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THE AGRICULTURAL SECTOR IN THE SOUTH MUNTENIA REGION: PARTICULARITIES AND TRENDS*

ABSTRACT

The paper presents the evolution of the agricultural sector in the South Muntenia region in the period 2000-2006, highlighting the characteristics of this sector, which is very important for the economy of the region. The paper reveals the contribution of the agricultural sector to the regional Gross Domestic Product, the South Muntenia region being on the first position among the eight developing regions from the point of view of the agricultural potential. The paper presents the evolution of the crop production, focusing on the main agricultural crops of the region, as well as the livestock production evolution, focusing on the number of livestock herds. At the same time, the paper identifies the trends and the prospects of the agricultural sector in the South-Muntenia region.

Key words: rural development, rural economy, agricultural sector, agricultural holdings.

JEL Classification: O13, Q10, R11.

Agriculture is an important sector in the South Muntenia region. The reorganization of agriculture and the revitalization of rural economy can be important developing factors in the region. The reorganization of agriculture can have a special impact on rural economy, in general, taking into account the fact that agriculture still remains the most important activity in the rural environment and an essential source of income for households. Agriculture is a sector that, together with the other sectors of the economy, can bring a significant contribution to the regional economic growth if the performance of the sector increases.

The indicator used to measure the economic growth is the Gross Domestic Product (GDP). Depending on the value of this indicator, one can draw conclusions regarding the real situation of the regional economy. Thus, the total GDP growth is used as an indicator of the increase of the productive capacity in the respective region and the growth of the GDP per capita indicates the changes in the economic welfare of the region and it is the main indicator that measures the regional disparities.

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The economy of the South-Muntenia region has had a positive evolution in recent years. The analysis of total GDP evolution in the South-Muntenia region in the period 2000–2006 shows an 85% increase in point of comparable prices. There is a positive evolution from year to year for the entire investigated period. The GDP per capita also increased by 85%, in comparable prices, in the investigated period (Table 1).

Of all the economic sectors, the highest growth, i.e., 172.7%, in the period 2000–2006, was experienced in the fishing - fish breeding sector. However, this sector holds a non-significant share in the overall regional economy. The following positions are held by: estate transactions (235.9%), constructions (146.2%), public health (99.1%), industry (90%), public administration and defense (82.9%), the activity of hotels and restaurants (81.4%). On the other hand, the sectors with the smallest increases are: agriculture (29.8%), a sector whose activity, in the period 2003–2006, even diminished by about 6%, as well as the financial intermediaries (45.6%).

Table 1
The Gross Domestic Product by categories of resources in the South Muntenia region, in the period 2000–2006

- million lei comparable prices-

	2000	2003	2006	Dynamics 2006/2000 (%)
Agriculture, hunting and forestry	3359.9	4637.4	4361.0	29.8
Fishing and fish breeding	0.99	2.34	2.7	172.7
Industry	7586.4	9059.0	14417.7	90.0
Constructions	1106.9	1699.2	2724.9	146.2
Commerce	2264.4	2530.6	3563.0	57.3
Hotels and restaurants	376.2	362.7	682.5	81.4
Transport, storage and communications	2205.6	2440.8	3434.2	55.7
Financial intermediaries	253.5	352.6	369.1	45.6
Estate transactions, rentals and delivering services, especially to companies	2310.3	3507.9	5449.4	235.9
Public administration and defense	1053.3	2030.4	1926.8	82.9
Education	674.9	921.0	1212.2	79.6
Public health and social welfare	468.5	779.2	932.9	99.1
Regional gross value added	21402.1	28323.1	39076.4	82.6
Regional GDP	24208.8	31839.3	44301.4	83.0
Regional GDP per capita (lei)	7209.7	9480.5	13374.6	85.5

Source: based on data from Romania's Statistical Yearbook, NIS.

The economic structure of the South Muntenia region by sectors reveals a negative development as compared to the national level, even if the sector of industry holds a significant share (36.9% in 2006, up compared to the previous years). The share of the services delivered (44.9% in 2006) is under the national

average. This fact reveals a low economic structure as compared to the national and European level. The share of agriculture in GDP has diminished as compared to previous years, from 15.7% in 2000 to 11.2% in 2006 (Table 2).

Table 2
The economic structure of the South Muntenia region, by sectors, in the period 2000–2006

- % -

	2000	2003	2006
Total	100	100	100
Agriculture	15.7	16.4	11.2
Industry	35.4	32.0	36.9
Constructions	5.2	6.0	7.0
Services	43.7	45.6	44.9

Source: based on data from Romania's Statistical Yearbook, NIS.

In order to encourage the regional GDP increase, special measures are to be taken. They refer to encouraging the sector of services, as the most competitive economic sector, on one hand, and to encouraging labour productivity in the rural area (through the diversification of the economic activities and reorienting the population working in the agricultural sector).

Agriculture is an important sector in the South Muntenia region. The agricultural land area in the region is 2,447,192 hectares, that is about 71% of the total area of the region (Table 3). The result of this is the agricultural character and the high agricultural potential in the region, on the one hand, and the first position it holds among the total eight development regions, on the other hand.

Table 3
Land use in South Muntenia region, in the period 2000–2006

- ha -

	2000		2003		2006	
	Total	%	Total	%	Total	%
Total area	3445299	100	3445299	100	3445299	100
Agricultural area	2448973	71.1	2442988	70.9	2447192	71.0
Forests and other land areas under forestry vegetation	664359	19.3	677746	19.7	677323	19.7
Rivers and ponds	118230	3.4	104411	3.0	101918	3.0
Other areas ²	213737	6.2	220154	6.4	218866	6.3

¹ It contains the private property of the state, of the territorial administrative units, of the legal entities and natural persons.

² Contains unproductive land, constructions, roads and railroads.

Source: Romania's Statistical Yearbook, NIS.

At present, over 95% of the agricultural area of the region is owned by the private sector.

The structure of the agricultural land area, consisting of 80.7% arable land, 11.8% pastures, 4.2% hay fields, 1.4% vineyards and vine nurseries and 1.9% orchards and fruit-tree nurseries, as well as the favourable natural conditions have contributed to the development of all branches of agriculture in the region (Table 4).

In the investigated period, the cultivated land area in the South Muntenia region decreased (Table 5). This situation is mainly due to the large operation costs of the agricultural areas that made some agricultural landowners unable to cultivate the areas into their ownership.

Table 4
The agricultural land area by utilization modality, in the South Muntenia region, in the period 2000–2006

- ha -

	2000		2003		2006	
	Total	%	Total	%	Total	%
Agricultural area	2448973	100	2442988	100	2447192	100
Out of which: private	2353945	96.1	2350067	96.2	2342473	95.7
By categories of use						
Arable land	1963951	80.2	1970455	80.7	1974524	80.7
Pastures	287060	11.7	286277	11.7	288796	11.8
Hayfields	96868	4.0	103425	4.2	103976	4.2
Vineyards and vine nurseries	47651	1.9	35432	1.5	33182	1.4
Orchards and fruit-tree nurseries	53443	2.2	47399	1.9	46714	1.9

Source: Romania's Statistical Yearbook, NIS.

Table 5
The cultivated area by the main crops, in the South Muntenia region, in the period 2000–2006

- ha -

	2000		2003		2006	
	Total	%	Total	%	Total	%
Cultivated area – total	1850467	100	1891341	100	1784510	100
out of which: mainly private property	1503966	81.3	1831967	96.9	1731934	97.1
Grain cereals, out of which:	1237983	66.9	1150857	60.8	1135474	63.6
Wheat and rye	538415	29.1	436467	23.1	572922	32.1
Barely and two-row barely	74035	4.0	51306	2.7	60653	3.4
Oats	24995	1.4	24582	1.3	23395	1.3
Maize	598093	32.3	630905	33.4	473985	26.6
Vegetables for seeds:	10892	0.6	9324	0.5	7866	0.4
Potatoes	24574	1.3	22053	1.2	21053	1.2
Sugar beet	96	0.01	6627	0.35	873	0.05
Oil crops	346296	18.7	462893	24.5	430716	24.1
Sunflower	276139	14.9	399526	21.1	303480	17.0
Soybean	37581	2.0	42590	2.3	72399	4.1
Vegetables	44599	2.4	41808	2.2	52065	2.9
Water melons and melons	11954	0.7	10839	0.6	7251	0.4
Green fodders from arable land	166612	9.0	177697	9.4	142076	7.8

Source: Romania's Statistical Yearbook, NIS.

Cereals represent the main crop of the South Muntenia region, that is about 63.6% of the cultivated land area in 2006; the wheat (with over 572 thousand ha cultivated area) and the maize (with about 474 thousand hectares) are the most cultivated cereals in the region. In the last period, the land area under wheat increased and the land area under maize diminished.

The oil crops represent another important crop of the region, that is 24.1% of the cultivated surface of the region. Sunflower is cultivated on more than 300 thousand hectares, while soybean is cultivated on almost 74 hectares. The area under oil crops has slightly increased as compared to the year 2000, but has significantly decreased as compared to the year 2003. There is a similar evolution in the case of the sunflower crop. However, the areas cultivated with soybean almost doubled in the period 2000–2006.

Potatoes, vegetables and vegetables for seeds are other important crops in the South-Muntenia region.

The agricultural production, in terms of comparable prices, increased by 31.6% in the period 2000–2006, an increase that is differentiated by sub sectors (table 6). Thus, in the above-mentioned period, the real increase was of 35.9% for the crop production and only of 23.6%, in the case of animal production. In terms of structure, in 2006, the crop production accounted for 59.7% out of the total, whereas the livestock production represented 39.6%. The agricultural services have a non-significant share of only 0.7%, which is a clue for the low development level of agriculture in South Muntenia region.

Table 6
Production of the sector Agriculture, in South Muntenia region, in the period 2000–2006

- thousand lei comparable prices-

	2000	2003	2006	Dynamics 2006/2000
Total:	6450113	8355867	8485410	31.6
Out of which: mainly private property	6010306	8112700	8176809	
Crop production	3728615	5130382	5066753	35.9
Livestock production	2721499	3092670	3362907	23.6
Agricultural services	-	132815	55750	-

Source: Romania's Statistical Yearbook, NIS.

The main crops of the South Muntenia region are: cereals (about 3.5 million tons in 2006), maize (1.7 million tons) and wheat (1.5 million tons). These have the most significant values. The oil crops (sunflower and soybean) hold the second place, both as regards the cultivated area and the production obtained (sunflower: over 460 thousand tons, soybean: over 150 thousand tons in 2006).

For most crops, the production increased in South Muntenia region in 2006 as compared to 2000. The data in the Table 7 show a significant decrease for most

of the crops in 2003. It should be mentioned that 2003 was a year when the unfavourable weather conditions were the cause of extremely low yields. In the period 2000–2006, significant increases were noticed in the case of cereals (by over 1.7 million tons), especially in the case of maize production (1.1 million tons). Other crops that experienced significant production increase in the above-mentioned period were the oil crops. After a strong decline in the early transition period, soybean and mainly sunflower experienced an increasing trend after 2000, due to the increase of world prices and to the processing industry development. However, as seen in the table below, the oil crops feature high instability both in South Muntenia and at national level.

Table 7
The agricultural production in the case of main crops, in South Muntenia region, in the period 2000–2006

- tons -

	2000	2003	2006
Grain cereals, out of which:	2318090	2051240	3489253
Wheat and rye	1416238	315015	1558357
Barely and two-row barely	217532	59055	142465
Oats	19433	28449	44255
Maize	660727	1643240	1730560
Leguminous crops for beans	6939	11761	17239
Potatoes	204925	271867	297843
Sugar beet	677	37690	15446
Sunflower	202533	466433	461516
Soybean	21456	74473	127233
Vegetables	437430	621914	804621
Water melons and melons	111787	159721	133874

Source: Romania's Statistical Yearbook, NIS.

The production of vegetables significantly increased in the period 2000-2006 in South Muntenia region, with a value over 800 thousand tons in 2006. Despite the fluctuations caused by the weather factors, there was an increasing general trend both in terms of the cultivated area and of the production of vegetables.

In the last years, performance in agriculture seems to be increasingly unstable. This can be illustrated by means of the average production per hectare in the case of the main crops (Table 8). The frequency of natural disasters (drought, floods) can lead to a significant decrease of the productivity in agriculture as well as to lower average yields. The dependence of Romanian agriculture on the environment conditions can lead to a significant productivity decline in agriculture in the years with floods or drought. In the South Muntenia region, in 2003, the average yields per hectare were severely down as compared to the previous years, which enables us to conclude that the risk management infrastructure in the region is not as it should be.

Table 8
The average yields per hectare, in the case of the main crops, in South–Muntenia region,
in the period 2000–2006

	2000	2003	2006
			- kg/ha -
Wheat	2630	722	2720
Barely and two-row barely	2938	1151	2349
Oats	777	1157	1892
Maize	1104	2605	3649
Peas	990	1353	2131
Beans	313	799	752
Potatoes	8334	12323	13913
Sugar beet	7052	5687	17693
Sunflower	733	1167	1521
Soybean	571	1749	1757
Tomatoes	10983	14235	14904
Onions	6134	9285	11754
Cabbages	13807	18922	24964
Water melons and melons	9348	14557	18463

Source: Romania's Statistical Yearbook, NIS.

The average yields obtained in the case of agricultural crops are very small in South Muntenia region, not necessarily compared to the national level (for most of the crops in South Muntenia the yields per hectare are comparable to the average national level), but compared to the average yields in the other European countries. The agricultural property fragmentation, the unfavourable weather conditions, the poor quality of agricultural services and the deterioration of the technologies are the main causes of this situation.

As regards the vineyards, under the background of the cultivated area decrease and of the low profit of the vine varieties, the grape production significantly decreased in the South Muntenia region in the period 2000–2006, from about 185 million tons to 120 million tons (Table 9). The fruit production also followed a decreasing trend, from 293 million tons in 2000 to about 281 thousand tons in 2006. South Muntenia has a significant potential as regards the fruit sector (it is worth mentioning the level of the fruit production in 2003: almost 458 thousand tons, i.e. almost double compared to 2006); yet, unfortunately, many fruit farmers have to face the lack of financial means to rejuvenate the fruit trees plantations and to buy fertilizers, pesticides, the lack of equipment, the lack of irrigation systems, of proper storage capacities and last but not least, the lack of outlets for selling their products. These factors influence both the quantity and the quality of the domestic fruit production.

Table 9
The fruit and grapes production in South Muntenia region, in the period 2000–2006

- tons -

	2000	2003	2006
Grapes	185650	128828	120653
Fruit:	293188	457958	281363
Plums	144159	228646	131999
Apples	99605	162438	100775
Pears	15510	24583	14404
Peaches	1382	1278	1773
Cherries and morellos	8122	9760	9002
Apricots and ungrafted apricots	8621	10593	9244
Nuts	4005	7946	6066
Strawberries	2105	1991	4155
Other fruits	9679	10723	3945

Source: Romania's Statistical Yearbook, NIS.

The number of animals decreased a lot in the transition period, both at national and regional level (Table 10). However, as one can notice in the table below, in the period 2000–2006, the number of animals was rather stable in the South Muntenia region. One could even notice signs of development of this sector, even if there were certain yearly fluctuations. The number of pigs significantly increased in the above-mentioned period (53.3%), an increase being also noticed in the case of the number of family bees (37%), goats (38.6%) and poultry (25.3%). The number of sheep decreased (10.7%) as well as the number of horses (9.3%), while the number of bovines practically remained unchanged. The South Muntenia region has an important potential as regards the livestock sector; yet this sector is vulnerable to animal diseases, as a large part of the animals are raised on individual holdings and the risks of disease propagation in the case of animals being significant.

Table 10
The number of animals in South Muntenia region, in the period 2000–2006

- number-

	2000	2003	2006
Bovines	436266	421836	437432
Pigs	791556	799148	1213068
Sheep	848845	742591	757941
Goats	95321	116013	132164
Horses	138951	140796	125977
Poultry	15080459	17553906	18894448
Bees (families)	103370	134262	141623

Source: Romania's Statistical Yearbook, NIS.

The livestock production tends to increase, but the small farm size limits this growth potential. In the period 2000–2006, the total meat production increased by 9.1% with differences by species: increase in the case of poultry and beef and decrease in the case of pork and mutton. The South Muntenia region is the most important meat producer of the country (Table 11).

Table 11
The animal production in the South Muntenia region, in the period 2000–2006

	2000	2003	2006
Meat – total (tons)	257419	307190	280747
Beef	58691	62647	60409
Pork	121734	119067	116611
Mutton	15250	15052	11537
Poultry	61448	110149	92237
Milk – total (thousand hectoliters)	8518	9018	10342
Out of which: cow and buffalo cow milk	8130	8593	9551
Wool (tons)	2235	1911	2059
Eggs (million)	1002	1155	1357
Honey (tone)	1757	2915	2782

Source: Romania's Statistical Yearbook, NIS.

The decline of pork production when the number of pigs increased is caused by the fact that most pigs are found on private farms where the feeding and the livestock raising techniques are deficient and the genetic material is of low quality, in most cases. Apart from this, the pork processing sector is confronted with high costs.

The total milk production increased by 21.4% in South Muntenia in the period 2000–2006. The improvement of feeding techniques on the farms and the introduction of advanced breeding techniques have all contributed to this favourable evolution. Although under way of improvement, the milk hygiene and milk collection are significant constraints in the milk processing industry. As the livestock raising techniques are improving, the average yields will also increase.

The technical endowment level of agriculture in the South Muntenia region is insufficient, not adapted to the production conditions which vary a lot (in accordance to the soil type, crop type, weather, etc.) and unable to provide mechanization works in the optimum periods established by the cropping technologies. The physical capital is still characterized by a high wear-and-tear and obsolescence level. However, one can notice that in the period 2000–2006, the number of tractors and agricultural machinery improved as a result of the SAPARD program (Table 12).

Table 12

The number of tractors and agricultural machinery in agriculture, in the South Muntenia region, in the period 2000–2006

	- pieces -		
	2000	2003	2006
Physical agricultural tractors	28585	28355	32020
Tractor-drawn ploughs	22068	22186	25243
Mechanical cultivators	5025	5016	5248
Mechanical seeders	11741	12619	14004
Mechanical sprayers and dusters	2800	2650	2036
Self-propelled combines for cereal harvesting	5172	4438	4774
Self-propelled combines for fodder harvesting	290	106	144
Self-propelled windrowers for fodder harvesting	369	259	242
Straw and hay packing presses	1587	785	939

Source: Romania's Statistical Yearbook, NIS.

As a result of the investments made with the financial support received in the pre-accession period, the agricultural commercial companies in the South Muntenia region managed to adjust only to a small extent to the present market needs. Thus, the competitiveness improvement of the agricultural holdings is needed, mainly in the case of the semi-subsistence holdings, by investments in the fixed capital and by introducing new and competitive technologies that will turn a large number of such farms into viable agricultural holdings.

Table 13

The quantity of chemical and natural fertilizers used in agriculture, in the South Muntenia region, in the period 2000–2006

	- tons 100% active substance-		
	2000	2003	2006
Chemical fertilizers	77778	70902	72147
N fertilizers	57598	52541	54836
P fertilizers	18558	17120	15301
K fertilizers	1622	1241	2010
Organic fertilizers	1311696	1341928	943256

Source: TEMPO – ON LINE data base, NIS.

At the level of South Muntenia region, the existing irrigation infrastructure and the access to it must be improved so as to fight against the risks determined by the climate changes. It can be noticed that the effectively irrigated area in the South Muntenia region dramatically decreased in the period 2000–2006. Both the increase in the energy price and the poor irrigation infrastructure efficiency make the irrigation activity a very expensive one.

Table 14
The irrigated area in the South Muntenia region, in the period 2000–2006

	2000	2003	2006
Irrigated agricultural area	58452	167326	12455
Out of which: arable area	58452	167196	12455

- thousand ha -

Source: Romania's Statistical Yearbook, NIS.

The distribution of agricultural holdings has a strong dual character. In 2005, out of the total of 847564 holdings in the South Muntenia region, 844424 were individual agricultural holdings, which used an agricultural area of 1232070 hectares, and 3140 were legal entity units, which utilized an area of 1093690 hectares. The average agricultural area per agricultural holding that uses agricultural land from the South Muntenia region is of 2.74 hectares. This fact places it much under the average of a European farm. This low average hides the disparity existing in the case of the agricultural holdings in terms of size.

It is obvious that agriculture is an important sector of the South Muntenia region. The regional economy development and the revitalization of the rural economy largely depend on the evolution of this sector. However, in the South Muntenia region, the agricultural sector is facing some problems. Mention can be made of the following ones:

- the low level of productivity obtained in agriculture; apart from this, the performance obtained in agriculture is increasingly unstable;
- high operation costs of the agricultural areas, many agricultural land owners choosing not to cultivate the lands they own;
- the non-significant share of agricultural services in the case of the agricultural production (only 0.7% in 2006);
- the risk management infrastructure completely inadequate; the irrigation infrastructure and the access to it need great improvements in order to fight against the risks caused by the modification of the climate conditions;
- although the South Muntenia region has an important potential as regards the animal breeding sector due to its relief, the high number of animals on individual holdings makes this sector vulnerable to animal diseases, with a high risk of disease spreading;
- the fragmentation of agricultural properties lowers the competitiveness in the agricultural sector.

These are only a few of the problems that the agricultural sector is facing in the South Muntenia region, which have to be taken into consideration by the national and local decision-making factors when programming the agricultural

sector development. By solving up these problems, at least partially, agriculture can become a key sector of the South Muntenia region. There are good premises for this, the European funds being able to turn agriculture into a competitive and efficient sector.

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