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# IMPACT OF SUBSIDIES IN AN AGRICULTURAL EXPLOITATION OF MEDIUM SIZE FROM VEGETABLE SECTOR

ȘURCĂ DANIELA-ELENA<sup>1</sup>

**Summary:** *exploitations of small and medium size plays an important role in Romanian agriculture, which are numerous, representing a significant percentage of the total number of those receiving subsidies. In this regard a case study drawn up on a farm representative of mid-size indicates the significant contribution has subsidization and which currently makes a clear separation between profit and loss for the Romanian farmer.*

**Keywords:** *subventions, agricultural exploitation, technical and economic indicators*

**Clasificare JEL:** Q12 – Micro Analysis of Farm Firms, Farm Households, and Farm Input Markets

## INTRODUCTION

The area payment plays a very important role for the Romanian farmer assuring continuity and the possibility of obtaining a minimum profit with which to live. European trend is one of uniformity, since the differences from country to country are very large, having as compared to Malta where the subsidy on the surface amounts to 750 euros / ha, which exceeded the previous years and the value 1,500 euros per hectare, while in Romania until it approaches the sum of 200 euros / ha.

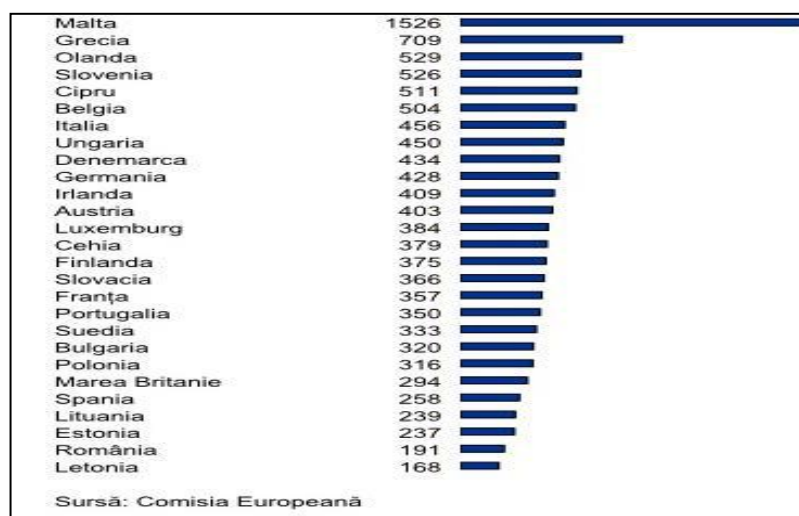
Agriculture is an industry base in most powerful countries of the world are supported by a range of financial mechanisms, even if non-European countries such as the United States and especially Japan, the country that subsidizes most agriculture, covering even after losses producer price fluctuations in the market.

Returning to the subsidy granted to the agriculture, the European Union stands at around 250 euros and 12 countries found that over this threshold. To remember is that although Croatia is an EU member only in 2013 managed to negotiate a higher subsidy as Romania, for approx 200 euros.

Although Romania has benefited since 2007 from a subsidy which started at 71 euros / ha, it has succeeded in the new common agricultural policy to receive a grant higher at around 190 euros / ha for 2014 and the tendency is to rise by 10 euros per hectare by 2020.

Fig. no. 1

The amount of subsidies recorded by the member countries of the European Union



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## MATERIALS AND METHODS

In the economic and financial analysis using multiple methods and specific or borrowed from other sciences.

The methods used are the following:

- Methods of quantitative analysis.
- Economic Modeling;
- Interpretation of results;
- generalization or evaluation of results.
- Indicators economic - financial;
- indices;

## RESULTS AND DISCUSSIONS

The present work refers to the economic situation of agricultural exploitation from vegetal sector and mid - size, highlighting the importance that it has to subsidize the farms in Romania in 2010-2015.

Total area across the entire analyzed period varies between 234.3 ha and 268.2 ha.

**Table 1**  
**Cultivated area during 2011-2015 (ha) with this cultures**

Culture	2011	2012	2013	2014	2015
<b>Wheat</b>	142, 3	142, 74	148, 6	223, 9	171, 3
<b>Rapeseed</b>	123, 9	-	-	-	37, 8
<b>SunFlower</b>	-	106, 6	53, 1	-	-
<b>Corn</b>	-	-	36. 6	33	48, 5
<b>Barley</b>	2	-	-	-	-
<b>Total</b>	268, 2	249, 34	238, 3	256, 9	257, 6

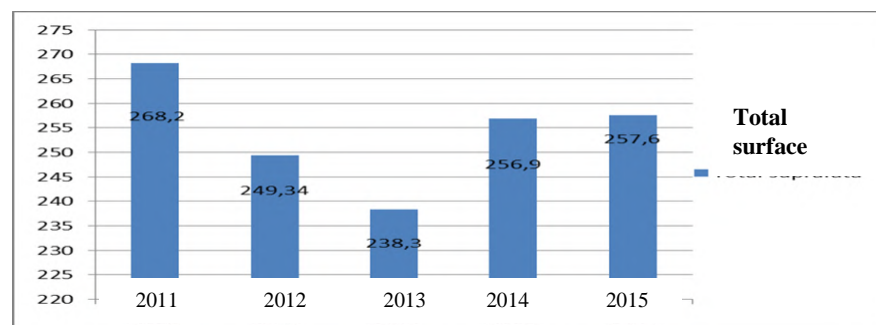
As seen from the data above, the surface with wheat is the largest and is present every year, in the year 2014 is a decrease of 23, 5% compared to year 2013, the area of the year 2013 is the largest. Rapeseed crop area decreases in 2014 with 69, 49% compared to 2010, these two years being the single years in which it was cultivated plant.

Sunflower crop is grown two years in a row (2011-2012), but, surface in 2012, is lower than in 2011 by 50, 1%.

The largest area planted to corn is recorded in 2014- 48, 5 hectares with 15. 5 hectares more than 2013.

At the opposite end with the smallest barley crop acreage it is present only in 2010 with only 2 0. Ha - representing 74% of total area

**Fig. 2.**  
**Graphical representation of the surface structure**



2012 is the year that the holding had the smallest area of 238, 3 hectares  
At the opposite end, the year 2011 has the largest surface in the entire period

**Table 2**  
**The situation average yields on crops during 2011-2015 (kg / ha)**

Culture \ Year	2011	2012	2013	2014	2015
	Kg/ha				
<b>Wheat</b>	3720	4231	3815	4532	4520
<b>Rapeseed</b>	2362	-	-	-	2610
<b>SunFlower</b>	-	2530	2362	-	-
<b>Corn</b>	-	-	4670	4550	5023
<b>Barley</b>	3210	-	-	-	-

As can be seen from the above table are rising average yield, the highest yield of wheat was recorded in 2014 with 4.53 t / ha, and most sunflower production was recorded in 2015 to 5.02 tonnes / ha.

**Table 3**  
**Total production on crops during 2011-2015 (tons)**

Year \ Culture	2011	2012	2013	2014	2015
	tone/suprafață				
<b>Wheat</b>	529, 4	603, 9	566, 9	1014, 7	774, 3
<b>Rapeseed</b>	292, 7	-	-	-	98, 7
<b>SunFlower</b>	-	269, 7	125, 4	-	-
<b>Corn</b>	-	-	170, 9	150, 2	243, 6
<b>Barley</b>	6, 42	-	-	-	-

As shown in the table above the highest wheat production recorded in the year 2014 a production of 1014, 7 tons at the opposite end is the year 2011 with a production of 529.4 tons.

The next crop production recorded at the largest is sunflower with a production of 243.6 tons in the year 2015

Expenditure is the consumption of manpower and materialized in any activity.

- **Indirect expenses** is the cost of production which do not change in relation to the production level such as work expenses plowing, disking, planting, herbicide.

- **Direct expenses** are those expenses as a proportion of production that vary depending on the level of production, such as expenses for raw materials, labor, fuel and power. Direct expenses are those expenses that change, directly, with the number of units produced

**Table 4**  
**Statement of expenditure on wheat in the period 2011-2015 (lei)**

Total expenses on wheat crop	M.U.	Years					2015/2011	2015/2014	
		2011	2012	2013	2014	2015	%		
		Lei	482666, 3	486509	506482	763131, 4	583851, 8	20, 9	-23, 4
which	Direct expenditure	Lei	468608, 1	470057	489354, 6	737325, 0	564108	20, 4	-23, 4
	Indirect expenses	Lei	14058, 2	16451, 9	17127, 41	25806, 3	19743, 7	40, 4	-23, 4

**Table 5**  
Statement of expenditure on maize during 2011-2015 (lei)

Total expenditure on maize		M.U.	Years					2015/ 2011	2015/ 2014
			2011	2012	2013	2014	2015	%	
		Lei	-	-	122.802, 6	110.723, 6	162.730, 2	32, 51	46, 96
which:	Direct expenditure	Lei	-	-	118.649, 8	10.6979, 4	157.227, 3		
	Indirect expenses	Lei	-	-	4.152, 74	3.744, 2	5.502, 95		

**Table 6**  
Statement of expenditure sunflower crop during 2011-2015(lei)

Total expenses on sunflower crop		M.U.	Years					2015/ 2011	2015/2014
			2011	2012	2013	2014	2015	%	
		Lei	-	322.596, 8	160.693, 1	-	-	-50, 18	
which:	Direct expenditure	Lei	-	311.687, 7	155.259, 1	--	-	-50, 18	-
	Indirect expenses	Lei	-	10.909	5.434, 1	-	-	-50, 18	-

**Table 7**  
The statement of expenditure to the culture of rape during 2011-2015 (lei)

Total expenses on rape crop		M.U.	Years					2015/2011	2015/2014
			2011	2012	2013	2014	2015	%	
		Lei	347245, 8	-	-	-	106453, 6	-69, 34	-
which:	Direct expenditure	Lei	337131, 9	-	-	-	102853, 8	-69, 49	-
	Indirect expenses	Lei	10113, 9	-	-	-	3599, 8	-64, 41	-

**Table 8**  
The statement of expenditure for barley in the period 2011-2015 (lei)

Total expenditure on culture barley		M.U.	Years					2015/2011	2015/2014
			2011	2012	2013	2014	2015	%	
		Lei	6820, 66	-	-	-	-	-	-
which:	Direct expenditure	Lei	6622	-	-	-	-	-	-
	Indirect expenses	Lei	198, 66	-	-	-	-	-	-

**Table 9**  
The situation of total farm spending during 2011-2015(lei):

Total expenses per farm		M.U.	Years					2015/ 2011	2015/ 2014
			2011	2012	2013	2014	2015	%	
		Lei	836732	809105	789977	873855	853035	1, 95	-2, 38
which:	Direct expenditure	Lei	812362	781744	763263	844304	824189	1. 46	-2, 38
	Indirect expenses	Lei	24370	27361	26714	29550	28846	18. 37	-2, 38

Analyzing the data we observed that total expenditure per farm increased by 1, 95% in 2015 compared to 2011 and decreased by 2, 38% in 2015 compared to 2014. Also, indirect costs vary little from year to year, this variation is influenced by the increase or decrease in raw material prices, they increased in 2015 by 18, 37% compared to 2011 and decreased by 2.38%. Direct expenses increased in 2015 by 1, 46% compared to 2011 and decreased by 2. 38% since 2014.

**Table 10**  
**Total farm income situation during 2011-2015 (lei)**

Culture	Years						
	2011	2012	2013	2014	2015	2015/2011	2015/2014
<b>Wheat</b>	317. 613, 6	392. 556, 4	396. 836, 3	811. 771, 8	580. 707	82, 8	-28, 4
<b>Rapeseed</b>	365. 814, 8	-	-	-	157852, 8	-56, 8	
						<b>2012/2011</b>	
<b>SunFlower</b>	-	350. 607, 4	158. 032	-	-	-54,9	-
						<b>2014/2012</b>	
<b>Corn</b>	-	-	128. 191, 5	142. 642, 5	194. 892, 4	52. 3	36, 6
<b>Barley</b>	3. 402, 6	-	-	-	-	--	-
						<b>2014/2010</b>	
<b>TOTAL INCOME</b>	686. 831, 0	743. 163, 8	683. 059, 8	954. 414, 3	933. 452, 2	35, 91	-2, 19

Total income per farm is growing at record wheat crop in 2015 compared to 2011 increased by 82.8% but the highest income from this crop recorded in 2014

**Table 11**

Culture	Years				
	2011	2012	2013	2014	2015
<b>Wheat</b>	399. 635, 3	480. 541, 3	494. 377, 3	967. 695, 7	121. 587
<b>Rapeseed</b>	437. 230, 7				184. 554, 7
<b>SunFlower</b>	-	363. 932, 4	7. 379, 63	-	-
<b>Corn</b>	-	-	151. 432, 5	164. 092, 5	227. 775, 4
<b>Barley</b>	156. 276, 6	-	-	-	-
<b>TOTAL INCOME</b>	993.160,6	844.473,7	653.189,43	1.131.788,2	533.917,1

**Total farm income situation during 2011-2015 with subsidies (lei)**

In 2015 there is an increase in total income by 35, 91% compared to 2011 and a decrease of 2, 19% compared to 2014

The production cost represents all costs, proper use of inputs, which operators they perform for the production and sale of material goods or services.

**Table 12**  
**Analysis for production cost / kg, related income culture during 2011-2015 (lei/kg)**

Culture	Years						
	2011	2012	2013	2014	2015	2015/2011	2015/2014
<b>Wheat</b>	0, 912	0, 806	0, 893	0, 752	0, 754	-17, 32	0, 26
<b>Rapeseed</b>	1, 186	-	-	-	1, 079	-9, 02	-
						<b>2012/2011</b>	
<b>SunFlower</b>	-	1, 196	1, 281	-	-	7, 10	
						<b>2014/2012</b>	
<b>Corn</b>	-	-	0, 719	0, 737	0, 668	-7, 09	-9, 3
<b>Barley</b>	1. 06	-	-	-	-	-	-

The largest cost production recorded in 2011 at wheat crop, it decreased in 2015 to 17.32% compared to year 2011, also for the culture of rapeseed decreased cost of production in 2015 with 9.02 % compared to year 2011.

The financial result is the difference between financial income and financial expenses in a year. With operating income from current year result

**Table 13**

**Results of technical and economic situation of the farm exploitation 2011-2015 (lei) -WITHOUT SUBSIDIES**

Culture	Years						
	2010	2011	2012	2013	2014	2015/2011	2015/2014
<b>Wheat</b>	-165052, 7	-93952, 6	-109645, 7	48640, 3	-3144, 8	-98, 09	-106, 47
<b>Rapeseed</b>	18568, 943	-	-	-	51399, 117	176, 80	
						2012/2011	
<b>SunFlower</b>	-	28010, 5	-2661, 1	-	-	-109, 5	
						2014/2012	
<b>Corn</b>	-	-	5388, 8	31918, 8	32162, 1	496, 83	0, 76
<b>Barley</b>	-3418, 06	-	-	-	-	-	-
						2014/2010	
<b>Total</b>	<b>-149901, 8</b>	<b>-65942, 1</b>	<b>-106918, 0</b>	<b>80559, 1</b>	<b>80416, 4</b>	<b>-153, 65</b>	<b>-0, 18</b>

The financial result for the analyzed farm decreased by 153.65% in 2015 compared to year 2011. In 2015 the financial result fell by 0.18% compared to year 2014. This decrease in profit is largely due to unfavorable weather conditions.

The grants pay, financing, usually non-refundable by the state or private individuals, given to companies, private industrial groups, state, mixed or private individuals to cover the difference between the cost of the manufacturer and the selling price, in principle, when price is lower than the marginal cost and to conduct specific actions and targets

**Table 14**

**The situation of economic-financial for the analyzed exploitation, during 2011-2015 (lei) -WITH SUBSIDIES**

Culture	Years				
	2011	2012	2013	2014	2015
<b>Wheat</b>	-83. 031, 0	-5. 967, 7	-12. 104, 7	204. 564, 2	117. 861, 51
<b>Rapeseed</b>	89. 984, 90				78. 101, 04
<b>SunFlower</b>	-	41. 335, 59	4. 560, 44		
<b>Corn</b>			28. 629, 8	53. 368, 8	65. 045, 1
<b>Barley</b>	149. 455, 9				
<b>Total</b>	<b>156.409,8</b>	<b>35.387,9</b>	<b>21.085,5</b>	<b>257.933</b>	<b>261.007,6</b>

Comparing the financial result on the farm without subsidies and financial result on the farm with subsidies found that subsidy plays an important role in making a profit for a farm of medium size, as can be seen in table number 12 financial results the holding is negative in the first three years registering losses wheat crop by using the grant to each culture we find that the financial result is positive registering profit from the first year of operation, less the wheat crop where there is a small loss . This is equated to the other two crops barley and rape.

## CONCLUSIONS

Grant plays a very important role for Romanian farmers. Even in this paper highlights that some cultures without being subsidized would not be profitable for the farmer to cultivate, as is the case of wheat, which in 2015 would incur a loss of more than 3,100 lei at farm level of medium size, with all that this culture remains very popular in the country and the European Union.

Taking as reference the same year, we can say that the profit recorded by the same holding as over 117 thousand lei, where fallow an area of approximately 170 hectares. If rape would make a profit of over 78 thousand lei, according to the receipt of the grant, which means an increase of about 34% of the profit recorded where this culture would not be subsidized.

In the case of corn grown on an area of approximately 48 hectares profit recorded a middle-size farm would be superior financial results noting an increase of over 50%, except where it would not be subsidized.

On a farm of medium size having to use an area of approximately 260 hectares differences between the raw results would be significant so that after subsidization would make a profit of 261,000 lei, compared to 80,400 lei if not be subsidized.

It is clear that the grant from the European Union manages to keep afloat Romanian farmers and a possible removing it from future Common Agricultural Policy can not be viewed favorably both in terms of the future of Romanian agriculture, but also through light of the fact that Romania did not receive enough grant years to be able to think to reach an acceptable level the developed countries of the European Union.

Any increase subsidies to this sector vegetable, and not only will facilitate the possibility of developing these small farms and medium enterprises through more areas, but also work efficiently farmland, through high performance machines that can contribute to a better return on hectare and thus to better farm production.

Farmers are practically dependent on such subsidies for development without subsidy is necessary to purchase some high performance machines that reduce production costs.

Building space conditioning, sorting and processing necessary to obtain higher revenues, we are addicts subsidies for a positive result for the year

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