

AGRICULTURAL LAND MANAGEMENT AND RESULTS OF LAND REFORM IN ROMANIA

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Abstract

This paper sets out a survey on the evolution of Romanian agricultural real estate for a period of 19 years. Based on the data and on the statistical processed information, this provides few pieces of information on the implementation impact of the Agricultural Real Estate Fund Law no. 18/1991, impact that was significantly felt (in negative manner) with respect to agricultural plots of land.

One of the consequences is that the contribution of agriculture to the Gross Domestic Product decreased during the last 15 years (from 19.4 % in 1995 to 13.6% in 2009). This survey also sets out the contraction of agricultural plots of land which still have hydroameliorative systems.

The paper provides useful data for those who can promote consolidation measures for lands of agricultural destination. On agricultural total lands, good and very good fertility it is 53%, middling 17%, low 13%.

Key words: analysis, agricultural land, use cover

Romania is situated in the south eastern part of Central Europe inside and outside of the Carpathians Arch, on the Danube (1,075 km) lower course and has exit to the Black Sea.

Main features of relief unit's area proportionality: 31 % mountains (the highest peak 2,544 m), 36 % hills and plateaus, 33 % plains and meadows.

Romania's climate is temperate – continental: average yearly temperature is variable 8 – 10°C; precipitations 400 – 1400 mm. The vegetation is determined by the relief and by pedo – climatic elements. Preponderant soil is the chernozem.

Total area country is 238391 km²; population 22.46 million inhabitants; density of population 94.2 in habitant/km².

Discussing about the land fund use the agricultural area is the biggest part of the land fund (62.47%), represent 0.66 hectares/person; the most founded is arable land (39.4%). Distribution is (in according by *figure 1*):

- Agricultural area: $14,836 \cdot 10^3$ ha
- Forest area: $6,388 \cdot 10^3$ ha
- Others area: $2,526 \cdot 10^3$ ha

MATERIAL AND METHOD

In this paper I have watched changes that occurred after applying the law no. 18/1991: evolution agricultural area by use type and lands with agricultural destination, owned by natural or legal persons.

A agricultural reform trough Land Fund law no. 18 has been approved in 1991 by the Romanian Parliament, which mainly instituted the private propriety re-possession over the agricultural land, inclusively agricultural lands, through dissolving the Agricultural State Units and Cooperative Agricultural farms. For the same purpose, afterwards has been adopted by Parliament and Government other laws about forming other types of agricultural units like: Legal persons unit, Agricultural companies, Commercial companies, Cooperative units, others types agricultural units (Sion I. Gr., 2003).

Based on data and analysis of the statistics date in according yearbooks of Romania's resulted *Table 1 and Table 2 (figure 2, 3)*.

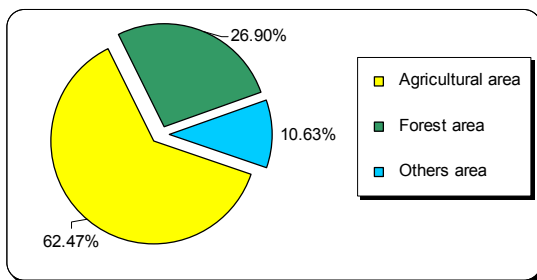


Figure 1 Distribution of land in Romania according to types of land use (2009)

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Table 1

Agricultural area by different category use, in Romania (1989)

Unit category	Agricultural area use		Number units	Area/unit (hectares)
	(hectares)	%		
Agricultural state units	4488221	30.0	407	1103
Cooperative agricultural farms	9061853	60.5	4643	1952
Private agricultural farms	1413853	9.5	-	-
TOTAL	14963417	100	-	-

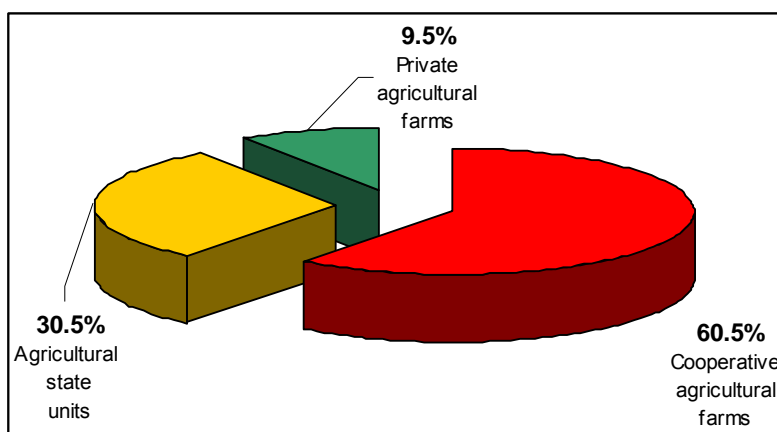


Figure 2 Agricultural area by use, in 1989 year

Table 2

Agricultural exploitations, agricultural area use and agricultural mean area use with one agricultural exploitation, after legal statute, 2009 year

Legal statute theirs agricultural exploitations	Number of agriculturals exploitation (%)	Agricultural area use (%)	Mean area use with one exploitation (hectares=ha)	Number of agricultural exploitation (%)				
				< 0.1 (ha)	1-2 (ha)	2-5 (ha)	5-10 (ha)	20-30 (ha)
Agricultural fellow exploitations	99.5	55.4	1.73	12.6	20.9	22.1	5.0	0.12
Units with legal statut:	0.50	44.6	274.43	2.5	5.8	13.0	14.3	2.0
• Agricultural companies	0.05	7.0	431.47	0.3	0.9	1.3	1.8	2.15
• Comercial companies	0.13	15.6	353.34	2.2	3.9	4.7	3.8	3.1
•Administrative teritorial units	0.13	20.6	503.22	3.7	5.6	9.1	5.8	1.3
•Cooperative units	0.02	0.01	27.19	22.0	5.1	3.8	5.6	1.2
•Other types	0.19	1.4	24.49	1.4	8.5	24.4	30.9	1.6
TOTAL	No. exploitation 4484893	13930710 hectares	3.11					

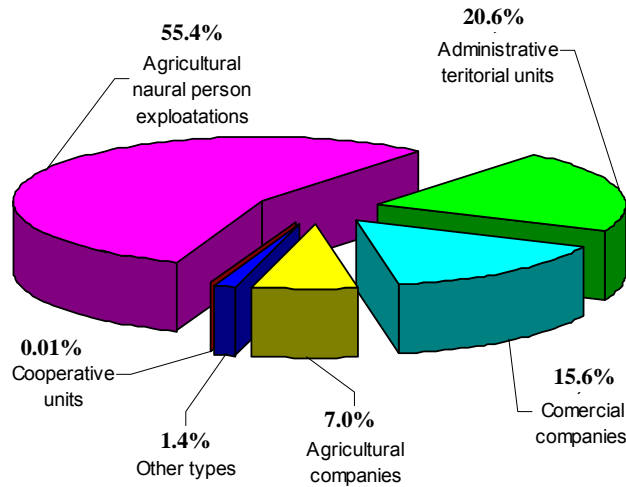


Figure 3 Agricultural area by use, in 2009

Obs. In present, total agricultural area and partial forest area is in private ownership (of state, of administrative – territorial units, of legal persons and of natural persons).

RESULTS AND DISCUSSIONS

Comparing the arable land percentage of other countries (Germany: 33.4%, France: 33.2%, Spain: 30.1%, Italy: 26.9%, United Kingdom: 24.1% and USA: 19.8%) and therefore the land area per person in Romania is 0.418 ha, our country is situated, from this point of view, in a very high position, comparable with the most important producers and exporters in agro-food

products (0.58 ha in USA, 0.53 ha in Spain, 0.26 ha in Italy).

As you can see in *Table 3* and *Figure 4*, during the last two decades resulted in an agricultural land diminish, especially the arable lands, because of the unsurveyed expansions of inner city lands and out of city limits buildings, also forsaking or changing the purposes of land on steep hills.

Cultivated area, by main crops in 2009 year: 67 % Cereals for grains (of which: 48 % Maize, 38 % Wheat and rye); 12.7 % Technical crops (of which: 92.6 % Oilseed crops – 84 % sunflower); 13.2 % Fodder crops (Lucerne, etc.)

Table 3

Total land by use in Romania (1989 –2009)

Use categories	1989 year		2009 year		2009/1989	
	10 ³ hectares	%	10 ³ hectares	%	+/-10 ³ hectares	%
Arable land	9833	41.4	9399	39.4	- 434	- 4.7
Pastures	3044	12.8	3424	14.4	+ 380	+ 11.1
Hayfields	1423	6.0	1514	6.3	+ 91	+ 6.0
Vineyards and nurseries	306	1.3	260	1.1	- 46	- 15.0
Orchards and nurseries	357	1.5	241	1.0	- 116	- 32.4
Total agricultural area	14963	63.0	14838	62.2	- 125	- 8.35
Forest and other areas with forest vegetation	6568	27.7	6791	28.4	+ 223	+ 3.2
Waters and ponds	880	3.7	879	3.7	- 1	0.0
Other areas	1428	5.6	1331	5.6	+ 99	+ 7.4
Total non agricultural area	8976	37.0	9001	37.7	+ 232	+ 2.4
Total general	23839	100	23839	100	0.0	0.0

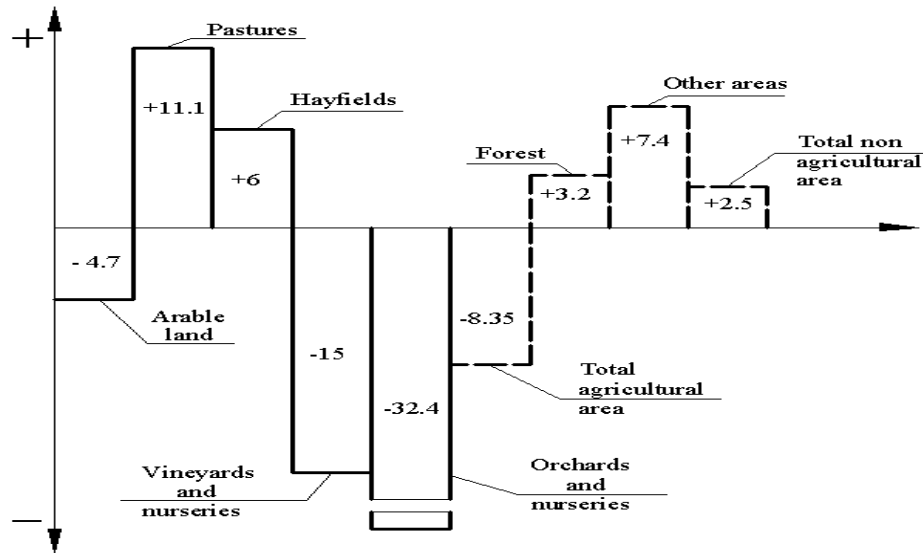


Figure 4 Agricultural areas by use, difference (%) of 1989/2009 years

This paper also studied the evolution of hydroameliorative improvements in Romania and, according to the conclusion, the negative trend was noticed in all areas (Biali Gabriela, 2015).

The current problems related to the versant improvement works in Romania (Table 4) and the investigations (on the spot and scientific) concerning the preservation of soil on slope plots of land showed that the soil erosion can be prevented by means of a set of anti-erosion actions, both of preventive and improvement

nature, regarding the already damaged plots of land (Biali Gabriela, Cojocaru Paula, Martinas Astrid Roberta, 2015).

Taking into consideration the large area of the land subject to anti-erosion actions in Romania (approx. 5.3 mil ha), taking into consideration the pace at which such improvements were performed so far (on approx. 42% of the required area), special further financial efforts are required for the extension thereof.

Table 4

Status of Land Improvement works in Romania in 1990

Improvement works	Required (economically convertible)		Performed		To be performed	
	10 ⁶ ha	(%)	10 ⁶ ha	(%)	10 ⁶ ha	(%)
Irrigation	5.5	100	3.2	8	2.3	42
Draining	5.5	100	3.1	56	2.4	44
Fight against soil erosion	5.3	100	2.2	42	3.1	58

In the first stage, the soil protection and preservation improvement works (c.e.s.) were backed by draining and irrigation works in the hilly and plateau areas, the protection and preservation improvement works being intended for the protection thereof against erosion-related damages. Based on the extension and complexity of the protection and preservation improvement works, representative are the hydrographic basins Bârlad (190,000 ha), Jijia and Bahlui (77,300 ha),

Jiu (122,800 ha), Argeșul (56,900 ha), Someșul (62,200 ha), Valea Hârtibaciului (44,100 ha), Almaș and Acriș 30,200 ha, Valea Carasu (42,000 ha), Câmpia Covurlui (50,600 ha).

If during 1990-2000, the irrigation and draining improvement works languished, the works related to the fight against soil erosion have extended for approximately 248,000 ha more, but are still insufficient compared to the demand.

The destruction of certain important soil protection and preservation works on the versants were also recorded in the same period of time (grassed straps, terraces, shoulders, coast channels and openings), and between 2000-2009 these affected 18% of the overall anti-erosion improved area (for instance, the counties: Suceava, Iași, Vaslui, Bihor, Sălaj, Hunedoara, Cluj, Dolj etc.).

The main economic indicators required for the assessment of an anti-erosion improvement works scheme are: the overall investment, the specific investment, the net revenue and the investment term of recovery.

Although in Romania the agricultural contribution in forming Gross Domestic Product has decreased in the last 15 years (from 19.4 % in 1995 to 13.6% in 2009), it represents nowadays a very important branch of the national economy (Table 5).

Because these changes took place in a short period of time (although necessary), some negative aspects were born:

- dismantling the agricultural land in small parts belonging to farmers doesn't offer the possibility of a normal exploitation, based on mechanization, chemical land treatments and applying some measures of soil fertility preservation and protection (Table 6); just the natural erosion of the soil on steep hills affects 47% of the land:

- production planning was affected by rezoning of the agricultural land;

- decreased exploitation of natural resources of the soil.

Table 5

Agricultural contribution of the Gross Domestic Product in Romania

Years	1938	1950	1960	1980	1989	1994	1995	1996	1997	1998	2000	2009
% GDP (Gross Domestic Product)	30.1	25.7	24.5	13.0	11.3	19.4	19.3	18.7	17.6	14.1	14.0	13.6

Table 6

Agricultural exploitations, after parcels number which it is dividet agricultural area use and legal statute (2009)

Legal statute theirs agricultural exploitations	Number of parcels which it is dividet agricultural area use						Number (media) of the parcels/exploitation
	1	2	3	4	5	> 5	
Agricultural fellow exploitations	30.0	20.4	15.5	11.2	7.2	15.7	3.34
Units with legal statut:	25.1	15.4	10.3	8.0	5.8	35.4	9.88
- Agricultural companies	6.7	4.7	6.7	6.8	6.5	35.4	9.88
- Comercial companies	22.3	9.8	7.6	6.7	6.4	47.2	13.52
- Administrative teritorial units	28.1	13.4	7.8	5.8	5.1	39.8	13.52
- Cooperative units	58.4	14.3	10.4	1.3	5.2	10.4	3.06
- Other types	29.3	23.2	15.0	10.3	5.7	16.5	3.67
TOTAL agricultural exploitations							3.38
Total number agricultural exploitations 4299361							
Total number parcels 14520731							

CONCLUSIONS

Presently we can say that the Reform's main purpose to restore the right of law over the land has been reached (with small exceptions). The land market has been formed; land transactions are something very common these days.

Because these changes took place in a short period of time (although necessary), some negative aspects were born:

- dismantling the agricultural land in small parts belonging to farmers doesn't offer the possibility of a normal exploitation, based on mechanization, chemical land treatments and applying some measures of soil fertility

preservation and protection (*Table 6*); just the natural erosion of the soil on steep hills affects 47% of the land:

- production planning was affected by rezoning of the agricultural land;
- decreased exploitation of natural resources of the soil.

On agricultural total lands, good and very good fertility it is 53%, middling 17%, low 13% (in according *table 3*).

Although in Romania the agricultural contribution in forming Gross Domestic Product has decreased in the last 20 years (from 20 % to 14%), it represents nowadays a very important branch of the national economy (*Table 5*).

The latest laws, started to promote corrective action to diminish the negative effects. Some examples are:

- consolidation of the lands for agriculture by forming certain landowners organizations, in special cooperative units;
- incentives for people involved in the land transactions (tax and imposes breaks, subsidys et.al.).

Please note that the investments in anti-erosion actions and works are larger than the immediate production benefit (revenues) response under these circumstances, where benefits are negative in the first 5-7 years after the completion of works.

That is the reason why the soil erosion fighting improvement works should be considered of public interest, because the effects thereof have an impact on several economic and social objectives (communication roads, water management, localities etc.)

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