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ROMANIA: ECONOMIC CRISIS AND AGRICULTURAL MANAGEMENT, by Robert Cummings

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Romania: Economic Crisis and Agricultural Management

Robert Cummings

Abstract: Agricultural production in Romania, like that in Eastern Europe, has suffered from rising costs and disappointing returns on investment. The government held out hope that its shift toward introducing market forces would succeed. In 1979 Romania adopted the New Economic Mechanism. This experiment was overshadowed, however, by the strong centralization of the MEd. The economic crisis in the early eighties—caused by large debt service requirements and poor economic performance—brought new attempts at management reform. Nonetheless, the government's more central control of agriculture, restrictive policies for the private sector, and a decline in domestic consumption, little positive impact is expected, and continued disappointing performance economywide should keep farm imports depressed.

KEYWORDS: Romania, agricultural production, reform, crisis, food supply, foreign trade, market.

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ROMANIA: ECONOMIC CRISIS AND AGRICULTURAL MANAGEMENT, by Robert Cummings. International Economics Division, Economic Research Service, U.S. Department of Agriculture. Washington, D.C., March 1986. ERS Staff Report No. AGES860127.

ABSTRACT

Romanian agricultural management is the most centralized in Eastern Europe. Production expanded favorably during the seventies, although rising costs and disappointing returns on investment held back net output. Some movement toward introducing market forces occurred in 1979 following the introduction of the New Economic Mechanism. This movement was overshadowed, however, by the strong centralist bias of the NEM. Economic crisis in the early eighties--caused by large debt service requirements and poor domestic performance--brought new attempts at management reform. Nonetheless, the result was more central control of agriculture, restrictive policies for the private sector, and a decline in domestic consumption. Little positive impact is expected, and continued disappointing performance economywide should keep farm imports depressed.

KEYWORDS: Romania, agricultural production, reform, trade, food supply, foreign trade, outlook.

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SUMMARY

Rapid economic expansion occurred in Romania during the seventies, spurred by extensive foreign borrowing, substantial imports, and targeted development. These policies, however, laid the foundation for an economic downturn which began in 1981. Officials are reinforcing central control as they strive to improve the economy.

Higher input use accounted for much of the economy's growth. Investment more than doubled, with industry's investment growth rates exceeding agriculture's. Energy use increased substantially.

Exports failed to keep pace with expanding imports, and the nation's trade deficit peaked at \$1.7 billion in 1980. Foreign credits financed the import boom, leaving the country close to \$10 billion in debt by the beginning of the eighties.

Agriculture performed fairly well through the midseventies, reflecting increased machinery availability, fertilizer use, and livestock feed imports. Agricultural output in 1977-79 was 29 percent above the 1971-73 level. Growth in the livestock sector eclipsed that of crops. Net farm output increased more slowly, however, reflecting a rapid rise in expenses.

Agricultural policy in the seventies emphasized improvements in production technology and input use. Cooperative farms were urged to form joint projects with the technically more advanced state farms. Such cooperation also facilitated a "unitary management" of agriculture with most production, input allocation, and utilization decisions made by planning officials in Bucharest and transmitted to farms through regional farm organizations.

Despite the overall good economic performance, officials became increasingly concerned with the high level of input use relative to output in the economy. By 1977-79, for example, growth in industrial and agricultural investment was outstripping output growth by substantial margins.

In response, the New Economic Mechanism (NEM), to take effect at the beginning of 1979, was adopted. The NEM was charged with raising output throughout the economy by improving efficiency. Increased use of financial incentives and indicators by enterprise managers were to be key tools in this effort.

The NEM's major impact on agriculture was a substantial change in farm structure. Central control grew, and cooperative farms became further integrated with state farms through the establishment of agro-industrial councils (AIC). AIC's are designed to integrate and unify all agricultural activities in a given region, including food processing, under a single management authority.

The NEM was not effective however, and Romania's economy soon began a substantial decline. By 1981, the country was nearly bankrupt and economic problems were pervasive. Again, major changes in economic policy were announced.

In June 1981, the International Monetary Fund agreed to provide up to \$1.3 billion in credit to Romania over 3 years to support economic adjustment.

Romania pledged to restrain domestic demand, promote efficient resource use through realistic prices, and reform the exchange rate system of the national currency--the leu.

The bulk of the adjustment occurred in the foreign trade sector. Authorities, using their monopoly control over foreign exchange, slashed imports. Exports also rose and a substantial portion of the country's hard currency debt was repaid. Farm imports fell substantially. By 1984, agricultural imports were valued at the equivalent of \$660 million, 58 percent below the 1981 peak.

Agriculture was not immune from the economic downturn. Output growth slowed dramatically while large increases in production expenses led to a real decline in net output. Food shortages and rationing became widespread. Officials took steps, primarily administrative, to improve input efficiency and enhance the Government's ability to procure farm output. Private agriculture also received increased attention and a degree of official recognition.

The Self Supply Program, announced in 1980, is the Government's chief response to agriculture's problems. The program aims to maximize sales of farm goods to state procurement centers and minimize outlays from central stocks for the retail food market. The Self Supply Program maintains tight state control over resources, contains strict enforcement methods, and amasses exportable food stocks by restricting domestic supplies. The effects of the Self Supply Program were severe. There are no reports of any general improvement in the food supply situation.

The importance of private agriculture has increased since 1981, but officials remain suspicious. Romania was the last country in the region to acknowledge, even rhetorically, the benefits of private farming. Extensive restrictions and supervision remain, nevertheless.

The Romanian economic adjustment has had limited successes but its overall impact on performance will not be positive. The constraints which have shaped the adjustment--scarce resources and maintenance of central economic control--have allowed for *ad hoc* measures only and made reform extremely difficult. The economy remains in acute need of a price structure that reflects the true cost of goods.

In agriculture, the adjustment has not produced significantly higher output. The emphasis is on improving land productivity, applying the results of scientific and technical research, and favored organizational structures to agriculture by administrative means. Nowhere is there serious discussion of altering existing price, wage, and credit policies.

The NEM's impact on Romania's agricultural trade will be mixed. In the short term, it has severely restricted imports. Emphasis today is on exports and import substitution. The Romanian aversion to substantial new debt and lender concern over the economy will hold down import financing.

Longer term prospects may be brighter for imports. The country invested heavily to expand the livestock and oilseed processing sectors. Continued depressed farm imports--particularly of feed--would set back progress and constrain exports. An improvement in the overall foreign trade and finance situation coupled with the pessimistic outlook for improved production could free up increased foreign exchange for farm imports.

Romania: Economic Crisis and Agricultural Management

Robert Cummings

INTRODUCTION

Western writers have discussed and reviewed economic reform in Eastern Europe extensively since announcement of Hungary's New Economic Mechanism (NEM) in 1968. Interest peaked again recently with efforts cited in almost every country in the region plus in the Soviet Union. Reform varies greatly, from crisis management in Poland, to steady, ongoing changes in Hungary.

The current round of economic reform was sparked by the foreign debt crisis of the early eighties, which caused substantial economic dislocations in several East European economies. Foreign debt servicing has meant an increased outflow of resources, making the traditional input-led growth strategy unworkable.

U.S. interest in East European reform lies in its effect on farm trade. The once substantial U.S. agricultural export market in the region was nearly erased by the debt crisis. Assessing the impact of any economic reforms on domestic agricultural performance and on the supply and utilization of farm goods will help in forecasting the market potential of Eastern Europe.

Romania joined the ranks of reformers in 1978 with announcement of the country's own NEM. This Romanian version was a somewhat vague program to improve productivity and efficiency, and enhance enterprise decisionmaking while maintaining strict central economic control. The NEM soon receded, however, until Romania's inability to service its maturing foreign debt in 1981 provoked an economic emergency and forced major adjustments. The NEM was dusted off, and all responses to 1981's situation were attributed to its further implementation. In agriculture, the adjustment goes under the umbrella of the New Agrarian Revolution (NAR), a program first announced in 1965, refurbished in 1982, and now apparently a component of the NEM.

Current agricultural policy is broadly shaped by the Romanian Government's efforts to pay off rapidly the country's foreign debt. Higher agricultural exports—supported by higher output—is now the main farm policy goal. The NEM in agriculture is supposed to spur output through the more efficient use of inputs within the existing centrally planned economy. This is to be accomplished by better application of the results of scientific and technical research to production, improved land productivity, and reliance on favored organizational structures.

Evaluating the NEM is difficult because of the limited availability and quality of Romanian statistics. Improvements in input use efficiency are difficult to determine beyond tracking crop and livestock output. Data are lacking to examine production costs, farm income, and subsidy levels, for example. Because of these constraints and the strong official bias for higher output, this paper will address the NEM's production and trade effects. The NEM will be assessed by comparing Romanian plans for crop and livestock output with actual performance plus examining the trend in farm imports and exports. Some inferences, however, about production efficiency, income effects, and the extent of producer and retail price subsidies can be made based on scattered data and published Romanian reports.

Only a few years have elapsed since the 1981 adjustment, making a quantitative analysis of their effect difficult. The poor quality of Romanian statistics complicates any analysis. This paper covers 1971-1982 in 3-year intervals. For this period, the statistical yearbook has three different base years for constant prices, making impossible the construction of value indices. Data for 1983-85, where available, are also provided. Quantitative output data are also suspect, particularly for livestock numbers and grain production.

Alternative sources have been chosen for the important aggregate indicators. Chief among these is the Research Project on National Income in East Central Europe, L.W. International Financial Research, Inc. However, despite the data problems and because of no alternative source, official statistics for crop and livestock output are used to insure year-to-year consistency in data presentation.

Finally, the Romanian press has not carried any ongoing discussions or debates over the merits of the NEM similar to those of other East European countries. There are no economywide studies or data available on the NEM. We are left mainly with piecing together anecdotal evidence scattered throughout the press, making final conclusions difficult and increasingly general.

ECONOMIC PERFORMANCE IN THE SEVENTIES

Rapid economic expansion occurred in Romania during the seventies spurred by extensive foreign borrowing, substantial imports of capital goods, energy, and agricultural products, and targeted economic development. These policies, however, laid the foundation for today's economic downturn which began in 1981. Officials have not adopted fundamental reforms and, particularly in agriculture, are reinforcing central control as they strive to improve the economy.

Macroeconomy

Romania's economy remains one of the least industrially developed in Eastern Europe, but expansion was nonetheless significant. Gross national product in 1977-79 was 36 percent higher than in 1971-73, agricultural output was up by 29 percent, and industrial output rose by 51 percent. The disposable money income of the population also rose substantially, suggesting an improving standard of living (table 1).

Higher input use accounted for much of the economy's growth. Investment nearly doubled over the period, with industry's investment growth rates exceeding agriculture's. Industry maintained its roughly 50-percent share of investment to agriculture's 13-15 percent (table 2). Energy use increased substantially, rising from 844,000 barrels a day in oil equivalent in 1970, to 1.3 million barrels per day by 1979, with most of the growth in the midseventies. 1/

Table 1--Romania: Indices of selected economic indicators,
1971-73 through 1980-82 averages and 1983 and 1984

Indicator	1974-76	1977-79	1980-82	1983	1984
<u>1/ 1971-73 = 100</u>					
Gross national product	118	136	141	144	150
Gross agricultural product 2/	106	125	114	120	134
Gross industrial product	130	151	163	169	176
Disposable money income	123	149	160	150	174
Agricultural output 3/	115	129	133	137	149
Crop	108	117	123	125	141
Livestock	122	143	145	150	158
Net agricultural output 4/	105	122	104	105	117

1/ Based on 1970 prices for all entries except gross national product and gross industrial product which are based on 1968 prices. 2/ Total production minus intermediate product use and production expenses. 3/ Total production minus intermediate use. 4/ Total production minus intermediate use, production expenses, and depreciation.

Sources: *Anuarul Statistic*, Bucharest, various editions; *Research Project on National Income in East Central Europe*, occasional papers 59, 62, 85, and 86, L.W. International Financial Research, New York, New York.

Table 2--Romania: Selected investment indicators,
1971-73 through 1980-82 and 1983

Indicator	1971-73	1974-76	1977-79	1980-82	1983
<u>1971-73=100</u>					
Total investment 1/	100	140	193	202	(205)
Industry	100	135	195	200	(183)
Agriculture	100	128	174	189	(198)
<u>Percent</u>					
Industry's share	50	49	49	49	48
Agriculture's share	15	13	13	14	16
Socialized agriculture's share	97	98	98	93	94

() = Estimate. 1/ Based on 1970 prices.

Source: *Anuarul Statistic*, Bucharest, various editions.

Labor use in industry rose at agriculture's expense as economic development progressed (table 3). By 1977-79, the industrial labor force was 32 percent larger than in 1971-73, and claimed a 34-percent share of the total labor force. The farm labor force fell 24 percent and its share in the total work force dropped from 44 percent in 1971-73 to 33 percent in 1977-79.

Table 3--Romania: Selected indicators of employment by branch, 1971-73 through 1980-82 averages and 1983

Sector	1971-73	1974-76	1977-79	1980-82	1983
<u>1,000 workers</u>					
Total	9,977	10,149	10,291	10,385	10,458
Index	100	102	103	104	105
Industry	2,619	3,120	3,464	3,746	3,835
Index	100	119	132	143	146
Agriculture	4,397	3,830	3,349	3,012	3,019
Index	100	87	76	69	69
<u>Percent</u>					
Industry's share	22.6	30.7	33.7	36	36.7
Index	100	136	149	159	162
Agriculture's share	44.1	37.7	32.5	29	28.9
Index	100	85	94	66	66

Source: *Anuarul Statistic*, Bucharest, various editions.

Foreign Trade. Economic growth resulted from the Government's rapid industrialization policy, which came increasingly to rely on imported raw materiels, machines, and technology, largely from the West (table 4). Key to this policy was development of an extensive, export-oriented, petrochemical industry. Between 1975 and 1980, oil imports more than tripled to 16 million tons annually and exports of the petrochemical industry were up 50 percent.

Although machinery and equipment exports actually increased more than imports during the seventies, it's likely that most exports went to other East European, Soviet, or developing country markets while most of the imports originated in the West.

By 1980, total Romanian imports were more than six times higher than in 1971 and valued at \$12.7 billion (only 11 percent of which were agricultural). Exports failed to keep pace, and the nation's trade deficit peaked at \$1.7 billion (table 5). Foreign credits provided the financing, leaving the country close to \$10 billion in debt by the beginning of the eighties.

Prices. Throughout the seventies, prices—measured in the socialist trade network only—were relatively stable because of extensive subsidies (table 6). Producer and retail prices rose only 5 and 6 percent, respectively, between 1971-73 and 1977-79. With stable prices, rising investment, imports, and disposable income left the economy consuming beyond its means. Energy and raw material use increased, resulting in higher unit costs for production than in comparable western countries.

Table 4--Romania: Trade in selected commodity groups,
1971-73 through 1980-82 averages and 1983 1/

Commodity group	1971-73	1974-76	1977-79	1980-82	1983
<u>Million dollars</u>					
Machinery and equipment:					
Export	714	1,301	2,193	3,285	3,649
Import	1,178	1,840	3,077	2,741	2,391
Raw materials and metals: 2/					
Export	502	1,241	1,943	3,239	3,154
Import	765	2,038	3,443	5,863	5,149
Chemicals, fertilizers, & rubber:					
Export	220	550	717	1,142	1,117
Import	157	428	567	752	636
Raw materials for food:					
Export	134	310	387	396	161
Import	84	319	401	613	289
Food stuffs:					
Export	363	642	855	920	760
Import	79	121	200	370	241

1/ Based on commodity group shares in trade given in *Anuarul Statistic* and total trade figures from table 5. 2/ Including fuel.

Sources: *Anuarul Statistic*, Bucharest, various editions; *International Financial Statistics*, International Monetary Fund, Washington, D.C., 1985.

Table 5--Romania: Total and agricultural foreign trade, 1971-84

Year	Exports		Imports		Balance	
	Total	Agricultural	Total	Agricultural	Total	Agricultural
<u>Million dollars</u>						
1971	2,102	374	2,104	254	-2	120
1972	2,599	515	2,616	298	-17	217
1973	3,667	726	3,425	454	242	272
1974	4,858	885	5,049	617	-191	268
1975	5,341	862	5,342	694	-1	168
1976	6,134	929	6,087	881	47	48
1977	6,859	1,275	7,002	778	-143	497
1978	8,022	1,273	8,628	833	-606	440
1979	9,303	1,211	10,519	1,221	-1,216	-10
1980	11,024	1,410	12,685	1,432	-1,661	-22
1981	12,367	1,320	12,264	1,573	103	-253
1982	11,559	1,011	9,745	839	1,814	172
1983	11,512	783	9,643	748	1,369	35
1984	12,646	856	10,334	660	2,312	196

Sources: *International Financial Statistics*, International Monetary Fund, Washington, D.C. 1985; *FAO Trade Yearbook*, Food and Agriculture Organization of the United Nations, various editions.

Table 6--Romania: Producer and retail price indices 1971-73 through 1980-82 averages

Indicator	1974-76	1977-79	1980-82
<u>1971-73 = 100</u>			
Producer prices	102	105	117
Retail prices	103	106	110

Sources: *Anuarul Statistic*, Bucharest, various editions; and unpublished Romanian data.

Agriculture

Agriculture performed fairly well through the midseventies, causing President Ceausescu in 1978 to state that "...we undoubtedly have every reason to be pleased with the development of our agriculture." ^{2/} Agricultural output (total production minus intermediate consumption for further production) in 1977-79 was 29 percent above the 1971-73 level. Growth in the livestock sector eclipsed that of crops. Net farm output--production minus intermediate use, production costs, and depreciation--increased more slowly, however, reflecting a rise in expenses.

Investment and Inputs. Investment in agriculture was 74 percent larger in 1977-79 than in 1971-73, although agriculture's share in total investment dropped slightly, from 15 percent to 13 percent. Much of this investment was concentrated in expanding irrigation facilities. Irrigated agricultural land nearly doubled to an average 1.8 million hectares in 1977-79 (table 7). Area expanded faster on cooperatives than on state farms.

Grain area, particularly corn, benefited the most. Irrigated grain area was an average 478,000 hectares larger in 1977-79 than in 1971-73 and this increase accounted for 58 percent of the growth of irrigated arable land.

Machinery availability also expanded rapidly (table 8). Tractor and self-propelled combine numbers increased significantly. There was a corresponding steep decline in tractor-drawn grain combines, indicating a quality improvement in the machinery stock.

Fertilizer use also increased substantially, rising to an average 106 kilograms (active ingredient) per hectare of arable land in 1977-79, 68 percent above 1971-73 (table 9). Although fertilizer use on collective farms expanded at nearly the same rate as total use, the per-hectare use of 98 kilograms was 44 percent less than on state farms. Romania remained the least intensive user of fertilizer in the region. Use in Czechoslovakia, for example, averaged 332 kilograms per hectare in 1977-79.

Crop and Livestock Performance. Output responded generally well to increased inputs. Grain yields rose 20 percent between 1971-73 and 1977-79; of the major crops, only soybean yields declined (table 10). But much of the rise in potato yields probably comes from efforts of private producers who grow over half the crop.

In general, yields of the major oilseeds--sunflowerseed and soybeans--were less than planned. Sunflower yields rose only 7 percent between 1971-73 and 1977-79 while soybean yields fell.

Table 7--Romania: Total irrigated area, irrigated area by farm type and crop, 1971-73 through 1980-82 averages and 1983

Indicator	1971-73	1974-76	1977-79	1980-82	1983
<u>1,000 hectares</u>					
Agricultural land	952	1,389	1,821	2,114	2,324
State farms	286	375	488	568	615
Cooperatives	637	946	1,235	1,367	1,487
Arable land	910	1,322	1,735	2,017	2,216
State farms	267	352	460	537	581
Cooperatives	616	912	1,190	1,322	1,438
Wheat	146	219	263	343	416
Corn	194	378	555	576	534
Sunflowerseed	45	61	85	112	138
Sugar beets	(22)	49	69	72	(80)
Soybeans	--	49	110	137	105
Pastures and meadows	16	24	31	31	33

-- = No information available or area less than 1,000 hectares. () = Estimate.

Source: *Anuarul Statistic*, Bucharest, various editions.

Table 8--Romania: Number of selected farm machinery, 1971-73 through 1980-82 averages and 1983

Type	1971-73	1974-76	1977-79	1980-82	1983
<u>1,000 units</u>					
Tractors	115	121	139	157	168
T-drawn cereal combines	36	22	15	1/ NA	--
T-drawn corn combines	4	3	1	1/ NA	--
Cereal combines	5	18	31	36	43
Corn combines	--	--	--	7	11
T-drawn fodder combines	8	10	14	18	21
Chemical fertilizer spreaders	14	12	14	13	14

-- = Negligible. NA = Not available. 1/ Negligible supply after 1981.

Source: *Anuarul Statistic*, Bucharest, various editions.

Livestock numbers expanded greatly with poultry leading the group. Meat and milk production also increased. By 1977-79, output of each was more than one-third higher than in 1971-73. This led to an increase in per-capita meat consumption. Consumption in 1980 was 60 kilograms per capita, a 31-percent increase over 1975, but still the lowest in the region.

Table 9—Romania: Chemical fertilizer use—total, state, and cooperative—1971–73 through 1980–82 averages and 1983

Indicator	1971–73	1974–76	1977–79	1980–82	1983
<u>1,000 tons (active ingredient) and index (1971–73=100)</u>					
Total NPK	662	916	1,118	1,091	1,157
Index	100	138	169	165	175
State farms	209	243	290	279	278
Index	100	116	139	133	133
Cooperatives	417	587	709	679	724
Index	100	141	170	163	174
<u>Kilograms/hectare</u>					
Use on arable land	63	87	106	104	110
Use on state farms	126	147	175	171	170
Use on cooperatives	58	81	98	94	100

Source: *Anuarul Statistic*, Bucharest, various editions.

Trade. Agricultural trade expanded rapidly. The value of farm exports and imports expanded three and five times, respectively, between 1971 and 1979. Imports expanded faster than exports and the country became a net agricultural importer.

Higher imports of grain, oilseeds, and oilseed meal and larger grain, live animal, and meat exports accounted for the increase in trade (table 11). The tremendous growth in grain imports—over 5 times between 1971–73 and 1977–79—and oilseed and oilseed meal purchases—13 times and 2 times, respectively—underpinned the livestock sector's growth.

Average wheat and corn imports during 1977–79 were roughly equal at approximately 545,000 tons, both up substantially from 1971–73 but still below the peak years of 1980–82. The 66-percent increase in grain exports between 1971–73 and 1977–79 probably represents exports of high quality grain offset by credit-financed or lower quality imports.

U.S. agricultural exports benefited from this expansion (tables 12 and 13). The average value of exports rose fourfold between 1971–73 and 1977–79, reaching \$209 million in the latter period. Growth continued into 1980 and 1981 before the current decline in sales began. Sales of all major commodities—grain, soybeans, soybean meal, cotton, and cattle hides—were up substantially.

Grain imports from the United States rose to an average 579,000 tons in 1977–79, 2.5 times 1971–73 purchases. Corn overtook wheat's traditional place as the major U.S. grain purchased, in large part to meet the feed requirements of the expanding livestock sector.

Soybean imports went from virtually nothing to an average 214,000 tons because a domestic crushing industry came on line in the late seventies. Soybean meal imports also rose.

Table 10--Romania: Crop yields, livestock numbers, and meat and milk production and indices; 1971-73 through 1980-82 averages, 1983, and 1984 estimate

Commodity	1971-73	1974-76	1977-79	1980-82	1983	1984
<u>Tons/hectare and index (1971-73=100)</u>						
Grain	2.5	2.6	3.0	3.3	3.2	3.7
Index	100	104	120	132	128	148
Sugar beet	23.1	23.9	23.9	22.5	18.8	25.9
Index	100	103	103	97	81	112
Sunflower	1.5	1.4	1.6	1.6	1.4	1.7
Index	100	93	107	107	93	113
Soybean	1.4	1.4	1.2	1.1	.94	1.3
Index	100	100	86	79	67	93
Potato	11.6	13.3	15.0	15.1	19.5	20.9
Index	100	115	129	130	168	180
<u>1,000 head and index (1971-73=100)</u>						
Cattle 1/	5,504	6,002	6,389	6,434	6,246	6,752
Index	100	109	116	117	113	123
Hogs	7,629	8,789	10,091	11,635	12,644	14,327
Index	100	115	132	153	166	188
Poultry	60,030	70,936	93,416	100,820	111,047	123,960
Index	100	118	156	170	185	206
<u>1,000 tons and index (1971-73=100)</u>						
Meat						
production 2/	1,621	2,049	2,377	2,362	2,225	NA
Index	100	126	147	146	137	NA
Milk						
production 3/	3,128	3,557	4,315	3,705	3,630	3,710
Index	100	114	138	118	116	119

1/ Includes cows. 2/ Liveweight for slaughter. 3/ Cow's milk for consumption only.

Source: *Anuarul Statistic*, Bucharest, various editions.

Table 11--Romania: Trade in selected agricultural commodities,
1971-73 through 1980-82 averages and 1983 and 1984

Commodity	1971-73	1974-76	1977-79	1980-82	1983	1984
<u>1,000 tons</u>						
Grain:						
Exports	911	1,170	1,511	1,489	530	(654)
Imports	278	1,367	1,548	2,165	906	(510)
Wheat:						
Exports	518	910	922	381	100	(150)
Imports	121	619	547	702	400	(100)
Corn:						
Exports	391	259	589	1,053	430	(500)
Imports	87	465	544	1,262	110	(--)
Oilseeds: <u>1/</u>						
Exports	(22)	2	5	2	2	(2)
Imports	20	87	251	(215)	(333)	(422)
Oilseed meal:						
Exports	--	--	--	--	--	(--)
Imports	(128)	273	260	402	115	(69)
Vegetable oil:						
Exports	134	132	145	92	97	(90)
Imports	1	7	4	13	6	(27)
Sugar:						
Exports <u>2/</u>	61	41	(91)	(208)	(62)	NA
Imports <u>3/</u>	89	73	113	(209)	228	NA
Meat and meat products:						
Exports	83	154	192	178	110	NA
Imports	32	8	31	73	21	NA
Cattle for slaughter: <u>4/</u>						
Exports	1,221	1,393	1,570	39	7	(40)
Imports	--	--	--	--	--	(--)
Sheep for slaughter:						
Exports	1,102	1,291	1499	799	648	(925)
Imports	2	(2)	120	84	50	(25)
Eggs: <u>5/</u>						
Exports	384	438	469	242	402	(220)
Imports	35	66	--	--	--	(--)
Vegetables:						
Exports	222	171	192	168	112	NA
Imports	--	--	--	--	--	NA
Fruit:						
Exports	58	61	74	46	69	NA
Imports	52	74	86	(109)	(81)	NA

-- = Less than 1,000 tons, head, or zero. NA = Not available. () = Estimate. 1/ Rapeseed, soybeans, and sunflowerseed. 2/ Raw basis. 3/ Raw and refined total. 4/ 1,000 head. 5/ Million pieces.

Sources: *Anuarul Statistic*, *FAO Trade Yearbook*, *Statisticheski ezegodnik stran-chlenov SEV*, various editions.

Table 12--Romania: Value of U.S. agricultural exports,
1971-73 through 1980-82 averages and 1983 and 1984

Commodity	1971-73	1974-76	1977-79	1980-82	1983	1984
<u>Million dollars</u>						
Grain	12.5	75.3	62.6	183.5	--	--
Wheat	7	20.1	9.5	33.5	--	--
Corn	4.6	55.2	53.1	146.9	--	--
Soybeans	1.9	16.3	55.6	52.8	76.4	112.5
Soybean meal	11.3	15	27.8	64.9	--	--
Cotton	9	17	14.7	11	--	--
Cattle hides	14	20	46.2	26	40.8	41.5
Other	1.5	2.8	2.2	7.7	.9	3.1
Total	50.2	146.4	209.1	345.9	118.1	157.1

-- = Amount less than \$1 million. 1/ Including transshipments through Western Europe and Canada during 1976-1983.

Sources: *Eastern Europe: Outlook and Situation Report*, USDA/ERS, Washington, D.C., various editions; *Foreign Agricultural Trade of the United States (FATUS)*, USDA/ERS, Washington, D.C., various editions.

Table 13--Romania: Volume of major U.S. agricultural exports,
1971-73 through 1980-82 averages, and 1983 and 1984

Commodity	1971-73	1974-76	1977-79	1980-82	1983	1984
<u>1,000 tons</u>						
Grain	228	599	579	1,262	--	--
Wheat	121	171	84	201	--	--
Corn	83	268	415	1041	--	--
Soybeans	6	79	214	215	305	369
Soybean meal	73	71	119	254	--	--
Cotton	13	10	10	7	--	--
Cattle hides 2/	926	1,551	1,577	888	1,300	1,032

-- = Amount less than 1,000 tons or not applicable.

1/ Including transshipments through Western Europe and Canada during 1976-1983.

2/ 1,000 pieces.

Sources: *Eastern Europe: Outlook and Situation Report*, USDA/ERS, Washington, D.C., various editions; *Foreign Agricultural Trade of the United States (FATUS)*, USDA/ERS, Washington, D.C., various editions.

Organization and Policy. The collectivization of Romanian agriculture was completed in the early sixties. The standard Soviet-style of land organization resulted: large state farms, somewhat smaller and more numerous cooperative farms, and machine tractor stations (charts 1-3). The state farms received preferential access to inputs, technology, and management skills and engaged in specialized production. Cooperative farm development was characterized by less input availability and more product diversification.

Officials have long sought to raise the technical level of agriculture, which has generally meant bringing the cooperative farms up to the state farm level. Cooperative farms have been encouraged to form joint projects plus cooperate with state farms. The aim has been for a "unitary management" of agriculture with most production, input allocation, and utilization decisions made by planning officials in Bucharest and transmitted to farms through regional farm organizations.

The first step in this direction came in the early seventies with the formation of intercooperative councils. These councils are groupings of five to seven farms within the same *judet* (county). They coordinate activities, discuss common problems, and draw on the particular strengths of individual members. Membership in a council is strictly voluntary and member farms have a veto over any collective decision.

Cooperation was further encouraged by the intercooperative economic associations which soon followed. Groups of farms were permitted to form joint investment projects, usually in livestock breeding or specialty crop raising, that would be too complex or expensive for individual farms. Association was again voluntary and joint activity with state farms was also encouraged.

The regulations on cooperation between state and cooperative farms were revised in 1978. The management authority of state farms and of intercooperative councils over individual cooperatives increased. The intercooperative councils were given legal status and the right to draw up production plans to cover member farms. ^{3/} The councils were also made responsible to the county agricultural directorates—the local representative of the ministry of agriculture—for their plan fulfillment.

The voluntary nature of the councils was reemphasized in the legislation, but the intent to unify agricultural management was evident. In 1977, the authority of the Union of Agricultural Production Cooperatives—the cooperatives' national organization—was weakened. ^{4/} The Union's influence over cooperatives' planning and development activities was reduced and it was relegated to a largely political role.

THE NEW ECONOMIC MECHANISM

Despite the economy's overall good performance, officials became increasingly concerned with the high level of input use relative to output. By 1977-79, for example, growth in industrial and agricultural investment was outstripping output by substantial margins. The rise in farm investment between 1974-76 and 1977-79 was 36 percent, more than twice the rise in net farm output. High farm production costs had become a serious problem.

Marcoeconomy

A plenum of the Romanian Communist Party in March 1978 announced major changes in economic management in response to the investment-output situation. The New Economic Mechanism (NEM), to take effect at the beginning of 1979, was adopted. The NEM was charged with raising output throughout the economy by improving efficiency. Increased use of financial incentives and indicators by enterprise managers were to be key tools in

Figure 1.

ORGANIZATIONAL STRUCTURE OF AGRICULTURAL PRODUCTION COOPERATIVES

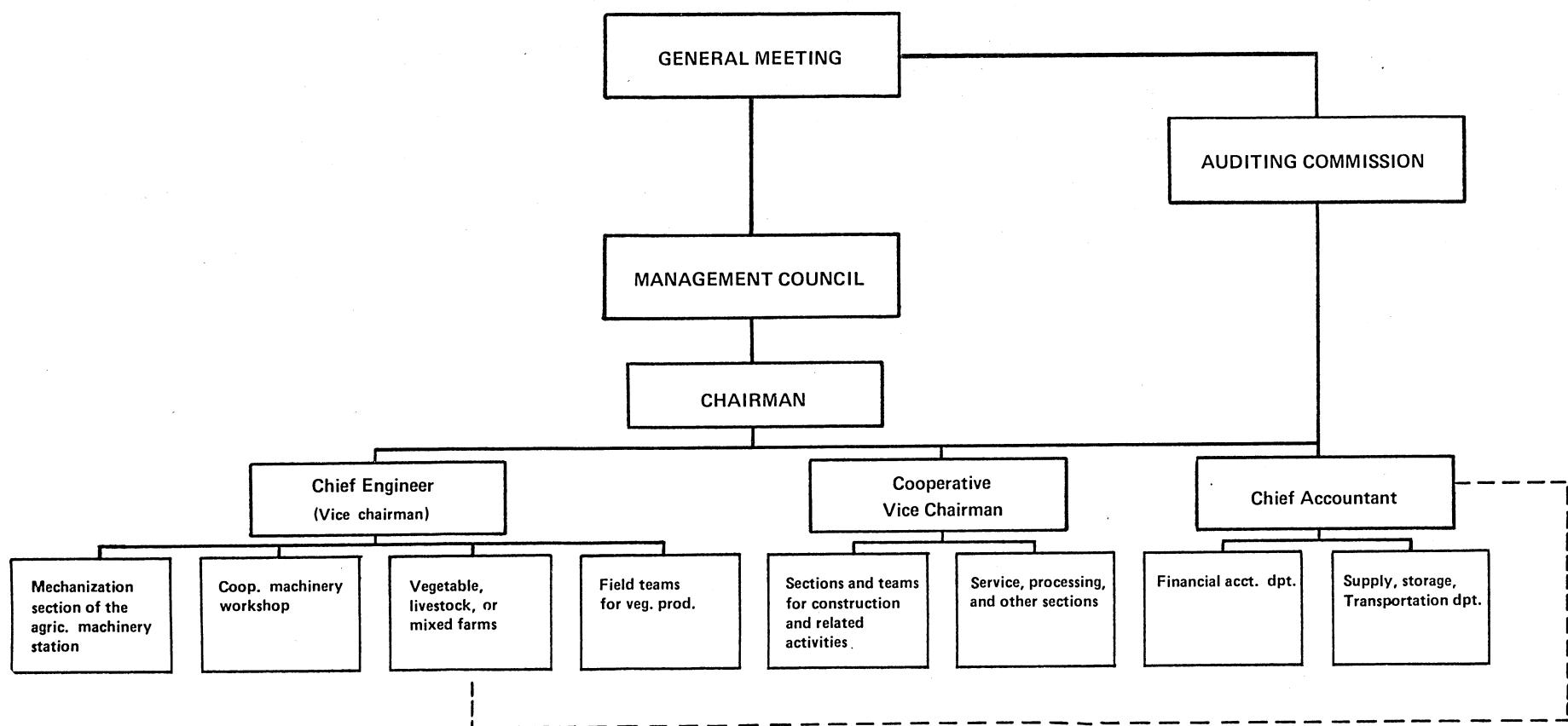
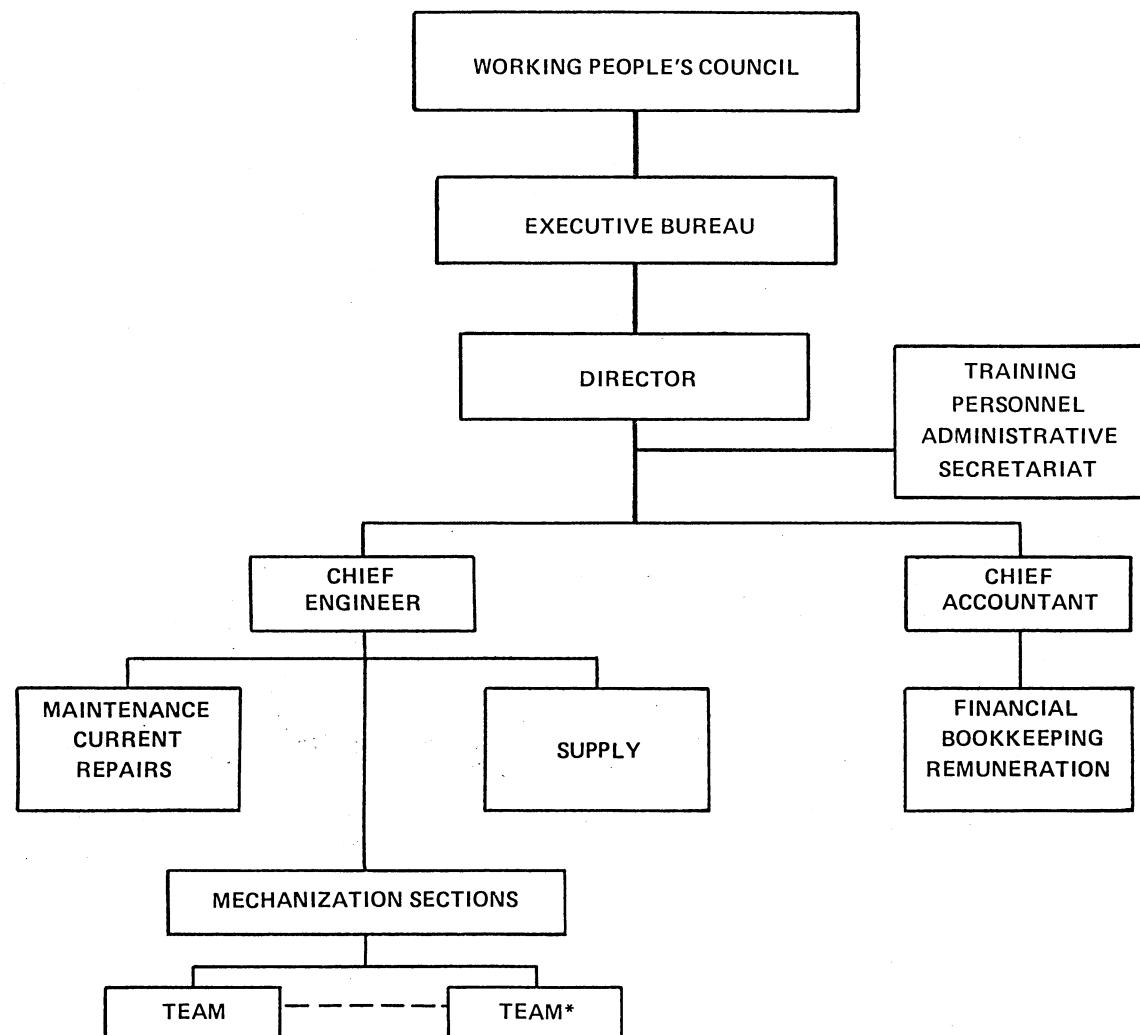


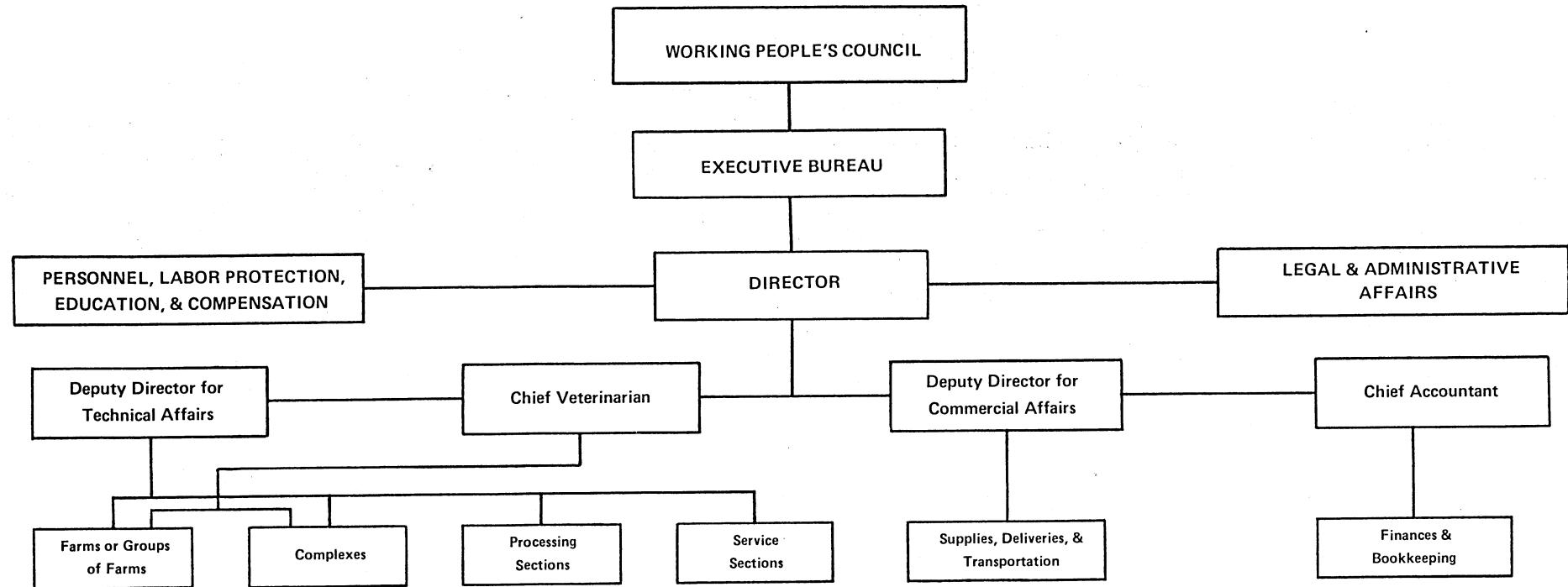
Figure 2.
**ORGANIZATIONAL STRUCTURE OF
AGRICULTURAL MACHINERY STATIONS**



*ONE TEAM IS COMPRISED OF AT LEAST 10 TRACTORS

Source: *Agricultura Socialistă în România*, Editura politica, Bucharest, Romania. 1983.

Figure 3.
**ORGANIZATIONAL STRUCTURE OF STATE
AGRICULTURAL ENTERPRISES***



*The number of organizational units varies with each state agricultural enterprise.

Source: Agricultura Socialista A Romaniei, Editura politica, Bucharest, Romania. 1983.

this effort. The primacy of annual and 5-year plans did not change, however. Under the NEM, regional economic associations, known as centrals, were to receive more authority, but this was granted to improve fulfillment of the detailed plans written in Bucharest. 5/

The little that could be classified as a market-oriented reform was the inclusion of a new indicator of plan fulfillment: net value added or net production. It was an attempt to improve input efficiency, particularly of energy, and it was the first serious attempt to move away from gross output as the primary plan fulfillment indicator.

However, the lack of any specific price reform in the NEM made the net production indicator virtually useless. With Romanian input prices lower relative to those on the world market, and with gross physical output targets still central to the plan, input efficiency was not improved. In fact, industrial productivity registered the slowest gains in a decade during this period, and were even negative in the fuel extraction branch. By 1980-82, the rate of increase in productivity per employee versus 1977-79 was half the comparable increase from 1974-76 to 1977-79.

Agriculture

More efficient use of agriculture's inputs was imperative because there were no longer surplus resources in farming nor adequate inputs in the rest of the economy. The steady transfer of labor to industry and agriculture's difficulty in improving investment productivity left farming undermechanized and short staffed. The farm labor force was also considerably older than industry's; half of industrial workers in 1980 were under 30 while two-thirds of the agricultural population was over 45. 6/

Costs had also become a serious problem. Between 1971 and 1980, for example, the cost of industrial products used in agriculture rose approximately 7.2 billion lei, while the prices paid by procuring agencies went up only 4 billion. 7/ By 1980, only 9 out of the 25 major commodities produced on state farms were profitable. 8/ The situation was particularly severe in livestock: by 1979, the average selling price of meat, milk, and eggs for the larger livestock farms was 7 to 30 percent below the production cost. 9/

Agro-Industrial Councils. The major impact of the NEM on agriculture was the establishment of agro-industrial councils (chart 4). One or more AIC's were established per county. Each AIC includes state and collective farms, machine tractor stations, and food processing plants. Central control--under the banner of unified farm management--increased and cooperative farms became further integrated with their state counterparts.

The AIC's remain today the major institutions for day-to-day management of agriculture on the regional level. 10/ It's through the AIC's that county general directorates for agriculture implement plans from Bucharest and supervise local agriculture. 11/

AIC's are designed to integrate and unify all agricultural activities in a given region, including food processing, under a single management authority (chart 5). Goals include further concentration and specialization of farm production, higher labor and input productivity, reduced costs, more intensive use of the land, and improved plan fulfillment. 12/

The management of an AIC acts largely to coordinate and channel the activities of member units. 13/ The councils, however, have independent authority. Each AIC is responsible to the county directorate of agriculture for the plan fulfillment of its component organizations, including plans for crop and livestock production, and commodity sales to state procurement centers. 14/ The work of the AIC is directed by the local communist

Figure 4.
**ORGANIZATIONAL STRUCTURE
 OF THE JOINT STATE AND COOPERATIVE AGROINDUSTRIAL COUNCILS**

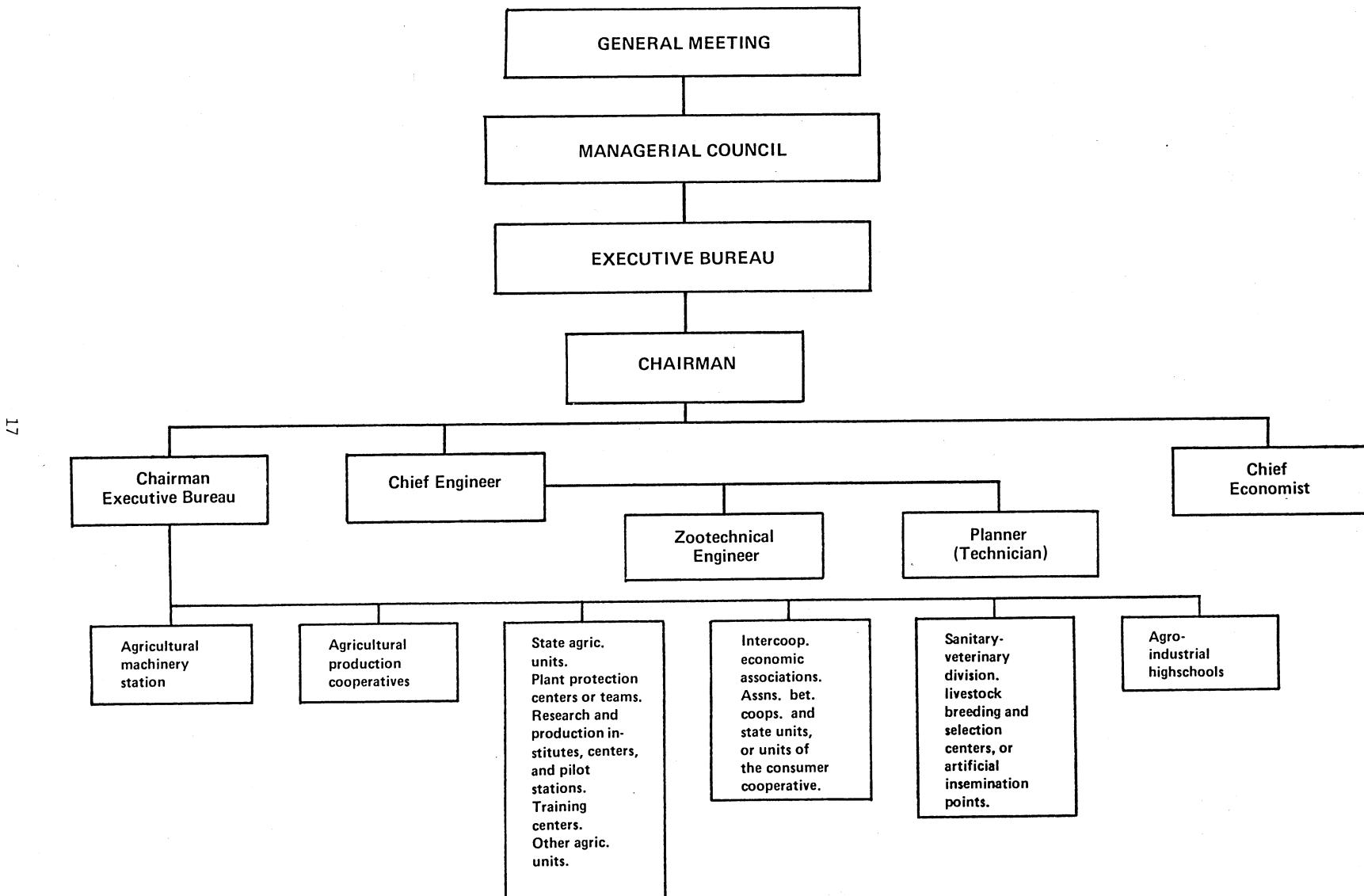
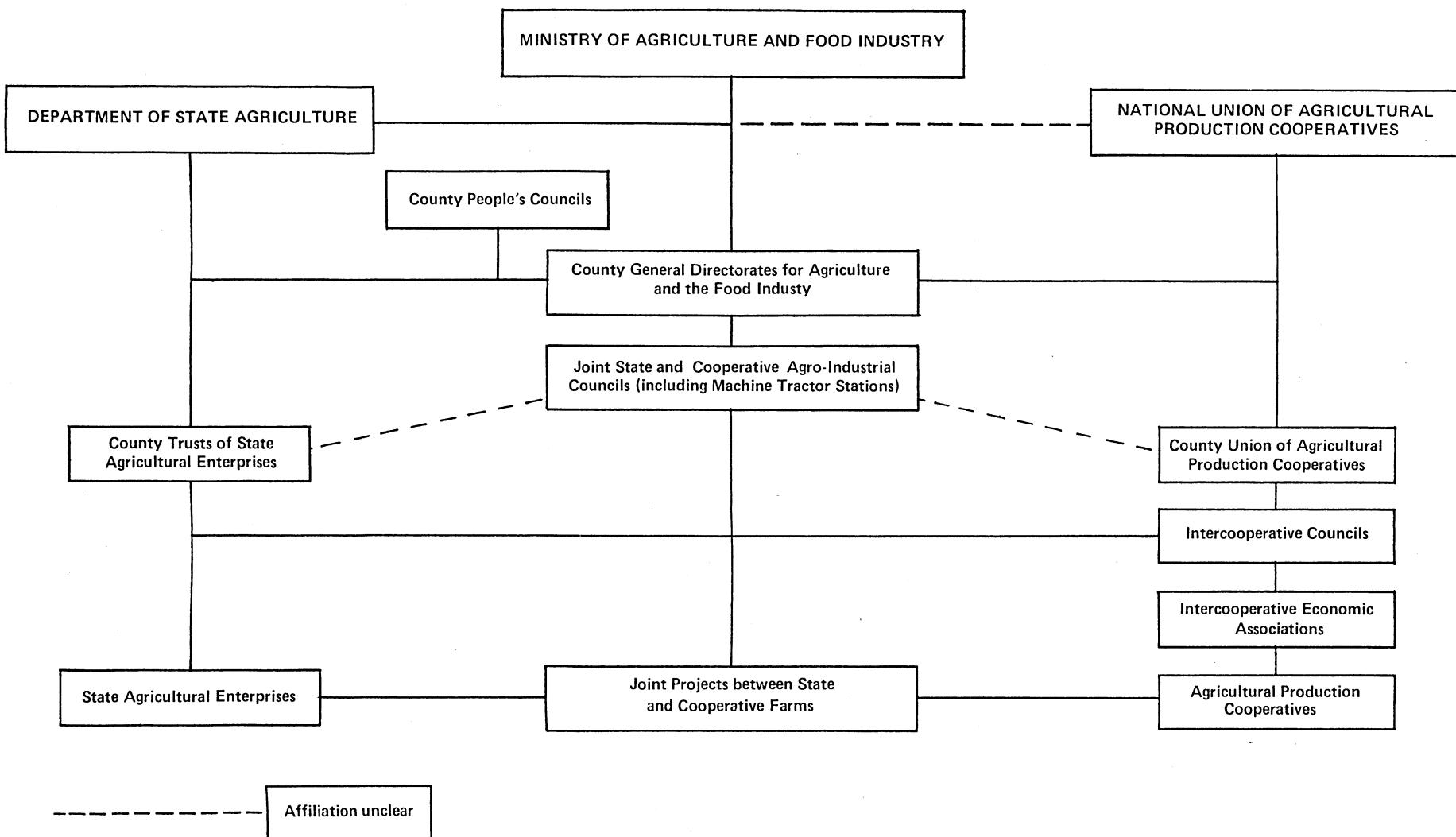


Figure 5.
ORGANIZATION OF ROMANIAN AGRICULTURE



Source: Various Romanian publications.

party organization, which appoints one of its staff to chair the council's executive bureau. 15/ The technical affairs of the council are run by the head of the local agricultural machinery station who is appointed the first deputy chairman.

The autonomy of component organizations in an AIC is guaranteed for an ill-defined transitional period, after which the AIC will assume increased management responsibilities. 16/ State and collective farms continue to receive their own individual plans but, for example, the AIC management coordinates all machinery use for farms under its jurisdiction. 17/

There is little evidence in AIC discussions about providing any substantial independence from the central planners in Bucharest. Nor are there signs of significant changes in the economic management of farms.

ECONOMIC CRISIS AND ADJUSTMENT

The NEM fanfare was hardly over when economic performance began to lag. The NEM provided no fundamental change in Romania's centrally planned economy. The expansion of heavy industry continued while agriculture fell behind. Many Romanian economists now cite this unevenness as a major cause of today's economic problems. 18/ Criticism intensified as the returns on capital investment fell short of repayment obligations to foreign financiers. In addition, the 1979 rise in world oil prices increased costs in Romania's energy intensive industries and the ensuing world recession reduced export demand.

Domestic shortfalls soon plagued the economy. GNP, industrial, and investment growth slowed dramatically in 1980-82. Although the growth of agricultural output continued, the growth rate of the gross product of agriculture--the measure of agriculture's contribution to GNP--declined.

Romania was unable to service its debt, missing payments to creditors, and entering into a stand-by credit arrangement with the International Monetary Fund (IMF). The country ultimately rescheduled its maturing debt in 1983.

In 1981, major changes in economic policy were again announced. These changes were identified officially as the ongoing implementation of the NEM, but were in fact adopted specially in response to the economic downturn.

The IMF Agreement

In June 1981, the IMF agreed to provide up to \$1.3 billion in credit to Romania over 3 years. Romania pledged to restrain domestic demand, promote efficient resource use through realistic prices, and reform the exchange rate system of the national currency--the leu.

Before the agreement was cancelled in early 1984 at Romanian request, producer and retail prices rose steadily, a single exchange rate for the leu was established, and its value cut against the dollar. Drawings on the agreement were also interrupted by the IMF briefly in 1982 because of delayed and incomplete implementation of its recommendations.

The bulk of the adjustment occurred in the foreign trade sector. Authorities, using their monopoly control over foreign exchange, slashed imports. Between 1980 and 1984, total imports fell from the equivalent of \$12.7 billion to \$10.3 billion and the merchandise trade balance went from a \$1.7 billion deficit to a \$2.3 billion surplus. Exports also rose.

The cut in imports was particularly marked on the convertible currency account (table 14). Hard currency imports fell 41 percent between 1980 and 1984, resulting in a surplus of \$2.2 billion versus a deficit of \$1.5 billion in 1980. Energy and capital imports dropped greatly; oil imports fell 22 percent, for example, between 1980 and 1983. There is no indication of increased efficiency of energy use to account for such a substantial decline.

The improved trade balance allowed for substantial repayment of foreign debt. The estimated net hard currency debt at the end of 1984 was \$6.8 billion, \$3 billion less than in 1981.

The Romanian population's standard of living has fallen as a result. Personal money income fell and retail shortages--especially of food and fuel--continue widespread. Staple foods have been either rationed or periodically unavailable since 1981. During the record-cold 1984/85 winter, use of private automobiles was banned and draconian restrictions on electricity use firmly enforced. The ban on private automobiles has been reimposed for the 1985/86 winter.

Table 14--Romania: Trade on convertible currency account, 1971-84

Year	Exports	Imports	Balance
<u>Million dollars</u>			
1971	830	881	-51
1972	1,076	1,148	-72
1973	1,666	1,734	-68
1974	2,619	2,945	-326
1975	2,839	2,950	-111
1976	3,403	3,327	76
1977	3,700	3,783	-83
1978	4,040	4,632	-592
1979	5,363	6,518	-1,155
1980	6,503	8,037	-1,534
1981	7,216	7,012	204
1982	6,235	4,710	1,525
1983	6,246	4,558	1,688
1984	6,892	4,706	2,186

Source: *International Financial Statistics*, International Monetary Fund, Washington, D.C., 1985.

Agriculture and Economic Adjustment

Agriculture was not immune from the economic downturn. Output growth slowed while large increases in production expenses led to a decline in net output. The downturn was so severe that it threatened overall growth in the new 1981-85 5-year plan. ^{19/} In response, officials took steps, primarily administrative, to improve input efficiency and increase procurements of farm output. Domestic consumption and private trade in farm products were restricted as a result. The Government backed off from its preoccupation with

industrial development and recognized the importance of agriculture to economic development. 20/ Private agriculture also received increased attention and a degree of official recognition.

The adjustment in agriculture goes loosely under the umbrella of the New Agrarian Revolution (NAR). The NAR, inaugurated in 1965, was resurrected in 1982 at the 9th Congress of the Romanian Communist Party. The 1982 version calls for increased farm production to bridge the gap between domestic output and consumption, and allow for exports to pay off the country's debt.

The NAR, like the NEM, is short on specifics. It relies on improved applications of science and technology in production, expanded land irrigation, more efficient use of resources, and better management by agro-industrial councils. 21/

Lagging Performance. Nearly every significant growth indicator of agricultural performance was lower in 1980-82 than in 1977-79 and below plan as well. The increase in agricultural output in 1980-82 was only 3 percent versus 12 percent in 1977-79.

Crop output expanded slightly more than total output, but milk and meat production fell, and growth in livestock numbers slowed. Net production in 1980-82 fell back to the 1974-76 level because of rising production costs.

The shortfalls in individual commodity production were particularly striking (table 15). Only hog numbers and egg production approached the average plan for 1980-82. The gap was widest for soybeans, sugar beets, and sunflowers.

Table 15--Romania: Plan versus actual output of selected commodities and livestock numbers, 1980-82 and 1983-85 averages 1/

Commodity	1980-82 average			1983-85 average		
	Plan	Actual	Actual/plan	Plan	Actual	Actual/plan
	<u>--1,000 tons--</u>		<u>Percent</u>	<u>--1,000 tons--</u>		<u>Percent</u>
Grain	24,580	20,827	85	27,990	20,732	74
Wheat and rye	7,035	6,106	87	9,370	58,70	63
Corn	14,007	11,888	85	15,162	11,969	79
Sunflower-seed	1,151	825	72	1,264	780	62
Soybeans	752	339	45	786	313	40
Sugar beets	9,045	5,883	65	10,337	5,940	57
Potatoes	5,433	4,529	83	6,248	6,097	98
Cattle <u>2/</u>	7,313	6,434	88	7,825	6,679	85
Hogs <u>2/</u>	12,800	11,635	91	14,443	13,924	96
Meat <u>3/</u>	2,835	2,375	84	2,919	NA	NA
Milk <u>4/</u>	57,085	49,420	87	57,433	37,786	66
Eggs <u>5/</u>	7,274	6,966	96	7,747	7,480	97

NA = Not available. 1/ The 1983-85 average output data are estimates.

2/ 1,000 head. 3/ Liveweight. 4/ 1,000 hectoliters. 5/ Million pieces.

Sources: Various Romanian plan and plan fulfillment reports; *Eastern Europe: Outlook and Situation Report*, USDA/ERS, various editions; author's estimates.

Self Supply Program. The Self Supply Program, announced in 1980, is the Government's chief response to agriculture's problems. The program aims to maximize sales of farm goods to state procurement centers and minimize outlays from central stocks for the retail food market. The Self Supply Program maintains tight state control over resources, contains strict enforcement methods, and amasses exportable food stocks by restricting domestic supplies.

Domestic trade in farm products is severely limited in Romania. Procurements from producers by Government agencies account for nearly all off-farm use. Procured output enters the state stock. The state stock then supplies urban and other nonagricultural areas and industrial processing, and is the source of Romania's farm exports.

Data on actual procurements are lacking, but nearly all industrial crop output is set for procurement based on plan data. In 1983-85, for example, between 70 to 80 percent of wheat, 70 percent of meat (liveweight), 50 percent of milk, and 40-45 percent of planned egg output were set for procurement.

The Self Supply Program obligates each agricultural unit and individuals who own farms or work private plots to raise selected crops and livestock to provide for their own needs and for sales to the state. ^{22/} Deliveries to the state procurement network have first claim on a farm's or individual producer's output. The decree assigns to the People's Councils in each village the responsibility for fulfilling plans handed down by county authorities for local sales to state stocks and for maintenance of the local retail food supply.

Local retail supplies of grain products and some livestock products are determined by the Ministry of Agriculture, based on established per-capita consumption norms and a region's population. If a region is a deficit producer, the difference between what the area is set to consume and produce is made up through deliveries from state stocks. Regions which produce more than the plan stipulates are allowed to keep a portion of the overfulfillment. But, regions experiencing production shortfalls are not granted any reduction in delivery obligations. Private trade in grain and meat is severely restricted.

The effects of the Self Supply Program have been quite severe. There are no reports of any general improvement in the food supply situation. Deliveries to stocks in many counties far exceed return deliveries from the state, sometimes approaching a factor of 10. Some Romanian commentators consider the consumption norms set by the Ministry of Agriculture as deliberately favoring state stocks at the expense of the population. Complaints were so strong that the Government proposed a modification of the program in late 1982, pledging to review the method for determining local food deliveries. ^{23/}

Organizational Changes. No organizational changes have occurred on the scale of the 1979 NEM, but the scope and management of the AIC's have been refined. In 1981, the AIC's were reduced in number and increased in size and all state farms were affiliated with a local AIC. ^{24/} The authority of AIC's likely increased, especially following the publication of new AIC statutes in 1982 designed to "provide the organizational framework necessary for the management of overall agriculture and the socio-economic development of the villages". ^{25/} New statutes were also issued for cooperation among cooperative farms and between cooperative and state farms. Details are unclear on all of these, but they seem to represent further centralization and vertical integration in agriculture.

Investment. Investment growth slowed greatly in the eighties, but agriculture has increased its share of the total. Agriculture and food processing are now priority sectors for investment. Farm investment in 1983 was 16 percent of the total, up from 13 percent in 1977-79. Growth in agricultural investment was more than three times that of industry in 1980-82. In 1983, industrial investment may have actually declined.

Wage and Income Policy. Steps were taken to increase labor productivity and hold labor in agriculture. In 1982, the existing law on labor renumeration in the collective sector (enacted in 1976) was modified. Group piecework as the basis for pay was maintained, but labor discipline was tightened by basing the total value of a cooperative member's income on fulfillment of the plan of that member's production unit. Other provisions require members to work 300 days a year, restrict the right to a private plot to those who have performed their work duties, and establish a pension system for collective farm members. 26/

Also, newly employed collective farmers must wait 5 years for full membership in the collective. During this time, half of the farmer's share in the collective's profit sharing fund is held in escrow. Leaving the farm on one's own initiative in the first 5 years results in loss of the escrow fund. 27/

Components of Cooperative Member Pay by Importance:

- Base pay in cash and kind*
- Profit sharing*
- Additional cash payment for above plan output*
- Length of service allowance*

Payment in kind includes 150 kg. of wheat per family under the *Self Supply Program* which is subject to a 20-percent reduction due to plan underfulfillment.

Profit sharing is derived from a fund containing up to 15 percent of a cooperative's profit.

Source: Agricultura Socialista a Romaniei, Bucharest: Editura Politica, 1983.

Prices. A condition of the Romanian-IMF agreement was that Romania undergo a substantial price reform. There had been no general movement in prices for years—some retail food prices had not changed in three decades—while production costs and subsidies skyrocketed.

Progress in this direction, however, preceded the IMF requirements. Major economywide increases in producer prices occurred on January 1, 1981. Energy prices doubled and the leu was devalued. Energy prices and interest rates rose further in 1983 and 1984. In agriculture, producer prices rose an average of 12 percent in 1981 and towards the end of the year bonuses of up to 59 percent were announced for deliveries of certain products to procurement centers. 28/ Retail food prices in the socialized market rose an average 35 percent in early 1982, with prices of meat and other basic products going up by 48 to 60 percent. Officials held the line on retail prices during 1983 and 1984, however, even though producer costs continued to rise. If this policy remains, shortages and rationing will continue.

Private Agriculture. The importance of private agriculture has increased since 1981, but officials are suspicious and maintain tight control. Private agriculture is attractive to resource-strapped planners because, relative to socialized farming, fewer resources are necessary for production and the output can be used for local needs, strengthening self supply. But there remains a strong anti-private agriculture strain in Romania. Romania was the last country in the region to acknowledge, even rhetorically, the benefits of private farming.

The private sector is small and accounts for only 16 percent of agricultural land (table 16). It is, however, a major producer of several foods. A large share of the country's livestock and nearly half of the meat produced comes from private production. Cooperative and state farmers raising labor-intensive crops and livestock on small individual plots account for the bulk of output. Private farm ownership is restricted to hilly and mountainous regions where large-scale, mechanized agriculture is impractical.

Table 16—Romania: Share of private farmers and plot holders in selected indicators, 1971-73 through 1980-82 averages and 1983

Indicator	1971-73	1974-76	1977-79	1980-82	1983
<u>Percent</u>					
Agricultural land	16	16	16	16	16
Potatoes	51	51	57	59	57
Vegetables	37	39	43	41	42
Meat	51	46	43	44	45
Pork	45	39	36	35	37
Cow's milk	56	55	53	58	57
Eggs	71	62	59	59	56
Cattle <u>1/</u>	46	44	41	39	<u>2/</u> 40
Hogs <u>1/</u>	38	31	31	27	<u>2/</u> 30

1/ January 1 data. 2/ January 1, 1984.

Source: *Anuarul Statistic*, Bucharest, various editions.

Officials are most interested in expanding the private sector's meat production. As elsewhere in Eastern Europe, private producers are encouraged to sign contracts with socialized farms or procurement centers, agreeing to deliver finished livestock in exchange for feed, grazing rights, area to grow feed, and inputs. 29/

Extensive restrictions and supervision remain, nevertheless. They are designed to obtain maximum output with minimal inputs from the State, and tie private production into planned agriculture. In late 1980, a decree required all inhabitants who possess farmland to cultivate it or face criminal prosecution. The right to use private plots was restricted in 1982 to those cooperative members who fulfill their work assignments. Each cooperative family and private farmer must also contract to sell output to procurement centers and those with private plots must hold a minimum number of livestock. Households that produce more milk than the minimum requirement are obligated to contract with and deliver to state procurement centers all milk in excess of their consumption requirements. 30/

To insure peasant participation, officials now have the authority to confiscate the farms/private plots of peasants who do not contract and deliver to expectations. This land would then revert to either other peasants or to state or cooperative farms.

Officials now judge the performance of private producers against a production plan, similar to that of cooperative and state farms, assigned to each farm or household. This plan is based on the national plan from the Ministry of Agriculture as it is applied to each county. 31/

Tougher restrictions have also been placed on the marketing of private production. All retail sales of meat by private producers are illegal as is peasant slaughtering of cattle and horses without state approval and supervision. 32/ Peasants are allowed to sell produce on the free market only after fulfilling their contract obligations. Goods may only be sold by the producer's household and prices for privately produced agricultural goods are tightly controlled.

Required Livestock Holdings for:

Cooperative Households

1 cow	5-8 other fowl
5 sheep or 2 goats	10-15 rabbits
1-2 pigs	1 beehive
10 hens	
60-80 broilers	

Private Farms

1 cow	60-80 broilers
1 calf	5-8 other fowl
2 pigs	10-15 rabbits
10 hens	

Source: Scinteia, Bucharest, January 19, 1984.

Foreign Trade. Farm imports fell substantially under the adjustment. By 1984, agricultural imports were valued at the equivalent of \$660 million, 58 percent below the 1981 peak. Agriculture's share in imports also fell, dropping from 13 to 6 percent. Agricultural exports have also fallen. They peaked at \$1.4 billion in 1980, following a decade of steady growth, but dropped to \$856 million in 1984. Despite reported increases in grain and livestock output, lower agricultural production likely accounts for the decline.

There are few distinct commodity trends in recent trade. Romania continues to import and export grain, the amounts of each depending on the size of the domestic crop. Nevertheless, the peak import years of 1979-1981--imports averaged 2.3 million tons--were supported by foreign borrowing and will not recur for some time.

Oilseed imports increased to supply the new domestic crushing industry. The resulting increased oilmeal availability caused a sharp drop off in oilmeal imports in the last 2 to 3 years, however. Oilmeal imports in 1983 and 1984 (115,000 and 69,000 tons, respectively) were the smallest since 1972. Of the other major commodities, imports have fallen from the peak of the late seventies with the exception of sugar.

Although the value of agricultural exports was up in 1984 from 1983, there is no evidence of a sustained increase in commodity exports. Grain, and probably sugar, exports are below the 1980-82 average. Only exports of sheep for slaughter have increased. The share of exports in output is difficult to measure against individual production data because grain and meat output, for example, are likely inflated. Continued reports of food shortages, declines in per-capita meat consumption; and the recent trend of overall agricultural output show that farm exports are maintained at the expense of the average Romanian's diet.

U.S. farm exports to Romania were decimated by the economic downturn. After peaking in 1980 at \$491 million, exports fell to \$118.1 billion in 1983 before recovering partially in 1984 to \$157 million. There were no U.S. grain or soybean meal exports to Romania in 1983 and 1984. Exports of these commodities resumed at a much reduced level in 1985.

ASSESSMENT

The Romanian economic adjustment has had limited successes, but its overall impact on performance will not be positive. In agriculture, policies of exhortation and administrative directives have been counterproductive. The constraints which have shaped the adjustment—scarce resources and rigorous maintenance of central economic control—have allowed for *ad hoc* measures only and made reform extremely difficult.

The Government's success in correcting the foreign trade balance and reducing debt resulted from its monopoly control over foreign trade. Officials lowered consumption and forced a net outflow of resources. But the magnitude of the living standard's decline and disruptions in industries dependent on imports was great. By forswearing new debt, officials forfeited a more gradual adjustment.

The economy remains in acute need of a price structure that reflects the true cost of goods. Planners, farm directors, and enterprise managers need to allocate their limited resources most efficiently, particularly for investment.

In agriculture, yields rose for the major crops in 1984 but good weather may have primary responsibility, and net agricultural production remained below the 1977-79 average. There is also skepticism over the grain yield progress. Livestock numbers and meat production data in statistical reports show improvement, but again there is doubt. Continuing food rationing and shortages indicate no real advance. Also, the percentage of average plan fulfillment for major crops and some livestock products in 1983-85 was less than in 1980-82. Production expenses remain high.

Given the character of the NEM, its effect so far on farming is not surprising. The emphasis is on improving land productivity, applying the results of scientific and technical research, and favored organizational structures to agriculture. ^{33/} Nowhere is there serious discussion of altering existing price, wage, and credit policies.

It's too early to assess specifically the impact of the centerpiece of the NEM: the agro-industrial complex. Putting state and collective farms under the management of large, regional AIC's will probably not spur output, however. Although the growth in agricultural output on state farms exceeded that of collectives throughout the seventies, this was more a function of preferential access to machinery and inputs rather than superior organization. With input availability now a major problem, unifying farm organization may make the allocation job of planners easier, but not guarantee higher output.

The outlook for higher private production is not good. Incentives to producers are outweighed by many restrictions. As early as 1979, commentators cited the disadvantages faced by cooperative farmers engaged in private agriculture. ^{34/} Chief among these was the lack of parity with nonagricultural income. Nothing in the NEM looks like solving this problem.

Prospects for food supplies are similarly poor. Meat consumption fell from the 1982 peak of 65 kilograms per capita to an estimated 59 kilograms in 1984. Plans for 1985 called for no increase in meat consumption and President Ceausescu often underlines the adequacy of the Romanian diet.

The NEM's impact on Romania's agricultural trade is mixed. It has severely restricted the import market in the short term. Emphasis today is on exports and import substitution. The Romanian aversion to substantial new debt and lender concern over the economy will hold down import financing.

Longer term prospects may be brighter. The country has invested heavily to expand the livestock and oilseed processing sectors. Continued depressed agricultural imports—particularly of feed—would set back progress and constrain exports. An improvement in the overall foreign trade and finance situation could free up increased foreign exchange for farm imports.

The generally pessimistic assessment of the NEM is grounded in its emphasis on organizational and technical solutions. Several of the other East European countries face problems related to Romania's, but all have responded with nearly opposite policies. With the exception of Poland—where political problems complicate matters—all countries have generally relaxed central control. In Hungary, planners set only broad policy for agriculture and encourage compliance through price, income, and tax policies rather than administrative orders. In principle, Hungarian farms are given the management freedom to function within a system stressing financial self support and farm profitability.

Bulgaria also has its own form of the agro-industrial complex with small brigades as the basic form of labor organization. However, these brigades appear to have more management autonomy than their Romanian counterparts. More importantly, Bulgaria has not experienced the economic problems of Romania and input availability is likely better able to support large, mechanized farms. More detailed discussion of the Hungarian and Bulgarian reforms are available in the following ERS reports: *Hungarian Economic Reforms*, Thomas A. Vankai, Staff Report no. AGES850419; and *The New Economic Mechanism in Bulgarian Agriculture*, Nancy Cochrane, Staff Report no. AGES851121.

The most striking difference with the rest of the region is Romania's treatment of the private sector. Faced with reduced resources, every Government now looks to the private sector. The experience of post-war centrally planned economies shows that Romania's reliance on coercion and administrative decrees will not prod individuals to produce above their needs. Absent an improvement at least in the supply of resources or a change in private sector policy, the outlook for a significant increase in Romanian farm output is not good.

ENDNOTES

1. *Handbook of Economic Statistics, 1984.* Directorate of Intelligence, Central Intelligence Agency, September 1984.
2. Bucharest Domestic Service. Bucharest: October 29, 1978.
3. Wassilko, G.; Gherghel, A.; and Cioranescu, G. "A Review of the New Laws Governing the Cooperative Sector of Agriculture." *RAD Background Report/54*, Radio Free Europe, March 21, 1978.
4. *Ibid.*
5. Gilberg, T. *Romanian Agricultural Policy: Achievements and Problems.* Presented at the 6th International Conference on Soviet and East European Agricultural Affairs, Giessen, FRG, June 5-8, 1981.
6. Larionescu, M. *Romanian Agriculture within Social and Economic Development Strategy.* Center of Sociological Research, Academy of Social and Political Sciences, Bucharest. Presented at a Conference on the Rural Economy and Society in Contemporary Eastern Europe, Bellagio, Italy, June 1980.
7. *Era Socialista*, No. 2. Bucharest, February 5, 1982.
8. *Revista Economica*, No. 51. Bucharest, December 18, 1981.
9. *Revista Economica*, No. 6. Bucharest, February 6, 1981.
10. *Agricultura Socialista a Romaniei.* Bucharest: Editura Politica, 1983.
11. *Ibid.*
12. *Ibid.*
13. *Revista Economica*, No. 4. Bucharest, January 25, 1980.
14. *Agricultura Socialista a Romaniei, op. cit.*
15. *Scinteia.* Bucharest, February 3, 1979.
16. *Revista Economica*, No. 4. Bucharest, January 25, 1980.
17. *Agerpres.* Bucharest, February 6, 1979.
18. *Era Socialista*, No. 17. Bucharest, September 15, 1985.
19. *Era Socialista*, No. 3. Bucharest, February 5, 1981.
20. *Era Socialista*, No. 17. Bucharest, September 15, 1985.
21. *Ibid.*
22. *Heti Villaggazdasag.* Budapest, January 8, 1983.

23. *Comertul Modern*, No. 2. Bucharest, March-April 1983.
24. *Agricultura Socialista*. Bucharest, November 28, 1981.
25. *Recent Developments of Soviet and East European Agricultural Policy Relevant to Agricultural Commodity Trade*. OECD Committee on Agriculture, Ad Hoc Group on East-West Economic Relations in Agriculture, 1984.
26. *Ibid.*
27. *Scinteia*. Bucharest, July 2, 1983.
28. *Ibid.*, December 26, 1981.
29. *Buletinul Oficial*, No. 18, part 1. Bucharest, March 28, 1983.
30. *Scinteia*. Bucharest, January 19, 1984.
31. *Ibid.*
32. *Ibid.* March 29, 1985.
33. *Era Socialista*, No. 9. Bucharest, May 10, 1984.
34. *Revista Economica*, No.5. Bucharest, December 14, 1979.

