

# LEASING AND ASSOCIATION – FACTOR AND INDICATOR OF AGRICULTURAL DEVELOPMENT IN CALARASI COUNTY

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## Abstract

*An important indicator to predict the evolution of Romanian agriculture in terms of efficiency due to high technology performance is Bărăgan agriculture, mainly that of Calarasi and Ialomita counties, and other counties with high quality soil in South Muntenia Region. Due to the quality of the soil, agriculture in this area has grown more than any other region of the country, many farms being established, working large areas of land (with well over 100 ha), acquiring performant agricultural equipment through accessing European grants, funds and identifying the best ways to purchase production inputs and capitalization. The most important tools used by farmers in order to reach the above performances are Leasing- as a mean of increasing the size of agricultural holdings and the Association as an effective way of interaction with the markets of inputs and agricultural production.*

## Keywords

*lease, association, agricultural development*

## Introduction

In Romania agriculture has developed differently depending on the area, influenced by pedological, topographic, and historical factors. Regardless of these factors are a few indicators which can be used to measure the degree of agriculture development at the macro level, indicators such as the number of tractors, cargo ha/Tractor, number of farms, agricultural area that is the responsibility of an agricultural holding, the average yield per hectare, the percentage of areas of leased, structures impact in agriculture. That, of course, from the standpoint of the development of agriculture, agricultural areas that have a high soil fertility (especially Baragan and Western Plain) have a net advantage due to primarily natural conditions. What we want to emphasize by the analysis contained in this report, is that in addition to these natural elements there are other factors that lie within reach of local, national and regional players, potential for agriculture development even in areas less endowed. Such factors are agriculture industrialization, increase the size of the agricultural holdings, association in agriculture.

## 1. Specialty literature

In the literature it is noted that "land market, through all its defining components represents a key issue under the responsibility of national agricultural policy for the purpose of reconfiguration and resizing the structures of ownership and exploitation in agriculture".

"Increasing the size of farms in an appropriate manner is a necessity, but also a resultant imposed by the requirements of scientific and technical progress. For these reasons, the issue has preoccupied itself and concerned the economic policy in agriculture in all developed countries. "The upward trend of the size of agricultural holdings in EU countries was the

result, on one hand, of the operations of the Organization and arrangement of territory in rural areas, and on the other hand, of the support and intensification of exchanges of land market" (Gabriel Popescu, "Association in agriculture, from the historical argument to the transfer of knowledge", Ed. Romanian Academy 2014).

"Finally, we can say that the lease that share land market has an active and leading role in increasing size of agricultural users by the movement of land ownership from small to big holding" (Gabriel Popescu, Old issues, new relations in agriculture, Ed. Romanian Academy, Bucharest, 2013).

## 2. Results and discussions

From the data obtained from the Survey of structural adjustment in agriculture from 2013 shows that efficiency in Călărași County agriculture is clearly superior to the average country. This is evident from the analysis of statistical data in conjunction with the status quo. Making an analysis of the number of hectares of utilized agricultural area to be worked by a tractor, is established as follows:

- in Călărași County workload of a tractor is 112.5 ha/tractor
- in South Muntenia region (which includes also Călărași County) workload of a tractor is 79.3 ha/tractor
- at national level workload of a tractor is 68.6 ha/tractor.

Although at first glance seems paradoxical that in Calarasi County, where modern and high-tech agriculture is practiced, (at least in terms of agricultural machinery necessary to work agricultural land), the number of hectares incumbent per tractor is higher than the national average, therefore deciding that the tractors in Calarasi have higher performance than tractors at the national average.

It should be mentioned that for such analysis until 1990 and shortly afterwards, they used the term "tractor statistics ", which is standard tractor 65 hp. Now for the analysis, the term " physical tractor " is used, without evidencing(from the data made available by the INS) a clear situation of power used.

**Table 1 Tractor's load**

Indicator	Călărași County	South Muntenia Region	National
Utilised agricultural area	405302,89	2250948,62	13055849,8
Number of tractors	3603	28372	190159
Cargo ha / tractor	112,5	79,3	68,6
Number of ploughs for tractors	2763	22245	150510
Cargo ha/plough	146,7	101,2	86,7

Source: INS, structural survey in agriculture 2013

Same conclusion emerges from the analysis and the number of ploughs for tractors:

- in Călărași County is found that the load per plough s 146.7 ha
- in South Muntenia region is found that the load per plough is 101.2 ha
- at national level, the load per plough is 86.7 ha.

Based on the above results, we can conclude that in Călărași County tractors are superior in terms of technology used in the national agriculture, so that a single tractor can work almost twice the number of hectares worked on average by a tractor. As regards to tractor's ploughs, their number is also analysed in relation to the number of utilised agricultural area, without having information about their size. It is understandable that plough's sizes used by tractors

in Călărași County is significantly higher than the country's average, taking into account the fact that they are used with high power tractors hauling.

From the perspective of the agricultural area used in Călărași County, associative structures from agriculture use 9.7% of SAU, South Muntenia associative structures in agriculture using 5.75% of SAU, and nationally, the associative structures from agriculture use 3.7% of SAU. Using these data, we conclude that, as agriculture is more developed, the impact of associative structures in agriculture, as well as their development, is more significant. When we talk about the structure of the Association we consider only companies and agricultural associations, but not agricultural cooperatives. This is because after 1990 the association was not done on agricultural land, only to exploit the benefits from association, such as low cost of inputs, better price for their production, structured and updated information.

The high degree of agricultural development in Calarasi is reflected also by the fact that the utilized agricultural area in the county, mostly used by agricultural holdings with legal personality( 77.3 %) remaining that only 22.7% is used by farms without legal personality (individual farms, authorized individuals, family businesses).

It is known that from mechanization and powerful technology in agriculture can benefit mostly large farms, which have legal personality and may provide more easily for adequate financial, human and knowledge (Gabriel Popescu, "Association in agriculture, from historical argument to the transfer of knowledge ", Ed. Romanian Academy, 2014), in order to provide access to their grant projects designed to develop farms.

Of farms with legal personality, those that can ensure a greater financial and human resources, as well as the management necessary for the development, are the privately owned companies or those with majority private capital.

Previously, we have shown data about the associative structures. Regarding private companies, in Calarasi Count, they work 62.5 % of SAU, in South Muntenia Region private companies with working capital work 41.7% of SAU and at national level, private companies are working 25 2% of SAU.

We discussed earlier about the fact that large farms can more easily access the resources in order to obtain performance and hence efficiency. The most common method for increasing the size of the farm is leasing the farmland, in the farmland areas with high fertility, such as the county of Calarasi. Efforts to increase the size of holdings belong almost exclusively to farmers, particularly lessees who have made the land market more dynamic through the continuous growth of the specific lease (benefits) offered to lessors so that in 2013, over 60% of the surface was in lease of 1,200 kg of wheat per hectare, double compared to 2009, in addition there are other benefits such as the provision of food (especially sugar and oil) or payment by the lessee of the tax owed to the lessor.

This situation was anticipated in the literature as a danger for maintaining high degree of fragmentation of agricultural land. "Granting direct payments will lead to higher prices for both agricultural land and an increase in the amount of the lease, and the Romanian farmers, especially the aged, will no longer be interested in to yield land by sale or lease to some young farmers, able to carry out performant agricultural activities" (Gabriel Popescu, Old problems, new relations in agriculture, Romanian Academy Publishing House, Bucharest, 2013).

Analyzing from this perspective, it appears that in Calarasi County percentage of leased farmland owned in 2013 was 53.9 % of SAU, double the national average which is 27.3 % of SAU.

**Table 2 SAU by owning type**

Owning type of agricultural land	Călărași County	South Muntenia Region	National
Utilised agricultural area- ha	405302,89	2250948,62	13055849,8
%	100 %	100 %	100 %
Ownership- ha	80511,41	992926,77	8012365,83
%	<b>19,86 %</b>	<b>44,11 %</b>	<b>61,3 %</b>
Lease- ha	218656,14	890416,65	3570865,06
%	<b>53,9 %</b>	<b>39,5 %</b>	<b>27,3%</b>
Concession - ha	51373,81	121969,96	460009,11
%	<b>12,67%</b>	<b>5,41 %</b>	<b>3,5 %</b>
Other types of owning- ha	43029,76	148797,66	551219,01
%	<b>10,6 %</b>	<b>6,6 %</b>	<b>4,2%</b>

Source: INS, structural survey in agriculture 2013

Fortunately, the potential factor of stagnation in the land market was overlapped by the tools for the development of agriculture and rural development through the use of projects which have been successful in industrialization of agriculture with European funds or Government grants, which, with the acquisition of new machines, increased efficiency and allowed lessees to use economic measures for the benefit of the lessors so as to maintain a high dynamic land market by encouraging the supply of land.

The result of this policy as practiced by farmers active in Călărași County, namely economic growth efforts in order to maintain the impetus of the land market, gave the results tracked, high-tech agriculture practiced on large surfaces resulting from lease farmland proving its effectiveness, relevant being economic results expressed in average yields per hectare higher than the average for the region and than the national average. The data in Table 3 shows the differences between the production of the main crops compared with results from the South Muntenia Region and nationally.

**Table 3 Average yield per hectare for main agricultural crops**

Agricultural crops	Year	Călărași County	South Muntenia Region	Național
		Kg / ha	Kg / ha	Kg / ha
Wheat	2013	4592	3772	3468
	2014	4235	3746	3590
Barley	2013	4510	3617	3111
	2014	4038	3573	3319
Corn	2013	6274	5199	4488
	2014	6475	5294	4770
Sunflower	2013	2387	2232	1993
	2014	2425	2307	2187
Rape	2013	2990	2677	2408
	2014	2753	2699	2604

Source: INS, Tempo online

Positive development of agriculture in Călărași County and accelerated pace in which it had developed and was seconded by national and regional average is reflected in the average returns on an agricultural holding. We note that the difference between the average area of an agricultural holding in the Călărași County in relation to the national average of an

agricultural holding (table 4) is pretty important (5.82 ha-vis 3.6 ha) which proves that the process of increasing the size of the agricultural holdings in Călărași Count has experienced significant development, especially amid high dynamics of land market.

**Table 4 The utilized agricultural area on average per farm(holding)**

	Călărași County	South Muntenia Region	National
Total holdings	69647	753585	3629656
Total SAU	405302,89	2250948,62	13055849,8
SAU average per holding	5,82	2,99	3,6
Holding without legal personality	68971	748615	3601776
SAU used by holdings without legal personality	91934,27 (22,7% din SAU)	949121,32 (42,2% din SAU)	7271007,38 (55,7% din SAU)
SAU average per holding without legal personality	1,33	1,27	2,02
Holdings with legal personality	676	4970	27880
SAU used by holding with legal personality	313368,6 (77,3% din SAU)	1301827,3 (57,8% din SAU)	5784842,4 (44,3% din SAU)
SAU average per holding with legal personality	463,5	261,9	207,5

Source: INS, structural survey in agriculture 2013

Leasing agricultural land is the main component of the land market which has led to an increase in the size of farms in Calarasi, which results from the data presented in Table 5. It is noted that of all lease land owned, 79.5 % is held by private equity companies, representing the most common legal form for large farms. Another important conclusion that emerges from the data in Table 5 is that the associations of agricultural hold only 2.6% of the total leased land in Calarasi County. This is yet another proof that the association in agriculture has not sought to jointly work the land, but pursued exploiting the benefits of the acquisition of inputs, knowledge or capitalizing production.

**Table 5 Land leased by legal status of agricultural holdings**

Legal status of agricultural holdings	Călărași County	South Muntenia Region	National
Total owned agricultural land on lease	218656,14	890416,65	3570865,06
%	<b>100 %</b>	<b>100 %</b>	<b>100 %</b>
Holdings without legal personality	38479,06	147667,29	990122,63
%	<b>17,6%</b>	<b>16,6 %</b>	<b>27,7 %</b>
Corporations/ Agricultural Associations	5777,69	27413,51	141210,32
%	<b>2,6 %</b>	<b>3 %</b>	<b>3,9 %</b>
Private corporations	173813,82	709752,83	2400792,37
%	<b>79,5 %</b>	<b>79,7 %</b>	<b>67,2 %</b>

Source: INS, structural survey in agriculture 2013

We can consider as an agriculture development indicator SAU's share of the land owned by associative structures in agriculture. And from this perspective, we find that agriculture in Calarasi county has precedence, 9.7% of SAU held by companies or agricultural associations, compared to 3.7% of SAU as average hold by agricultural associative structures at national level.

**Table 6 Land leased by Corporations/ Agricultural Associations**

Corporations/ Agricultural Associations	Călărași County	South Muntenia Region	National
Total	39314,36 (9,7% din SAU)	128731,14 (5,7% din SAU)	479698,31 (3,7% din SAU)
%	<b>100%</b>	<b>100%</b>	<b>100%</b>
Owned land - ha	4109,92	9630,69	76093,1
%	<b>10,5%</b>	<b>7,5%</b>	<b>15,8%</b>
Leased land - ha	5777,69	27413,51	141210,32
%	<b>14,7%</b>	<b>21,3%</b>	<b>29,4%</b>
Concession land - ha	0	3675	27732,18
%	<b>0</b>	<b>2,9%</b>	<b>5,8%</b>
Percentage - ha	1216,14	6531,85	15649,35
%	<b>3,1%</b>	<b>5,1%</b>	<b>3,2%</b>
Other categories - ha	28188,61	80481,61	214689,43
%	<b>71,7%</b>	<b>62,5%</b>	<b>44,7%</b>

Source: INS, structural survey in agriculture 2013

### Conclusions

Statistical data of Calarasi agriculture, in comparison with those of regional or national agriculture, taking into account the data on average yield per hectare, we can say that agricultural development in Calarasi is obviously superior of that practiced at regional or national level. These results are due not only to natural factors (climate, topography, soil,) but also to the way in which agricultural activity is dealt with (investment in modernization through by purchasing permanent equipment) and also by the way the land market is functioning by encouraging the land offering supply in order to be leased and by encouraging the incorporation of associative structures in agriculture.

As relevant data, in this case, we mention:

- 53.9% of the utilized agricultural area of Calarasi county is leased, versus 27.3% at national level
- Average yield per hectare for main crops (wheat, barley, maize, sunflower, rape) is greater on average 15% in Calarasi County compared to the national average.
- Associations in agriculture have 9.7% of SAU of Calarasi County, compared to 3.7% of SAU at national level.

### References

1. Gabriel Popescu, "Old issues, new relations in agriculture", Ed. Romanian Academy, Bucharest, 2013
2. Gabriel Popescu, "Association in agriculture, from the historical argument to the transfer of knowledge", Ed. Romanian Academy 2014
3. INS, structural survey in agriculture 2013
4. INS, Tempo online