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Conference Paper
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Provided in Cooperation with:
The Research Institute for Agriculture Economy and Rural Development (ICEADR), Bucharest

Suggested Citation: Iurchevici, Lidia; Chetroiu, Rodica (2012) : The dynamics of technical economic indicators of crop and animal production in South-East region, The 3rd International Symposium "Agrarian Economy and Rural Development - realities and perspectives for Romania", Bucharest, Romania, October 11-13, 2012, ICEADR, Bucharest

This Version is available at:
http://hdl.handle.net/10419/76862

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THE DYNAMICS OF TECHNICAL ECONOMIC INDICATORS OF CROP AND ANIMAL PRODUCTION IN SOUTH-EAST REGION

IURCHEVICI LIDIA¹, CHETROIU RODICA²

Abstract
The South-East Region represents the joining place of Moldova, Muntenia and Dobrogea, situated, thus, at the confluence of the history and national culture. The administrative structure of the region includes six counties: Constanta, Tulcea, Braila, Galati, Vrancea and Buzau. Being the second largest in the 8 regions of Romania, covers 35,762 km², ie 15% of total national area. Agriculture holds an important share in the region economy, 40.4% of the population of region being occupied in this sector. The work studies the evolution, during 2000 - 2010, of the following technical and economic indicators specific to agriculture in South-East: the land fund, material and technical basis of agriculture, agricultural crop area and production, average production for the main crops, livestock and animal production, the number of animals per 100 ha, value of agricultural production, agricultural production indices. It shows that the total agricultural area of South-East Region met an upward curve in the first three years of the interval, decreasing slightly from the base year. Of total cultivated areas, cereals represented in 2010, 62.6% and 99.8% of the surface cultivated with cereals in 2000. The surfaces of the private sector, cultivated with cereals, increased in 2010 by 18.4% compared to 2000. Of the total cereals, wheat and corn represent over 90%, the rest being represented by other straw cereals. Among animal products, a positive dynamic in the analyzed period, have registered the pork meat, the sheep and goat’s milk, wool, eggs and honey. The value of agricultural production in 2009 was 140% higher than the initial.

Keywords: land fund, agricultural area, production, cereals, dynamic

INTRODUCTION

The South-East Region is the only region of Romania where all forms of relief blend harmoniously, so that, from the Black Sea shore, passes by Dobrogea Plateau, bordered to the north of the Macin Mountains, for then to cross the Danube valley in the plain Baragan and Covurlui and reach the Curvature Sub-Carpathians and Curvature Carpathians. The east of the region is surrounded by the Danube Delta, unique in Europe, and nature has given the privilege Danube to cross the region and to spill directly by Delta in the Black Sea.

All of these are crowned with the rich fruit of plains land, from the Danube valley, or hills and plateaus of the region. These places, especially Baragan Plain, have always been considered "granary of Europe". In this paper, is performed a multi-annual analysis of technical economic indicators of plant and animal production, at the territorial level.

MATERIAL AND METHOD

The paper studies the evolution, during 2000 - 2010, of following technical and economic indicators specific to agriculture in South-East Region, using official statistical data series of N.I.S.: - land fund; - technical and material basis of agriculture; - crop area and production; - average production for main crops; - livestock and animal production; - number of animals per 100 ha; - value of agricultural production; - agricultural production indexes.

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RESULTS AND DISCUSSION

1. Land fund

Analyzing the evolution of land fund in the period 2000-2010, it shows that total agricultural area of South-East Region has seen a trend ascending in the first three years of interval, decreasing slightly to 99.6%, compared to base year. At the same time, the arable land has increased by 0.6 percent in 2010 compared to 2000. In contrast, the areas under vineyards and wine nurseries decrease by 13%. The same descending evolution is noticed for areas under orchards, they decrease by 11% at the end of the range. Fortunately, the fact that degraded and unproductive lands in South-East Region decreased by 20.6% in the period analyzed, showing how attention is given to improving the use and quality of land.

2. Technical and material basis of agriculture

Source: N.S.I

Source: N.S.I
It finds that the largest number is of agricultural tractors, which, having a sinuous dynamic, decrease by 6.8% from 22033 in 2000 to 20532 pieces in 2010. The current park of agricultural machinery is broadly outdated, and this leads to big losses of harvest and not solve the problem of long campaigns. The numerical hierarchy, follows mechanical sowers, which, however, have an increase of 10.7% at the end of the period under review. In terms of combines for cereals harvesting, they decrease by 14.6%, something not encouraging, given the fact that, in the increasing of cereals production conditions, the existing material and technical basis is poor, leading to delays in production harvesting and losses.

3. Crop area and production
According to data from 2010, agricultural land in the South - East of the country is 2.32 million hectares, ie 15.9% of the total country land for agricultural activities. Agricultural land has 65% of the total region. The private sector holds the largest share of agricultural land (90.5%) and also produces the major part of agricultural production (96.1% in 2009).

Source: N.I.S.
Thus, of total area cultivated cereals were, in 2010, 62.6% and 99.8% of the cereals surface of 2000. In 2010, the total area cultivated with wheat represented 47.8% of the total cereals surface, with an increase of 26% compared to 2000. Areas cultivated with barley and two row barley have tripled in 2010 compared to 2000, 99% being in the private sector, and oats increases in size by almost 4%. Area occupied by corn represented, in 2010, only 56.2% of the year 2000, after having peaked at 694782 ha in 2004. For almost five times greater is surface area of rice in 2010, it reached 6233 ha and legumes occupy an area greater by 15% than in 2000.

Sunflower was cultivated in 2010 on an area by 17.9% lower than in 2000, and soybean represented only 33.8% of the abovementioned year surface. Starting with 2009, in the statistics do not appear areas under sugar beet, although in 2000 there were still 4701 hectares. Medicinal plants were cultivated in 2010 on an area by 3.2 times higher than in 2000, and the potatoes are decreasing by 24.3%.

Chart 5

Production of the main cereals and oilseeds (to)

<table>
<thead>
<tr>
<th>Year</th>
<th>Wheat</th>
<th>Barley and two row barley</th>
<th>Maize</th>
<th>Sunflower</th>
<th>Soybean</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>911919</td>
<td>1E+06</td>
<td>1E+06</td>
<td>297570</td>
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</tr>
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<td>2001</td>
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<tr>
<td>2002</td>
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<td>226011</td>
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<td>2003</td>
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<td>48823</td>
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<tr>
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<td>259342</td>
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<td>489846</td>
<td>59787</td>
</tr>
<tr>
<td>2005</td>
<td>934078</td>
<td>149369</td>
<td>2E+06</td>
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<td>211496</td>
</tr>
<tr>
<td>2006</td>
<td>531232</td>
<td>134975</td>
<td>2E+06</td>
<td>149369</td>
<td>385501</td>
</tr>
<tr>
<td>2007</td>
<td>1E+06</td>
<td>13959</td>
<td>1E+06</td>
<td>350475</td>
<td>398267</td>
</tr>
<tr>
<td>2008</td>
<td>2E+06</td>
<td>1E+06</td>
<td>1E+06</td>
<td>350475</td>
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</tr>
<tr>
<td>2009</td>
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<td>1E+06</td>
<td>350475</td>
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<tr>
<td>2010</td>
<td>1E+06</td>
<td>1E+06</td>
<td>1E+06</td>
<td>350475</td>
<td></td>
</tr>
</tbody>
</table>

Source: N.I.S.

Chart 6

Production for other crops (to)

<table>
<thead>
<tr>
<th>Year</th>
<th>Oats</th>
<th>Rice</th>
<th>Legumes</th>
<th>Rapeseed</th>
<th>Sugar beet</th>
<th>Medicinal and aromatic plants</th>
<th>Potatoes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
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<td>17261</td>
<td>19805</td>
<td>16479</td>
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<td>2001</td>
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<td>38094</td>
<td>32069</td>
<td>11216</td>
</tr>
</tbody>
</table>

Source: N.I.S.
In terms of agricultural production for the main crops, cereals production had an irregular evolution over the period analyzed, climatic conditions, germinating material quality and compliance with technologies culture having a decisive influence. Thus, the minimum was recorded in 2007, when production fell by over 1 million tons compared to 2000 and maximum in 2004, over 2.5 million tons. Also, the year 2010 recorded an increase over 60% compared to 2000. Of all cereals, wheat and corn is over 90%, the rest being represented by barley, two row barley, rye, oats, rice. At legumes, peas grew substantially, by more than 3 times in 2010 compared to 2000, while the beans, production remained constant. And oil plants recorded increases in 2010, with over 45% compared to 2000.

4. Average production for main crops

The evolutions of average production for the main crops in the period 2000-2010 have ranged depending on the varieties of cultures: in cereal grains, maize recorded the highest increase of over 240%, ranging from 1756 kg / ha to 4337 kg / ha, and in the oil plants, soya bean average production increased of 4 times at the end of the interval.

![Chart 7](chart7.png)

Source: NIS

5. Livestock and animal production

![Chart 8](chart8.png)

Source: NIS
Regarding the evolution of meat production, overall, it was declining in 2010 compared to 2000, with 14%. Per species, situation is as follows: the beef fell by 39.8%, in the sheep and goats by 19.5% and 35.7% in poultry. In contrast, a slight increase in pork meat by 14.6% was registered. (Chart 10). Cow and buffalo milk decrease as production, by 5.6% in 2010 compared to 2000, and
milk of sheep and goats increase by over 152%, consecutive to livestock growth. Wool production overall decreases slightly by 2%.

In terms of egg production, this registered an ascending trend, by 3.9% in 2010 compared to 2000. Also, honey production has increased by 48.2%.

6. **Number of animals per 100 ha**

In the case of bovine population, it is an indicator of a sinuos evolution, in the period analyzed, with a maximum in 2006 of 104% and a minimum in 2010, 68.7%.

In pigs, the year 2010 shows an increase of 56.1% compared to 2000, consecutive to livestock increases and in sheep and goats of 6.1%.

7. **Value of agricultural production**

Value of agricultural production in 2009 was 140% higher than in 2001, but the maximum was reached in 2008. (Chart 12). In 2009, of total agricultural production, 61.3% is represented by plant production, animal production 34.9% and 3.8% of agricultural services. The main supplier of agricultural production value is the private sector (96.1%) and in particular the production plant. Thus, 96.9% of this is carried out in the private sector.
8. Agricultural production indexes

They reflect the dynamics of agricultural production value and, as noted above, in the analyzed interval, maximum is reached in 2008 by the crop production index (169), followed by the same of 2004 (140). In 2009, there is a regression of indexes, with a slight advance of animal production compared to crop production.

CONCLUSIONS

In conclusion, it points out that:

- land fund dynamic knew no significant variations during the 10 years analyzed;
- total agricultural area of South-East Region had an slight ascending curve in the first three years of interval, decreasing slightly compared to the base year;
- in the conditions of growing cereals production, the existing material and technical basis is poor, leading to delays in harvesting production and losses;
- of total area cultivated, cereals were, in 2010, 62.6% and 99.8% of the cereals surface of the year 2000;
- of all cereals, wheat and maize occupies over 90%, the rest being represented by other cereal straw;
- among animal productions, a positive trend in the analyzed period have registered the pork meat, sheep and goat's milk, wool, eggs and honey;
- of total agricultural production, over 60% is represented by plant production, animal
- production about 35% and the remaining agricultural services.

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