

THE EVOLUTION OF AGRICULTURAL HOLDINGS AND ELIGIBLE AGRICULTURAL SURFACES FOR GRANT AWARD, AT OLT COUNTY-LEVEL FOR THE PERIOD 2007-2014

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Abstract

Agricultural holdings business financing from public funds (EU budget and national budget), constitutes an important element in the process of consolidation of agricultural competitive structures from Romania and. In the period 2007-2014 at the level of the Olt County, the number of agricultural holdings eligible to receive subsidy was reduced on account of an increase in their size. The process of consolidation of Romanian agricultural holdings is barely at beginning. The average size of a farm in Romania is 3.6 ha, four times lower than the EU average, which lies at 14.2 hectares. New conditions for the subsidies granting in the period 2014-2020 commits small farmers in finding solutions in order to be eligible for payment. The budget allocated to Romania through the new Common Agricultural Policy (Cap) for direct payments on the surface will be over 10.6 billion euros in the period 2014-2020, and the aid per hectare paid from European funds will reach 196 euros in the year 2019, compared to Euro 139.17 in 2013. During this period the transformations among agricultural structures will continue because of the new rules that are stipulated since 2020 in accessing the communitarian funds.

Key words: agricultural holdings, Agency of Payments and Intervention for Agriculture (APIA), consolidation, subsidies

INTRODUCTION

The date of Romania's integration in the European Union, year 2007, coincided with the start of the multiannual exercise of Common Agricultural Policy 2007-2013.

As a result, since 2007 the Romanian farmers have benefited from a new subsidy scheme-single payment on area (SAPS). In order to obtain subsidies, farmers must exploit areas of at least one hectare, divided into plots of at least 0.3 ha. In addition, the applicant must declare all agricultural parcels and meet a series of conditions for the care of the soil (Good agricultural and Environmental Conditions) on the entire agricultural area of the holding.

Romania succeeded after negotiations for the 2014-2020 CAP, to maintain the single payment scheme on the surface-SAPS until

2020 and granting Complementary National Direct Payments (PNDC) under the conditions and for the sectors that have been granted to such payments in 2013. Whereas there is a discrepancy between the amounts of subsidies granted for single payment scheme (SAPS) and the single payment scheme (SPS), granted in other Member States, the new CAP reduces the differences between subsidies received by farmers. In Romania, the subsidy per hectare paid from the EU budget will increase in 2019 at an average of Euro 196 towards Euro 139.17 as it was in 2013, and the budget allocated to Romania for direct payments that they will perform during the period 2014-2020 will be more than Euro Billion 10.6.

MATERIALS AND METHODS

The research was carried out in the framework

of the Agency of Payments and Intervention for Agriculture (APIA) and the Agency for Rural Financing Investments (AFIR) of Olt County, that have provided the details necessary for this study.

Stages of investigations shall cover the following aspects: the study of the bibliography from the specialty literature; concrete information-gathering within the area investigated; ordering, processing and presentation of results in a synthetic form (tables, figures, schemes); analysis and interpretation of results.

Formulas used to calculate these indicators are further presented [2], [3]:

For arithmetic average ; $\bar{x} = \frac{\sum xi}{n}$ where: \bar{x} = arithmetic

mean; n = number of years included in the analysis.

For the calculation of trend phenomena analyzed we used fixed-base indices, indices with base in chain and the annual growth rate.

The annual growth rate

$$[3]= \frac{\prod_{2007-2014} (p1/po)^{(1/(n-1))}}{1}; \text{ where:}$$

$\prod p1/po$ = prudusul chain indicators during the reporting period

For the standard deviation (σ) is calculated a square average of all deviations from the series from their arithmetic average[9].

The standard deviation is an indicator that is used in the analysis of variance, estimation errors of selection in the correlation calculation.

□ □ efficient of variation (V) shall be calculated as a ratio between the standard deviation and arithmetic average. It is expressed as a percentage: $V = \frac{\sigma}{\bar{x}} \cdot 100$

Significance. The higher the value of v is close to zero so the variance is weaker, the collectivity is more homogeneous, with a high degree of representativeness. The higher the value of v is greater than the variation is more intense, the collectivity is more heterogeneous, and has a low level of significance.

It is estimated that at a factor of over 35-40%, the average is no longer representative and the data should be separated in a series of components, groups, depending on the variation of another grouping features. In this

paper we considered grouping farms in large groups (holding up to 50 ha and holdings more than 50 ha), and small groups (< 9.99 ha; 10 to 49.9; 50-ha to 99.9 ha; 100-499.9 ha; 500 to 1,000 ha; > 1,000 ha)

The aim of the research was the evolution of agricultural holdings under the impact of European funding eligibility at Olt County level.

RESULTS AND DISCUSSIONS

As a result of the data processing and analysis, it was found that there is a strong trend of strengthening agricultural structures benefiting from subsidies. Grant remains an important source for farmers to cover a substantial part of their expenses. Subsidies granted to Romania remain, also for the next period, below the level of those in Western European countries, putting in an unfair competition position the agricultural producers in our country. They will be forced, as below, to find the own way to the status of "sustainable economic family farm" by renouncing to individual consumption. The effects of **capital penury** are materialized in reduced agricultural yields, compared with those in the EU [7].

The SAPS grant is conditional upon compliance with the GAEC (Good agricultural and Environmental Conditions). These requirements also apply to actions supported by pillar II aimed at financial aid in less favored areas (LFA), the application of agro-environmental practices and compliance with the requirements of the management plans for the protected areas of Community interest Natura 2000. GAEC determines the reduction of suitably according of support, conditioned by these requirements.

Another source of subsidies are Complementary National Payments, which are introduced also in 2007, and added to the single area payments, which are paid by the Romanian State, the budget of the Ministry of Agriculture. Complementary National Payments are given on the area under cultivation, respectively on animal head, according to the European model.

Olt County agricultural area of 434,846 ha in

2007 presents a slight increase of 3% over the year 2013, which constitutes a positive aspect within the County Land Fund (Table 1). In

respect of the eligible land it grew from 307,531 ha in 2007 to 337,681 ha in the year 2013, representing an increase of 9.8%.

Table 1. The structure and evolution of land areas benefiting from APIA, subsidies on the period 2007-2013

Specification	2007		2010		2013	
	HA	%	HA	%	HA	%
1 Total agricultural land, Olt County	434,846	100.00	434,442	100.00	435,943	100.00
compared with 2007 (%)	100.0	x	99.9	x	100.3	x
2 Agricultural area benefiting from APIA subsidies	307,531	70.72	324,390	74.67	337,681	77.46
compared with 2007 (%)	100.0	x	105.5	x	109.8	x
3 Agricultural area which do not benefit from APIA subsidies	127,314	29.28	110,051	25.33	98,261	22.54
compared with 2007 (%)	100.0	x	86.4	x	77.2	x

Source: Internal statistical data, APIA, Olt County; Statistical Yearbook of Olt County, INS, DJS, 2012 and 2014 Editions

Share in relation to the total agricultural land, of eligible land areas grew from 70.72% in 2007 to 77.46% in 2013. This was accomplished by merging agricultural land in the lease process. Not to be overlooked any sale of land by local and foreign investors.

Romania has the most fragmented agricultural area in the European Union, with 3.86 million farms in 2010, accounting 31% of total EU, this being the result of the refund property after 1989. In 2010, 7.07 million Romanians were working in family farms, according to the 2010 census. If the number of those

working in agriculture represents 30% of the total EU, the agricultural surfaces from Romania represented only 7.6% of the agricultural surfaces in use, according to Eurostat data [1].

In the Olt County in the period 2007-2013, the number of farms has declined from 139,220 in 2007 to 2013 129,098 (decrease of 92.7%). At the same time has been reduced also the number of eligible holdings from 54,215 in 2007 to 40,914 holdings in the year 2013 (decrease at 75.5%).

Table 2. The structure and the evolution of agricultural holdings receiving APIA subsidies, on the period 2007-2013

Specification	2007		2010		2013	
	No	%	No	%	No	%
1 Total agricultural holdings	139,220	100.00	134,911	100.00	129,098	100.00
compared with 2007 (%)	100.0	x	96.9	x	92.7	x
2 Agricultural area benefiting from APIA subsidies	54,215	38.94	48,379	35.86	40,914	31.69
compared with 2007 (%)	100.0	x	89.2	x	75.5	x
3 Agricultural area which do not benefit from APIA subsidies	85,005	61.06	86,532	64.14	88,184	68.31
compared with 2007 (%)	100.0	x	101.8	x	103.7	x

Source: Internal statistical data, APIA, Olt County; Statistical Yearbook of Olt County, INS, DJS, 2012 and 2014 Editions

In share, compared to the total agricultural holdings, the holdings number which have benefited from the subsidies fell from 38.94% in 2007 to 31.39% in 2013. (Table 2)

Also the EU agriculture is characterized by a trend of decrease in the number of farms, maintained continuously from the 1970s (the 5.8 million holdings of the 9 members since 1975 have been reduced to 2.6 million until 2007). The rate of decline appears to have accelerated in the last decade, and some of the new Member States recorded greater rate (for example, Bulgaria: -7.2% from 2003 to 2007)[5].

The number of agricultural holdings eligible for Community subsidies have the same

downward trend as the total number of farms. Thus, during the period 2007-2013, the total number of farms dropped from 54,215 to 38,560, annual average rate of -6.59 %. The agricultural holdings from the group up to 50 ha were at an annual decline rate of -6.82%, and holdings of more than 50 ha presents an annual increase rate of 13.42%. (Table 3)

The increasing trend toward the number of agricultural holdings over 50 hectares is logically accompanied by another trend- that of reducing the total number of agricultural holdings. The reduction is based on each year's disappearance of a large number of small farms unviable economically, or by the death of the farmers. Young people that left

the city or abroad have created favorable conditions for the lease of land.

Table 3. The agricultural exploitations number evolution that benefit of subsidies (SAPS and PNDC) in Olt County during the period 2007-2014

Specification	MU	2007	2010	2011	2012	2013	2014	Average/ Annual rythm	Standard deviation	Coef. Of Var.	
1. Beneficiary farms	Total	No.	54,215	48,379	46,160	44,014	40,914	38,560	34,030	11,004	32,33
	Compared to 2007	%	100	89.2	85.1	81.2	75.5	71.1	X	X	X
	Chain indices	%		0.89	0.95	0.95	0.93	0.94	-6.59	X	X
	Abs. Dif. towards 2007	No.		5,836	8,055	10,201	13,301	15,655	X	X	X
2. Farms <50ha	Total	No.	53,808	47,863	45,556	43,330	40,173	37,796	33,566	10,874	32.4
	Compared to 2007	%	100	89.0	84.7	80.5	74.7	70.2	X	X	X
	Chain indices	%		0.89	0.95	0.95	0.93	0.94	-6.82	X	X
	abs. Dif. towards 2007	No.		5,945	8,252	10,478	13,635	16,012	X	X	X
3. Farms >50 ha	Total	No.	407	516	604	684	741	764	465	200	42.98
	Compared to 2007	%	100	126.8	148.4	168.1	182.1	187.7	X	X	X
	Chain indices	%		1.27	1.17	1.13	1.08	1.03	13.42	X	X
	abs. Dif. towards 2007	No.		109	197	277	334	357	X	X	X

Source: Internal statistics data, APIA, Olt County

In conclusion, we can say that poverty and demographic evolution of villages in Olt County have created prerequisites for reducing agricultural holdings and increase their size. At Olt County-level, between 2007 and 2014 disappeared 16,012 holdings

eligible SAPS smaller than 50 hectares. During this time as it was natural the number of farmers with holdings more than 50 hectares has grown from 407 in 2007 to 764 in the year 2014. (Table 4)

Table 4. Structure of agricultural holdings benefiting from subsidies (PNDC and SAPS) in Olt County during the period 2007-2014

Specification	2007		2010		2012		2014	
	No	%	No	%	No	%	No	%
1. Beneficiary Holdings	54,215	100.00	48,379	100.00	44,014	100.00	38,560	100.00
2. Holdings with surfaces < 50 ha	53,808	99.25	47,863	98.93	43,330	98.45	37,796	98.02
3. Holdings with surfaces > 50 ha	407	0.75	516	1.07	684	1.55	764	1.98

Source: Internal statistics data, APIA, Olt County

This trend of increase in the number of agricultural holdings eligible SAPS who works more than 50 hectares is obvious. The new holdings that emerged after 2007 to 2014 in number 357 were able to merge 74,323 ha. (Table 4). It should be mentioned that the area declared by these holdings at APIA in 2014 represents 38.58% of eligible area of Olt County.

In Romania, the majority of individual farms are characterized by reduced economic power and are geared mainly to own

consumption. Their opening to the market is relatively small, both in terms of the necessary input and output. These farms are characterized by a very diversified production structure, driven by the needs of the household, as well as through a unfit and technical equipment, which impedes productivity and achieve a surplus of products for sale[6]. That is why accessing European funding is urgently needed for enhancing agricultural holdings.

Table 5. Total grants structure on large groups of agricultural holdings size in the Olt County during the 2007-2014

Farm size	UM	2007		2010		2013		2014	
		MIL lei	%	MIL lei	%	MIL lei	%	MIL lei	%
1. Total Grants	Total	25,027	100.0	42,129	100.0	56,408	100.0	52,073	100.0
Compared to 2007	%	100	X	168.33	X	225.39	X	208.07	X
2. Farms with < 50 ha	Total	13,928	55.7	19,557	46.4	22,057	39.1	20,052	38.5
Compared to 2007	%	100	X	140.41	X	158.36	X	143.97	X
3. Farms with > 50 ha	Total	11,098	44.3	22,572	53.6	34,351	60.9	32,022	61.5
Compared to 2007	%	100	X	203.39	X	309.52	X	288.54	X

Source: Internal statistics data, APIA, Olt County

Olt County-level size of grants increased from Lei Million 25,027 in 2007 to Lei Million 52,073 in 2014 representing a doubling of subsidies (208%). For the group of up to 50 hectares per farm subsidies increased by 43.97% and for the group of more than 50 hectares has been increasing by 288.54%, because this group has attracted a greater number of eligible hectares in this period.

Agricultural holdings which works over 50 ha represent only 1.98% of the total number of farmers benefiting from subsidies and 0.56% of the total number of agricultural holdings in the Olt County.(Table 5, Figure 1).

The increase of subsidies on small groups of farm size has different growth rates.

The lowest annual growth is at the group up to 9.99 ha per holding of 3.1% annually and reach an annual growth of 21% in the group of 50 ha to 99.9 ha.

Annual important increases are also at groups over 1000 hectares of 17.3%, group 100-499.9 ha of 17.3%, group of 10 to 49.9 ha of 14.9%. (Table 6).

At Olt County-level the average surface area on a farm has grown from 3.12 ha/farm in 2007 at 3.38 ha/farm in 2013 (Table 7).

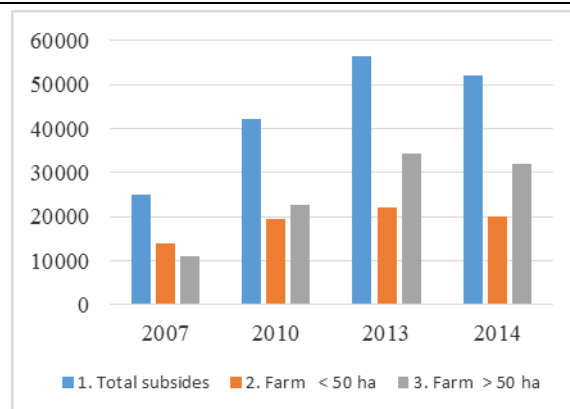


Fig. 1. The total grants evolution on dimensions groups of agricultural holdings in the Olt County during the 2007-2014

The average area of a farm from Romania is 3.4 hectares, compared with an average of 14.2 hectares in the EU and 53.9 hectares in France, the largest agricultural producer.

The area of the agricultural land on an eligible holding increased in Olt County to 145% in 2013, i.e. 5.67 ha in the year 2007 to 8.25 ha in 2013.

At the same time the surface of an ineligible farm decreased from 1.5 ha to 1.11 ha. (Table 7, Figure 2)

Table 6. The total grants structure on dimensions groups of agricultural holdings in the Olt County during the 2007-2014

Farm size	2007		2010		2013		2014		Media MIL lei	Rhythm %	Standard Deviation MIL	Coef of variation %
	MIL lei	%	MIL lei	%	MIL lei	%	MIL lei	%				
< 9.99 ha	11,918	47.6	16,226	38.5	16,472	29.2	14,747	28.3	15,038	3.1	1,649	11
10 to 49.9	2,010	8.0	3,331	7.9	5,585	9.9	5,305	10.2	3,719	14.9	1,350	36.3
50 at 99.9	734	2.9	1,597	3.8	2,919	5.2	2,916	5.6	1,873	21.8	828	44.2
100-499.9	3,912	15.6	7,834	18.6	12,265	21.7	10,932	21.0	8,318	15.8	2,710	32.6
500 to 1000	2,804	11.2	5,568	13.2	7,729	13.7	7,030	13.5	5,346	14.0	1,728	32.3
> 1000 ha	3,648	14.6	7,573	18.0	11,438	20.3	11,144	21.4	8,034	17.3	2,812	35
Total grants	25,027	100.0	42,129	100.0	56,408	100.0	52,073	100.0	42,328	11.0	10,649	25.2

Source: APIA and own processing

Table 7. Evolution of the land surface on a agricultural holding, managed for the period 2007-2013

Specification	UM	2007	2010	2013
1. Average surface/ farm	HA/farm	3.12	3.22	3.38
	Compared to 2007 (%)	100	103.1	108.1
2. Surface/ beneficiary farm	HA/farm	5.67	6.71	8.25
	Compared to 2007 (%)	100	118.2	145.5
3. Surface/ non beneficiary farm	HA/farm	1.5	1.27	1.11
	girl 2007 (%)	100	84.9	74.4

Source: APIA and own processing

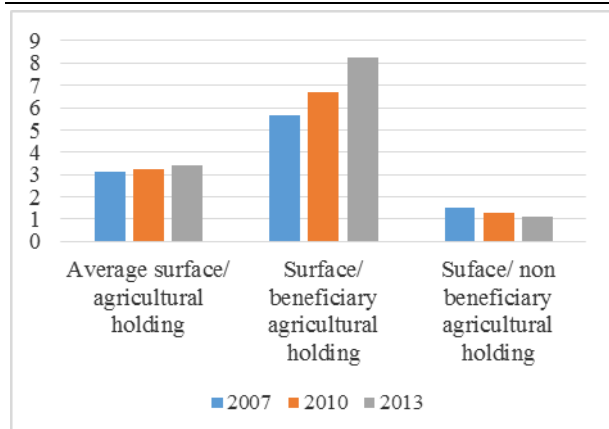


Fig. 2. Evolution of the land surface on a agricultural holding, managed for the period 2007-2013

In the EU are countries like Greece or Cyprus where a holding area is as small as in Romania (in Hungary, Poland and Italy is not far above).

Also like Ireland where the population of Ireland is almost 40%.

However in these countries the agriculture occupies a special importance in the economy of these countries[5].

CONCLUSIONS

For the period 2007-2013, the total number of farms dropped from 54,215 at 38,560, annual average rate of -6,59%. Holdings from the group up to 50 ha were at an annual rate of decline of -6.82% holdings of more than 50 ha presents an annual rate increase of 13.42%.

At the level of the Olt County the average area on a farm has grown from 3.12 ha/farm in 2007 to 3.38 ha/farm in 2013.

The area of the agricultural land on eligible holdings has increased in Olt County to 145% in 2013, i.e. from 5.67 in the year 2007 at 8.25 ha in 2013. At the same time the surface on a farm ineligible decreased from 1.5 ha to 1.11 ha.

At the level of the Olt County the size of grants increased from Lei Million 25,027 in 2007 to Lei Million 52,073 in 2014, representing a doubling of subsidies (208%).

For the group of up to 50 hectares per farm subsidies increased by 43.97% and for the group of more than 50 hectares increased by 288.54%, because this group has attracted a

greater number of eligible hectares in this period.

The increase of subsidies on small farm size groups has different growth rates. The lowest annual growth is at the group up to 9.99 ha per holding of 3.1% annually and reach an annual growth of 21% in the group of 50 ha to 99.9 ha.

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