

## EVOLUTION OF ROMANIAN AGRICULTURE IN THE LAST TWO DECADES AND THE NECESSITY OF COOPERATION

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### Abstract

*It is well known that the Romanian rural economy is dominated by agriculture whose main feature is the significant percentage of subsistence and semi-subsistence farms that produce for own consumption, occasionally selling these products obtained to the market [2]. This paper refers to the evolution of Romanian agriculture in the last two decades and it will show that rural economy remains very weak integrated in market economy, and that the social measures in agriculture have made this important sector of national economy not competitive and will underlined the necessity of cooperation. In order to characterize the evolution of agricultural sector in Romania a number of indicators have been taken into account such as cultivated areas, total vegetal and animal production, livestock and prices, for the last two decades. The 20 years analysed show the oscillations for indicators used, due to the climate, economical and politically conditions. The EU agriculture was well organized and supported with a huge progress compared to the situation in Romania, where agriculture is still in the early evolution to a business efficiency and performance. The best solution to make the agricultural sector to achieve his potential both in economically and socially are cooperatives.*

**Key words:** rural economy, evolution, agricultural sector, necessity of cooperation.

### INTRODUCTION

Agriculture is important for all humans and animals around the world because has the primordial task to feed the increasing population of the globe. Agricultural sector is an important branch of rural economy in many countries and it has many problems mainly where small farms are the basic producing units.

It is well known that the agriculture is an important branch with a long tradition in our country.

After 1989, the Romanian agricultural sector has suffered important modification due to the dissolution of the state enterprises and the old APC (Agricultural Production Cooperatives) which did not comply with democratic principles of the European cooperatives.

Agriculture provided a rather feeble support in terms of economic growth over the past 10 years compared with its share in GDP, mainly due to high dependence on weather conditions

and low level of equipment with technical means of agricultural holding [8].

For Romania, the chance to overcome the economic crisis is provided by radical changes in zoning of agriculture crops, crop structure, crop rotation, technologies and more environmentally friendly, stable production and prices competitive on the European single market [5].

It indicates that all will be applicable only through farmers' cooperation, supported by the Romanian state and EU with concrete measures and funds for development of cadastre, in order to improve the efficiency of the irrigation system and obtaining loans at interest comparable to other European countries.

In this context, the paper presents an analysis of the evolution of agricultural production from Romania in order to put into evidence the evolution of the cultivated areas, total vegetal and animal production, livestock and prices in the period 1989-2010.

## MATERIAL AND METHOD

In order to characterize the evolution of agricultural sector in Romania, a number of indicators have been taken into account such as cultivated areas, total vegetal and animal production, livestock and prices, for two decades.

The period analyzed in this study was 1989-2010.

The data, collected from National Institute for Statistics and Ministry of Agriculture and Rural Development have been statistically processed and interpreted, building the trend line and setting up the forecast based on simulation models for the next period.

## RESULTS AND DISCUSSIONS

The arable surface of Romania decreased in 2010 with 53.3 thousand hectares and in 2000 with 23.9 thousand hectares compared to 1989. Area covered with pastures and hayfields in 2000 increased by 243,600 ha to 1989, respectively 113,200 ha in 2010. The area planted with vineyards, orchards and nurseries dropped significantly with 124,800 ha by 2000 and with 183,500 ha by the year 2010 compared to 1989 [7].

Irrigable area in Romania is about 7% of arable land, while the irrigated area is less than 2%. Irrigation by flooding, which requires a high consumption of water, is predominant in Romania (57% of total) [8].

The cultivated area has continuously decreased from 1989 reaching in 2010 a surface of 91.66% for wheat, 67.17% for barley and two-row barley, 76.76% for maize, 12.47% for soybean, 83.58% for potatoes, 62.26% for orchards and nurseries and 82.89% for bearing vineyards. But there were also some increases of the cultivated areas in 2010 compared to 1989: for sunflower the surface increased with 182.33%, for rape with 271.36% and for vegetables with 103.87% [7] (Table 1).

This was the result of the dissolution for the state enterprises and the old APC (Agricultural Production Cooperatives) and due to market demands.

Table 1. Evolution of the cultivated area during the period 1989-2010 (thousand hectares)

Specification	1989	1995	2000	2005	2010	2010/ 1989 %
Wheat	2,359	2,005.4	1,954.3	2,476	2,162.3	91.66
Barley and two-row barley	767.8	342.4	411.9	484.6	515.8	67.17
Maize	2,733.4	2,828.9	3,049.4	2,628.5	2,098.3	76.76
Sunflower	433.7	534.3	876.8	971	790.8	182.33
Rape	19.8	-	68.4	87.8	537.3	271.36
Soybean	512.2	12.8	117	143.1	63.9	12.47
Potatoes	288.7	203.9	282.7	284.9	241.3	83.58
Vegetables	252.8	189.6	234	266.7	262.6	103.87
Orchards and nurseries	318	277.6	206	181	198	62.26
Bearing vineyards	213.4	188.4	247.5	190.6	176.9	82.89

Total production decreased in the analyzed period for wheat from 7,935.2 thousand tonnes in the year 1989 to 5,811.8 thousand tonnes in the year 2010, for barley and two-row barley from 3,436.3 thousand tonnes to 1,311 thousand tonnes, for soybean from 303.9 thousand tonnes to 149.9 thousand tonnes, for potatoes from 3,892.1 thousand tonnes to 3,283.3 thousand tonnes, for orchards and nurseries from 1,580.2 thousand tonnes to 1,419.6 thousand tonnes and for bearing vineyards from 914.5 thousand tonnes to 740.1 thousand tonnes.

Therefore, there were some increases for total production of maize from 6,761.8 thousand tonnes in 1989 at 9,042 thousand tonnes in 2010, for sunflower an important increase from 655.8 thousand tonnes at 1,262.9 thousand tonnes, for rape also from 18 thousand tonnes at 943 thousand tonnes and also for vegetables with a small variation from 3,726.6 thousand tonnes to 3,863.6 thousand tonnes [7] (Table 2).

Table 2. Evolution of total production during the period 1989-2010 (thousand tonnes)

Specification	1989	1995	2000	2005	2010	2010/1989 %
Wheat	7,935.2	5,929.8	4,456.2	7,340.7	5,811.8	73.24
Barley and two-row barley	3,436.3	961.9	867	1,079.1	1,311	38.15
Maize	6,761.8	9,195.7	4,897.6	10,388.5	9,042	133.72
Sunflower	655.8	675.8	720.9	1,340.9	1,262.9	192.57
Rape	18	-	76.1	147.6	943	523.88
Soybean	303.9	11.9	76.1	312.8	149.9	49.32
Potatoes	3,892.1	2,567.3	3,469.8	3,738.6	3,283.8	84.37
Vegetables	3,726.6	2,559.8	2,527.8	3,624.6	3,863.6	103.67
Orchards and nurseries	1,580.2	670.8	1,301	1,647	1,419.6	89.83
Bearing vineyards	914.5	951.2	1,295.3	505.8	740.1	80.92

Although acreage and productions have ranged during the analyzed period, the prices had a normal significant increase. The price for wheat grown with 178.78% until 2010 from 2001, for barley with 216%, for maize with 225.8%, for sunflower with 253.19%, for soybean with 212%, and for potatoes with 680% [6] (Table 3).

Table 3. Evolution of prices for cultivated crops during the period 2001-2010 (ron/kg)

Specification	2001	2003	2005	2007	2010	2010/2001 %
Wheat	0.33	0.51	0.36	0.61	0.59	178.78
Barley and two-row barley	0.25	0.48	0.36	0.59	0.54	216
Maize	0.31	0.46	0.31	0.55	0.7	225.80
Sunflower	0.47	0.6	0.72	0.78	1.19	253.19
Soybean	0.58	0.71	0.63	0.78	1.23	212
Potatoes	0.2	0.49	0.84	1.04	1.36	680

The number of livestock has deeply decreased in the analyzed period, arriving in 2010 at 31.18% of the cattle from 1989, at 47.09% for cows, buffalo cows and heifers, at 37.82% of pigs, 55.86% of sheep and goats, 63.37% of poultry, 84.94% of the hen eggs and 89.94% for families of bees [7] (Table 4).

Therefore, in 2010 we had only 46.69% of the beef meat, 53.95% of the pigs meat, 46.06% of the mutton and goats and 92.14% of the poultry meat [7] (Table 5).

Table 4. Evolution of livestock during the period 1989-2010 (thousand heads)

Specification	1989	1995	2000	2005	2010	2010/1989 %
Cattle, of which:	6,416	3,481	3,051	2,862	2,001	31.18
Cows, buffalo cows and heifers	2,758	1,963	1,769	1,812	1,299	47.09
Pigs	14,351	7,758	5,848	6,622	5,428	37.82
Sheep and goats	17,288	11,642	8,679	8,298	9,658	55.86
Poultry, of which:	127,561	70,157	69,143	86,552	80,844	63.37
Hen eggs	52,498	36,233	38,497	40,725	44,503	84.77
Families of bees	1,418	747	614	886	1,274	89.84

Table 5. Evolution of the animal production during the period 1989-2010 (thousand tonnes live weight)

Specification	1989	1995	2000	2005	2010	2010/1989 %
Meat, of which:						
Beef	439	392	330	383	205	46.69
Pork	1,023	882	670	605	552	53.95
Mutton and goats	216	152	116	114	99.5	46.06
Poultry	484	355	324	401	446	92.14

Prices have evolved from 2001 until 2010 at meat of which: beef from 2.14 Ron at 4.85 Ron, pork from 2.99 Ron to 4.93 Ron, mutton and goat from 3.6 Ron to 5.38 Ron, poultry from 0.33 Ron to 0.54 Ron. At extracted honey prices went to 8.79 Ron from 2.9 Ron in 2001, at bovine milk from 0.39 Ron to 0.94 Ron and at eggs progressed from 0.15 Ron in 2001 at 0.46 Ron in 2010 [6] (Table 6).

Table 6. Evolution of prices for animal production during the period 2001-2010 (Ron/kg)

Specification	2001	2003	2005	2007	2010	2010/2001 %
Meat, of which:						
Beef	2.14	2.39	3.3	2.98	4.85	226.6
Pork	2.99	3.3	4.69	3.55	4.93	164.8
Mutton and goats	3.6	4.74	3.31	3.52	5.38	149.4
Poultry	0.33	0.51	0.36	0.61	0.52	157.5
Extracted honey	2.9	7.48	4.1	4.55	8.79	303.1
Bovine milk(ron/l)	0.39	0.56	0.64	0.75	0.94	241
Eggs (ron / piece)	0.15	0.17	0.22	0.24	0.46	306.6

We have such results due to the low level of mechanization combined with outdated irrigation systems, more than 71% of the total area used is worked at low intensity, spending more than 125 Euros/ha, as opposed to France which spends 336 Euros/ha for fertilizers and pesticides [8].

National Bank chief economist proposed three directions required by 2014 to have an agriculture that would ensure domestic consumption and to strengthen its position in country's GDP:

✓ Emergency Consolidation of farms by re-establishing life annuities, the tax penalties for agricultural land uncultivated and stimulation by all means of the farmers association.

✓ Investment in human capital in rural areas by establishing a program called "sons of villages".

✓ Investment in physical infrastructure from rural areas [4].

Commissioner for Agriculture has completed the directions to be followed by the transparent operation of agricultural markets addressed by the fiscal intelligent so that farmers are not only constraints but also feel the benefits [3].

For doing what is necessary for Romanian agricultural sector, producers need to be united, correct one to each other, and also to have access to reasonable funding.

Financing agriculture can be supported by setting up the credit cooperatives for financing agriculture and rural development [1].

## CONCLUSIONS

✓ Area cultivated with wheat, barley, corn, soybeans, potatoes, orchards, nurseries and vineyards bearing fruit decreased during the period analyzed. But there were some small increases in area cultivated with vegetables and raises significant acreage of sunflower and rapeseed due to increased demand of biodiesel.

✓ Even if currently we cultivate only 76% of surface cultivated area with corn then in 1989, we managed to increase production by 33%.

✓ Livestock has been drastically reduced, exception the poultry sector where we have about 80% from what we had.

✓ The necessary measures to be taken will be applicable only through farmers' cooperation,

supported by the Romanian state and EU with concrete measures and funds for achievement of cadastre, in order to improve the efficiency of the irrigation system and obtaining loans at interest comparable to other European countries.

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