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ANALYSIS OF AGRICULTURAL SUPPLY IN ROMANIA DURING TRANSITION TO A MARKET ECONOMY

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ABSTRACT

The objective of this paper is to provide an overview of agricultural production and supply in Romania during the transition. Romania is well-endowed in agricultural resources and has a high potential for agricultural production, supply and exports. The private sector has dominated in agricultural production since the end of 1996, although the public sector has not been completely phased out. Production declined significantly during the transition as a result of the incomplete land restitution process, lack of management and marketing skills of the new land owners, lack of working capital and equipment, and slow privatisation of upstream and downstream industries. Consequently, exports declined sharply and Romania became a net importer of agro-food products, despite its rich agricultural resources.

Keywords:

ROMANIA, AGRICULTURAL SUPPLY, TRANSITION ECONOMIES, SUBSISTENCE PRODUCTION

1. Introduction

Romania is a Central European country with a temperate climate and soils of very good quality. Therefore, agriculture has always been one of the main branches of the economy. During the period of the centrally-planned economy, agricultural policy aimed to increase production in order to supply the population with cheap agro-food products and to export as much as possible, both to COMECON and to Western countries. By the end of the period, exports became the most important goal, sharply decreasing the degree of domestic self-sufficiency especially in livestock products and processed foods, while imports of these goods decreased strongly (see Table 1).

Since 1990, when the transition period began, agricultural policy has changed significantly, redefining its main goals as: (i) the supply of sufficient quantities of agro-food products, in order to cover the consumption requirements of the population, the industrial needs where processing is concerned and, if possible, to export, (ii) the maintenance of low consumer prices for agro-food products, (iii) the supply of good quality agro-food products and (iv) the creation of a new agricultural structure based on the prevalence of private commercial farms, able to compete with similar domestic and foreign outputs.

The land reform which started in 1991 led to a quick dismantling of the former agricultural production cooperatives (collective farms), which resulted in a disruption of production structures and breaking of the former marketing channels, both for inputs and outputs. When the incomplete process of land restitution, lack of management and marketing skills of the new land owners, and lack of working capital and equipment for the new small farms, are taken as specific factors within agriculture and coupled with the unfriendly macroeconomic environment (high inflation rate, high interest rates, strong devaluation of the national currency, reluctance of financial institutions to grant loans to

agriculture, hard budgetary constraints, slow privatisation of the upstream and downstream branches), there emerges a broad picture of the conditions under which agriculture developed during the last years, as well as a good explanation for the decrease in agricultural output.

In order to cover the requirements of the population in agro-food products, many imports of such were made by the Government and by private trading companies, mainly from EU countries (see Table 1).

Table 1 - Agro-food trade balance, Romania - European Union, in thousands of US\$

Year	Exports - FOB	Imports - CIF	Balance
1990	1,956,455	2,004,731	-48,276
1991	1,575,789	1,663,601	-87,812
1992	1,534,810	2,583,865	-1,049,055
1993	2,023,342	2,955,218	-931,876
1994	2,964,703	3,426,938	-462,235
1995	4,283,420	5,185,550	-902,130
1996	4,262,000	5,203,200	-941,200

Source: 1995 Statistical Yearbook, National Commission for Statistics, 1996.

In comparison with the period of pre-transition reform, Romanian exports of agro-food products declined sharply. At the beginning of 1990, they were temporarily banned; afterwards a system of export licences was introduced. During the years in which output for different staple products (wheat, sunflower seeds for edible oil, live cattle for meat and milk, etc.) was low, various temporary export bans and more facilities for import were introduced.

At the beginning of the transition period, there were very few import barriers (not even customs duties during the first six months of 1990). Due to the fact that there was also a certain shortage of most livestock and processed food products, the share of agro-food imports in the total imports was 2-8 times higher than the share of agro-food exports in the total of Romanian exports (see Table 2). Consequently during the last few years, Romania unfortunately became a net importer of agro-food products, after it had been a net exporter for years.

From July 1st, 1995, in order to protect some domestic food industries, very high customs duties (50-245% of the product value) were introduced for the import of some agro-food products (beef, pork and poultry meat, butter, cheese, white flour, wine, etc.). At the end of 1995, some of them were partially reduced.

Despite the fact that over the period 1991 to 1993 the area under cultivation respectively the number of animals and the total agricultural output decreased substantially, domestic production remained the main supply source for the domestic market. It should be mentioned that imported agro-food products were much more expensive than their domestic counterparts, because of their higher quality and import price (expressed in hard currency at the exchange rate).

After 1990, the ratio between the values of plant and animal production changed; the share of plant production increased, thus showing an imbalance in agriculture output (see Table 3).

Even a "relative overproduction" was observed for meat and meat products; this was due to the sharp decrease in the purchasing power of the population (by almost 50% at the end of 1993), taking into account that livestock products (especially meat and meat products) are among the most expensive foodstuffs. An important decrease in the share of animal protein in the daily caloric intake was observed, while a drastic substitution of livestock products with plant products took place.

Table 2 - Main macroeconomic indicators (1989 - 1996)

	1989	1990	1991	1992	1993	1994	1995	1996
Gross domestic product by resources categories (billion lei, current prices)								
Total GDP	800.0	857.9	2,203.9	6,029.2	20,051.0	49,794.8	72,559.7	109,515.4
Agriculture	109.8	181.6	404.3	1,119.9	4,124.3	97,90.7	14,112.5	...
Industry	369.3	347.6	834.6	2,311.0	6,487.9	16,090.9	25095.0	...
Share of agriculture, industry and food industry in GDP (%)								
Agriculture	13.7	21.2	18.4	18.6	20.6	19.7	19.5	20.2
Industry	46.2	40.5	37.9	38.3	32.4	32.3	34.6	...
Food industry	...	6.0	5.7	6.3	6.7	...	...	...
CPI index (1990 = 100)								
Total CPI index	nc*	100	270.2	838.8	2,987	7,071.9	9,353.4	12,385.3
Food goods	nc	100	286.2	963.4	3,361.2	7,940.3	10,469.3	14,735.5
Non-food goods	nc	100	267.8	787.9	2,907.4	6,769.8	8,775.5	10,965.9
Services	nc	100	235.7	661	2,249.5	5,641.8	8,051.2	10,775.6
GDP deflator	1.1357	2.9506	3.0674	3.2023	2.4377	1.391	...	...
Official exchange rate (lei/US \$)	21	23.03	80.08	320.37	771.84	1,670.03	2,049.80	3,082.61
EXPORTS (in million lei at official rate)								
Export total	...	133,015	341,594	1,397,899	3,775,942	10,272,827	16,214,041	23,611,868
I. Live animals and animal products	...	530	11,853	59,130	134,733	366,426	347,161	438,347
01. Live animals	...	397	5,015	24,308	49,902	144,722	179,701	...
02. Meat and edible offal	...	83	5,092	26,616	74,390	193,864	126,259	...
04. Milk and dairy products, eggs, natural honey	...	24	618	3,987	5,334	12,766	20,274	...
II. Vegetable products	...	855	5,603	15,952	45,588	106,625	465,615	1,127,927
08. Edible fruit	...	315	2,249	5,891	16,398	33,448	52,744	...
III. Animal or vegetable oils and fats	...	-	464	2,480	51,943	79,133	174,694	211,775
IV. Foodstuffs, beverages and tobacco	...	479	2,913	15,322	36,715	113,382	148,430	307,953
16. Meat and fish products	...	58	960	4,805	10,274	22,833	20,773	...
22. Alcoholic and non-alcoholic beverages	...	266	1,288	5,286	13,515	40,823	63,872	...
Share of exports of agricultural and food industry products in total exports (%)								
Agricultural products	...	1.0	5.1	5.4	4.8	4.6	5.0	6.6
Food industry products	...	0.4	1.0	1.3	2.4	1.9	2.0	2.2
IMPORTS (in million lei at official rate)								
Import CIF - total	...	211,944	463,932	2,005,396	5,087,390	11,919,074	21,173,572	30,734,238
I. Live animals and animal products	...	8,104	3,383	27,433	50,639	166,157	255,908	182,182
01. Live animals	...	1,361	222	1,283	2,583	4,627	24,606	...
02. Meat and edible offal	...	4,850	824	12,150	25,569	97,364	135,802	...
04. Milk and dairy products, eggs, natural honey	...	1,682	2,024	12,009	17,383	38,484	45,448	...
II. Vegetable products	...	9,768	29,557	137,471	360,553	233,145	311,902	465,474
08. Edible fruit	...	561	2,871	12,268	24,835	52,670	116,568	...
III. Animal or vegetable oils and fats	...	1,056	1,135	12,830	18,854	55,646	65,755	58,570
IV. Foodstuffs, beverages and tobacco	...	8,961	28,805	141,621	312,054	656,769	1,178,576	1,630,701
16. Meat and fish Products	...	421	851	2,980	3,863	14,168	62,320	...
22. Alcoholic and non-alcoholic beverages	...	468	4,879	26,653	42,046	56,620	77,794	...
Share of imports of agricultural and food industry products in total imports (%)								
Agricultural products	...	8.4	7.1	8.2	8.1	3.4	2.7	2.1
Food industry products	...	4.7	6.5	7.7	6.5	6	5.9	5.5

... not available

*nc = not calculated

Source: Romanian Statistical Yearbooks, National Commission for Statistics, 1990-1996.

Table 3 - Ratio between plant and animal production value , in %

Specification	1989	1990	1991	1992	1993	1994	1995
Total plant production	54.41	52.95	65.92	57.96	62.91	60.83	59.59
Total animal production	45.59	47.05	34.08	42.04	37.09	39.17	40.41

Source: Romanian Agriculture 1980 - 1993, National Commission for Statistics, 1996.

In this paper we selected for presentation those crops that account for around 95% of the area under cultivation and the animals that constitute the most important share of the total value of animal output. Data availability criteria were, of course, also taken into consideration.

The crops selected were wheat, barley and two-row barley, maize, sunflowers, sugar beet and potatoes. In the case of the supply of livestock products, cattle, pigs and poultry were selected.

2. Production, distribution channels and prices in the crop sector

The evolution of production for the major crop products is given in Table 4.

Table 4 - Total production for main crops, in thousands of tons

Crop	1991	1992	1993	1994	1995	1996
Wheat	5,558.9	3,227.6	5,354.5	6,186.5	7,709.3	3,164.1
Barley and two-row barley	2,950.7	1,677.9	1,552.8	2,133.5	1,816.3	1,107.5
Maize	10,497.3	6,828.3	7,987.5	9,339.6	9,923.1	9,607.9
Sunflowers	612	774	695	762.2	933.0	1,095.7
Sugar beet	4,702.7	2,896.7	1,776.3	2,763.8	2,655.0	2,848.2
Potatoes	1,872.8	2,601.6	3,708.9	2,946.7	3,020.0	3,246.3

Source: 1991-1996 Statistical Yearbooks, National Commission for Statistics.

1992 and 1996 were the years in which there was the maximum drop in crop output; although this was a result, as explained previously, of climatic conditions, it was mainly due to the economic environment inside and outside agriculture. The output decreased by 35-43% (for barley and two-row barley, and maize respectively). This correlated with a 34% drop in the area under cultivation for wheat, 39% in that for barley, and 11% in that for sugar beet. Yields also dropped by 13% for wheat, and up to 50% for maize.²⁶

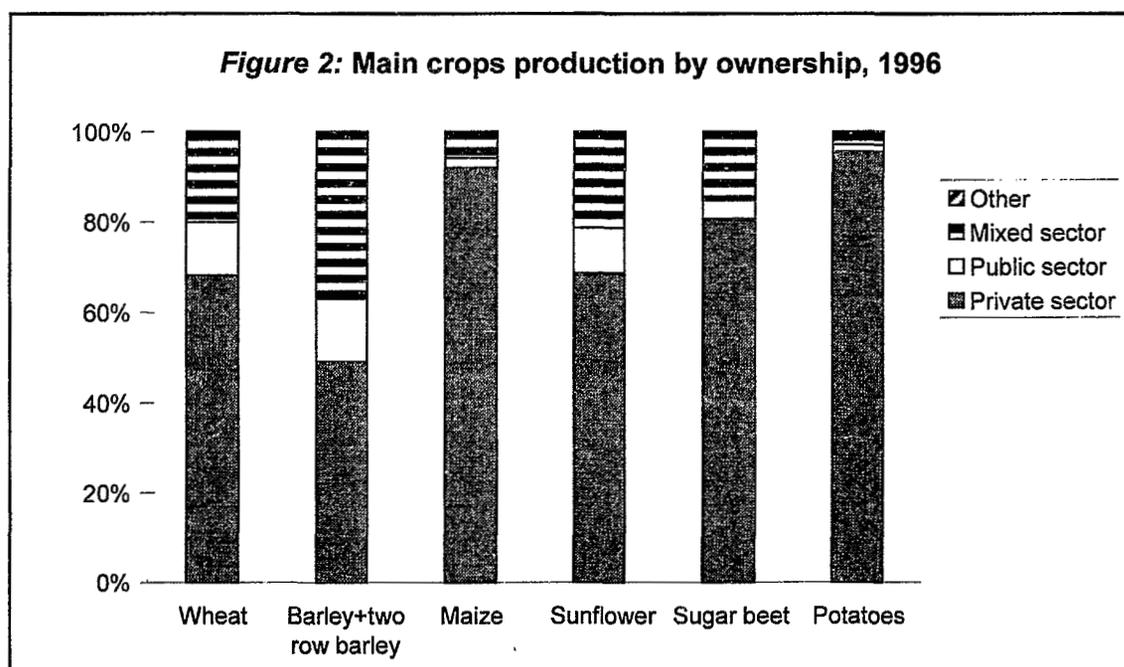
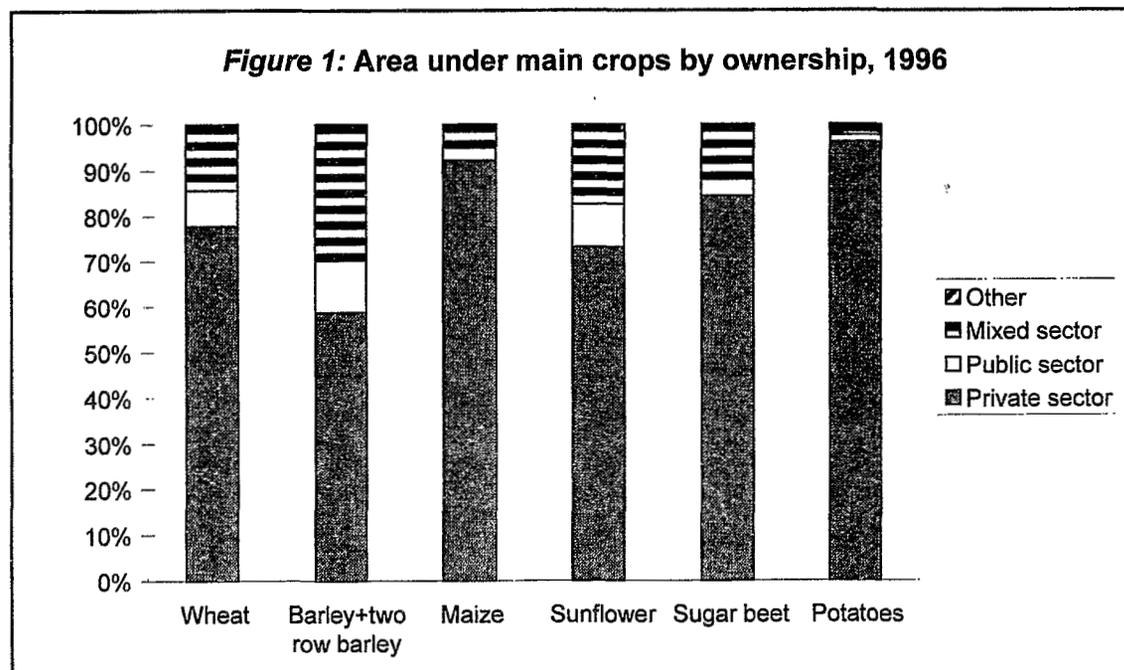
Conversely, 1995 was the best year for cereals since 1990, amounting to a total of 19.9 million tons, while wheat registered the highest total production for a long time (7.7 million tons), as did maize also (9.9 million tons).

As Figs. 1 and 2 suggest, the largest share of both the area under the main crops and production belongs to the private sector; however, the highest yields are in the mixed sector followed by the State sector (for barley+two row barley and sugar beet). For wheat, sunflowers and potatoes, the order is reversed. Only the private sector shows higher yields than the public sector in the case of maize (but these are lower than those for the mixed sector).

The quantities of crop products purchased by the State Fund for agricultural resources only decreased in 1992 when compared to those purchased in the previous year in the case of sugar beet (by 37%), wheat (by 41%) and barley (44%). Over the period as a whole, an increasing quantity of wheat was purchased by the State Fund only up until 1994; the trend reversed from 1995 onwards. The other products were purchased to a lesser degree by the State. The amount of products sold through the State outlets varies greatly according to the products, with a very low

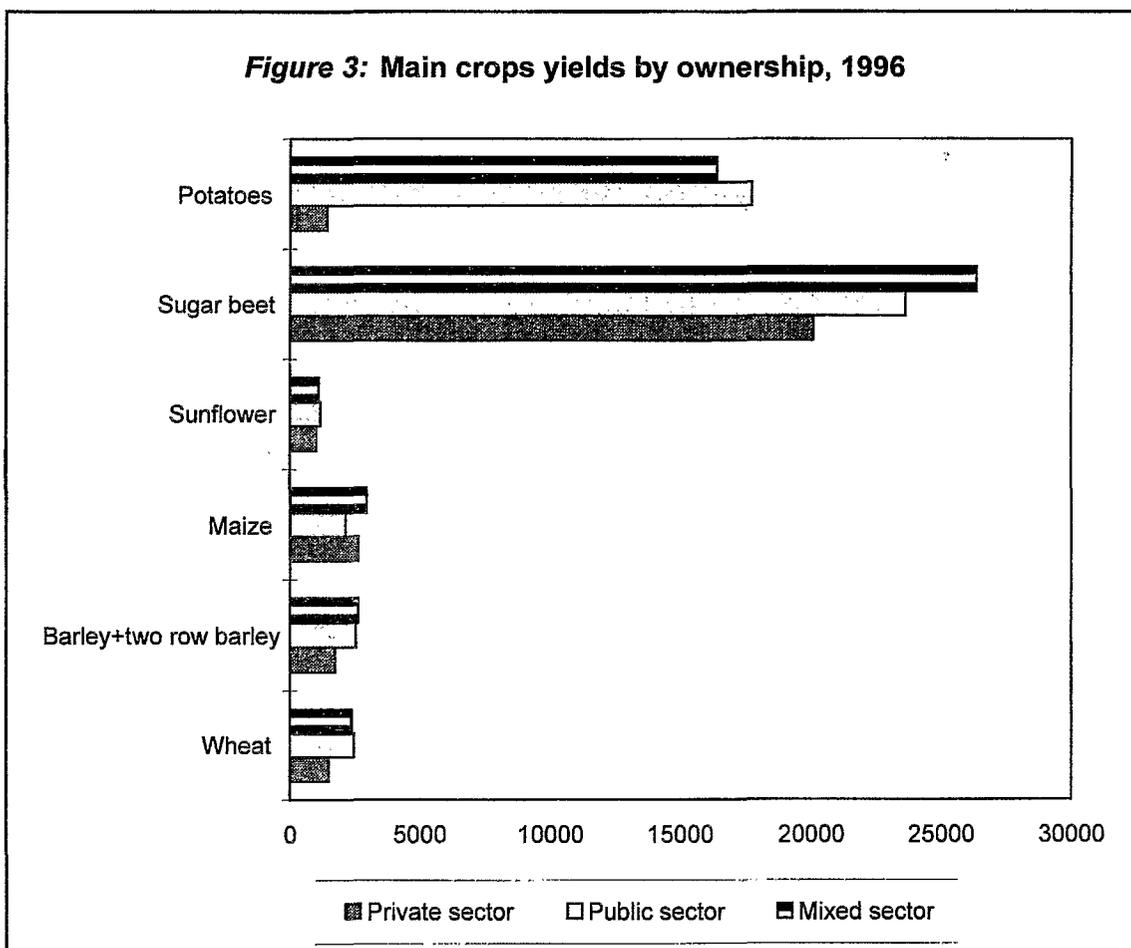
²⁶ Detailed information on production and prices for the various products for the period 1990-1995, at national as well as at regional level, is given in: D. Gavrilescu (1996). Agricultural demand, supply and price in Romania during 1990-1995, Institute of Agricultural Economics, Romanian Academy, Bucharest. This publication is also available from the author.

percentage for potatoes (2%) and maize (5%), around 50% for wheat, decreasing from 37% in 1991 to 21% in 1994, and quite large percentages for industrial crops, e.g. sunflowers (75-83%) and sugar beet (90%). From 1995, State-owned bakeries were also allowed to purchase their raw material (wheat) directly from the producers, irrespective of the form of their ownership, and were no longer obliged to buy wheat through the State integrator (Romcereal). Thus the wheat quantities purchased by the State decreased.



At the beginning of the transition period, contract and procurement prices for the main crop products were still subject to controls and regulated by Government Decisions. Shortly afterwards State control became less strict, except in the case of the two main cereals designated as "of national importance", i.e. wheat and maize, for which prices remained subject to control. The controlled prices

for these two products may change several times during each year, according to the pre-harvest forecasts and harvest records as well as the evolution of world prices. The prices are the same for the whole of the country. Until now, no increasing margin has been included in the price to cover conditioning and storage costs, as would normally be the case. The contract prices function as minimum guaranteed prices only for the quantities contracted with State purchasers (mainly Romcereal) before harvest. Since 1996, a minimum guaranteed price has been settled only for wheat.



As for the other products, controlled prices have finally been abandoned, thus prices are presently established before the harvest "by negotiations" between producers' associations and State representatives.

Certain quantities of wheat, maize and potatoes are also sold through channels other than those of the State. For these products, the free markets in the towns are quite an important marketing channel for the supply of the urban population. Through a country-wide network, the National Commission for Statistics estimates the quantities and prices on these free markets every ten days. Unfortunately, only price data are available at the moment for these markets. They provide interesting material for study, because they indicate seasonal variations, and are very sensitive to supply changes. As a general rule for all the products examined (both crop and animal) free market prices were higher than procurement prices.

Products that are used for animal feed or seeds are sometimes sold directly among economic operators. Such flows (quantities and prices) cannot at present be registered or even estimated in a reliable manner.

3. Production, distribution channels and prices in the livestock sector

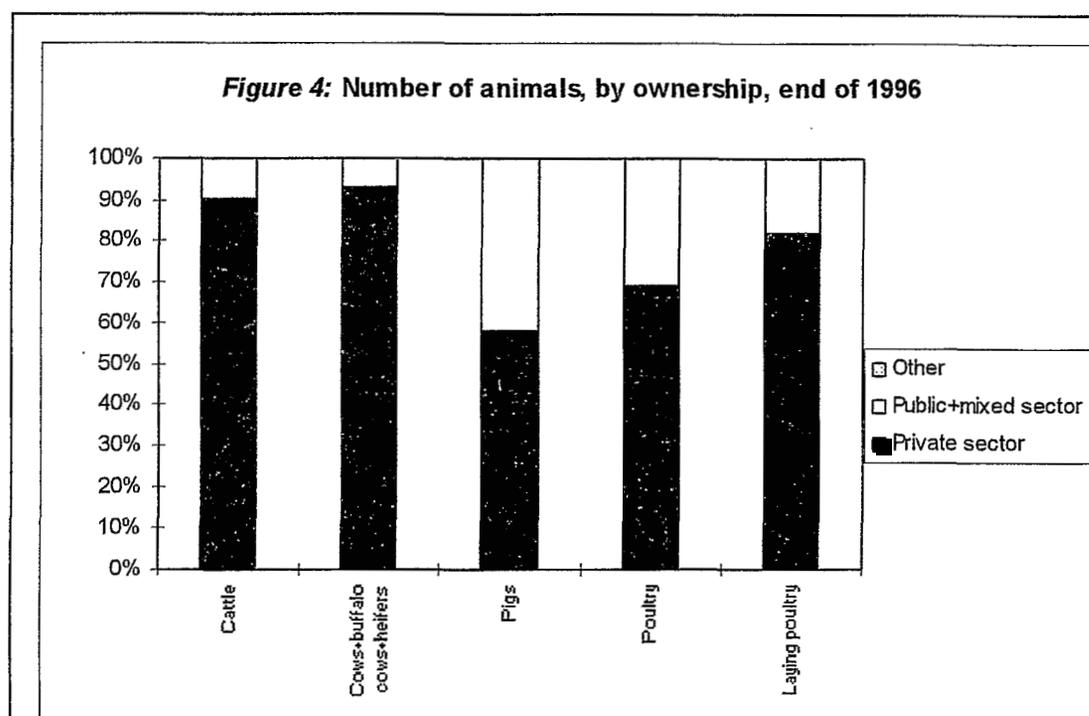
Table 5 - Total production of main livestock products

Product	Unit	1991	1992	1993	1994	1995	1996
Dairy milk	in thousand hectolitres	41,822.8	41,078.5	43,506.9	46,616	54,241.3	54,873.8
Beef	in thousand tonnes liveweight	6,34.1	499.2	485.6	487.7	390.8	363.3
Pork	in thousand tonnes liveweight	1,069.1	1,011.2	975.6	994.5	879.6	910.3
Poultry	in thousand tonnes liveweight	474.4	421.7	382.3	327.4	355.4	375.5
Eggs	billion pieces	7,177.1	6,140.4	5,632.8	5,407.1	5,566.1	5,782.6

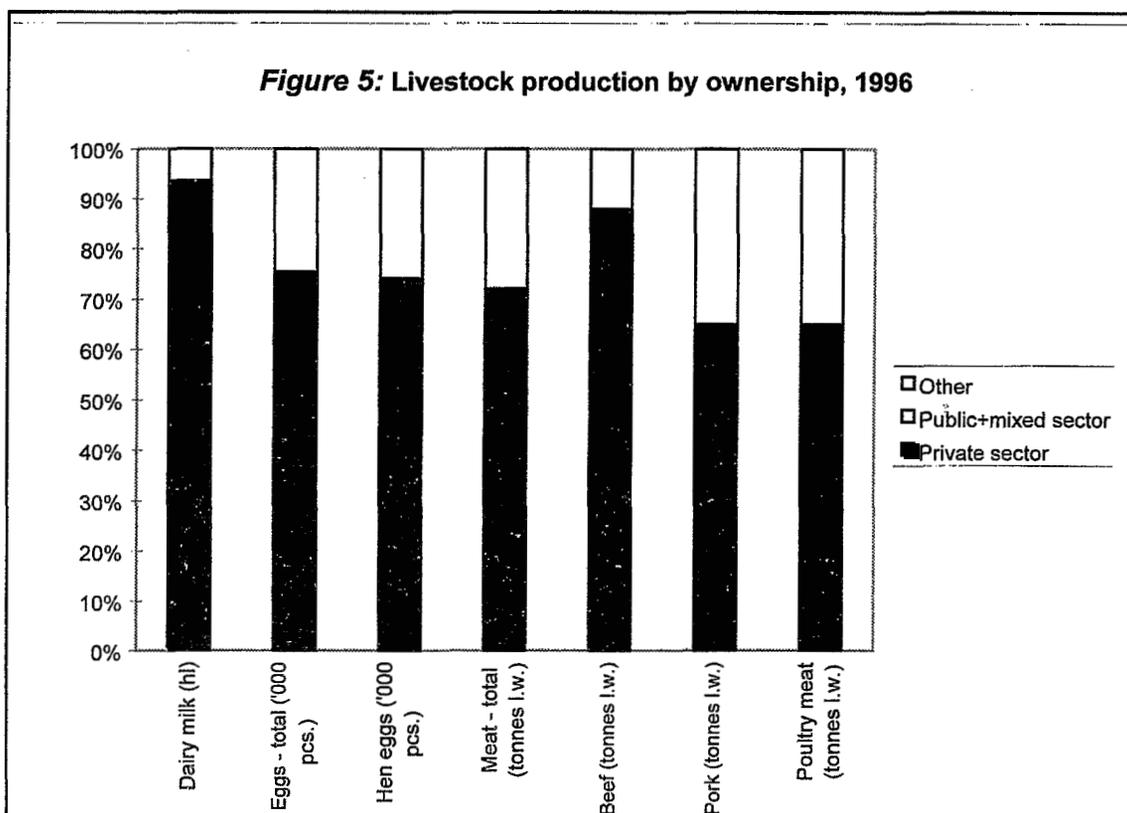
Source: 1991-1996 Statistical Yearbooks, National Commission for Statistics.

As shown in Table 5, the drops in production were not so sharp where livestock products are concerned, i.e. 12% for beef, and only 8% for pork (in spite of a 30% reduction in the number of pigs). The poultry production units experienced a great number of financial problems, thus the drop in production was sharper only for poultry meat and eggs (25% for eggs and 32% for meat). Nevertheless, the number of heads also decreased by 32% for poultry. Milk production even showed a slight increase, in spite of the 16-20% reduction in the number of cattle.

Livestock is concentrated on private farms, which account for the largest number of animals. The quantities of livestock products purchased by the State Fund for agricultural resources decreased significantly, by 73% for beef, 59% for eggs, 44% for poultry meat, 40% for pork and 36% for milk.



As the figures suggest, over 90% of the cows, buffalo cows and heifers are kept by the private sector, with the same percentage of dairy milk production coming from there; however for beef (meat), the amount of production is around 85%, while around 95% of the cattle are in private hands. This suggests that in the private sector producers are breeding cattle mainly for dairy production and only to a much lesser extent for meat, because beef consumption in Romania is much lower when compared to that in the EU countries.



The reverse situation may be observed in the case of pork. More than 65% of pork meat produced comes from the private sector, while only around 55% of the animals are in private hands, suggesting a higher productivity for meat when compared with the productivity levels in the public and mixed sector.

As a result of an improved (industrial) system of breeding and in spite of the financial difficulties, yields of eggs and poultry meat seem to be higher in the public and mixed sector when compared to those of the private sector, where poultry is bred according to the extensive system.

Where the amount of total production sold through State channels is concerned, the decrease is quite significant from 1991 to 1994, i.e. from 60% to 40% for pork, 43% to 35% for poultry meat, 39% to 22% for eggs, 34% to 24% for beef and 31% to 18% for milk.

Contract and procurement prices established by the State for livestock products continued in place until they were replaced by negotiated prices. By the end of 1992 the price for eggs had been liberalised, that for beef and veal by the end of 1993. For pork and poultry meat there still exist established maximum procurement prices (used as thresholds for subsidies). The price for fresh dairy milk (3.5% fat) is still subject to control and premia for producers are granted from the State budget.

It is interesting to note that in spite of all these decreasing trends in production (the number of animals, etc), real prices (both procurement and free market prices) are decreasing in real terms. The CPI index was used as a deflator for these prices, and the results are shown in Table 6.

A fact of major importance is that the moment of the greatest decline in area, number of animals, yields and productions was passed; most trends for 1994 and preliminary data for 1995 show slight increases, which means that the first, very difficult stage of transition to a market economy (in agriculture) will soon end.

Table 6 - Procurement prices and free market prices in real terms (1990-1995) - (deflated by CPI index)

Product	Prices	1990	1991	1992	1993	1994	1995
1	2	3	4	5	6	7	8
Wheat	Procurement prices	1.44	1.55	2.01	1.86	2.36	1.82
	Free market prices	5.41	2.59	2.77	2.56	2.35	1.62
Barley	Procurement prices	1.44	1.54	1.47	2.10	2.30	1.33
	Free market prices	...	...	...	...	...	...
Maize	Procurement prices	1.90	1.84	2.20	1.71	1.58	1.44
	Free market prices	5.95	2.81	2.69	2.66	2.32	...
Sugar beet	Procurement prices	0.46	0.63	0.51	0.50	0.51	...
	Free market prices	...	...	...	...	...	...
Potatoes	Procurement prices	1.90	4.22	4.30	1.91	...	...
	Free market prices	6.26	7.17	6.36	3.19	3.66	...
1	2	3	4	5	6	7	8
Beef	Procurement prices	15.65	9.49	14.94	9.22	11.41	22.74
	Free market prices	49.83	36.72	33.60	28.50	39.57	...
Dairy milk	Procurement prices	4.18	2.48	2.51	1.82	3.20	...
	Free market prices	8.61	4.43	4.02	3.68	5.59	5.01
Pork	Procurement prices	18.26	12.75	17.24	13.86	16.64	22.74
	Free market prices	48.05	34.02	38.01	29.87	42.11	39.86
Poultry	Procurement prices	13.73	14.47	17.89	13.67	20.47	17.71
	Free market prices	57.69	27.45	29.16	19.90	32.56	...
Eggs	Procurement prices	1.10	0.91	1.01	0.75	1.16	...
	Free market prices	1.85	1.17	1.22	1.04	1.57	1.30

... = not available

Source: Calculations based on data from the National Commission for Statistics, 1990-1996.

Price and Income Support

Agricultural policy, orientated according to product, was designed to be applied through actions and measures to ensure the competitiveness of Romanian agriculture in the light of Romanian accession to the EU. A special role within the agricultural policy for these products is played by the economic and financial measures and mechanisms which constitute a major lever for the stimulation and support of crop and livestock production, such as: (i) product-orientated programs, (ii) prices, (iii) credit and interest rates, (iv) taxes and charges, and (v) the granting and use of subsidies.

As a consequence of the changes which occurred in the property structure and resulted in a weighting of private property of 85%, coupled with a strong decapitalisation of this sector, a large package of support measures (from the State) became necessary.

Most of these measures are included in Law 83/1993 concerning the support granted by the State to agricultural producers and mainly comprise: (i) allocations for credit interest rates, (ii) production premia and compensations, (iii) fiscal facilities, and (iv) guaranteed prices, etc.

"In response to a request by the Essen European Council (EC Summit) in December 1994, the EC Commission also prepared a study on alternative agricultural policy strategies for enlargement, which was presented to the Madrid summit. The study, adopted by the Commission in November 1995, explored a number of options and concluded that the CEECs were less in need of a high level of price and income support than of targeted assistance for restructuring, modernisation and diversification, and recommended that pre-accession be given in the form of modernisation programmes, technical assistance and access to EU markets.

A consensus had emerged in OECD countries that an integrated rural development policy that allows agriculture an important role in rural areas, but not an exaggerated one as in the past, can facilitate

the adjustment process and improve the poor conditions in rural areas that have been the justification for past market distorting policies. The primary focus of rural development policy should be the reduction of impediments to, and the promotion of, viable economic activities. The CEECs still have the opportunity to avoid the error made by all OECD countries in the past, namely, relying too heavily on agricultural and agro-food policies for the well-being of rural areas and adopting price support as the main instrument of such a policy."²⁷

²⁷ Agricultural policies, markets and trade in transition economies - monitoring and evaluation 1996, OECD, 1996.