

## ***AGRICULTURAL FARMS –EVOLUTION AND STRUCTURE***

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*Abstract: The process of evolution and restructuring of agriculture was a rather slow one, and the phenomenon of structural coexistence of the two types of agricultural farms, with or without juridical personality was maintained in all this period.*

*The big number of agricultural farms show how ample is the phenomenon of their fragmentation, having negative consequences upon the economic performances, the general evolution and development state of them.*

*The structure of the agricultural farms as regards the utilized agricultural area is one of contrasts, from some ars in the case of the subsistence households, to tens of thousands of hectares in the case of commercial farms.*

**Key words:** *agricultural farms, structure, agriculture*

### **1. INTRODUCTION**

The Romanian agriculture's state is determined by the Romanian agrarian structure and is the most important economic and social present issue.

The multifunctional role of agriculture is fully recognized, reason for which an overall knowledge of its structure and evolution has in view mainly the agricultural farm.

The evolution of the agricultural farm was and is strictly linked to the transformations in the Romanian society.

Within this context the main goals of the paper have had in view the analysis and evolution of the agricultural farms in the period between the two general agricultural censuses (2002 and 2010). Also, an analysis was made of the evolution and structure of agricultural farms in regional profile, in the attempt to evidence the mutations taking place at the level of the development regions in Romania. For an overall image, the analysis comprised the GDP evolution, that of the land fund and that of the modality to farm the land area.

In view of reaching the goals established there were used data supplied by: i) The NSI Annual Yearbooks; ii) The General Agricultural Census, the years 2002 and 2010; iii) statistical data/on line information - [www.NSI-tempo-online](http://www.NSI-tempo-online); iv) statistical data/on line information from MARD. The methodology comprised the statistical analysis of the primary data using as working instrument the Excel quantitative analysis program.

### **2. STAGE OF PROBLEM KNOWLEDGE**

Romanian agriculture suffered a long process of transition from centralized economy to market economy and to adapt to the common agricultural policy. Thus, in recent years there have been numerous studies on the importance of agriculture as a branch of the national economy.

In the early years of the post-communist studies and analyzes were focused on the problems facing agriculture, from the "restoration of property rights on land which was extremely slow" (Oțiman, P.I., 1994), to the privatization of agriculture which made the

"Romanian land structure is almost identical to that before the great agrarian reform of 1921" (Oțiman, P.I., și colab., 2010).

There followed studies that analyzed the Romanian agriculture position during pre- and post- accession to the European Union (Oțiman, P.I., 2002, Stanef, R.M., 2010), leading to the current state when "impose its approach as a strategic priority" (Zahiu și colab., 2010).

According to specialists "agriculture it is a complex issue, having regard the openness and interaction with other sectors" (Glogovețan, O.E., 2010) and represents "the nucleus around which all branches are formed in upstream and downstream activities" (Popescu, M., 2001).

The big number of agricultural farms show how ample is their fragmentation phenomenon, having negative consequences upon the economic performances, the general evolution state and development of them.

### 3. RESULTS AND DISCUSSIONS

#### 3.1. Agriculture and the GDP

Agriculture represents a first importance sector due to its contribution it has in the national economy. Agriculture's contribution to the GDP maintained high, oscillating from 11.36% in the year 2002, to a minimum of 5.6% in the year 2013, being three times higher than the average EU- 27 which is of 1.7%.

Table 1. Share of agriculture in the GDP

- mil.lei current prices -

Years	2002 <sup>*)</sup>	2007 <sup>*)</sup>	2010 <sup>**)</sup>	2013 <sup>***)</sup>
Total GDP	152017.0	416006.8	523693.3	628581.3
Agriculture, silviculture, fishing and pisciculture	17280.6	23966.3	29874.2	35192.8
% from GDP	11.36	5.76	5.70	5.6

Source: <sup>\*)</sup> NSI, Romania's Statistical Yearbook, 1990-2009 time series, tab.11.1;

<sup>\*\*) NSI, Romania's Statistical Yearbook, 2013, tab.11.1;</sup>

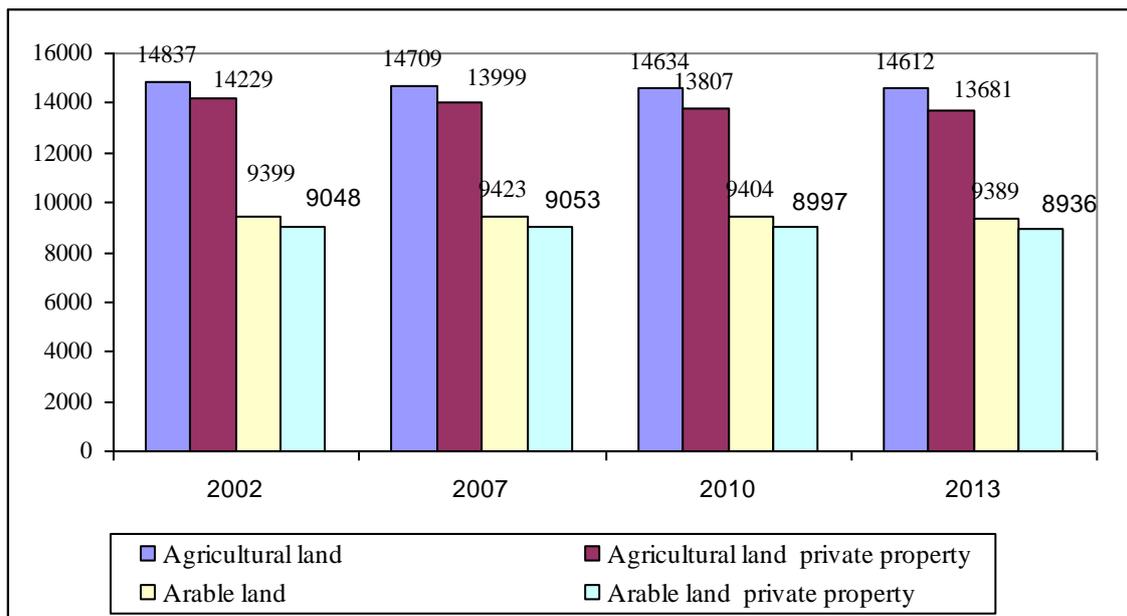
<sup>\*\*\*) data for the year 2013: NSI press release comunicat no.80 from April 2014( provisory data)</sup>

#### 3.2. The Land Fund

Agriculture represents an important factor of the natural environment having in view that the share of the agricultural land in the ensemble of the country's territory is of over 61%.

In the year 2002 Romania's agricultural area was of 14.8 mill.ha (95.9% private ownership), and the area of the arable land was of 9.4 mill.ha (96.2% under private ownership). In the year 2013, Romania's agricultural area was of 14.6 mill.ha (93.8% private ownership), and the area of the arable land is of 9.4 mill.ha (94.7% private ownership).

Graphic 1. Situation of the land fund, by utilization way, by ownership forms



Source: [www.NSI-tempo-online](http://www.NSI-tempo-online)

In the analyzed period the areas of agricultural land and arable land were not modified significantly, while their shares being in the private ownership decreased in year 2013 opposed to the year 2002. The transfer of the land areas to the forestry sector and that of constructions has constituted the main cause of the reduction of the agricultural area in the last years. The reduction of the land areas, by their including into the urban zone, represents a phenomenon met in the zones with higher productivity, while the change of the utilization category for the agricultural land into that of forestry appears, mainly, in the less favored zones.

### 3.3. Agricultural farms

The number of the agricultural farms diminished by 13.3%, and their utilized agricultural area diminished by 4.5% in the year 2010 as opposed to the year 2002.

The agricultural area per one farm averagely registered a slight increase, from 3.24 ha (2002) to 3.57 ha in 2010.

The phenomenon of structural duality of the agricultural farms maintained itself, such that in the year 2002 there were 4299 thousand agricultural farms, of which 99.4% were farms without juridical personality and 0.60% were farms with juridical personality. The modifications in the agricultural farms' structure were not spectacular, such that in the year 2010 there were 3724 thousand agricultural farms, of which 99.2% were agricultural farms without juridical personality and 0.80% were farms with juridical personality.

Table 2. Number of agricultural farms by the juridical status and the utilized agricultural area

Indicator	MU	Total farms utilizing agricultural	of which:	
			Agricultural farms with	Agricultural farms without

		area		juridical personality		juridical personality	
		2002	2010	2002	2010	2002	2010
Number of farms	thou.	4299	3724	22	30	4277	3694
Utilized agricultural area	thou. ha	1393 1	13306	6222	5856	7709	7450
Agricultural area averagely per farm	ha	3.24	3.57	282.2	193.7	1.80	2.02

Source: General Agricultural Census, 2002 and 2010, NSI

The agricultural area utilized by the agricultural farms recorded decreases, both in the case of farms with juridical personality, and in the case of those without juridical personality. Thus, the agricultural area which was registered averagely per one agricultural farm with juridical personality decreased from 282.2 ha (2002) to 193.7 ha (2010), while the agricultural area which was registered averagely per one farm without juridical personality recorded a slight increase, from 1.80 ha (2002) to 2.02 ha (2010).

Even if in the analysed period the total number of farms registered a decrease, that of the agricultural farms with juridical personality registered a significant increase, being by 1.4 times more numerous in the year 2010 opposed to the year 2002.

It is to be remarked the fact that, both in the year 2002, and in the year 2010, the agricultural farms with juridical personality were utilizing over 44% of the agricultural area.

At regional level, the biggest number of farms without juridical personality were to be found in the development regions: North-East and South, both in the year 2002, and in the year 2010.

Table 3. Modification of the agricultural farms' structure without juridical personality by development regions, in the years 2002 and 2010

Development region	2002		2010	
	No.	Ha.	No.	Ha.
North- East	855501	1352913.37	770777	1265278.15
South -East	527113	1063311.13	440541	1012661.46
South	839508	1148109.22	755491	1069697.87
South West	595859	1149138.23	551996	1105097.06
West	341261	905599.58	260055	774304.02
North West	605,02	1165981.63	515381	1182540.58
Center	445942	866238.69	370681	1017204.06
Bucharest Ilfov	66929	57465.76	29182	22838.34
<b>Total Romania</b>	4277.315	7708757.61	3694.104	7449621.54

Source: General Agricultural Census, 2002 and 2010, NSI

As regards the utilized agricultural area by the agricultural farms without juridical personality in the development regions North-West and Center there were registered increases of it in the year 2010 opposed to the year 2002, while in the rest of the development regions

the agricultural area utilized by the agricultural farms without juridical personality registered significant decreases.

In the year 2010 opposed to 2002 the number of agricultural farms with juridical personality registered significant increases at the level of all development regions, except the region Bucharest -Ilfov.

Table 4. Modification of the agricultural farms' structure with juridical personality, by development regions, in the years 2002 and 2010

Development region	2002		2010	
	No.	Ha.	No.	Ha.
North East	3630	703593.42	4443	674880.15
South East	2780	1085857.29	3871	1181712.26
South	3656	1193851.50	5453	1263986.74
South West	2372	636058.33	2620	503317.01
West	2575	963874.51	4088	957110.85
North West	3642	753054.75	5242	625806.26
Center	2951	732158.67	4298	610085.76
Bucharest Ilfov	440	153504.02	213	39607.76
Total Romania	22046	6221952.49	30228	5856506.79

Source: General Agricultural Census, 2002 and 2010, NSI

At regional level, the biggest number of agricultural farms with juridical personality was registered in the development regions South and North-West, both in the year 2002, and in the year 2010; most of the increases of the utilized agricultural areas were recorded in the development regions South and South -East.

The development region Bucharest-Ilfov was the only one which registered both a diminution of the number of agricultural farms with juridical personality, from 440 thousand in 2002, to 213 thousand in year 2010, and a diminution of their utilized agricultural areas, from 153.5 thousand ha in 2002, to 39.6 thousand ha in 2010.

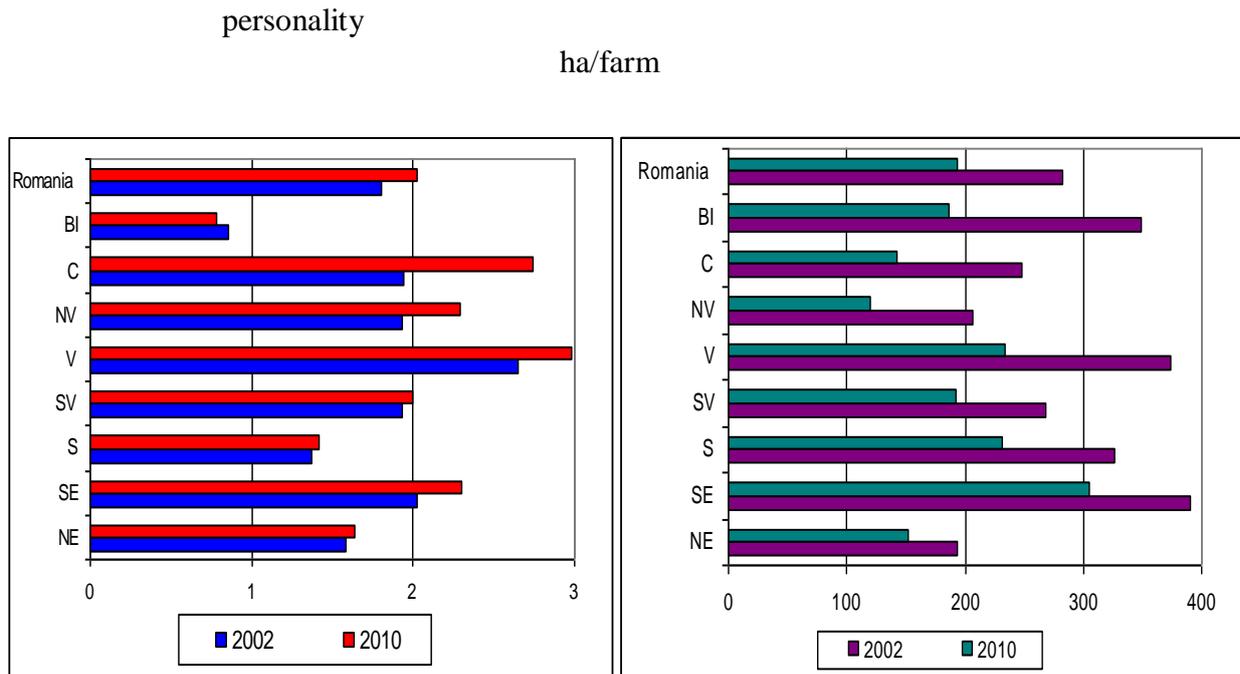
The average area of the agricultural farms without juridical personality registered increases in the year 2010 opposed to the year 2002 in all the development regions, except only the region Bucharest -Ilfov.

In three of Romania's development regions (North-East, South and Bucharest -Ilfov) the average area of the agricultural farms without juridical personality was smaller than the average per country, both in 2002, and in 2010. Significant increases of the average area of the agricultural farms without juridical personality were registered in the development regions: Center, North -West, West and South-East, regions in which the average area of the agricultural farms without juridical personality was higher than the average per country both in the year 2002, and in the year 2010.

Graphic 2. Modification of the average area of the farm, by types of farms, at national and regional level in the years 2002 and 2010

Agricultural farms without juridical

Agricultural farms with juridical personality



Source: General Agricultural Census, 2002 and 2010, NSI

The average area of the agricultural farms without juridical personality registered the biggest increases in two development regions (from 1.93 ha/farm in 2002, to 2.29 ha/farm in 2010 – North-West; from 1.94 ha/farm in 2002, to 2.74 ha/farm in 2010 – Center).

The increase of the number of the agricultural farms with juridical personality and the decrease of the areas utilized by them explains the diminution of the average area of this type of farms, both at whole country level, and at regional level.

In three of Romania’s development regions (South -East, South and West) the average area of agricultural farms with juridical personality was higher than the average per country, both in the year 2002, and in the year 2010.

**3.4. The profile of the agricultural farms**

On the background of the decrease of total number of agricultural farms also the number of mixed agricultural farms registered a decreasing trend, from 3400.1 thousand (2002), to 2702.4 thousand (2010). Nevertheless, the highest share in the total number of farms was held by the mixed agricultural farms, both in the year 2002, and in the year 2010.

Table 5. Agricultural farms which utilized agricultural areas and/or owned livestock

	- thousand-	
	2002	2010
Agricultural farms– total	4485.0	3859.0
Agricultural farms with utilized agricultural area and livestock, of which:	3400.1	2702.5
- agricultural farms only with utilized agricultural area	899.4	1021.9

- agricultural farms only with livestock	185.5	134.6
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Source: NSI, Romania's Statistical Yearbook, 1990-2009, time series and 2013, tab.14.3

As regards the evolution of the specialized agricultural farms, the number of those with utilized agricultural area increased, whereas the number of those with only livestock decreased. These fluctuations show that the specialization process of agricultural farms was in continuous change.

### 3.5. The farming of agricultural lands by their juridical status

In the year 2002, from the total of the utilized agricultural area, the area in ownership was representing 90.5% the rest being farmed in other forms.

Table 6. The way of farming the lands in the year 2010 opposed to the year 2002

Specification	2002	2010
In ownership	90.5	60.0
In lease form	0.2	27.0
In concession form	0.1	3.0
Sharecropping	0.3	2.1
Others	8.9	7.9

- % -

Source: General Agricultural Census, 2002 and 2010, NSI

In the year 2010 the share of the areas in ownership decreased significantly, while the shares of the others forms of farming the lands increased, the biggest increasing trend being registered by the share of the areas leased, which means that the phenomenon of leasing was in full development.

### 3.6. Romania's agrarian structure

Romania's agrarian structure is made of four big categories of agricultural farms<sup>1</sup>:

- the family agricultural households with areas between 0.1-1 ha, which, due to the small agricultural areas and also strongly fragmented are not eligible for the EU financing; their agricultural land is made mainly of gardens, pastures and natural hayfields with a weakly productive soil;
- subsistence and semi subsistence farms(households) comprised between 1-10 ha which are producing mainly, for the selfconsumption needs;
- family commercial farms with areas between 10-100 ha;
- the commercial companies with areas larger than 100 ha, with agricultural areas made of arable land of best quality, placed in most favourable zones.

Table 7. Agricultural farms by the size class and the utilized agricultural area

	2002	2010	2002	2010
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<sup>1</sup>Otiman, P.I., (2012), The present Romanian agrarian structure— a big (and unresolved ) social and economic problem of the country in the Romanian Sociology Review, new series, year XXIII, no.5-6, p.339-360, Bucharest

	Number (thousand)	%	Number (thousand)	%	UAA (thou. ha)	%	UAA (thou. ha)	%
0,1-1 ha	2169	50.5	2019	54.2	759	5.4	708	5.3
1-10 ha	2069	48.1	1622	43.6	5622	40.4	4451	33.5
10-100 ha	51	1.2	69	1.8	1011	7.3	1648	12.4
Over 100 ha	10	0.2	14	0.4	6540	46.9	6499	48.8
Total	4299	100	3724	100	13931	100	13306	100

*Source: own calculations on basis of data from General Agricultural Census,: 2002 and 2010, NSI*

In the year 2010 the share of agricultural farms with areas between 0.1-1 ha in total farms was of 54.2%, increasing as opposed to the year 2002. The share of the utilized agricultural area by this category of farms did not suffer significant modifications.

The agricultural farms with areas between 1-10 ha, registered percentage decreases, both as number, and as utilized area. The farms with areas comprised between 10-100 ha and those with over 100 ha registered increases, both from the number point of view, and from that of the utilized agricultural areas.

## CONCLUSIONS

In the period 2002-2013 agriculture's contribution to the GDP maintained itself at a high level, much over the EU average.

The areas of agricultural land and arable land did not change significantly, but their shares suffered modifications, those being under private ownership, registering decreases in the year 2013 opposed to the year 2002. The phenomenon of leasing was in full evolution process having in view that the share of the areas under ownership decreased, while the share of areas taken into lease was in continuous increase.

As regards the profile of the agricultural farms, the biggest share in the total number of farms was held by the mixed agricultural farms, both in the year 2002, and in the year 2010.

In the year 2010, opposed to the year 2002, both the total number of agricultural farms and their utilized agricultural area decreased.

There did not intervene spectacular structural modifications in the evolution of the agricultural farms in the period analysed, the agricultural farms without juridical personality representing 99.4% from the total in the year 2002 and 99.2% in the year 2010. So, the greatest part of the agricultural farms in Romania were individual subsistence farms (individual agricultural farms, authorised physical persons, individual or family enterprises), while only 0.6% in the year 2002 or 0.8% in the year 2010 from the total were agricultural farms with juridical personality (autonomous regies or farm associations, commercial companies, institutes or research stations and educational units with agricultural profile, local councils and other public institutions, cooperative units and other types of units). These were farming but 44% of Romania's agricultural area.

The agricultural area which came in average per one agricultural farm with juridical personality, decreased from 282.2 ha (2002) to 193.7 ha (2010), while the agricultural area in

average per one farm without juridical personality registered a slight increase, from 1.80 ha (2002) to 2.02 ha (2010). This national trend maintained itself also at regional level, such that the average of the agricultural farms with juridical personality registered decreases in all development regions, while the average area of the agricultural farms without juridical personality registered slight increases in all development regions except the region Bucharest -Ilfov.

The agricultural farms without juridical personality with average areas smaller than the average per country were to be found in the development regions: North-East, South and Bucharest -Ilfov, while the agricultural farms with juridical personality with average areas bigger than the average on country were to be found in the development regions: South -East, South and West.

Predominant in the Romanian agriculture were the farms with less than 1 ha arable land, which represented 50.5% in the year 2002 and respectively 54.2% in the year 2010 from the total number of farms and which were utilizing a few over 5% of the country's agricultural area. Even if these do not contribute to the development of a performant agriculture, they play an important social role because they are ensuring the food security of of the inhabitants in the rurakl environment.

The agricultural farms with areas comprised between 10-100 ha and over 100 ha, that is the commercial farms, the commercial companies, were owning an extremely reduced percentage of the total number of farms (1.4% in the year 2002 and respectively 2.2% in the year 2010), but utilized 54.2% (in the year 2002) and respectively 61.2% (in the year 2010), from the agricultural area of the country. The territorial concentration of these agricultural farms is conferring to them a real cmpetitiveness potential.

Such a distribution, accentuatedly bipolar, with the biggest part of the land fragmented, on one hand, between extremely modest farms as physical sizes, which produce greatly for own needs, and, on the other hand, a relatively small number of commercial agricultural farms which produce in industrial system and adopt modern technologies, constitutes the main factor limiting the increase of the Romanian agriculture competitiveness and which reveals its structural imbalance.

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