic reforms in Lithuania. This paper is a result of that joint venture.

CONTENTS

FIGURES

TABLES

ABSTRACT

After parliamentary elections and the formation of a new government, Lithuania declared the restoration of its independence from the USSR on March 11, 1990. Although Lithuania was not recognized as a separate state by the USSR and the world community until after the failed Moscow putsch of August 1991, the process of economic and political transformation began in 1990. The goal of the reforms is a democratic political system and a market-oriented economy.

The agricultural and food industry has been emphasized in these reforms because of its historical significance and its current importance in the national economy. This report provides an overview of this industry leading up to and including 1989 so the context for the reforms and the potential consequences can be better understood. Emphasis is given to the structure of farming, agricultural production and productivity, food production and consumption, farm prices and profitability, and trade. Information presented on price reform decisions up to May 1991 is indicative of the type of change that is under way, but this process is continuing.

THE LITHUANIAN AGRICULTURAL AND FOOD INDUSTRY: THE SETTING FOR ECONOMIC REFORMS

Lithuania is one of three Baltic states that were a part of the USSR. Its area is 25.2 thousand square miles (65 thousand square kilometers) and in 1989 it had a total population of 3.72 million people. As Lithuania moved towards independence, there were numerous political and economic changes. One outcome of these changes is the reform of existing economic policies that, since the republic's incorporation into the Soviet Union in 1940, have been governed by a highly centralized planning system.

All sectors of the economy will be affected by these economic reforms. Economists, government legislators, and leaders of agriculture and industrial enterprises are heavily involved in formulating economic reforms. The goal of the reforms is to move towards a market-oriented economy. The agricultural sector has been emphasized within the framework of these overall reforms because of its nature and its importance to the national economy. As a consequence of economic and political reforms, conditions in the food and agricultural industry are changing rapidly. This report provides a comprehensive overview of this industry prior to these major reforms so that the context for these reforms can be better understood.

The agricultural orientation of the Lithuanian economy can be illustrated by the traditionally large share of total GDP the agribusiness sector has held in the republic: 50.4 percent in 1989, 42.6 percent in 1980, and 50.3 percent in 1975. The rural population is heavily employed in the agricultural sector and comprises 31.5 percent of Lithuania's total population. The agribusiness industry consists of three sectors: input production and supply for agriculture, production of primary agricultural products, and processing of agricultural products. Among these three sectors agricultural production is the largest. For example, in 1989 the contribution of production agriculture to the agribusiness industry GNP was 48.4 percent, it employed 56.0 percent of the labor force, and possessed 70.1 percent of the agribusiness industry's assets.

The recently implemented policy reforms and others still under discussion are intended to alleviate economic problems of the current production and distribution systems. Some reforms deal with fundamental changes in the structure of the farming system, ownership of the land and other assets, and management of the farms. Others deal with economic considerations such as price policies, income subsidies, tax policies, as well as the development of banking and credit systems, and the

privatization of enterprises related to production, processing, marketing, input supply, and agro-services. The reforms also include changes in state procurement policies for agricultural outputs. Specifically, these reforms would lead to alternative marketing systems, including a market-oriented system for agricultural products.

Agro-industry in the General Economy

More than 30 percent of the Lithuanian population lives in rural areas, and many rural residents work in some part of the agribusiness industry. The agribusiness sector produces about 50 percent of the Lithuanian GDP. In 1989, for example, agricultural production was 23 percent of GDP; and nearly 33 percent of GDP from industrial, construction, and transportation and communications activities was also in this sector. In the same year, about 44 percent of the labor and 62 percent of Lithuania's assets were employed in agribusiness.

While the food industry contributes nearly 25 percent of agribusiness GDP, it uses less than 10 percent of the labor and assets in the sector and receives less than 10 percent of the investment. These figures suggest that the food processing sector has been neglected relative to production agriculture and that there is significant investment potential in the processing industry. Such investment would also provide a new source of employment and income to workers who may be displaced by adjustments in production agriculture.

Wages in most agribusiness enterprises are higher than the national average, but there is a significant variation between the lowest group (retail) and the highest group (management). In addition, rural families can earn greater extra income from production on personal plots, which is not included in the wage rates. Investment in agriculture in 1989 was 80 percent of the total for the agribusiness complex and 38 percent of the total investment in the Lithuanian economy. Total figures on investment, machinery, and fertilizer disguise problems with distribution of these resources. The current productivity of farms is partially determined by the distribution and quality of assets and inputs. Past distribution of investment and machinery was not based on efficiency criteria but on administrative decisions that could be influenced by favoritism or mere incompetence of the authorities.

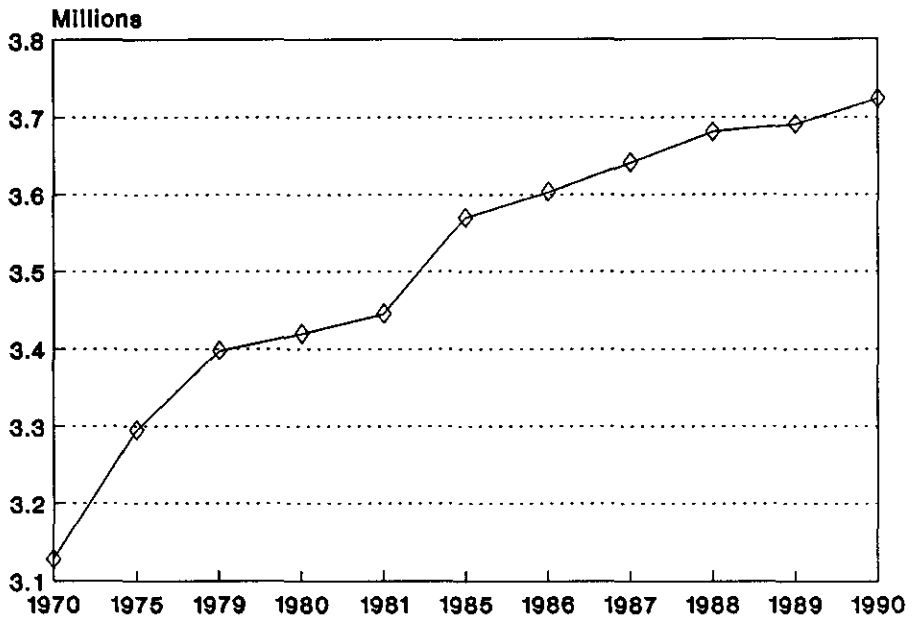

Figure 1. Lithuanian population

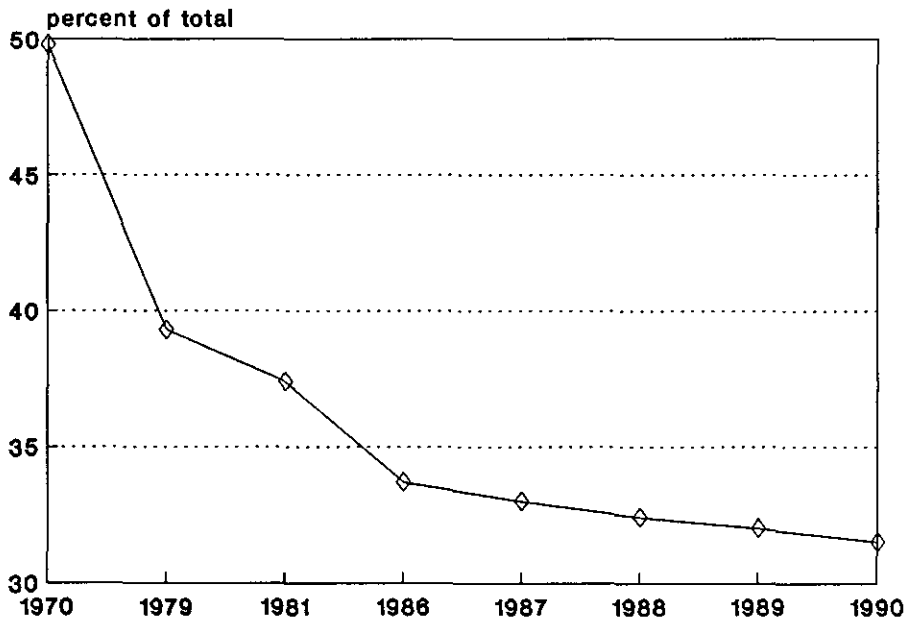

Figure 2. Lithuanian rural population

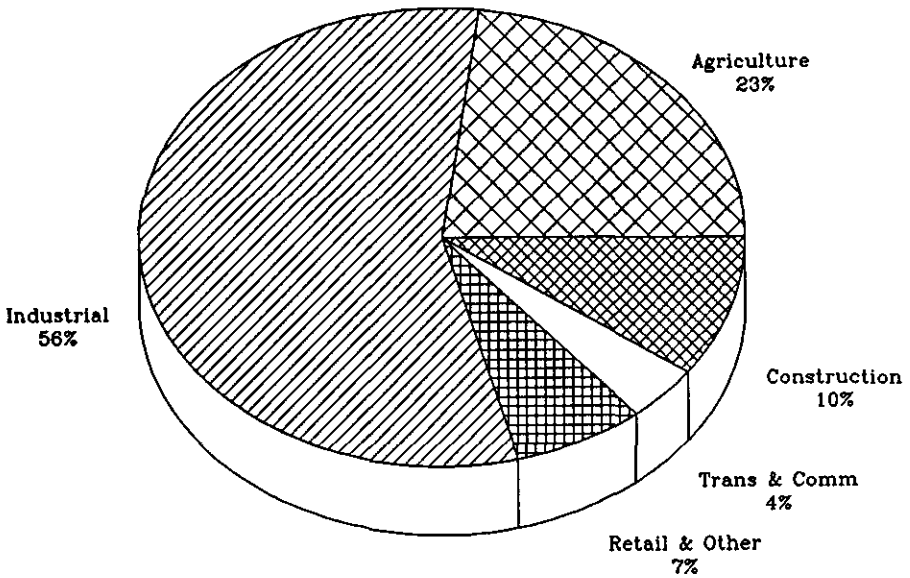

Figure 3. Structure of Lithuanian total GDP, 1989

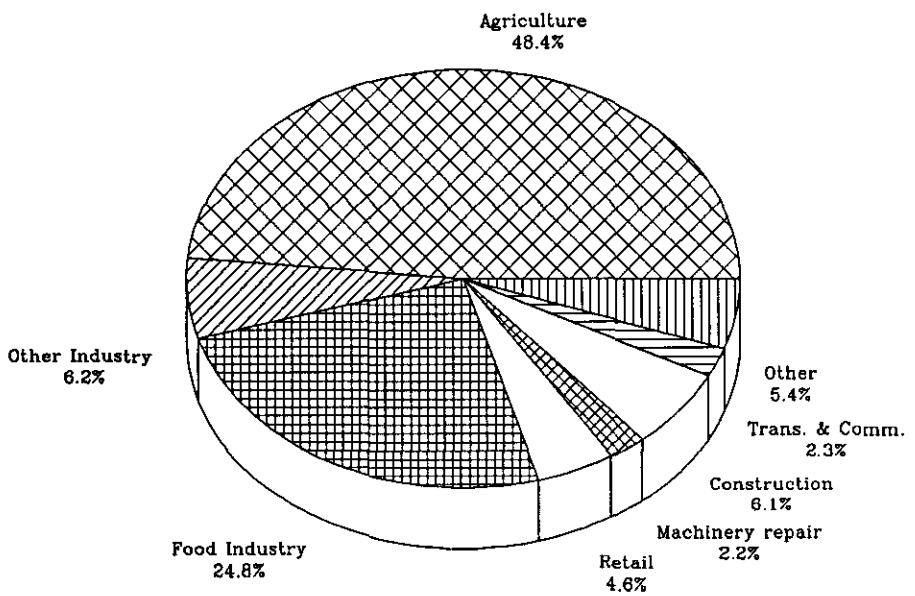

Figure 4. Structure of Lithuanian agribusiness GDP, 1989

Table 1. Overview of Lithuanian population, GDP, and income

	1980	1985	1986	1987	1988	1989
Population (as of December 31)			(thousands)			
Total	3,446	3,603	3,641	3,680	3,690	3,723
			(percent)			
Rural	37.4	33.7	33.0	32.4	32.0	31.5
Gross Domestic Product			(million rubles, current prices)			
Industrial	9,336	11,074	11,782	12,559	12,847	13,664
Agricultural	3,040	4,775	4,986	4,939	5,550	5,585
Construction	1,450	2,066	2,103	2,446	2,559	2,423
Transportation and Communication	506	716	771	765	787	869
Retail and Other	1,234	1,715	1,661	1,658	1,740	1,741
Total	15,565	20,346	21,303	22,368	23,482	24,282
National Income	5,867	7,514	7,922	8,280	8,913	9,145
			(rubles/year)			
Income per Capita	1,717	2,116	2,212	2,289	2,439	2,478

Table 2. Structure of GDP, labor, and assets in the agribusiness industry for 1989

	GDP	Labor	Assets
	(percent)		
Agriculture	48.4	56.0	70.1
Industry	31.0	9.5	9.2
(Food industry)	(24.8)	(8.8)	(8.3)
Forestry	0.2	0.9	0.1
State Purchases	0.6	1.5	0.6
Retail	4.6	7.7	3.0
Machinery Repair	2.2	0.3	3.0
Construction	6.1	14.2	1.7
Transport and Communications	2.3	2.5	7.5
Agro-chemicals	1.7	1.2	2.4
Other	2.9	6.2	2.4
Total[a]	12,234	684,400	17,059
(Percent of national)	(50.4)	(43.7)	(61.7)

[a] Million rubles for GDP and assets, number of workers for labor

Table 3. Number of agribusiness enterprises

	1988	1989
Total (as of December 31)		
Collective Farms	736	833
State Farms	310	275
Agricultural Collective Ventures or Complexes	76	77
Regional Construction Organizations	80	181
Slaughter Houses	8	8
Dairy Plants	8	9
Sugar Refineries	4	4
Flax Processing	10	10
Alcohol Production	2	2
Vegetable and Fruit Processing	6	6
Agro-chemicals	44	44
Repair Workshops	44	44

Table 4. Wages in the agribusiness industry

	1988	1989[a]
	(rubles per month)	
Agriculture	222	254
Food industry	271	283
Retail	150	184
Construction	308	335
Research	218	262
Management	298	447
Transportation	220	239
Average	234	263
National Average	223	241

[a] In 1989 annual average income from personal plots was 739 rubles per family (373 rubles for urban and 2920 rubles for rural families). This income is not included in the wage rates.

Table 5. Investment in the agribusiness industry

	1988	1989
	(percent)	
Agriculture	77	80
Industry	8	9
Capital	6	3
Retail	1	2
Other	8	6
	(million rubles, 1989 prices)	
Total	1,449	1,392

Table 6. Investment in agriculture

	1980	1985	1986	1987	1988	1989
	(million rubles, 1989 prices)					
Total Investment in Agriculture	795	953	997	1055	1114	1114
State Investment	460	523	583	614	622	615
Collective Farm Investment	335	430	459	441	492	498
	(percent of total investment)					
Agricultural Investment	44	39	36	36	35	38

Table 7. Farm machinery asset inventory, all sectors

	1980	1985	1986	1987	1988	1989
Grain Harvesting Combines	1,470	1,400	1,350	1,414	982	816
Tractor Ploughs	3,549	2,707	3,020	3,946	4,759	4,310
Tractor Seeders	2,872	1,798	1,717	1,584	1,680	1,443
Tractor Cultivators	3,448	5,281	5,736	5,536	3,731	2,581
Potato Harvesting Combines	110	282	128	14	32	4
Root Harvesting Combines	293	44	70	127	75	109
Silage Combines	514	203	377	191	74	80
Tractor Grass-mowers	3,200	1,600	1,590	1,530	1,960	1,774
Tractor Grass-rakers	1,582	1,054	840	524	490	470
Balers	721	560	424	216	375	588
Loaders	1,238	1,380	1,653	1,726	1,338	798
Milking Equipment	548	841	1,007	958	941	920

Table 8. Fertilizer supplied by the state

	1980	1985	1986	1987	1988	1989
	(thousand metric tons)					
Total Fertilizer	553	689	657	672	667	732
Nitrogen	239	284	271	274	257	283
Phosphorous	123	143	133	144	139	179
Potassium	190	262	253	253	271	270

Note: Actual total fertilizer use is greater than the official numbers for total fertilizer supply. This discrepancy arises because farms may acquire fertilizer outside state contracts and use farm fertilizer stocks from previous years.

Structure of Farming

State and collective farms make up the public agricultural sector. In addition, there are individual plots and private farms are now being introduced. Part of the difference between 1989 and 1990 numbers for state and collective farms is the impact of reorganization. Some of the state farms became collectives and some of the large-scale collectives were divided into two or three separate collective farms.

The difference between collective and state farms is the ownership of assets. Collective farms own their assets and have greater decision making independence about using them. In addition, part of the collective farm profits are distributed among the workers as an end of year bonus. This bonus can be a substantial portion of yearly income. State farm assets are owned by the state and managers have little decision making flexibility.

Part of the processing of agricultural products takes place at the farm level and there is a tendency to increase the amount of processing at this level. Many farms are encouraging both agricultural and nonagricultural industries. These make up more than 50 percent of gross income on many farms.

Until July 1990, individual plots were officially limited to 0.5 hectares, although this limit was often exceeded. Since July 1990 individuals can have plots ranging up to 3.0 hectares. These small plots are mainly for livestock production. The little crop production that does take place consists mainly of potatoes or vegetables. Individual plots are allotted to public sector agricultural workers. They are allowed to graze their animals on some meadows of the collective farms. Livestock production on the individual plots is primarily dairy cattle. However, pigs are also fattened on contract with the collective farms, with feeder pigs and concentrate being provided by the collectives. Overall, about 30 percent of agricultural GDP comes from individual plot production.

Beginning in 1985 much of the livestock production from individual plots was sold to the collective farms through contracts. This production was included as part of the collective farms' production rather than as individual plot production. The individual plots are cultivated by workers from collective and state farms, and this outside activity may cut into their on-farm work time. The production purchased from the individual plots helps the collective farms meet or exceed their contracts with the state. Because so much extra time is demanded from workers, they are unable to develop markets for their own products. They are also constrained in their ability to market their goods because of the limited farm-to-market transportation and an underdeveloped marketing system for private production.

In 1989/90 there were 150 private farms in Lithuania, and about 3,000 people had applied for farms. The number of private farms increased to 543 by April 15, 1990 and to 1,718 by July 1, 1990. Private farms will be given away in plots of up to 50 hectares. It is thought that it may take as long as 10 to 15 years before all the land is fully privatized. Some of the successful collective farms will probably develop into shareholding or joint stock enterprises. There will be laws regarding the sale of this land and the distribution of farm assets during the first few years of the transition process. A bimodal production structure is likely to exist for some time, with many small farms producing a small part of farm output and fewer large farms producing a large share of the output.

The individual plots are not mechanized to any large extent. In fact, the lack of any type of small-scale farm machinery will be an obstacle to the success of small private farms. Currently farm machinery and buildings are those of the large-scale collective and state farms. Until there is enough small-scale technology available, the private farms will need to adapt and develop ways of sharing or leasing existing farm equipment or services.

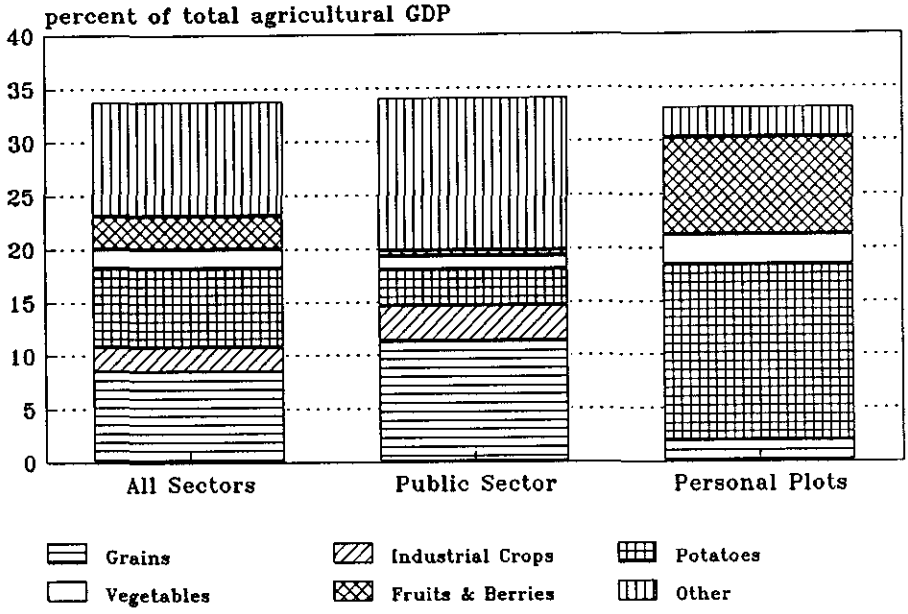

Figure 5. Structure of agricultural GDP, crops sector, 1989

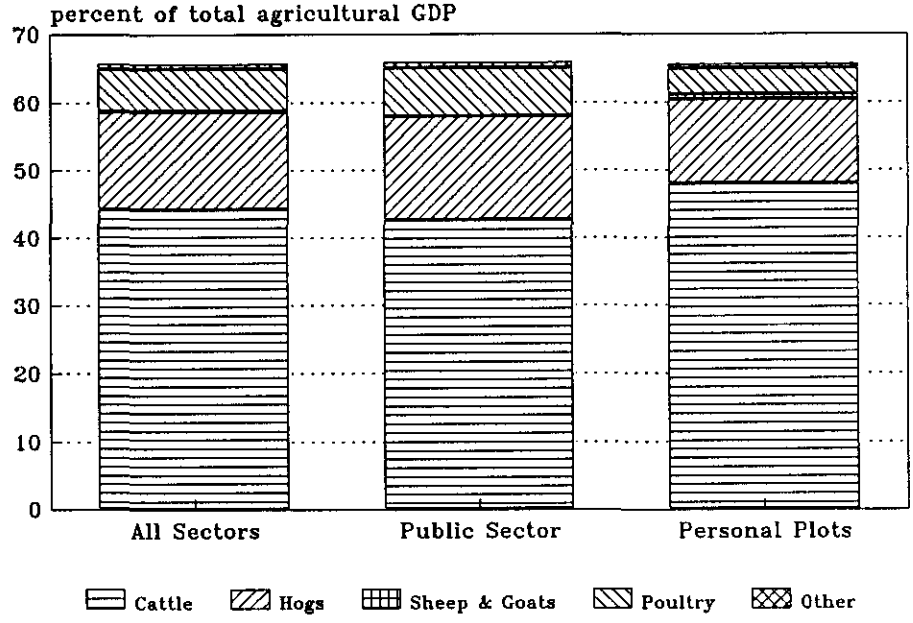

Figure 6. Structure of agricultural GDP, livestock sector, 1989

Table 9. Structure of agricultural GDP

	Average 1976-80	Average 1981-86	1986	1987	1988	1989
		(1983 prices, million rubles)				
Total	4,022.7	4,289.1	4,772.5	4,774.7	4,890.5	4,978.3
Public sector (percent)	(64.3)	(67.3)	(68.6)	(71.0)	(70.7)	(69.4)
Crops	1,301.4	1,475.1	1,623.7	1,586.2	1,639.9	1,706.4
Public sector (percent)	(64.2)	(69.1)	(69.0)	(71.9)	(69.9)	(69.2)
Livestock	2,721.2	2,814.0	3,148.8	3,188.5	3,250.6	3,271.9
Public sector (percent)	(64.4)	(66.4)	(68.5)	(70.6)	(71.0)	(69.5)

Table 10. Agricultural GDP structure in 1989

	All Sectors	Public Sector	Industrial Plots
		(percent)	
Crop Production	34.3	34.2	34.4
Grain	8.5	11.3	1.9
Industrial Crops	2.3	3.3	0.0
Potatoes	7.4	3.4	16.5
Vegetables	1.8	1.3	2.8
Fruits and Berries	3.1	0.5	9.0
Feed Crops	10.7	14.2	2.9
Other Crops	0.5	0.2	1.3
Livestock Production	65.7	65.8	65.6
Dairy and Cattle	44.1	42.5	47.9
Hogs	14.5	15.4	12.5
Sheep and Goats	0.2	0.0	0.7
Poultry	6.1	7.1	3.8
Other	0.8	0.8	0.7
GDP Total	100.0	100.0	100.0

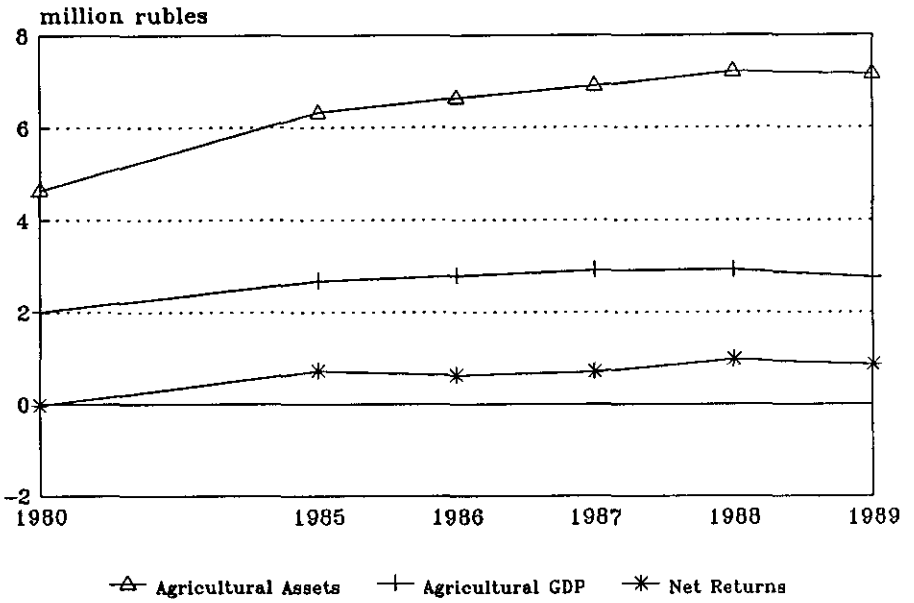

Figure 7. Assets, GDP, and net returns on an average collective farm

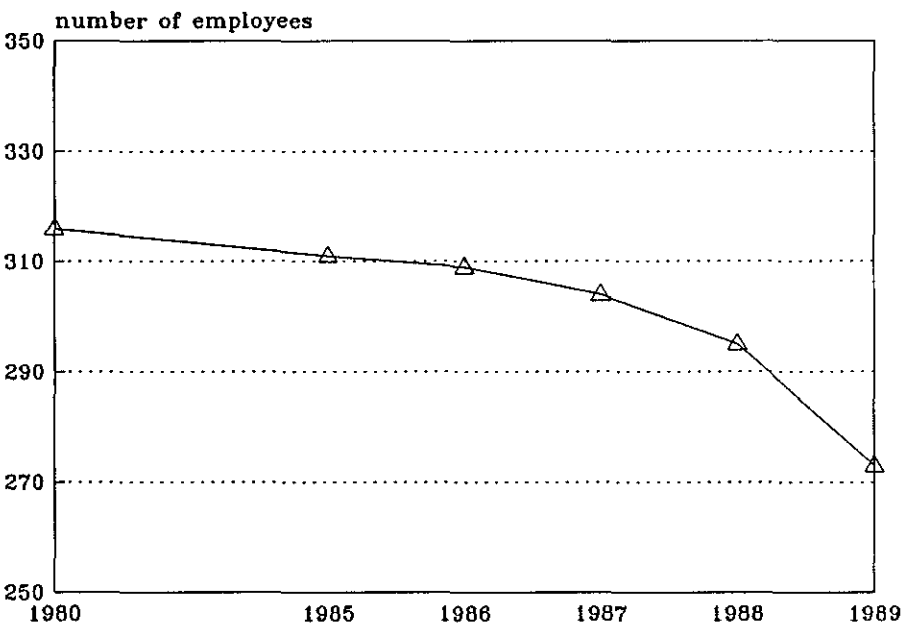

Figure 8. Employment on an average collective farm

Table 11. Characteristics of an average collective farm, public sector

	1980	1985	1986	1987	1988	1989
Number of Collective Farms	751	737	737	737	749	834
Agricultural Land (hectares)	2,984	3,039	3,035	3,020	2,975	2,693
Area in Crops (hectares)	1,993	1,980	1,976	1,967	1,926	1,798
Cattle (head)	1,561	1,828	1,832	1,848	1,802	1,637
Milking Cows (head)	507	523	523	518	499	458
Hogs (head)	1,877	1,872	1,919	1,884	1,857	1,745
Labor (people)	316	311	309	304	295	273
Average Monthly Wage (rubles)	134	183	197	207	224	257
		(thousand rubles)				
Agricultural Assets	4,648	6,328	6,634	6,904	7,207	7,157
Agricultural GDP	2,003	2,673	2,791	2,914	2,923	2,756
Net Returns	-30	725	631	713	973	863

Table 12. Agricultural land use in 1988 and 1989

	All Sectors		Public Sector	
	1988	1989	1988	1989
	(thousand hectares)			
Total Land Area	6,520	6,520	2,563	2,598
Arable Land	2,378	2,307	1,575	1,567
Meadows and Pastures	1,222	1,167	745	763
Orchards and Berries	51	49	8	8
Total Agricultural Land	3,650	3,523	2,328	2,338
Individual Plots[a]	152	152	96	119

[a] This land is owned by the collective and state farms, but used for production by workers of the public sector farms.

Agricultural Production and Productivity

The arable land of Lithuania is divided into one-third for pasture and meadows and two-thirds for crops. Nearly 50 percent of crop area is in grains, about 40 percent is in feed crops, and the rest is industrial crops (flax, sugar beets), potatoes, vegetables, fallow, and other minor crops. The rotation is very important in determining crop area. Depending on the quality of the land, grain is planted on about 37 to 50 percent of the arable land. This rotation consists of corn for silage, other silage crops, and grasses. Corn silage is the preferred crop in this rotation, but its production is constrained by the availability of harvest machinery. Production of other silage crops is constrained by the availability of seed grain.

The hard wheat grown in central Lithuania is used for food, and the remainder is soft wheat used mostly for feed. Rye is used for food, and barley is used for feed and beer production. Individual plots do not contribute greatly to the production of grain, feed, and industrial crops but are important for potatoes and vegetables. In 1989, 93.1 percent of grains and 91.7 percent of feed crops were produced in the public sector, while 68.4 percent of potatoes and 49.6 percent of vegetables were produced on individual plots. In 1980, which was a bad year for potatoes, the state purchased a much higher share of potatoes from individual plots than in other years. It is possible that higher yields were achieved on individual plots that year, because the potatoes are harvested by hand rather than by machines as in the public sector.

Most livestock product production comes from the individual sector. In 1989, 21 percent of meat, 38.7 percent of milk, 29.8 percent of eggs, and 73.1 percent of wool were produced on individual plots. Overall, the individual sector accounted for 30.5 percent of livestock production. Thus, state procurement needs to rely partially on individual production, especially for milk.

Lithuania is purchasing feed grain and processed concentrate feed from the Soviet Union in exchange for the supply of livestock products. Pork and poultry production is based largely on imported feed concentrate and takes place in large public sector confinement units and to a lessor extent in small contract feeding enterprises on individual plots. In total, about 84 percent of total feed use and only 53 percent of concentrate use is produced in Lithuania.

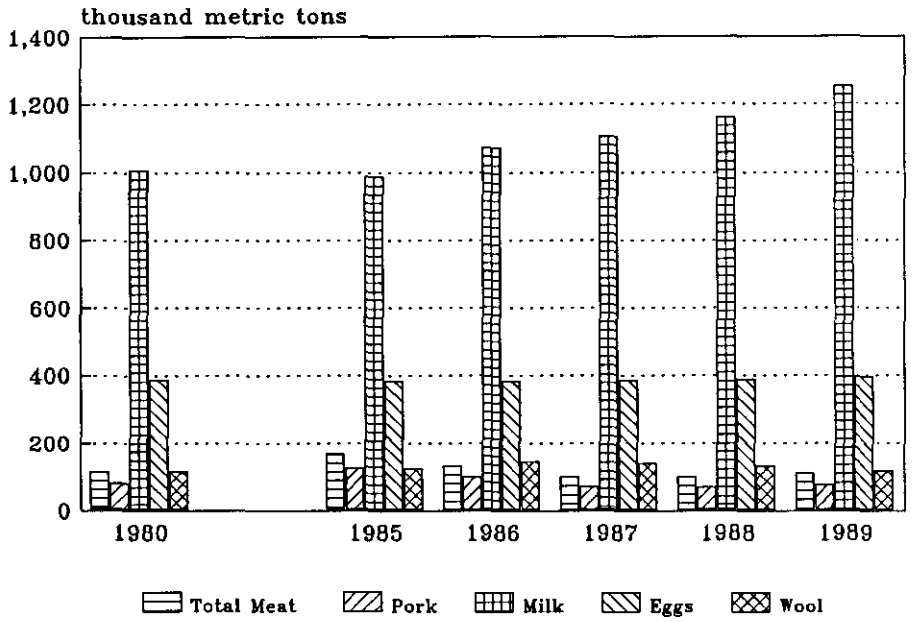

Figure 9. Livestock and products from individual plots

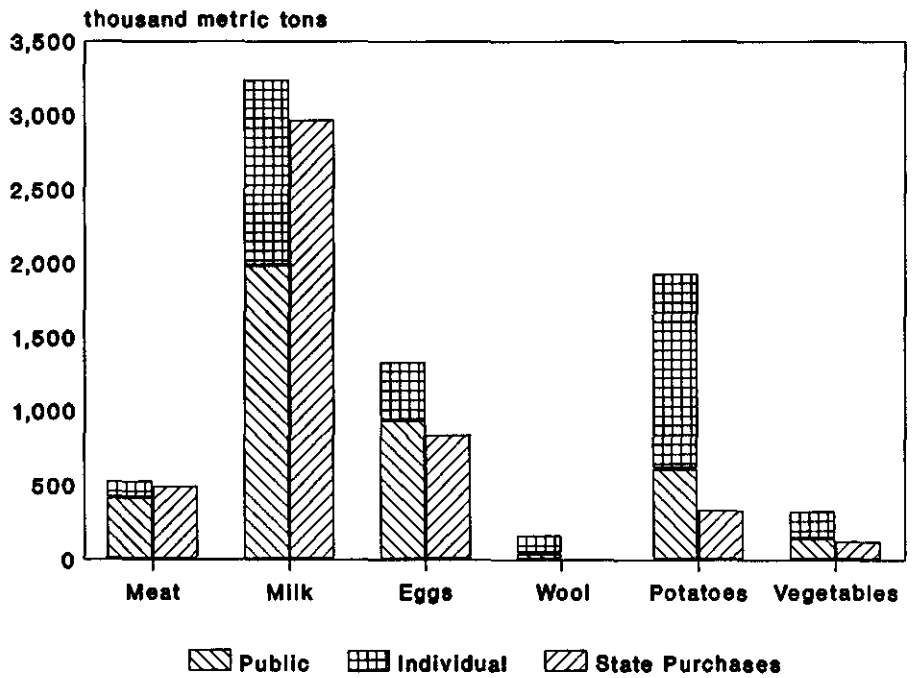

Figure 10. Agricultural production and procurement from public and individual sectors, 1989

Table 13. Agricultural production from individual plots

	1976-80 (Average)	1981-86 (Average)	1986	1987	1988	1989
			(thousand metric tons)			
Crops						
Potatoes	795	1,091	1,393	873	1,219	1,318
Vegetables	156	174	180	155	190	184
Feed Roots	518	702	786	725	958	973
Hay						
Annual and Perennial Grasses	17	32	53	47	48	51
Pastures and Meadows	374	391	367	357	358	376
Livestock and Products						
Meat (slaughter weight)	116	168	133	100	101	112
Pork	81	127	99	72	70	78
Milk	1,006	988	1,073	1,106	1,162	1,253
Eggs	386	383	383	383	389	396
Wool	116	124	145	140	132	117

Table 14. State procurement of agricultural produce from individual plots

	1980	1985	1986	1987	1988	1989
Noncontract Sales			(thousand metric tons)			
Crops						
Potatoes	86.5	48.8	52.5	51.8	32.2	49.3
Vegetables	1.4	8.3	8.9	7.8	11.2	7.4
Livestock and Poultry (liveweight)[a]	64.8	7.6	7.0	5.8	5.5	5.6
Milk and Products (milk equivalent)[a]	541	0.2	0.2	0.2	0.2	0.2
Contract Sales						
Total Meat	106.5	132.4	80.4	80.1	97.5	----
Milk	742.5	957.6	1009.3	1042.6	1133.6	----

[a] Beginning in 1985 contract sales to public sector farms are reported as being procured from public sector farms.

---- = Data not available.

Table 15. Level of mechanization in the public sector

	1988	1989
	(percent)	
Crop Sector		
Vegetable and Fruit Production	94	93
Flax Production	100	100
Sugar Beet Harvesting	99	99
Potato Harvesting	54	61
Grain Harvesting	100	100
Grain Drying	100	100
Grain Cleaning	100	100
Livestock Sector		
Milking	100	100
Water Supply	99	99
Fodder Preparation	76	80
Manure Extraction	94	94
Complex Mechanization	78	83

Table 16. Actual fertilizer use

	1980	1985	1986	1987	1988	1989
	(kilogram per hectare of arable land)					
Total Fertilizer Use	241	305	299	308	310	352
Nitrogen	105	127	123	126	120	137
Phosphorous	52	59	61	66	64	83
Potassium	84	119	115	116	126	132

Table 17. Area under crops in all sectors

	1980	1985	1986	1987	1988	1989
			(thousand hectares)			
Total Grains	1,192	1,147	1,192	1,120	1,121	1,125
Winter Grains	396	433	419	386	443	499
Rye	192	169	171	157	166	180
Wheat	204	261	243	227	276	319
Spring Grains	796	714	773	734	678	626
Barley	565	478	503	492	432	406
Oats	116	101	96	93	96	89
Other	115	134	172	148	149	130
Industrial Crops	75	70	69	75	75	75
Flax	38	34	32	32	29	28
Sugar Beets	36	35	35	35	35	34
Potatoes	139	131	134	131	127	120
Vegetables	22	19	19	19	19	17
Feed Crops	979	981	939	1,000	984	955
Perennial Grasses	531	579	592	595	610	615
Annual Grasses	162	130	116	111	114	109
Corn for Silage	86	85	82	84	77	77
Other Silage Crops[a]	138	128	87	147	121	89
Feed Turnips	59	57	61	61	61	58
Fallow	37	35	45	40	45	42
Other	38	35	25	36	30	62
Total Crop Area	2,405	2,348	2,353	2,346	2,326	2,321

[a] Other silage crops: small grain/perennial grass mix used for silage.

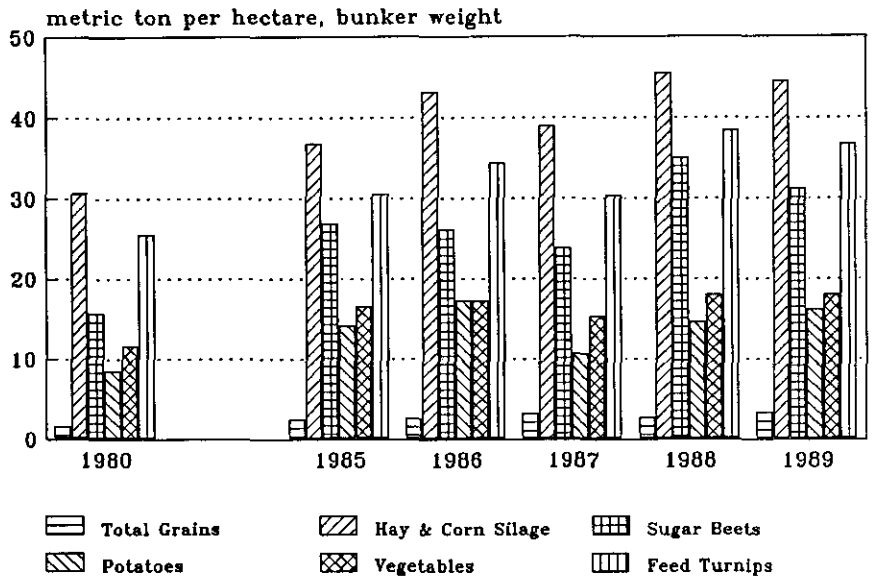

Figure 11. Average yield of agricultural products, all sectors

Table 18. Average yield of agricultural products in all sectors

	1980[a]	1985	1986	1987	1988	1989
	(metric ton per hectare, bunker weight)					
Total Grains	1.6	2.5	2.7	3.2	2.7	3.3
Winter Rye	1.7	2.1	2.6	2.8	2.7	2.8
Winter Wheat	2.0	2.8	3.0	3.9	3.5	3.6
Spring Barley	1.6	2.6	2.7	3.1	2.5	2.8
Oats	1.5	2.1	2.4	3.1	2.3	2.2
Oilseeds[b]	1.0	2.3	2.2	2.8	2.2	2.2
Flax	0.2	0.4	0.4	0.5	0.5	0.6
Sugar Beets	15.7	26.9	26.1	23.8	35.0	31.2
Potatoes	8.5	14.1	17.3	10.7	14.6	16.2
Vegetables	11.6	16.6	17.2	15.3	18.0	18.0
Feed Turnips	23.1	38.7	41.7	39.1	52.5	57.4
Corn Silage	25.5	30.6	34.4	30.4	38.4	36.7
Hay and Silage						
Annual Grasses	2.4	2.4	4.7	4.3	3.0	3.5
Perennial Grasses	2.7	3.9	4.1	4.3	4.1	4.3

[a] The harvest in 1980 was reduced by excessive rains in the fall. The potato harvest in particular was severely reduced.

[b] The main oilseed is rapeseed.

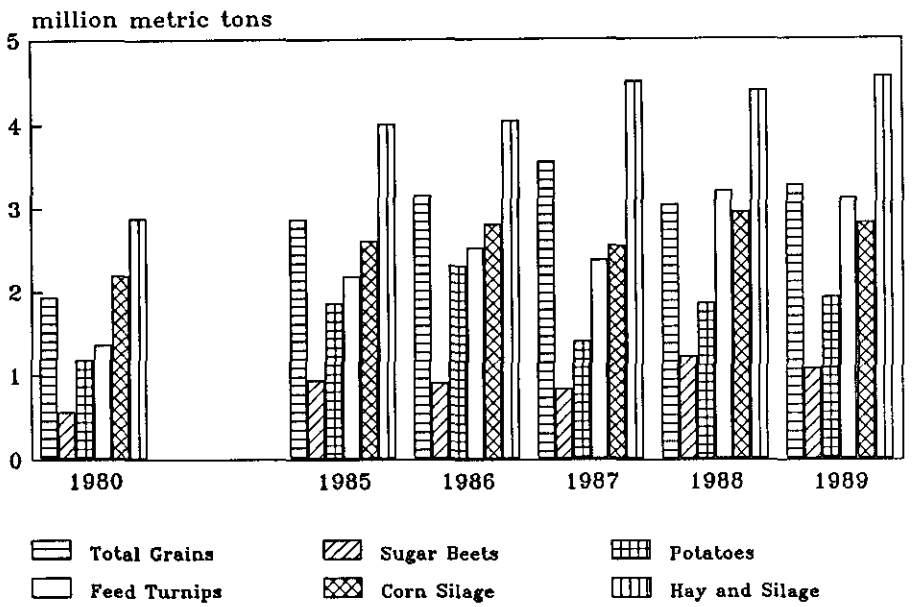

Figure 12. Crop production, all sectors

Table 19. Crop production in all sectors

	1980[a]	1985	1986	1987	1988	1989
		(thousand metric tons)				
Total Grains	1,932	2,866	3,155	3,554	3,046	3,272
Winter Rye	328	361	436	437	442	510
Winter Wheat	406	721	724	877	963	1,151
Spring Barley	915	1,254	1,366	1,532	1,094	1,129
Oats	169	213	231	286	219	201
Flax	8	14	14	16	14	15
Sugar Beets	559	938	906	838	1,213	1,075
Potatoes	1,178	1,851	2,312	1,397	1,850	1,927
Vegetables	265	331	354	317	370	326
Feed Turnips	1,362	2,184	2,523	2,380	3,208	3,118
Corn Silage	2,196	2,609	2,802	2,552	2,953	2,823
Hay and Silage						
Annual Grasses	388	399	373	399	376	379
Perennial Grasses	1,698	2,621	2,648	3,074	2,989	3,140
Meadow	793	981	1,019	1,023	1,019	1,034

[a] The harvest in 1980 was reduced by excessive rains in the fall. The potato harvest in particular was severely reduced.

Table 20. State procurement of crop production from all sectors

	1980	1985	1986	1987	1988	1989
		(thousand metric tons)				
Grain	220.8	472.5	452.5	480.7	428.9	432.3
Public sector share of procurement	100%	100%	100%	100%	100%	100%
Sugar beets	412.5	768.6	732.0	691.9	1048.4	916.2
Public sector share of procurement	100%	100%	100%	100%	100%	100%
Flax	6.6	12.8	13.3	16.0	14.0	15.1
Public sector share of procurement	100%	100%	100%	100%	100%	100%
Potatoes	200.0	334.8	355.3	240.1	315.0	333.5
Public sector share of procurement	56.8%	85.4%	85.2%	78.4%	89.8%	85.2%
Vegetables	92.9	133.9	141.4	138.8	145.3	125.0
Public sector share of procurement	98.5%	93.8%	93.7%	94.4%	92.3%	94.1%

Table 21. Total livestock head in all sectors, by the end of the year

	1980	1985	1986	1987	1988	1989
		(thousand head)				
Fed Cattle	1,354	1,637	1,618	1,632	1,585	1,575
Public sector	808	1,054	1,064	1,086	1,043	1,007
Personal plots	546	583	555	546	542	567
Milk Cows	861	876	870	862	850	848
Public sector	546	556	556	550	537	524
Personal plots	315	320	314	312	312	324
Pigs	2,551	2,710	2,772	2,706	2,705	2,730
Public sector	2,045	2,191	2,249	2,223	2,215	2,214
Personal plots	506	519	523	483	491	516
Sheep and Goats	65	103	93	90	79	69
Public sector	20	31	31	32	26	18
Personal plots	45	72	62	59	52	51
Horses	77	80	80	80	78	78
Public sector	74	75	74	74	72	70
Personal plots	3	5	5	6	6	8
Poultry	13,915	16,589	16,932	17,364	17,231	17,500
Public sector	7,981	10,609	10,952	11,382	11,429	11,791
Personal plots	5,934	5,980	5,980	5,981	5,802	5,709

Table 22. Livestock production in all sectors

	1980	1985	1986	1987	1988	1989
		(thousand metric tons)				
Meat (slaughter weight)						
Beef	190	224	220	222	233	224
Pork	215	243	229	248	246	250
Other	46	64	65	61	66	60
Total	451	531	514	531	545	534
Milk	2,731	3,154	3,051	3,120	3,209	3,235
		(million units)				
Eggs	1,055	1,291	1,207	1,279	1,347	1,330
		(metric tons)				
Wool	171	188	200	202	189	160

Table 23. State procurement of livestock production

	1980	1985	1986	1987	1988	1989
		(thousand metric tons)				
Livestock and Poultry						
Public sector (liveweight)	463.4	663.0	685.8	704.1	725.1	721.2
Individual plots (liveweight)	64.8	7.6	7.0	5.8	5.5	5.6
Milk and Products		(milk equivalent)				
Public sector	1,427.0	2,104.8	2,769.5	2,875.7	2,940.9	2,963.6
Individual plots[a]	469.9	541.0	0.2	0.2	0.2	0.2
		(million units)				
Eggs	511.1	650.0	736.9	808.6	862.8	837.3

[a] After 1985 contract sales to public sector farms from individual plots are reported as a procurement from the public sector.

Table 24. Productivity in the dairy sector

	1980	1985	1986	1987	1988	1989
	(kilograms of milk per cow)[a]					
All Sectors	2,905	3,407	3,492	3,571	3,674	3,765
Public Sector	2,942	3,447	3,570	3,634	3,733	3,774

[a] Yield per cow is converted to the base fat content.

Table 25. Feed requirements and supply in the public sector

	1988		1989	
	(thousand metric tons)			
Concentrate[a]				
Computed requirement	3,431		3,590	
Total supply	3,404		3,369	
Lithuanian supply	1,800	(52.9%)	1,782	(53.0%)
Hay				
Computed requirement	3,649		3,595	
Total supply	4,621		4,718	
Silage and Roots				
Computed requirement	6,444		6,456	
Total supply	6,813		6,174	
Total Feed	(thousand grain units)[b]			
Computed requirement	602.3		602.4	
Total supply	480.5		504.0	
Lithuanian supply	405.4	(84.4%)	423.7	(84.1%)

[a] Poultry production in the public sector uses imported concentrate. Hogs are also fed mainly imported concentrate.

[b] Individual crops used for feed are converted into common feed units. The conversion coefficients used were taken from *Recommended Feed Rations for Livestock for 1986-1990* by Lithuanian Institute of Livestock Breeding. Conversion coefficients used for particular feed crops are following: concentrate feed, 1.05; grains (average), 1.0; hay, 0.5; straw, 0.3; grass, 0.18; silage, 0.18; feed roots, 0.10; potatoes, 0.30, etc.

Food Production and Consumption

Lithuania produces a surplus of food products and exports substantial quantities of meat and milk products to other republics. Although most of the agricultural commodities used in food production are produced in Lithuania, about two-thirds of the sugar production is from imported raw cane sugar.

Consumption patterns have been similar to those in East Germany for the same period, although meat consumption in Lithuania is about 20 percent lower and grain products about 20 percent higher. Differences between rural and urban household expenditure patterns reflect the availability of food products as well as economic factors. Urban residents not only consume more away from home but also have fewer home-grown foods available such as potatoes, vegetables, and eggs. Higher urban expenditures on fruits may result from higher incomes as well as the fact that fruits are more available in urban markets. Perhaps the largest contrast is that in absolute terms, rural consumers spend nearly twice as much as urban consumers on grain products and less than half as much on meat products.

Food self-sufficiency ratios indicate that meat and milk products are the major export products. Lithuania is mostly self-sufficient in food grains, although some hard wheat is imported from other republics. However, large amounts of imported grain and protein meal, are used for feeding purposes. The self-sufficiency ratio is high for potatoes only because feed use and waste are high relative to food use. Although processed sugar is exported, domestic sugar beet production is less than half of what is needed for Lithuanian consumption.

Lithuania has three parallel retail food markets: the state market, the cooperative retail system, and the private market. The cooperative retail stores are more concentrated in the rural areas and the state stores are more prevalent in urban areas. The private market is legal for food products and is mostly in urban areas. State retail prices were heavily subsidized by the government prior to recent price reforms and in most cases were even below procurement prices of raw commodities. Cooperative retail prices were generally higher than state prices but still controlled and subsidized. Private market prices were not controlled and were much higher than both state and cooperative prices. For example, in 1989 the ratio of average market price to state price ranged from 161 percent for fruits to 567 percent for potatoes.

Table 26. Food production

	1980	1985	1986	1987	1988	1989
		(thousand metric tons)				
Sugar	212	222	238	239	239	239
Meat	313	397	410	420	433	447
Beef	133	167	177	172	181	172
Pork	123	156	154	168	168	173
Mutton	1	3	3	3	3	2
Poultry	31	36	39	41	46	48
Other	25	34	38	36	36	52
Sausage (tons)	62	68	72	74	75	76
Fish	277	276	297	272	425	418
Butter	52	72	75	77	258	78
Vegetable Oil	4	2	0	0	0	1
Confectionery	68	79	85	87	90	91
Sweets	46	54	58	60	61	62
Cakes and Pastry	22	25	26	28	29	29
Pasta	13	13	13	14	13	14
		(million tins)[a]				
Canned Food	270	327	343	373	405	423
		(thousand metric ton milk equivalents)				
Milk and Products	502	730	747	790	794	814
Fluid Milk	176	175	180	188	177	164
Kefir	43	50	52	59	60	57
Sour Cream	24	30	32	34	35	37
Cream	4	4	4	5	5	5
Full Fat Curd	20	23	24	26	26	24
Low Fat Curd	4	4	4	4	4	4
Cream Cheese	3	3	3	4	4	3
Cheese	18	23	25	26	26	27

[a] In equivalent basic canned food measure. Canned food includes canned meat, fish, fruits, and vegetables. The standard size is 150 grams for fish, 351 grams for meat, 400 grams for milk and vegetables.

Table 27. Per capita production of agricultural products

	1980	1985	1986	1987	1988	1989
		(kilograms per year)				
Grain	476	686	761	837	727	883
Potatoes	343	516	638	382	500	520
Vegetables	77	92	98	87	100	88
Sugar (from beets)	21	21	21	21	22	21
Sugar (from imported cane)	43	43	46	45	44	43
Fruits and Berries	48	51	56	18	34	68
Meat		(kilograms per year, slaughter weight)				
Beef	55	62	60	60	63	60
Pork	62	67	63	67	67	67
Other	13	18	18	17	18	16
Total	130	147	141	144	148	143
		(kilograms per year, milk equivalent)				
Milk and Products	735	829	842	852	867	873
		(units)				
Eggs	279	311	333	349	364	359

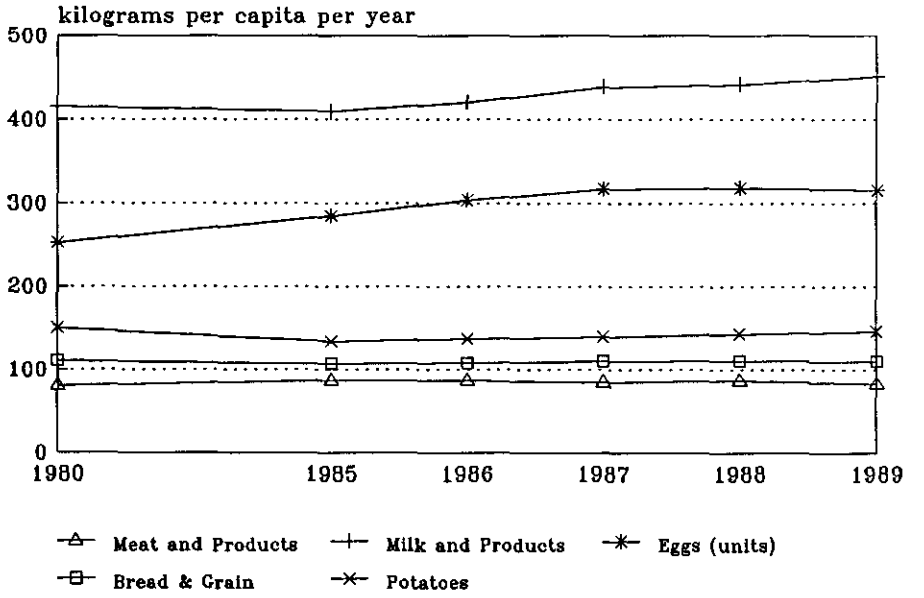

Figure 13. Per capita consumption of meat, milk, eggs, grains, and potatoes

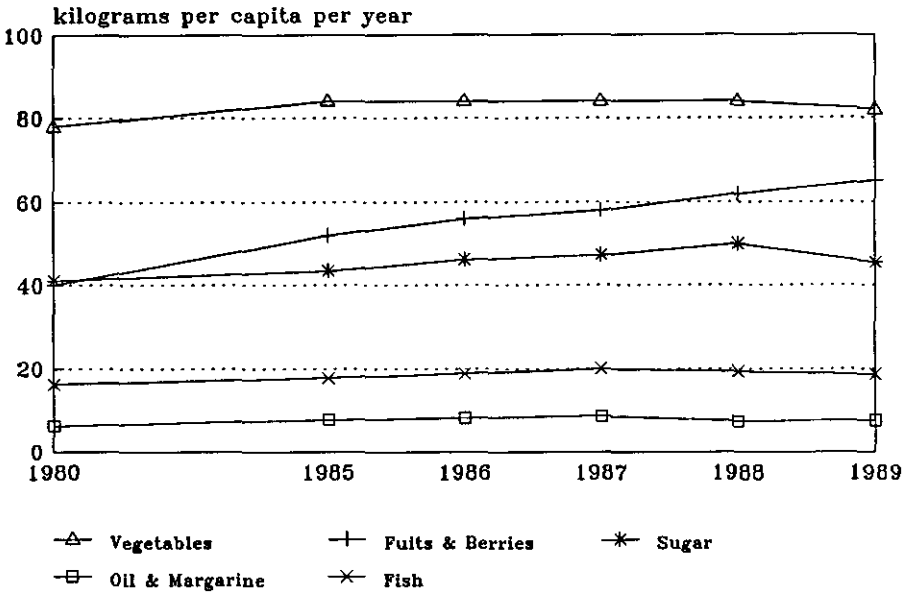

Figure 14. Per capita consumption of vegetables, oils, fruits, fish, and sugar

Table 28. Per capita consumption of agricultural products

	1980	1985	1986	1987	1988	1989
	(kilograms per capita per year)					
Meat	81	87	87	85	87	83
Milk and Products	415	409	420	438	441	451
Eggs (units)	253	285	304	317	319	316
Bread and Grain Products	111	107	108	110	111	110
Potatoes	150	134	137	139	143	146
Vegetables	78	84	84	84	84	82
Fruits and Berries	40	52	56	58	62	65
Sugar	41	44	46	47	50	46
Oil and Margarine	6	8	8	9	7	8
Fish	16	18	19	20	19	19

Table 29. Urban and rural annual per capita food expenditure patterns

	1986		1987		1988		1989	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
				(percent)				
Home Consumption	87.1	93.1	86.7	94.6	85.8	95.0	83.5	93.5
Bread and Grain Products	7.6	23.7	7.3	23.1	6.8	21.7	6.1	20.3
Potatoes	1.5	0.6	1.7	0.6	1.5	0.5	1.3	0.3
Vegetables	5.6	2.4	5.9	3.3	5.3	1.9	5.0	2.0
Fruits and Berries	7.8	1.4	6.6	1.9	6.3	1.9	5.9	1.4
Meat	25.1	21.7	25.9	20.2	26.5	21.6	26.6	22.2
Milk	15.5	13.9	15.3	15.5	14.4	15.8	13.4	15.4
Eggs	3.2	0.7	3.1	1.0	3.0	1.0	2.7	0.9
Sugar	3.4	8.0	2.8	6.2	3.2	6.8	2.5	5.4
Confectionery	7.2	9.8	7.4	10.3	7.5	10.4	7.8	11.1
Other	10.2	11.6	10.7	13.1	11.3	13.4	12.2	14.5
Away from Home	12.9	6.9	13.3	5.4	14.2	5.3	16.5	6.5
				(rubles per capita)				
Total Food Expenditures	511.8	263.7	551.1	293.6	584.9	297.0	614.4	337.4

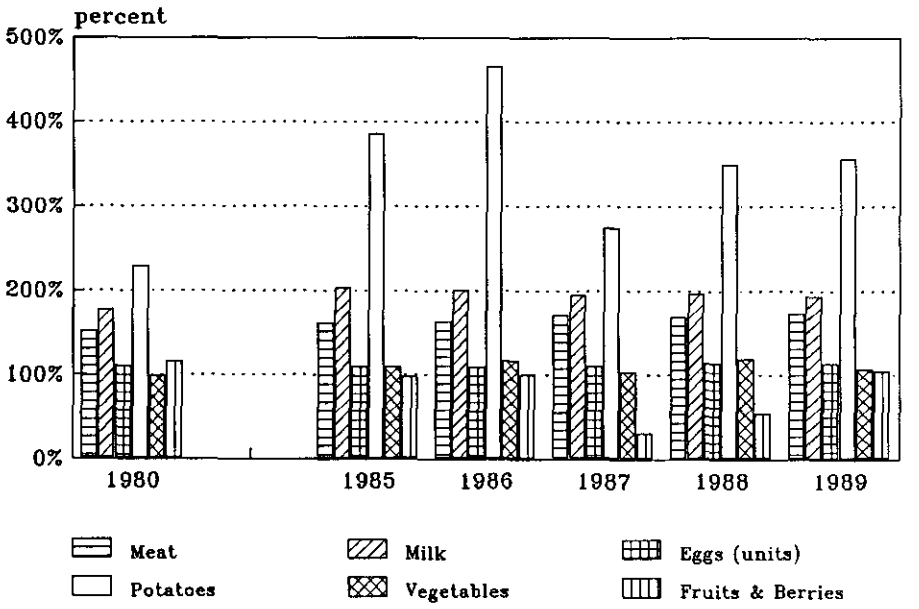

Figure 15. Self-sufficiency ratio

Table 30. Food self-sufficiency ratio

	1980	1985	1986	1987	1988	1989
			(percent)			
Meat and Products	160	169	162	169	170	172
Milk and Products	177	203	201	195	197	194
Eggs (units)	110	109	110	110	114	114
Potatoes	229	385	466	275	350	356
Vegetables	99	110	117	104	119	107
Fruits and Berries	117	98	100	31	55	105

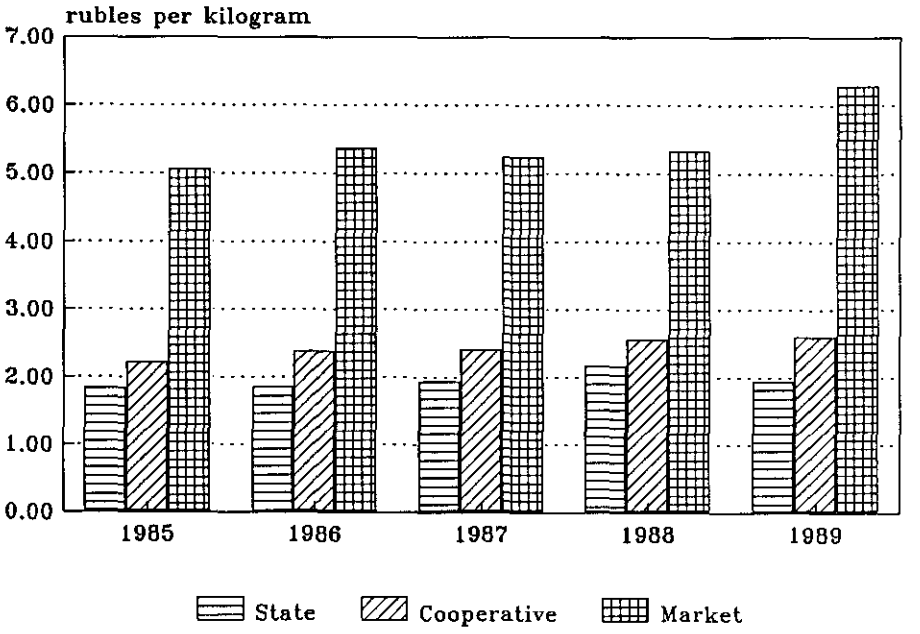

Figure 16. Consumer prices for meat

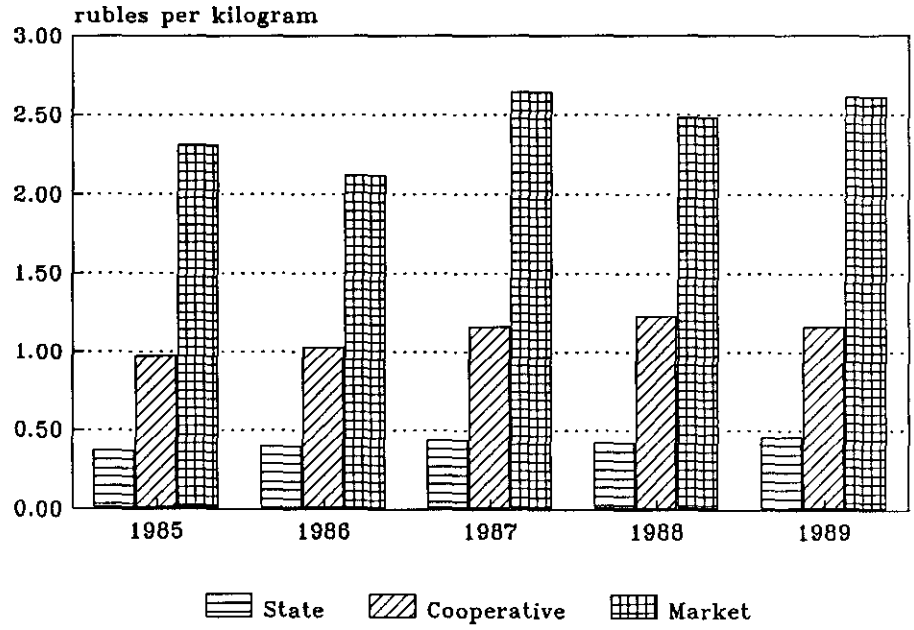

Figure 17. Consumer prices for vegetables

Table 31. Consumer prices for main food commodities

	1985	1986	1987	1988	1989
			(rubles per kilogram)		
Meat					
State retail price	1.83	1.85	1.94	2.17	1.95
Cooperative price	2.22	2.38	2.41	2.56	2.60
Market price	5.06	5.36	5.24	5.32	6.28
			(percent)		
Market/state price ratio	276.50	288.60	270.10	245.20	322.10
Potatoes			(rubles per kilogram)		
State retail price	0.11	0.12	0.12	0.15	0.14
Cooperative price	0.90	0.84	0.78	0.90	0.33
Market price	0.38	0.40	0.47	0.45	0.54
			(percent)		
Market/state price ratio	345.50	333.30	391.70	300.00	385.70
Vegetables			(rubles per kilogram)		
State retail price	0.37	0.40	0.44	0.42	0.46
Cooperative price	0.97	1.03	1.16	1.23	1.16
Market price	2.31	2.12	2.64	2.48	2.61
			(percent)		
Market/state price ratio	624.30	530.00	600.00	590.50	567.40
Fruits			(rubles per kilogram)		
State retail price	1.33	1.33	1.27	1.27	1.49
Cooperative price	1.72	1.60	1.53	1.56	2.06
Market price	2.70	2.17	2.96	2.58	2.40
			(percent)		
Market/state price ratio	203.00	163.20	233.10	203.10	161.10

Farm Prices, Costs, and Profits

Under the state plan during this period, farms were expected to reach a profitability rate of at least 25 percent. Farms with low or no profits were aided with higher prices. In 1989, there were 7 farms with losses, 21 farms with profitability levels of less than 5 percent, 48 farms at 5 to 10 percent, 71 farms at 10 to 15 percent, 463 farms at 15 to 30 percent, and 505 farms with profitability rates of more than 30 percent. Extra price payments to low-profit farms in 1989 amounted to 559,600 rubles.

Grain production was not considered a profitable enterprise, especially on state farms when the grain is to be sold to the state. However, much of the grain is fed to livestock on the farm. Profitability rates for potatoes, sugar beets, and vegetables increased substantially in 1988 and 1989 primarily due to higher procurement prices. Bonus payments were also made in 1989 for farms exceeding the average production of the previous five years, which amounted to 283,300 rubles.

While there may be profit sharing on collective farms, profits are often used to form different funds to finance activities carried out by collective and state farms. The share of different funds in total 1989 profits was:

- fund for production growth and scientific/technological research, 27.3 percent;
- fund for development of social infrastructure, 8.4 percent;
- fund for bonus salaries for the members of state and collective farms, 10.5 percent;
- taxes for capital assets use, 2.9 percent;
- payments on short-term bank loans, 0.5 percent;
- payments to centralized funds and stocks, 2.7 percent;
- fund for salaries of the members of state and collective farms, 46.9 percent; and
- funds for financing other kinds of activities, 0.8 percent.

Table 32. State procurement prices on state and collective farms

	1985	1986	1987	1988	1989
			(rubles per metric ton)		
Grain	172	157	163	160	162
Sugar Beets	66	61	60	67	65
Flax (fiber)	1,256	1,113	1,308	1,313	1,479
Potatoes	127	172	152	188	204
Vegetables	232	260	307	334	390
Meat Total (liveweight)	2,725	2,560	2,610	2,795	2,826
Milk	383	345	344	371	371
			(1,000 units)		
Eggs	94	87	91	87	87

Table 33. Production costs of major agricultural products on collective and state farms

	1985		1986		1987		1988		1989	
	Collective	State	Collective	State	Collective	State	Collective	State	Collective	State
					(rubles per metric ton)					
Grain	121	147	120	141	113	136	124	143	119	139
Sugar Beets	45	54	45	54	46	53	43	45	45	47
Potatoes	136	157	127	144	163	177	157	173	154	167
Vegetables	119	134	115	137	119	149	131	157	147	174
Beef	2,204	2,557	2,194	2,557	2,249	2,604	2,327	2,656	2,493	274
Pork	2,126	2,438	2,031	2,302	1,978	2,224	2,007	2,248	2,137	2,344
Milk	270	306	268	303	253	286	258	288	279	298
					(rubles per 1,000 units)					
Eggs	57	61	56	59	55	59	57	61	59	64

Table 34. Profitability rates for major agricultural products (all sectors)

	1986	1987	1988[a]	1989[a]
		(percent)		
Crop production	17.0	17.3	26.3	32.4
Grain	8.0	10.9	5.4	10.9
Potatoes	9.0	-11.4	19.0	29.4
Sugar beets	7.5	6.8	36.0	23.3
Vegetables	6.7	4.5	26.8	28.2
Livestock production	27.6	27.8	34.0	29.2
Beef	28.8	25.1	27.4	20.9
Pork	22.9	27.0	36.0	31.5
Milk	26.2	30.9	39.8	35.0
Total	24.4	25.4	32.1	29.1

[a] New higher prices were introduced for potatoes, sugar beets, and vegetables.

Table 35. Structure of profits on the collective farms

	1988		1989	
	million rubles	percent	million rubles	percent
Crop Sector	80.0	11.0	105.4	10.8
Grain	8.5	1.2	15.6	1.6
Sugar Beets	15.7	2.2	10.0	1.0
Flax	7.5	1.0	8.4	0.9
Potatoes	8.7	1.2	13.3	1.4
Vegetables	1.6	0.2	1.7	0.2
Fruits and Berries	[a]	[a]	0.4	[a]
Other	38.0	5.2	56	5.8
Livestock Sector	566.6	77.7	515.6	53.0
Beef	181.6	24.9	144.2	14.8
Pork	140.9	19.3	139.7	14.3
Poultry	3.4	0.5	5.4	0.6
Milk	226.2	31.0	212.1	21.8
Eggs	5.5	0.8	4.7	0.5
Agriculture	646.6	88.7	853.2	87.6
Other	82.2	11.3	120.4	12.4
Total	728.8	100.0	973.6	100.0

[a] Less than .1 million rubles or 0.1 percent.

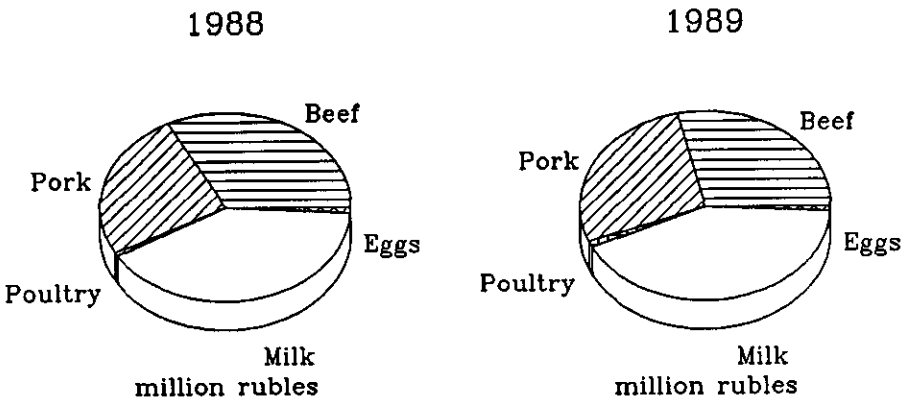

Figure 18. Profit structure on collective farms, livestock sector

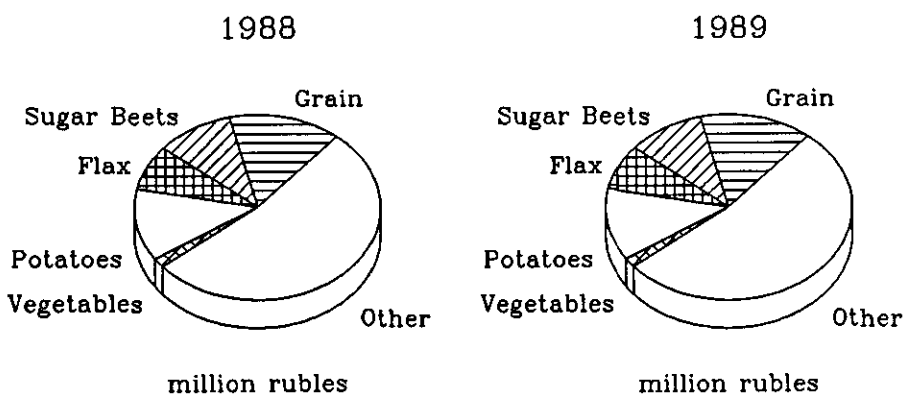

Figure 19. Profit structure on collective farms, crops sector

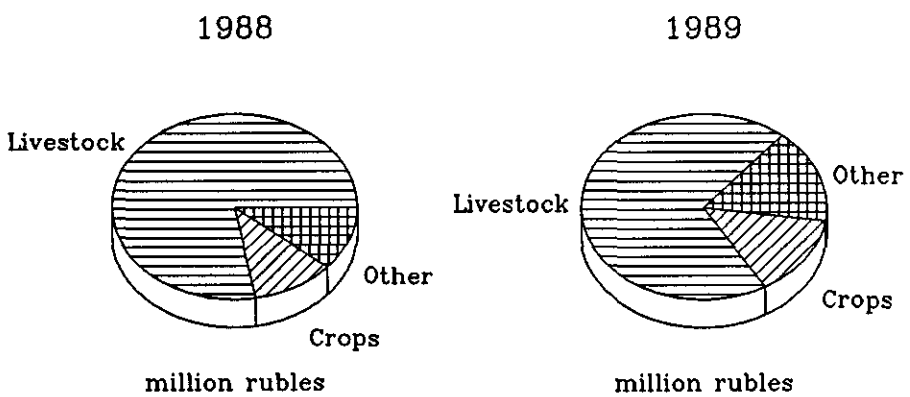

Figure 20. Profit structure on collective farms, total

Trade

Lithuania has been a net exporter of most consumer commodities and a net importer of a few agricultural raw materials (feed grains, feed concentrate, and sugar cane) and many other inputs for production and processing. The largest export earnings for consumer commodities came from livestock products and clothing products. A large share of exports of basic food commodities was through state procurement for the all-union centralized fund. These goods were allocated to other republics or sold in foreign markets according to the central plan.

The trade flow data indicate that many food products were both imported and exported. Among the 20 food commodities listed for 1989, Lithuania was a net importer of vegetables, fruits and berries, tea, canned fruits, canned vegetables, margarine, vegetable oil, and salt. Tea, margarine, vegetable oil, and salt are not produced internally.

The most intensive economic ties Lithuania has are with the Russian republic (approximately 57 percent of total commodity exchange). Trade with the Ukraine accounts for 15.3 percent; Byelorussia, 9.1 percent; Latvia and Estonia, 8.0 percent; the republics of Middle Asia, 3.1 percent; the Caucasian republics, 3.0 percent; Moldovia, 1.8 percent; and Kazakhstan, 3.0 percent of the total commodity exchange.

The main items that Lithuania imports from the Soviet republics are: oil products, building materials, timber, paper, ferrous and nonferrous metals, metal-cutting machine tools, cotton, plastic articles, various instruments, silk and textile goods primarily from Russia; and metals, coal, natural gas, farm machinery, cotton, wool, raw leather, sugar, and salt from the Ukraine. Natural gas, oil products, and instruments are being imported from Byelorussia; knitted goods, silk, woolen articles, cotton fabrics, electrical equipment, household devices and machines come from Latvia and Estonia; cotton and wool from Middle Asia; rolled metal, saturation equipment, pumps, and wool from Kazakhstan; wine, tobacco, fruits, and vegetables from the Caucasian republics.

Lithuania exports various industrial equipment, processing equipment for the food industry, instruments, electrical equipment, metal-cutting machine tools, farm machinery, synthetic fibers and yarn, bicycles, woolen and linen fabrics, knitted goods, footwear, leather and fur goods, household electric devices, fish products, meat and dairy products, sugar, confectionery, fruits and vegetables, and tobacco products.

Foreign Trade

In 1988 and 1989 Lithuania was a net importer of goods from countries outside the USSR, and about 95 percent of this trade went through Moscow. Lithuania imports various equipment for industrial enterprises and medicine production, transportation facilities, and farm machinery. Less than 50 percent of the foreign exports in 1988 and less than 33 percent in 1989 were for hard currency. Export data for 1988 indicate that less than 10 percent of the exports through Moscow were agricultural or food products. In 1988, nearly 20 percent of exports were processed food products to Poland through direct contracts.

The structure of exports are divided as follows: 60 percent to East European countries, 20 percent to developing countries, and 20 percent to developed countries. Geographically, 60 percent of Lithuanian exports are to European countries, 15 percent to the North American continent, 18 percent to African countries, 8 percent to Asian countries, and 0.4 percent to Australia. Main exports are machine building and metal-working products, electrical welding equipment, floating docks and electrical meters, radio and TV sets, bicycles, sanitary equipment, chemical products, farm machinery, furniture, building materials, fabrics, fish, meat, dairy products, and confectionery.

Table 36. Trade flows for consumer commodities

	1988			1989		
	Imports	Exports	Net Exports	Imports	Exports	Net Exports
			(million rubles)			
Food						
Livestock Products	4.5	699.1	694.6	4.9	559.7	554.8
Crop Products	53.4	15.5	-37.9	35.8	22.2	-13.6
Processed Food	218.8	338.8	120.0	266.8	296.5	29.7
Other	93.5	16.5	-77.0	135.2	54.3	-80.9
Nonfood Commodities	1,139.0	1,991.3	852.3	1,430.0	2,110.7	680.7
Cloth, Clothes, Shoes	521.5	1,045.9	524.4	666.4	1,089.4	423.0
Cultural and Entertainment Commodities	280.2	424.9	144.7	323.3	442.1	118.8
Household Commodities	146.9	221.5	74.6	197.4	256.5	59.1
Haberdashery	176.5	264.4	87.9	226.6	285.0	58.4
Tobacco Products	13.9	34.6	20.7	16.3	37.7	21.4

Table 37. State procurement of main agricultural products for the all-union centralized fund

	1980	1985	1986	1987	1988	1989
			(thousand metric tons)			
Potatoes	19.5	33.7	29.7	19.6	23.0	32.0
Vegetables	0.5	12.6	15.1	9.5	18.9	11.5
Meat and Products	120.5	175.0	180.0	187.0	196.0	169.4
Milk and Products	863.0	1,100.0	1,120.0	1,140.0	1,180.0	1,256.0
			(million units)			
Eggs and Products	29.0	36.5	35.0	35.0	40.0	35.0

Table 38. Trade flows of main food commodities

	1988				1989			
	Imports	Exports	Net exports	Domestic consumption	Imports	Exports	Net exports	Domestic consumption
				(thousand metric tons)				
Meat and Products	2	180	178	235	1	136	135	272
Milk and Products	2	1,328	1,326	1,642	2	1,251	1,249	1,697
Eggs and Products (million units)	0	51	51	813	0	25	25	775
Potatoes	11	41	30	215	0	58	58	239
Vegetables	17	19	2	128	18	13	-5	116
Fruits and Berries	27	3	-24	65	12	10	-1	84
Pastry	----	2	----	1	0	2	2	12
Sugar	10	43	33	205	1	50	49	198
Bakery	1	28	27	63	1	26	25	65
Tea	1	0	-1	1	1	0	-1	1
Margarine	19	0	-19	19	18	0	-18	18
Animal Fat	0	13	13	6	0	13	13	8
Vegetable Oil	16	----	----	15	19	----	----	19
Salt	155	0	-155	155	142	0	-142	142
Flour	15	44	29	356	20	43	23	365
Fish (fresh)	17	175	158	83	17	105	88	77
				(million tins)				
Canned Vegetables	15	20	5	44	15	13	-2	48
Canned Fruits	37	13	-24	82	43	9	-34	87
Fish (canned)	17	58	41	45	17	45	28	49
				(1,000 dal)				
Soft Drinks	----	8	----	11,773	----	40	----	11,927

---- = Data not available.

Table 39. Structure of trade outside the USSR

	Total value	Total	Trade via Moscow	Direct contracts	Joint ventures
	(million rubles)	(percent)			
Turnover					
1988	1,627.9	100.0	95.8	4.2	0.0
1989	1,796.6	100.0	94.5	5.3	0.2
Exports					
1988	586.7	36.0	34.5	1.5	0.0
1989	507.8	28.3	25.9	2.3	0.1
Imports					
1988	1,041.2	64.0	61.3	2.7	0.0
1989	1,288.8	71.7	68.6	3.0	0.1

Price Reforms and Proposals

In 1990 and 1991, major Lithuanian price reforms helped move the country toward a market economy. Procurement prices were increased first in October 1990 in response to the rise in input prices after most inputs were released from state price controls. Crop price increases were announced in January 1991, but were increased even further before harvest. Meat prices were increased in January, April, and May 1991; and meat and milk prices are expected to increase substantially in September and October. These increases were partially based on a pass-through of input price increases but were also influenced by political pressure from producers and by the need to procure sufficient amounts to meet state agreements to ship products to Moscow and Leningrad. The large increase in procurement prices has been partially offset by higher profit taxes on more efficient farms. It is also important to recognize that higher procurement prices are partially offset by the elimination of the complex system of bonus payments.

Retail price increases of 200 to 300 percent were introduced in April 1991 to cut the growing food subsidy costs and to begin removing the large dependence of the food processing sector on government subsidies. Some food items and many nonfood consumer goods were removed from state price control and were thereafter dependent on negotiations between wholesale buyers and sellers (contract pricing). To partially offset the higher cost of living, wage increases or direct income payments were made to consumers. The initial procurement and retail price increases apparently would have reduced government subsidy costs significantly, but later procurement price increases seem to have canceled these expected gains.

Latvia and Estonia have initiated similar price reforms, but they have different levels of prices. Latvia and Estonia have more goods that are priced according to negotiated contracts. In the absence of truly functioning markets for food and agricultural products, many prices are still controlled by the governments and can be strongly influenced by the small number of state enterprises involved in input supply and product processing. The food and agricultural pricing and subsidy policies remain very dynamic as the governments try to deregulate as quickly as possible while trying to moderate the adjustment costs to producers and consumers.

These large price changes are indicative of the major adjustments that are taking place and are needed in the transformation of these economies. By the end of 1991 most retail prices are expected to be deregulated. Meanwhile, laws are being adopted to implement privatization and other institutional reforms that provide the foundation for the development of market-oriented production and distribution systems for the agribusiness industry.

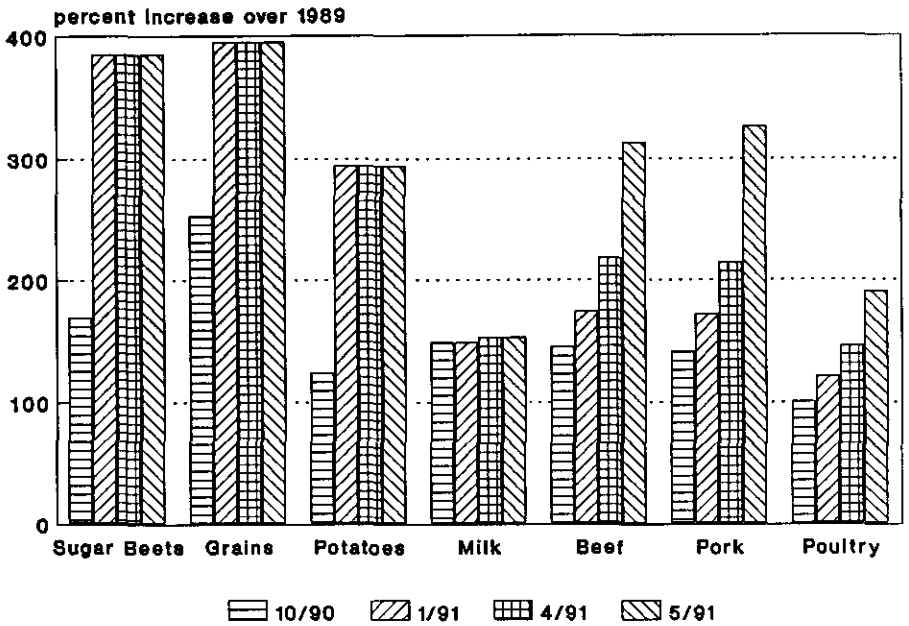

Figure 21. Lithuanian state procurement prices for main agricultural products

Table 40. Lithuanian state procurement prices for main agricultural products

	1979	1989	Oct. 90	Jan. 91	Apr. 91	May 91
			(rubles per metric ton)			
Grains Total	130	162	410	640	640	640
Potatoes (for food)	100	204	253	600	600	600
Sugar Beets	45	65	110	250	250	250
Meat (liveweight)[a]						
Beef (middle quality)	1,353	2,871	3,330	4,000	5,010	7,200
Pork (II class)	1,945	2,839	3,480	4,220	5,260	8,010
Mutton (middle quality)	1,490	3,391	4,170	[b]	[b]	[b]
Poultry (chickens)	1,960	2,221	2,500	3,000	3,600	4,700
Milk	250	371	553	553	567	567

[a] 1979 and 1989 prices are simple averages; the later prices are for an intermediate quality of the commodity.

[b] Contract prices are negotiated, not fixed.

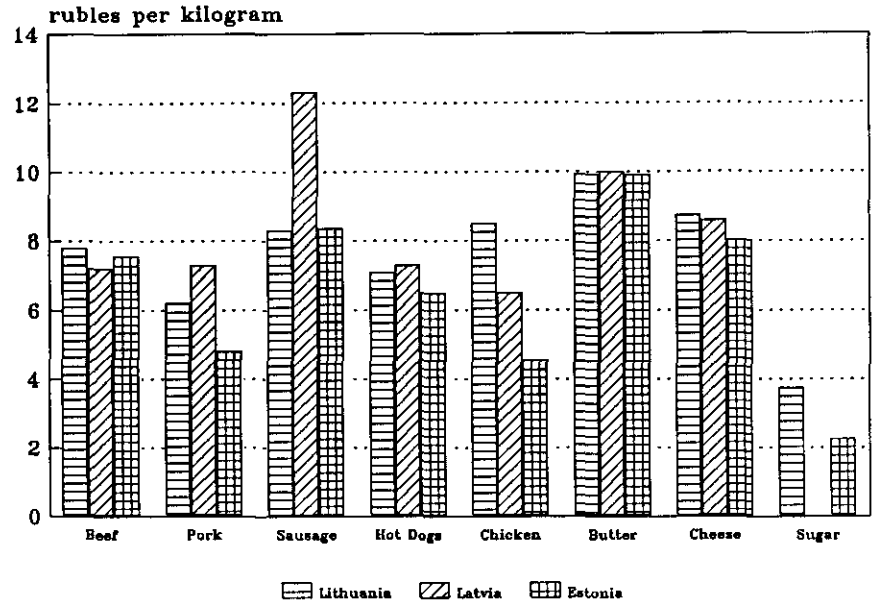

Figure 22. Baltic retail prices for main food commodities

Table 41. Baltic retail prices for main food commodities compared with old prices as of April 1, 1991

	Old price	Lithuania	Latvia	Estonia
	(rubles per kilogram)			
Beef	1.80	7.80	7.20	7.55
Pork	1.94	6.20	7.30	4.80
Sausage	2.90	8.30	12.30	8.36
Hot dogs	2.60	7.10	7.30	6.49
Chicken	2.70	8.50	6.50	4.53
Milk (1 liter)	0.26	0.73	0.60	0.62
Butter	3.40	9.90	10.00	9.90
Sour cream (1 liter, 35% fat)	1.20	3.90	4.00	6.24
Cheese	2.90	8.7	8.60	8.02
Sugar	0.80	3.75	0.90[a]	2.20
Eggs (10 units)	1.00	2.40	[b]	2.95

[a] As of March 26, 1991.

[b] Contract prices are negotiated, not fixed.

Table 42. Baltic average state procurement prices for main agricultural products as of April 1, 1991

	Lithuania	Latvia	Estonia
	(rubles per metric ton)		
Beef (liveweight)	5,010	5,260	6,150
Pork (liveweight)	5,260	4,985	5,250
Poultry (liveweight)	3,600	[a]	5,050
Milk	567	705	590
Grains	640	550	600
Sugar Beets	250	136	----
Eggs (1000 units)	135	[a]	[a]
Mutton	[a]	[a]	[a]

[a] Contract prices are negotiated, not fixed.

---- = Not produced in Estonia.

DATA SOURCES

National Economy of the Lithuanian SSR. Annual issues. Department of Statistics, Vilnius, Lithuania, 1980, 1985-1989.

Price reform data were derived from several sources:

Lithuanian Institute of Agrarian Economics, Vilnius, Lithuania.

Latvian Research Institute of Agricultural Economics, Riga, Latvia.

Estonian Institute of Agriculture and Land Reclamation, Saku, Estonia.