CHAPTER IV

THE ROLE OF MACRO-MANAGEMENT IN INCREASING THE COMPETITIVENESS OF SERBIAN AGRIBUSINESS

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CHAPTER IV
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THE COMPETITIVENESS OF SERBIAN AGRIBUSINESS

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1. Introduction

The agriculture of Serbia reached its peak during the 1980s. During the 1990s, there was an extreme decline in all aspects of its agricultural development. At the beginning of the 21st century, the agriculture was recovering very slowly from the collapse in its development in the 1990s. The future development of Serbia’s agriculture can be directed towards the resumption of positive productive and economic results from the 1980s; however, through the classical investments in agricultural development, it will be a very slow process (Group of authors, 2006).

The real capabilities of faster development of Vojvodina’s agriculture lie in the multi-functional development. This means that one part of the agricultural resources will be used in conventional manner by intensifying agricultural production to the limits of sustainable development, a part of the resources will be used for non-agricultural purposes (agro-eco tourism, hunting, fishing and sports tourism and catering, and other services and the production of renewable energy), while a part of resources will be used for organic and safe food (Novkovic, 2003).

The term “multi-functional development” is used for a whole unconventional agriculture (production of so call „healthy-food“, organic production), and conventional agriculture (agricultural production realized on conventional way and used for usual purposes – food production and as an input for processing industry), unconventional purposes (production agricultural products, and used it for bio-energy). It means that multi-functional production should be economics profitable for producers, and ecologically and socially for state and society (Novković, 2003).

In that way, Serbian agriculture is multi-functional, even it is present so called “transition fall”. In a future, accounting new possibilities on market (rechargeable sources of energy, tourism, recreations, services...), Serbia can be more diversification usage of its agricultural resources, to reach main goal – increasing economics effectiveness and efficiency.

2. Method of research and data sources

Researches in this paper obtain analysis of agricultural capacity (agricultural population, land capacity, depends of way of usage, main reproductive capacity in animal production in the most important sort of animals), production results (sowing area, yields, total production) of main plant products (wheat, maize, soya, sugar beet), and animal products (meat and milk), as the conditions and production and economics results of agriculture of Serbia in the period from 2001 to 2007.

Statistical data are processed by standard statistical methods: average value (X̄), minimum, maximum, coefficient of variation (Cv), and change rate (r). The average year change rate was accounting directly from absolute value of time-seizure elements, by using next formula:

\[ r = (G - 1) \]

\[ G = \left( \frac{Y_2}{Y_1} \right)^{\frac{1}{n-1}} \]

where is:
\[ r = \text{yearly change rate} \]
\[ G = \text{constant relative change of variable} \]
\[ Y_1 = \text{absolute value of first element of time-serial} \]
Y_n = absolute value of last element of time-serial
n = number of elements of time-serial

On the base of quantitative - statistic analysis, on the next step of research, the qualitative, SWOT analysis is implemented. The SWOT analysis of Serbian’s agriculture was realized, as a qualitative method of strategic position analyses. The SWOT analysis is a qualitative method for the strategic planning. SWOT is the acronym of the words: STRENGTHS, WEAKNESSES, OPPORTUNITIES and THREATS. This method is based upon the comparison of the internal features of a system, in this case of the agriculture of Serbia (advantages and shortcomings), with capabilities and perils from the surroundings. This way, the SWOT analysis combines the evaluation of the internal features, with those coming from the external sources, upon which the system does not have a control. The SWOT analysis is the main process used in the situational analysis. The system should activate its powers, overcome its shortcomings, use capabilities and resist the perils. The analysis of powers and shortcomings of a business system is also called “an internal evaluation”, because it refers to the factors within the system which can be controlled. “The external evaluation” includes opportunities and threats, which are usually outside of the system control. Opportunities and threats could be related to: market, technology, economy, society, law legislation, ecology.

The purpose of the SWOT analysis is to highlight the main opportunities and threats, and to simultaneously identify the key aspects of system ability to ensure power and mark shortcomings in dealing with the changes in surroundings. The results of such a situational analysis are the basis for the formulation of the strategy of development of agriculture in Serbia.

The data acquired from the Republic Office for Statistics of Serbia have been used in this research.

### 3. The resource analyses

#### 3.1. Population

The agricultural population decreased for more than 1/3 between the two censuses (Table 1). The agricultural population was very dynamically decreasing, at average yearly rate of -4,2%.

<table>
<thead>
<tr>
<th>Category</th>
<th>1991</th>
<th>2002</th>
<th>Change (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural</td>
<td>1.305</td>
<td>817</td>
<td>-37,4</td>
</tr>
<tr>
<td>Active</td>
<td>904</td>
<td>529</td>
<td>-41,5</td>
</tr>
<tr>
<td>Alimented</td>
<td>401</td>
<td>288</td>
<td>-28,18</td>
</tr>
<tr>
<td>Quota of active in agricultural (in %)</td>
<td>69,3</td>
<td>64,7</td>
<td>-6,6</td>
</tr>
<tr>
<td>Quota of active agricultural in the total active (in %)</td>
<td>14,6</td>
<td>13,6</td>
<td>6,8</td>
</tr>
<tr>
<td>Quota of agricultural in the total population (in %)</td>
<td>16,7</td>
<td>10,9</td>
<td>-54,7</td>
</tr>
</tbody>
</table>

The active population was decreasing more rapidly, so that the quota of active population in the total agricultural population is reduced. Also, the increase in the quota of active agricultural population in the total active population of Serbia was noticed. It is expected that these tendencies will continue to occur in the next long-term period, with an expectation that the quota of active agricultural population in the total population of Serbia will decrease.

The number of agricultural husbandry, according to the census from 2002, was reduced from 970.000 in 1991 to 779.000, namely for nearly 20%. This means that the average estate was increased from 3,96 to 5,22 hectares of agricultural land.
3.2. Land

The structure of land resources is presented in Table 2, according to the way of usage. About 80% of the agricultural land is in private property of peasant husbandries. The rest of the agricultural land is used by the agricultural companies. That land is in their property, or is in the property of the State. The companies and their land are finished the process of privatization, while the usage of state-owned land is regulated by a special law.

A slight reduction of all land resources is noticeable, but the structure of usage methods has not been changed fundamentally. The arable land participates in over 80% in the agricultural land, and nearly with the same percentage, the total area of tillage participates in the arable land. The significant rate reduction of vineyards is unfavorable, since vineyards were already represented in a small number.

Table 2. The land resources

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Average (000)ha</th>
<th>Change rate (%) (1981-2007)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean</td>
<td>1981-90</td>
<td>1991-00</td>
</tr>
<tr>
<td>Agricultural</td>
<td>5.744</td>
<td>5.595</td>
</tr>
<tr>
<td>Arable</td>
<td>4.706</td>
<td>4.590</td>
</tr>
<tr>
<td>Tillage</td>
<td>3.688</td>
<td>3.602</td>
</tr>
<tr>
<td>Orchards</td>
<td>263</td>
<td>254</td>
</tr>
<tr>
<td>Vineyards</td>
<td>92</td>
<td>81</td>
</tr>
<tr>
<td>Meadows</td>
<td>664</td>
<td>653</td>
</tr>
<tr>
<td>Pastures</td>
<td>1,002</td>
<td>970</td>
</tr>
</tbody>
</table>

The indicator of the extensive structure of agricultural production is the structure of tillage usage methods, as well as the most frequent method of land usage (Table 3). In the structure of tillage, cereals participation decreased from 67% (1981-90), to 62% (2001-07). The participation of other sorts of crops in the same period increased: industrial plants from 9.4 to 10.7%, vegetables from 7.9 to 8.8%, forage plants from 13.2 to 14%. These data show the slight increase in the intensity of tillage usage.

Table 3. Tillage area per crop groups

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Average (000)ha</th>
<th>Change rate (%) (1981-2007)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean</td>
<td>1981-90</td>
<td>1991-00</td>
</tr>
<tr>
<td>Cereals</td>
<td>2,476</td>
<td>2,121</td>
</tr>
<tr>
<td>Industrial plants</td>
<td>347</td>
<td>342</td>
</tr>
<tr>
<td>Vegetables</td>
<td>295</td>
<td>305</td>
</tr>
<tr>
<td>Forage plants</td>
<td>488</td>
<td>497</td>
</tr>
</tbody>
</table>

3.3. The cattle capacity

The main reproductive animal capacity in Serbia is given in Table 4. In the observed period negative tendency in population of cattle and pigs are present, while number of sheep has a positive change rate. Decreasing of number of reproductive animals in Serbia is caused by significantly negative economics position of cattle breeding, and poor state protection from not loyal competence from abroad.
Cattle breeding are represented in a small number in Serbia (Table 5). Furthermore, all sorts of cattle were on the decrease in each observed period (with the exception of sheep number in the period 2000-2007).

One of basic natural parameter of intensity of the agricultural production is level of cattle breeding, or animal concentration. The animal concentration is present on following ways:

- The number of cattle and sheep on 100 hectares of agricultural land, and
- The number of pigs and poultry on 100 hectares of tillage land.

The number of cattle on 100 hectares of agricultural land was reduced from 32 heads from the 90’s of the last century, down to 20 heads in the period from 2001-2007. The number of sheep on 100 hectares of agricultural land was reduced from 39 heads, to 27 heads in the same period.

In the same interval, the number of pigs on 100 hectares of tillage was reduced from 131 to 95. The negative tendencies in the cattle number have not been abated nor stopped in the 21st century.

Comparative analysis of cattle concentration in Serbia and Hungary is presented on Table 6.

### Table 4. The number of reproductive cattle herds (2001-2007)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Average</th>
<th>Change rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cows &amp; reproductive calves</td>
<td>727,000</td>
<td>-1,19</td>
</tr>
<tr>
<td>Reproductive pig</td>
<td>714,000</td>
<td>-6,01</td>
</tr>
<tr>
<td>Reproductive sheep</td>
<td>1,160,500</td>
<td>1,45</td>
</tr>
</tbody>
</table>

### Table 5. Number of heads of cattle (000 heads)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>1.811</td>
<td>1.331</td>
<td>1.117</td>
<td>-2.57</td>
</tr>
<tr>
<td>Pigs</td>
<td>4.838</td>
<td>4.058</td>
<td>3.488</td>
<td>-1.72</td>
</tr>
<tr>
<td>Sheep</td>
<td>2.227</td>
<td>1.791</td>
<td>1.522</td>
<td>-1.54</td>
</tr>
<tr>
<td>Poultry</td>
<td>24.890</td>
<td>21.795</td>
<td>17.736</td>
<td>-1.36</td>
</tr>
</tbody>
</table>

Cattle breeding are represented in a small number in Serbia (Table 5). Furthermore, all sorts of cattle were on the decrease in each observed period (with the exception of sheep number in the period 2000-2007). One of basic natural parameter of intensity of the agricultural production is level of cattle breeding, or animal concentration. The animal concentration is present on following ways:

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Comparative analysis of cattle concentration in Serbia and Hungary is presented on Table 6.


<table>
<thead>
<tr>
<th>Category</th>
<th>Serbia</th>
<th>Hungary</th>
<th>Index (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2/3</td>
</tr>
<tr>
<td>Number of cattle on 100 ha of agricultural land</td>
<td>19,5</td>
<td>33,4</td>
<td>58</td>
</tr>
<tr>
<td>Number of pigs on 100 ha of tillage land</td>
<td>95,0</td>
<td>96,3</td>
<td>99</td>
</tr>
<tr>
<td>Number of sheep on 100 ha of agricultural land</td>
<td>26,6</td>
<td>21,5</td>
<td>124</td>
</tr>
<tr>
<td>Number of poultry on 100 ha of tillage land</td>
<td>48,4</td>
<td>316</td>
<td>153</td>
</tr>
</tbody>
</table>

On the base of data in table 6, it can be seen how Serbia has worst position in cattle breeding, comparing with Hungary, while concentration of pigs is on the same level, and concentration of sheep is significantly higher than in Hungary.
4. The production results

4.1. Plant production

The status image and the tendency of intensifying the Serbian agriculture are not prosperous when comparing the yields and the total production of more significant farming crops. (Tables 7 and 8).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Average (t/ha)</th>
<th>Change rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>4.0</td>
<td>3.5</td>
</tr>
<tr>
<td>Maize</td>
<td>4.6</td>
<td>4.0</td>
</tr>
<tr>
<td>Sugar Beet</td>
<td>41.5</td>
<td>33.2</td>
</tr>
<tr>
<td>Sunflower</td>
<td>2.1</td>
<td>1.8</td>
</tr>
<tr>
<td>Soya</td>
<td>2.0</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Table 8. The production of significant farming crops (000 t)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Average (000 t)</th>
<th>Change rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>3.003</td>
<td>2.456</td>
</tr>
<tr>
<td>Maize</td>
<td>6.064</td>
<td>5.141</td>
</tr>
<tr>
<td>Sugar Beet</td>
<td>4.350</td>
<td>2.263</td>
</tr>
<tr>
<td>Sunflower</td>
<td>246</td>
<td>310</td>
</tr>
<tr>
<td>Soya</td>
<td>142</td>
<td>140</td>
</tr>
</tbody>
</table>

The yields of all farming crops were lower than the yields in EU. The average yield in the 21st century is lower or insignificantly higher than the average of 80’s of the 20th century (with the exception of soy, whose average yield has been increased by 20%). The stagnation and decrease of the yields and the reduction of area caused the total production to be lower than in the 80’s of the last century (again with the exception of soy, whose production is higher for over 90% due to the increase in the yield and area, and the sunflower for more than 40% due to the increase in area). However, during the period 2001-07, the yields and the total production were higher than in the period of 1991-2000 (with the exception of wheat).

The most significant Serbian agricultural and exporting product – raspberry (after maize), has been recording the constant increase in the yield, area and the total production. The yield of raspberry was increased from 4.5 t/ha during the period of 1981-90, to 5.3 t/ha in the period of 2001-07, and the annual production was raised by 2/3 (from 51 to 87 thousand tons).

The total production of cattle breeding production in the first years of the 21st century has not reached the level from the 80’s of the last century (Table 9).
5. The economics results

5.1. Gross domestic product (GDP)

The analysis of tendency of economics development of Serbian agriculture is seen on the base of Gross Domestic Product (GDP) movements. Value of GDP is present in fix prices from year 1994. It was analyzed tendency in GDP of agriculture and food industry in the period 2000-2004. (Table 10). From the year 2005, statistic start to account GDP on the different methodology, so the data is not comparable with a former period. Analyzed is also the ratio movement between agricultures and food industries GDP.

The GDP of agriculture is significantly higher than the GDP of food industry, what shows that, the great part of agricultural products are spending or exporting, while, some smaller part is processing in the Serbian food industry. The GDP of agriculture was increasing, but significantly slower than the GDP of food industry. So, the ratio of agriculture GDP, and food industry GDP was decreasing by average year rate of -7,58 %. The ratio of agriculture GDP/ food industry GDP fell from 2.5, to less than 1,9. It shows the positive tendency of development in Serbian agrarian sector.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef meat</td>
<td>135</td>
<td>103</td>
<td>94</td>
<td>-1,49</td>
</tr>
<tr>
<td>Sheep meat</td>
<td>22</td>
<td>20</td>
<td>18</td>
<td>0,00</td>
</tr>
<tr>
<td>Pork meat</td>
<td>279</td>
<td>267</td>
<td>257</td>
<td>-0,05</td>
</tr>
<tr>
<td>Poultry meat</td>
<td>106</td>
<td>76</td>
<td>64</td>
<td>-12,69</td>
</tr>
<tr>
<td>Milk*</td>
<td>1.556</td>
<td>1.469</td>
<td>1.582</td>
<td>0,16</td>
</tr>
<tr>
<td>Eggs**</td>
<td>1.644</td>
<td>1.462</td>
<td>1.425</td>
<td>-0,35</td>
</tr>
</tbody>
</table>

* in millions of liters
** in millions of pieces

Table 10. Gross domestic product (GDP) of agriculture and food industry (Million RSD)

<table>
<thead>
<tr>
<th>Year</th>
<th>Agriculture</th>
<th>Food industry</th>
<th>Index 2/3 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000.</td>
<td>72.656</td>
<td>28.489</td>
<td>255</td>
</tr>
<tr>
<td>2001.</td>
<td>135.955</td>
<td>54.695</td>
<td>249</td>
</tr>
<tr>
<td>2002.</td>
<td>130.783</td>
<td>73.348</td>
<td>178</td>
</tr>
<tr>
<td>2003.</td>
<td>129.744</td>
<td>71.423</td>
<td>182</td>
</tr>
<tr>
<td>2004.</td>
<td>162.258</td>
<td>87.230</td>
<td>186</td>
</tr>
</tbody>
</table>

Change rate %

22,2 32,2 -7,58

Source: Novković et al. 2007.
6. Agrarian policy

Republic of Serbia according to indicators of economic development belongs to a group of less developed countries. The low level of development, among the other things, is present in agricultural sector. In compliance with the existing conditions, defined the objectives and principles of agricultural policy in Serbia:

- Creating of sustainable and efficient agricultural sector, which can compete on the world market, contributing to the rise of national income;
- Providing food to satisfy a need of consumers in terms of quality and health security;
- Insurance of support of living standards for people who depend on agriculture but which are not able to follow the development of economic reform;
- Insurance of support of sustainable rural development;
- Preserve of environmental from the negative effects of agricultural production;
- Preparation of the agricultural sector for integration into European Union, and
- Preparation policies of domestic support and trade in agriculture for the rules of the World Trade Organization (WTO).

By analyzing the structure of the agricultural budget of the Republic of Serbia noticeable is dominance of subsidies milk production and industrial crops, as well as subsidies for some inputs. Budgetary resources are using for financing another:

- Program to carry out works on protecting, using and organization of agricultural land.
- Planting of new plum orchards and grapevines.
- Expansion of demesne.
- Stimulation of exports.
- Conservation and sustainable use of plant genetic resources for food and agriculture.

The measure, also introduced 2001, and whose application was continued in following years refers to the exchange of agricultural products for agricultural machinery.

7. Financing of agriculture

As economic activity with insufficient of self-funding capacity, in order of their operation and development, agriculture is addressed to use the loans. Credit, as a real source of financing, particularly becomes more important in circumstances where the economic performance of the agricultural sector is negative. Such conditions are, unfortunately, the reality with which the majority of the holders of agricultural production on our country are facing a many years. Short-term and long-term loans to agricultural farms were one of the measures to encourage the development of agriculture in Serbia.

By establishing the Development Fund of the Republic of Serbia, in cooperation with the Ministry of Agriculture, Forestry and Water Management, same as the Ministry of Finance, farms enrolled in the Registry in order to encourage agricultural production were approved loans for specific purposes. The planned lending models were:

- Short-term lending to individuals (farmers) through commercial banks;
- Long-term lending to farms (corporate and individuals), through commercial banks, as well as
- Long-term lending to farms (corporate and individuals) through the Development Fund of the Republic of Serbia, respectively to adequate funds of Province of Vojvodina.

Amount of funds approved in the form of short-term loans was determined by filling out the general and special conditions, as well as owning of total area of agricultural land. These loans were approved with a repayment period of 12 months and interest rate of 5.5% per annum, without currency clause. Interest, together with principal of loan, returned at the end of term loan.

For investments in the improvement of agriculture loans are provided with repayment period of up to five years and exclusively for the following purposes:

- Construction and purchase of irrigation systems, same as irrigation equipment;
- Purchase of agricultural machinery;
- Planting of perennial plantations;
- Building of greenhouses and glasshouses, and
- Crediting of livestock productions.

The interest rate for long-term loans on an annual basis was 3%, but they are applied in this case currency clause\(^1\).

Incentive measures have also been implemented, mainly through short-term and long-term crediting of registered farms. Funds which are necessary for realization measures encouraging for the development of agricultural production in this Program were provided from the budget of Republic of Serbia\(^2\). The program was predicting two models for using budget funds for crediting farms:

1. Short-term loans were being approved to final user with repayment period of up to 12 months and interest rate of 5% per annum.
2. Long-term loans with repayment period of up to five years, the interest rate of 2.75% per annum and grace period of 12 months. In addition to the application of other measures of agricultural policy, this way can significantly contribute to solving development problems due to lack of irrigation systems, outdated machinery, reduction of area under perennial plantations, devastation for livestock production, small average farm and other accumulated problems.

In the process of socio-economic transition in addition to changes of agricultural structure and institutional framework, reform of the agricultural sector includes the appropriate adjustment of agricultural policy. The experiences of former socialist countries confirm that the efficiency of agricultural policy in post transition period is mostly determined by availability of budgetary resources, as well as by development of relevant institutions.

The current macroeconomic conditions in our country still not allow the required level of support to agriculture, either by price, either through budget payments. The volume and structure of support to agricultural sector will undoubtedly conditioned by economic growth and macroeconomic stability.

Also, the types of mechanisms and measures of agricultural policy will have to adapt to the requirements that were set by international institutions, particularly the World Trade Organization, the European Union, as well as relevant bilateral and multilateral trade agreements.

When it comes to concrete changes in the area of budget support to agriculture, it is realistic to expect reduction of price support and increased of direct incentive funds. Also, following the trends of reforming of European agricultural policy, direct payment to our farmers should be based on respect of the standards as criteria for determining their amount. For example, budget funds in animal production are provided exclusively for farming systems that meet the requirements of the welfare of domestic animals. Such criteria for exercising the right of budget support are placed in most other branches and directions of agricultural productions. In such circumstances, the farms will achieve the right to subsidy funds only if they compliance with numerous regulations related to good manufacturing practice, protection of domestic animals, and conservation of natural resources.

However, substantial changes of our agricultural policy, in accordance with existing circumstances in the agricultural sector in the economy in general, should be referring to changes of the importance of certain measures of support. Accent should be placed on the structural and support of rural development, while the market-price policy should be reduced.

### 8. Cooperatives

The key problem of cooperative sectors was reflected in the lack of co-operative which operating in generally accepted cooperative principles. If we observe the profile and management of cooperatives in our country, we can see two distinctive types of cooperatives. One type is so called „state co-operative“ managed by employees, while farmers as members of the cooperative have no such rights. The second type is so called „private cooperatives“, which in fact operate as private companies,

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\(^1\) Currency clause involves determining the amount of debt in Euros at the time of loan disbursement and debt in the RSD calculation, the average official exchange rate of National Bank of Serbia on the day of calculation.

\(^2\) For this purpose in year 2005 Year from the national budget is allocated 3.500.000.000 dinars (Official Gazette of the Republic of Serbia, No. 45/04)
without of respect for cooperative principles. Equally important, but also unresolved question also applies to property of cooperatives, which limits their development and in many cases disabling their operations.

In order to solve these problems and to create conditions for the promotion of cooperative sector, new Law on cooperatives was passed on 2006. Under Law cooperatives was founded and operates on the principles of: voluntary and open membership, reciprocity, equality, solidarity, equal rights of management, democracy, cooperative education and knowledge and cooperation among cooperatives, as well as other internationally recognized cooperative principles. In practice, this Law was not foster cooperative promotion.

9. Export – import balance of agricultural products

The food & agriculture sector in only one in Serbia who has continuously a positive ratio between expire and import value. The three most important export products of Serbian agrarian sector are: maize, raspberry and sugar.

The export potentials of agricultural complex of Serbia are also: edible sunflower oil, wheat (mercantile and seed), seed soy bean and sunflower, fruit (fresh and processed – sour cherry, strawberry, apple, apricot), vegetables (fresh and processed – frozen green peas, green beans, sweet corn), heifers and steers for slaughter, baby beef, lambs for slaughter, lamb, their high-quality products (foiled or canned ham and shoulder ham, etc.) beer, non-alcoholic beverages, mineral water, wine, unconventional agricultural products (frogs, snails, honey, medical herbs) and safe food.

10. Competitiveness evaluation – SWOT analysis

Developing strengths of agriculture of Serbia are:

- Good natural conditions for production (soil, climate, water resources)
- Comparative advantages of regions and micro-regions (the hills in Central Serbia and low land in region of Vojvodina, with of Fruška Gora and the Vršac mountains, the sandy area of Subotička peščara,)
- Relatively un polluted environment and agricultural resources
- Excellent conditions for multi-functional agriculture (good natural resources for development of tourism, hotel management, energy production from renewable sources)
- Tradition in conventional agricultural production,
- Relatively qualified and educated labor,
- Developed processing capacities,
- Educational, scientific and research institutions and agricultural extension service centers.
- State institutions prepared to develop agricultural complexes
- Existence of agricultural extension service

The weaknesses are:

- Small and unorganized estates and parcels of farms
- Extensive production in structure and yields
- Little animal husbandry
- Inappropriate solution for the use of the state-owned land
- Bad economic conditions for using water potentials for irrigation
- Bad organization of farms (cooperatives)
- Insufficient support to the development of agriculture by the state
- Aged farmers and rural devastation

Developing opportunities are:

- Regulation of land areas,
- Extension of irrigative areas (possibility for stubble and additional crop sowing)
• Intensifying of plant production, by changing of structure of production, and increasing the inputs in present agricultural production lines
• Better usage of land, by two or more sowing during a year
• Developing the animal production
• Higher level of product finalization in own processing capacities
• Improvement of processing technology for agricultural products
• Development of multi-functional production and diversification: development of agricultural-ecological tourism (agro tourism, tourist events in rural areas, spa tourism, fishing and hunting tourism), catering (on farms, fresh and healthy food, home-made food), and energy production from renewable sources (harvest residues, Aeolian energy, etc).
• Increase of competitiveness with the development of cooperatives, SME (small and middle sized enterprises) and cluster-integration
• Increase of export possibilities, by ISO standardization and increase of product quality
• Development of ecological production, medical and aromatic herbs production
• Improving institutions for support of agriculture (financing, organization, management, educational support)

Threats for the development are:
• Placement limitations (low domestic payment demand),
• Export limitations (export quotes, non-custom barriers, no export stimulations)
• Insufficient possibilities of the state to support agricultural development
• Lack of high-quality resources for development and functioning
• Lack of or insufficient legal regulations
• Strong negative influence of interest groups (import lobby) on the measures of agrarian policy
• Insufficient influence of professional and scientific institutions on the development of agriculture, and the economic policy measures in agriculture

11. Conclusion – macro management measures for agriculture competitiveness increasing

As a conclusion of these researches, it is necessary, notwithstanding the intensification of conventional agriculture and food industry, to establish the multifunctional development of agriculture. The multi-functionality of agriculture means the usage of agricultural resources not only for the food production, but also for other purposes which lead to faster economy development, and for energy production, tourism services, catering, health care, fishing, hunting…

In order for this to be performed, the active policy of state institutions is necessary to be established, for the aims of agricultural development (and not political interests and short-term goals). The active long-term agricultural policy means the formulation of agricultural development concept (multifunctional, sustainable development), development of institutions, law legislation, subventions and investments in agricultural resources.

The most important measures in that way are:

1. Stimulation of building and use of irrigation systems. Despite the outstanding water resources in Vojvodina, their lever of utilization is very low. One of the major reasons for their minimal use lies in the economic conditions for their exploitation. Republic and provincial funds for agricultural development should provide significant loans under favorable conditions to direct the purchase of equipment and irrigation systems, fiscal policy with tax exemptions will be stimulate farm which using irrigation systems.

2. Stimulation of increasing investment in rural areas. Stimulating measures that would improve investment in rural areas will be exemptions or reduction of contribution for employment in rural areas, favorable tax and credit policies, financial incentives to agribusiness development by the state, the republic and local autonomy.
3. **Organization and rational use of land.** Regulation of land resources and rational use of land fund today is the most important problems of agriculture of Vojvodina.

4. **Regulation of the infrastructure and development of institutions in rural areas.** Significant development of rural areas is development of infrastructure and facilities (roads, water supply and sewerage networks, telecommunications, kindergartens, schools, banks, sports fields and playgrounds). In this segment important source may be of foreign soft loans and donations.

5. **Direct foreign and state investments of local management organs in the development of firms in rural areas.** Agricultural land, as a state resource should be the basis for priorities in the National Investment Plan in Serbia. This means that Serbia as investing in the development of mountain tourism with investment in ski lifts and ski terrain structure, expected to invest in the optimal use of their agricultural land, through development of agricultural companies, experimental stations, research institutes, tourist attractions and other profitable ways of multifunctional use of agricultural land.

6. **Consistent and professional agrarian policy which would serve the development of agricultural business**

7. **Development of institutions for development of small agricultural businesses (S.M.E) and entrepreneurship.** Institutions have special role in the world in the development of small business and entrepreneurship. In terms of agribusiness a significant investments are technological problems, guarantee funds and advisory institution for development of agribusiness.

8. **Education of rural population.** Economic development in rural areas must be accompanied by the general social development, and general education of the rural population and education in technical, technological, educational, cultural, ecological, and not in the last place economical sense.

9. **Improvement of organization (cluster development, cooperatives and extension services).** For the survival and development of peasant farms of particular importance is the further development of cooperative and agricultural extension, type, as well as institutions in the interests of agriculture need which have to coordinate the goals and objectives of the state and farmers and should be institutions for the implementation of agricultural policy

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