Regional Agriculture in Romania: A Quantitative Assessment

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Abstract: - In last decade, the Romania's regional agriculture has become the main driver of development through absorption of EU funds. According to official data of the Ministry of Agriculture and Rural Development, Romania has reached 84% (or 12.85 billion euros) in the field of EU absorption funds for agriculture and rural development programmes during 2007-2013. According to the latest EU statistics, in Romania agricultural sector has a high importance in ensuring income through self-employment, while diversification of rural economy remains challenging. Most people engaged in agriculture are self-employed and agriculture accounts for only 3.2% in the total number of the employees in the Romanian economy. The paper intends to assess the stage of development of agriculture in Romania by regions, based on a quantitative analysis, using both national and European statistics. The results of this article show regional disparities of agricultural development in Romania and the need for central authorities to diminish the differences between macro regions in the agriculture field.

Key-Words: - Romania, agriculture, regions, arable crops, harvest, livestock sector.

JEL Classification: Q00, R12, R14, R58.

1. Introduction

At the national level, agriculture is an important sector in Romania's economy, both through its contribution to the GDP growth of, as well as weight of labour force involved in the field. As mentioned in some national analyses, in the last 25 years, performances of Romanian agricultural sector remain relatively modest, compared with its potential. Its contribution (agriculture, forestry and fisheries) to national gross value added (GVA) has accounted for around 5.5% in 2013 and agriculture's share in Romania was more three times higher than in EU27 level (1.5% in 2013) Also, approximately 45.7% of the Romanian population lives in rural areas, as compared with 23.6% in the EU 27 and 30% of the population is engaged in agriculture (2% in the old Member States).

Romania's territorial area is 238,391 km² and includes: 61.3 % agricultural land (about 14.6 million hectares, of which 64.2% arable land, 32.9% natural pastures and meadows and 2.7% plantations of fruit trees and vines); 36.64% forests and other land with forestry vegetation (National Institute of Statistics [NIS], 2014). Geographically, rural space in Romania is well-proportioned, including: 33% plains (down to 300 m altitude), 37% hills (from 300 to 1,000 m) and 30% mountainous (over 1,000 m altitude). In terms of regional territorial distribution, the rural space is balanced between the 7 macro regions (14.33% North-West, 14.30 % Centre, 15.46% North-East, 15% South-East, 14.45% South, 12.25% South-West, 13.44% West) and the Bucharest-Ilfov Region with only 0.76 percentage points of Romania's territory.

According to The Ministry of Agriculture and Rural Development (The Ministry of Agriculture and Rural Development [MARD], 2014b), in 2012, rural areas have a surface of 207,522 km² (87.1%) and 45.0% of Romania's population lives in this territory. The population living in rural areas are not evenly distributed in the territory of the country. The most populated rural areas are in South – 58.6%, North-East – 56.8% and South-West – 51.9% and North-East Region (63.24 inhabitant/km²), while in the West Region of the country rural area is less populated (26.51 inhabitant/km²). Such disparities have generated gaps regarding socio-economic developments of the area concerned and on the quality of life of the rural population.

Currently, rural areas are confronted with a demographic decline. Hence, in the period 2005-2012, rural population decreased by 65,646 people. According with this evolution, demographic forecasts are pessimistic until 2015 and afterwards this decline will sharply continue during 2015-2050 (MARD, 2014b).

The Common Agricultural Policy (CAP) is the most important instrument of EU to offer many opportunities for Romanian farmers. The CAP will invest nearly 20 billion euro of total allocation of Direct Payments and Rural Development for the period 2014-2020 in Romania's farming sector and rural areas. Key political priorities defined at EU level include: jobs, sustainability, modernisation, innovation and quality. In parallel, Romania has flexibility to adapt both direct payments and rural development programmes to its specific needs. For 2014-2020, Romania has been allocated around 8 billion euro for rural investments to be spent in accordance with well-defined priorities set out in its rural development programme. With nearly 12 billion euro, the budget available for direct payments in Romania will increase despite a general reduction of 3.2% at EU level. (European Commission [EC], 2014a).

Romanian farmers will take simple, proven measures to promote sustainability and combat climate change with the support of the CAP. 30% of direct payments will be linked to three environmentally-friendly farming practices: crop diversification, maintaining permanent grassland and conserving 5% of areas of ecological interest or measures considered to have at least equivalent environmental benefits. (EC, 2014b)

Drăgoi (2012, p.38) stated that distribution support for rural development will be based on objective criteria and will allow underdeveloped regions to benefit from higher co-financing rates, which will apply to certain measures of national funding on knowledge transfer, producer groups, cooperation and Leader programs.

The new Programme will focus on three main objectives: improving competitiveness of the agricultural sector, preserving ecosystems and an efficient use of natural resources and creating conditions for the economic and social revitalisation of rural areas. (EC, 2014b)

2. Regional Agriculture

For the most part of the territory, agriculture represents a strong component of economic development. In mountain areas large regions of grassland and meadows are favourable for natural rearing of animals, even if through a colder climates and specific rainfall regime those regions are less predisposed to droughts, hence being favourable for agricultural activities. However, it is not possible to work out a strict delimitation between favourable areas for various agricultural activities on the basis of the landscape, climate and the ground.

In the period 1990 - 2013, at the national level, trend of agricultural area has been kept relatively constant, recording small variations, an increase by 0.37% in 2000 followed by a drop of 0.11% in 2005 and 1.1% in 2013. According to the NIS data, in 2013, the area of farms in Romania was of about 14.6 million hectares, which represents 60% of the country's territory, from which: arable land 65%, grassland 22%, meadows 11%, vineyards 1.44% and orchards 1.35% (Table 1). In terms of the area occupied by pastures, this was 22.1% in 1990, and only 22.4% in 2013 (+0.3%).

In 2013, arable area distribution on macro regions, as provided in national statistics, was the following: macro region 1: 1.6 million ha, macro region 2: 3.1 million ha, macro region 3: nearly 2 million ha, and macro region 4: 2.1 million ha.

Surface of the *North-West Region* is 3.4 million ha and agricultural land covers 2.1 million ha, which represents 61% of the total surface area of the region. The weighting arable land/pasture and meadows in the North-West area is different than the national average; while the country average of utilized agricultural area is 64.3% arable land, in the North-West Region weighted as arable land is only 49.5%. In 2013, the North-West Region had 614 hectares of grazing land (place II by counties), favourable for the development of livestock sector. Area of pasture has decreased by 5% in the period 2005 - 2013, fact explained by changing methods extensively (grazing) of animal husbandry with intensive methods (in the stable), but also by reducing the number of cattle. The vast majority of agricultural holdings in the North-West Region consists of individual farms (98.75%) a similar situation to the one at national level (99.07%). By implementing SAPARD programs and National Agriculture and Rural Development Plan for 2007-2013 (NARD), a different category of self-employed individual has appeared among agricultural farms: individual farms and family farms, which are categories of eligible beneficiaries for a series of measures from the Common Agricultural Policy. This category is not numerous; the percentage of self-employed individual and family farms in the region is 0.24%, a

little more up than national average (0.13%). (Ministry of Regional Development and Public Administration [MRDPA], 2014)

Table 1: Romania's agriculture Land use by Regions, in 2013

- Hectares -

| Macro regions, development regions | Fund, from which: | Arable Land | Grazing Land | Meadows | Vines | Orchards |
|------------------------------------|-------------------------|----------------|-----------------|-----------|---------|----------|
| Romania | 14,611,883 | 9,389,254 | 3,273,961 | 1,541,854 | 210,270 | 196,544 |
| Macro region 1 | 3,966,473 | 1,768,418 | 1,259,270 | 869,865 | 18,991 | 49,929 |
| North-West | 2,067,045 | 1,022,379 | 613,749 | 385,547 | 9,481 | 35,889 |
| Centre | 1,899,428 | 746,039 | 645,521 | 484,318 | 9,510 | 14,040 |
| Macro region 2 | 4,447,262 | 3,210,362 | 818,881 | 263,100 | 115,572 | 39,347 |
| North-East | 2,121,157 | 1,380,452 | 491,389 | 200,258 | 30,639 | 18,419 |
| South-East | 2,326,105 | 1,829,910 | 327,492 | 62,842 | 84,933 | 20,928 |
| Macro region 3 | 2,535,791 | 2,068,682 | 287,623 | 108,423 | 29,015 | 42,048 |
| South-Muntenia | 2,430,712 | 1,967,439 | 285,477 | 108,365 | 28,117 | 41,314 |
| Bucharest-Ilfov | 105,079 | 101,243 | 2,146 | 58 | 898 | 734 |
| Macro region 4 | 3,662,357 | 2,341,792 | 908,187 | 300,466 | 46,692 | 65,220 |
| South-West Oltenia | 1,795,934 | 1,250,617 | 378,323 | 89,221 | 38,024 | 39,749 |
| West | 1,866,423 | 1,091,175 | 529,864 | 211,245 | 8,668 | 25,471 |

Source: Author's calculations based on the NIS data (2014). TEMPO Online

Agricultural land in the *Centre Region* is 1.9 million ha, representing 48% of the total surface area of macro region and 13% of the Romania's agricultural area. By use, agricultural area structure shall be in the following format: arable land 39%, grassland 34%, meadows 26%, vines 0.5%, and orchards 0.7%. The largest weightings of land areas shall be recorded in the counties of Mures and Harghita (61.3% and 59.6% of the total surface area), the last one being the largest area covered with pastures and meadows (79% of agricultural land), while the lowest is in Covasna county (30.3%), also the county with the largest area covered by woods and forest vegetation (44.5% of the total surface area). (Centre Regional Development Agency [CRDA], 2014).

With a total area of 3.7 million ha, in 2013, in terms of the surface, the *North-East Region* (15% of national area) is the third largest region of Romania. About 2.1 million ha of the county is allocated to agricultural area (14.5% of the agricultural national area), being divided into categories of use, and in private property are about 2 million ha. (94.7% of the agricultural area).

The largest agricultural area in Romania is in *South-Muntenia Region* with 2.4 million ha, which represents 96% of the macro regions' agricultural area and 17% of the Romania's agricultural area, this situation shows the agrarian character and agricultural potential of the region.

With the exception of *Bucharest - Ilfov Region*, the narrowest agricultural area of the country is located in the *South-West Region*, of 1.8 million hectares, which representing 12.3% of the national agricultural area. By use, at the end of the year 2013, regional agricultural area was: 1.25 million hectares of arable land (53% of the surface area of arable macro region) and 12% (378 thousand ha) of the total national pasture area. (The South-West Oltenia Regional Development Agency [SWORDA], 2014)

Grassland are concentrated especially in the Centre and North-West (34% of the agricultural area and 30%), accounting for lowest national representation in the total of the areas occupied with meadows in South, except for Bucharest - Ilfov County.

In the terms of wine-growing areas, the South-East holds the largest area (40%), followed by South-West, while West and North-West are in the opposite pole with 4% or 5 % of the area.

Agricultural land in Romania is affected by a multitude of degradation processes, such as: soil erosion determined to raise the level that any discharges from depth to the surface, removing the progressive fragments of soil and rocks from the wind (erosion wind), structure damage and soil compaction (the exaggerated ascension of the mass of soil per unit of volume), chemical pollution of the earth or land slides, etc. (MRDPA, 2013).

2.1. Arable crops

According to NIS data, in Romania the areas cultivated with arable plants have been reduced in 2013 compared with 1990 by 13%, to 8.2 million hectares, but raised of 4.6 percent as compared to 2010, as a result of the granting of funds by the programs carried out both by the Ministry of Agriculture and the European Union. However, the areas cultivated with wheat, barley and vegetables were restricted, to the detriment of those sown with maize and sunflowers.

In terms of the cultivated areas, the South-Muntenia Region is the main area in which the crops are grown extensive, mainly with the maize and wheat.

From the crops analysis point of view (graph 1), it should be noted that over 300 thousand ha areas of the extra-Carpathian zone (South-East and South) are cultivated with wheat, as a result of optimal quality of the soil for this cereal. Wheat is an important cereal for population nutrition, as well as for animal feed. In addition, the soil is appropriated for this crop, due to the climatic conditions exiting in this part of the country.

Also, maize has good conditions for the development in the North-East, South-East and South. Areas cultivated with this cereal exceed 450 thousand ha in each region referred to, which represents 56% of the area cultivated with maize at national level.

across the Romanian regions, in 2013 □ Wheat ☑ Maize Barley ■ Sun flower ■ Vegetables - hectare -300.000 100.000 North-North-East South-East South-Bucharest-South-West West Muntenia West Oltenia

Graph 1: Harvested production of arable crops and vegetables

Source: Author's representation based on the NIS data (2014). *Online TEMPO*

In the North-West Region mainly cereals for seed have been grown (61% of total area cultivated in the year 2013). According to the NIS data (NIS, 2014) (table 2), arable land cultivated with wheat is in the North-West represents a small percentage e (13.28%), compared with national level (27%) while maize crops are most widespread in the North-West (32%), compared with share of national level (24%). (MRDPA, 2014)

In 2013, in the *Centre Region* arable crops totalled only 78.1% of the whole arable land. Area harvested with cereals has the greatest weighted 55% of the total (main crops, as follows r: maize, wheat and rye, barley and barley); followed by feeds crops (27.8%), technical plants (potato with 11% of the total and sugar beet 1.6%) and vegetables (3.2% of areas cultivated). (CRDA, 2014)

In 2013, in the South Region, arable crops represented 95.55% of the total arable area (table 2). Plant production was centred on cereal crops for seed - on a surface of 65% of the total surface area cultivated at regional level (main crops are, in order: wheat and rye, maize), oily plants - 25% of the total, plants of fodder - 6% and vegetables - 3% of the areas cultivated. (The South-Muntenia Regional Development Agency [SMRDA], 2013).

In 2013, in the South-East Region, 4 million tonnes of cereals for seed was produced, which was equivalent to 22% of the total production at national level. Yield for maize represented 56% of the total

production of cereals for seed at regional level, followed by production of wheat (34%). (The South-East Regional Development Agency [SERDA], 2013).

Table 2: Harvested area and production of arable crops and vegetables by Romanian territorial structure, in the period 2010-2013

| | | Harvested area | | | | Production | | | | |
|------------|-------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------------------------|----------------------|------------------------|--|
| | Country/Macroregions/Regions | - hectares - | | | | **** | | nes - | **** | |
| | - | 2010 | 2011 | 2012 | 2013 | 2010 | 2011 | 2012 | 2013 | |
| | Total | 2,162,388 | 1,947,008 | 1,997,633 | 2,103,985 | 5,811,810 | 7,131,590 | | 7,296,373 | |
| | Macro region 1 North-West | 208,941 116,226 | 219,204 120,130 | 194,519 118,220 | 209,560 119,514 | 594,648 339,408 | 797,152 434,917 | 552,883 350,895 | 753,717 455,524 | |
| | Centre | 92,715 | 99,074 | 76,299 | 90,046 | | 362,235 | 201,988 | 298,193 | |
| | Macro region 2 | 684,380 | 558,839 | 649,079 | 667,756 | | 2,035,228 | 1,520,894 | 2,145,089 | |
| _ | North-East | 156,158 | 137,276 | 182,914 | 152,736 | | 462,060 | 423,787 | 484,599 | |
| Wheat | South-East | 528,222 | 421,563 | 466,165 | 515,020 | | 1,573,168 | | 1,660,490 | |
| at | Macro region 3 | 646,074 | 615,375 | 655,858 | 616,988 | , , | 2,351,723 | 1,753,547 | 2,335,210 | |
| | South-Muntenia | 628,723 | 600,021 | 637,568 | 597,630 | | 2,293,514 | 1,701,501 | 2,254,405 | |
| | Bucharest-Ilfov | 17,351 | 15,354 | 18,290 | 19,358 | 52,186 | 58,209 | 52,046 | 80,805 | |
| | Macro region 4 | 622,993 | 553,590 | 498,177 | 609,681 | | 1,947,487 | 1,470,424 | 2,062,357 | |
| | South-West Oltenia | 403,705 | 350,049 | 311,349 | 387,170 | | 1,126,897 | 745,916 | 1,096,190 | |
| | West | 219,288 | 203,541 | 186,828 | 222,511 | 656,356 | 820,590 | 724,508 | 966,167 | |
| | Total | 515,820 | 419,508 | 424,244 | 495,685 | | 1,329,692 | 986,361 | 1,542,247 | |
| | Macro region 1 | 72,546 | 69,433 | 61,233 | 69,158 | | 183,265 | 134,543 | 191,622 | |
| | North-West | 35,301 | 32,710 | 28,209 | 37,976 | | 89,154 | 64,321 | 112,949 | |
| | Centre Magra ragion 2 | 37,245 | 36,723 | 33,024 | 31,182 | 83,652 | 94,111 | 70,222 | 78,673 525,580 | |
| | Macro region 2 North-East | 236,481 26,755 | 174,374 28,229 | 182,275 25,431 | 191,680 25,998 | 595,998 59,033 | 528,060 66,216 | 370,719 50,170 | 60,863 | |
| Barley | South-East | 209,726 | 146,145 | 156,844 | 165,682 | 536,965 | 461,844 | 320,549 | 464,717 | |
| ley | Macro region 3 | 138,091 | 119,362 | 130,889 | 145,323 | 377,820 | 424,353 | 343,376 | 526,350 | |
| | South-Muntenia | 133,656 | 114,806 | 124,874 | 138,318 | 365,823 | 408,810 | 328,012 | 500,292 | |
| | Bucharest-Ilfov | 4,435 | 4,556 | 6,015 | 7,005 | 11,997 | 15,543 | 15,364 | 26,058 | |
| | Macro region 4 | 68,702 | 56,339 | 49,847 | 89,524 | 170,879 | 194,014 | 137,723 | 298,695 | |
| | South-West Oltenia | 35,363 | 24,671 | 28,241 | 41,393 | 88,758 | 69,651 | 62,530 | 106,256 | |
| | West | 33,339 | 31,668 | 21,606 | 48,131 | 82,121 | 124,363 | 75,193 | 192,439 | |
| | Total | 2,098,394 | 2,589,667 | 2,730,157 | 2,518,268 | | 11,717,591 | 5,953,352 | 11,305,095 | |
| | Macro region 1 | 388,029 | 384,445 | 397,559 | 406,347 | 1,678,890 | 1,736,655 | 1,055,199 | 1,739,098 | |
| | North-West | 256,454 | 239,673 | 237,459 | 256,501 | 1,096,326 | 1,060,818 | 648,234 | 1,094,982 | |
| | Centre | 131,575 | 144,772 | 160,100 | 149,846 | | 675,837 | 406,965 | 644,116 | |
| | Macro region 2 | 764,751 | 979,718 463,941 | 994,695 | 934,710 | | 4,421,042 | 1,817,026 977,220 | 4,112,284 | |
| Maize | North-East South-East | 428,878 335,873 | 515,777 | 494,583 500,112 | 453,051 481,659 | | 1,966,518 2,454,524 | 839,806 | 2,057,116 2,055,168 | |
| ize | Macro region 3 | 404,152 | 488,538 | 551,451 | 495,023 | | 2,434,324 | 1,401,247 | 2,568,396 | |
| | South-Muntenia | 391,651 | 479,875 | 544,146 | 484,636 | | 2,381,534 | | 2,519,407 | |
| | Bucharest-Ilfov | 12,501 | 8,663 | 7,305 | 10,387 | 49,754 | 38,721 | 12,555 | 48,989 | |
| | Macro region 4 | 541,462 | 736,966 | 786,452 | 682,188 | | 3,139,639 | 1,679,880 | 2,885,317 | |
| | South-West Oltenia | 276,396 | 386,455 | 414,269 | 346,643 | | 1,569,294 | 604,181 | 1,475,745 | |
| | West | 265,066 | 350,511 | 372,183 | 335,545 | 1,208,001 | 1,570,345 | 1,075,699 | 1,409,572 | |
| | Total | 790,814 | 994,984 | 1,067,045 | 1,074,583 | 1,262,926 | 1,789,326 | 1,398,203 | 2,142,087 | |
| | Macro region 1 | 45,603 | 52,706 | 44,602 | 55,895 | 60,312 | 98,485 | 60,603 | 109,475 | |
| | North-West | 41,025 | 48,274 | 39,147 | 47,668 | | 89,114 | | 97,302 | |
| | Centre | 4,578 | 4,432 | 5,455 | 8,227 | | 9,371 | 7,448 | 12,173 | |
| Su | Macro region 2 | 344,527 | 468,283 | 506,524 | 497,502 | 536,210 | 766,687 | 582,315 | 915,482 | |
| Sunflowers | North-East South-East | 91,959 252,568 | 104,215 364,068 | 133,656 372,868 | 109,393 388,109 | | 186,208 580,479 | 153,442 428,873 | 219,408 696,074 | |
| 0W | Macro region 3 | 252,368 | 318,957 | 326,517 | 298,955 | 415,047 | 631,868 | 428,873 | 664,871 | |
| ers | South-Muntenia | 241,180 | 310,144 | 318,022 | 290,412 | 401,619 | 616,161 | 477,100 | 648,311 | |
| | Bucharest-Ilfov | 9,094 | 8,813 | 8,495 | 8,543 | | 15,707 | 11,502 | 16,560 | |
| | Macro region 4 | 150,410 | 155,038 | 189,402 | 222,231 | 251,357 | 292,286 | 266,683 | 452,259 | |
| | South-West Oltenia | 92,057 | 102,380 | 115,414 | 132,247 | 160,944 | 178,239 | 137,726 | 237,429 | |
| | West | 58,353 | 52,658 | 73,988 | 89,984 | | 114,047 | | 214,830 | |
| | Total | 262,692 | 263,359 | 258,910 | 259,029 | 3,863,617 | 4,176,298 | 3,535,316 | 3,960,990 | |
| | Macro region 1 | 41,069 | 40,605 | 39,469 | 42,751 | 590,156 | 627,034 | 544,389 | 618,788 | |
| | North-West | 23,651 | 22,840 | 22,298 | 23,965 | | 353,968 | 314,084 | 352,539 | |
| Veg | Centre | 17,418 | 17,765 | 17,171 | 18,786 | | 273,066 | | 266,249 | |
| Vegetables | Macro region 2 | 89,375 | 90,067 | 88,016 | 89,060 | | 1,456,416 | | 1,392,744 | |
| abla | North-East | 45,439 | 46,605 | 45,378 | 46,160 | | 665,168 | 571,721 | 666,719 | |
| S | South-East | 43,936 | 43,462 | 42,638 | 42,900 | | 791,248 | 605,256 | 726,025 | |
| | Macro region 3 South-Muntenia | 56,501 | 56,626 50,710 | 55,828 | 54,228 48,224 | | 935,294 | 792,900 | 864,157 755,814 | |
| | Bucharest-Ilfov | 51,058 5,443 | 5,916 | 50,183 5,645 | 6,004 | , | 813,045 122,249 | 703,018 89,882 | 755,814 108,343 | |
| | Ducharest-IIIOV | 5,445 | 5,910 | 5,043 | 0,004 | 90,232 | 122,249 | 07,002 | 100,343 | |

| Country/Macroregions/Regions | Harvested area | | | | Production | | | |
|------------------------------|----------------|--------|--------|--------|------------|-----------|-----------|-----------|
| Country/Wacroregions/Regions | - hectares - | | | | - tonnes - | | | |
| Macro region 4 | 75,747 | 76,061 | 75,597 | 72,990 | 1,052,576 | 1,157,554 | 1,021,050 | 1,085,301 |
| South-West Oltenia | 46,565 | 45,439 | 45,181 | 40,318 | 675,766 | 722,782 | 644,341 | 633,454 |
| West | 29,182 | 30,622 | 30,416 | 32,672 | 376,810 | 434,772 | 376,709 | 451,847 |

Source: NIS. (2014). TEMPO Online.

2.2 Livestock Sector

Livestock production is a considerable part in Romanian agriculture. It represents one of the most important rural sector activities. Although existing livestock are operated in an efficient mode, there is a potential for increasing production of animals, due to the area of pastures and meadows in the country.

In 2013, at the national level, the share of livestock production in the total agriculture production was 32%. At the level of all development regions, this share was well above the national average, from 26% in the South-East to 36% in Centre, the differences are very small between the other regions. (MRDPA, 2013)

NIS data (NIS, 2014) shows that, in 2013, in the North-West Region the majority of farms are growing poultry (58%), but this share is smaller, than the national average (69%). The second place is occupied by pig farming (39% of agricultural holdings in the region and 43% at the national level) and on the third place are the cattle farms (23% at the regional level and 18.83% at national level). During 2007-2013 in North-West livestock production registered differences by races; livestock numbers decreased in case of cattle (by 23 %, from 454 thousand to 352 ends), pigs (by 23%, from 885 thousand to 681 thousand) and poultry (by 3%, from 8.7 million to 8.4 million heads), and increased in case of sheep (by 17 %, from 1.2 million to 1.4 million heads). The decrease in number of cattle and substantial increase of the sheep reflect a change in the structure of agricultural production, caused by market constraints (difficulties encountered by small farmers in making use of products, low price for the purchase of milk offered by the big companies processing and small number of slaughter houses and low price for meat, etc.), as well as regulations introduced after Romania's accession to the EU. The increase in number of goats and sheep has advantages, such as: easy maintenance, propagation faster and demand of products on the market. (MRDPA, 2014)

At the end of the year 2011, in the *Centre Region* there were 2 million sheep (22 % of total Romania sheep number), 321 thousand cattle (16% of the national cattle herd), 490 thousand swine (9% of number from the national level) and 8.5 million poultry (11% of the total national number) (Table 3). Density of livestock on 100 hectares (arable plot + pastures and meadows) in Centre Region, in the year 2011, was of 17 cattle (14% at national level) and 105 sheep and goats (60 throughout the country). 100 ha arable lands returned 74 swine, comparing with 57, at national level. A steady fall in livestock was registered in the period 1990 - 2013, such as: cattle number at the end of the year 2013 was by 60% less than the end of 1990, the number of pigs was by 55% smaller, the poultry number by 45% less and the sheep and goats number by 3% higher. (CRDA, 2014)

At the end of the year 2013, in the North-East Region were registered 525 thousand cattle (decrease by approximately 25% from 2007), 558 thousand swine (-31%), 1.3 million sheep (-7%), 13.2 million poultry (-3%) (Table.3). In the region there are many specialized livestock farms and most animals are breaded in households and used to ensure individual consumption. Distribution of livestock breeding by counties shows that the most important regions: Suceava 25% and Bacau 17%. Very small contribution (only 13%) of Vaslui county is somewhat surprising, because this province holds an important animal husbandry potential. (NRDA, 2014)

In the South-East Region livestock production accounted 15% of national production, in 2013. At the end of the year 2013 in the region there were 239 thousands of cattle (decrease by approximately 26% compared to 2007, and 12% share of national livestock), 1.4 million sheep (-6% and 15% of national livestock), 841 thousand swine (-5 %, 16% of the national livestock) and more than 13 million poultry (+0.5 % as compared to 2007 and 17 % share compared to the national level). (SERDA, 2013).

Table 3: The livestock numbers, by Romanian territorial structure, in 2007 and 2013

- Numbers -

| Macroregiunea/ Region/ Types of animals | Catlle | | Swi | ne | Sheep | | Poultry | |
|---|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|
| | 2007 | 2013 | 2007 | 2013 | 2007 | 2013 | 2007 | 2013 |
| Romania | 2,818,983 | 2,022,408 | 6,564,907 | 5,180,173 | 8,469,195 | 9,135,678 | 82,035,594 | 79,440,251 |
| Macroregion 1 | 843,161 | 672,338 | 1,645,566 | 1,170,981 | 2,891,584 | 3,454,087 | 17,410,074 | 16,956,463 |
| North-West | 453,616 | 351,552 | 885,048 | 680,959 | 1,198,889 | 1,406,954 | 8,664,768 | 8,420,820 |
| Centre | 389,545 | 320,786 | 760,518 | 490,022 | 1,692,695 | 2,047,133 | 8,745,306 | 8,535,643 |
| Macroregion 2 | 1,019,060 | 763,198 | 1,691,614 | 1,399,011 | 2,922,772 | 2,727,664 | 26,702,932 | 26,362,804 |
| North-East | 698,521 | 524,521 | 806,138 | 558,426 | 1,432,248 | 1,326,483 | 13,625,719 | 13,219,922 |
| South - East | 320,539 | 238,677 | 885,476 | 840,585 | 1,490,524 | 1,401,181 | 13,077,213 | 13,142,882 |
| Macroregion 3 | 418,963 | 239,035 | 1,323,573 | 986,333 | 846,956 | 893,913 | 20,636,592 | 20,442,245 |
| South | 399,709 | 232,359 | 1,131,926 | 913,767 | 822,973 | 864,870 | 19,734,904 | 19,917,425 |
| Bucharest - Ilfov | 19,254 | 6,676 | 191,647 | 72,566 | 23,983 | 29,043 | 901,688 | 524,820 |
| Macroregion 4 | 537,799 | 347,837 | 1,904,154 | 1,623,848 | 1,807,883 | 2,060,014 | 17,285,996 | 15,678,739 |
| South-West | 315,860 | 194,177 | 936,132 | 652,176 | 671,306 | 633,858 | 11,363,787 | 9,807,370 |
| West | 221,939 | 153,660 | 968,022 | 971,672 | 1,136,577 | 1,426,156 | 5,922,209 | 5,871,369 |

Source: NIS (2014). TEMPO Online.

In the South Muntenia Region, structure analysis of the land and the agricultural areas illustrates a huge potential for agricultural production which may sustain livestock sector development. In 2013, South-Muntenia Region had almost 20 million poultry (25% of Romania total poultry), 914 thousand swine (18% of herd at national level), 864 thousand sheep (9.5%) and 232 thousand cattle (11.5%).

At the end of the year 2013, in the South-West Oltenia Region, 99 % of the total cattle number (about 200 thousand heads) was breaded in private ownership and represented 10% of national herds of cattle. In 2013, majority of the nearly 700 thousand heads of swine was in private property. Between 2007 and 2013, the number of swine decrease of approximately 30% in this region, because of difficulties encountered by farmers. The vast majority of sheep in the region south-west Oltenia were held in family farms, the number of animals accounted for 634 thousand (7% of existing stocks at national level). (SWORDA, 2014)

In 2013, in the *West* Region, livestock more widespread were poultry (5.9 million), then sheep (1.4 million head) and pigs (971 thousand ends).

3. Conclusions

Despite considerable potential, Romanian agriculture efficiency remains modest, indicating a small use of the production factors which is under suitable values. Operated in an appropriate manner, the potential allows existing employment farming to be much more productive, thereby contributing to the recording of real progress on the path of rural poverty reduction and eliminate the gaps related to high incomes in the urban areas. Economic growth and effective management of financial resources are needed as well as achieving a positive trade balance. Food products competitiveness should be associated with durability to obtain them. (MARD, 2014) In addition, agricultural sector must be protected against the risks associated with specific activities, by systems based on the operation. An effective system of insurance in the field of agriculture should be enforced regarding the balance between preventing calamities and the granting of financial compensation. At this moment, agricultural sector has access to technology and systems for the protection of crops with high economic value by the assistance active in the atmosphere in order to change the local climatic factors, in particular for the risk of hail (MARD, 2014b). According to mentioned national evaluation the conversion of agriculture and rural areas in a way which allows efficient utilisation of the available resources requires action and public involvement, at the same time as the strategic coordination. Recognizing the existence of a dual structure or agricultural sector, The Ministry of Agriculture and Rural Development undertakes measures to draw up and implement their packs of public policies tailored to meet specific needs of each segment, helping farms of semi-subsistence farming transition toward a market oriented and for exports.

The Ministry of Agriculture and Rural Development wants to help food producers succeed better integration on the market and on value chain. For smaller producers, the emphasis will be placed on stimulating association, and on improving access to credits for investments, while for the major actors there is a need for investment in upgrading to comply with the EU requirements, as well as for increasing the competitiveness on the international market.

Beyond these strategies, at the regional and local level there is a need for better collaboration between the regional development agencies, which shall operate under the direct guidance of The Ministry of Agriculture and Rural Development, and local farmers, in order to assist to finding solutions for their problems, who are also faced, in order to help the guidance through to the selection of those agricultural activities (types of crops, categories of animals, etc.), to offer business opportunities, in order to increase absorption of European Funds. For example, in the case of extra-Carpathian regions an action plan for cultivation of cereals may be implemented, due to facilities offered by soil structure. Also, in these areas measures for stimulating intensive stock-farming may be adopted, as a result of large meadows and pastures areas. For the viability of such measures investments are required, both from internal and/or external sources, for the construction of warehouses and factories to produce agriculture products, etc.

Whereas current rural population is rather aging population, central officials should promote programs in order to attract young farmers to rural area, since they are presumed to be able to apply modern technologies and techniques required of range, for obtaining competitive products on the foreign markets. In this respect, The Ministry of Agriculture and Rural Development will need to facilitate farmers chance to professionalize, through better access to knowledge, education and advice, in order to ensure their better integration in the labour market and should support the development of research aimed at transferring results (applicative research) at the farm level. (MARD, 2014)

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