The comparison of the cost-rate and profitability of the agricultural products in the SR and CR

Komparácia nákladovosti a rentability polľohospodárskych výrobkov SR a ČR

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Abstract: The article deals with the comparison and evaluation of the development of economic indicators, such as the costs, yields, economic result and profitability in the Czech and Slovak Republics for the period of years 1997–2000. The economic indicators are evaluated and compared on the basis of sample survey results of the RIAFE Bratislava and RIAE (Research Institute of Agricultural Economics) Prague. The first part contains the evaluation and comparison of the costs, yields and the economic results for agricultural production and its branches recalculated per 1 ha of agricultural land (a. l.). The second part contains the evaluation and comparison of the production intensity indicators (per hectare yields, utility), costs per 1 ha, 100 feeding days and per unit, and agricultural production realization prices. Based on these indicators, cost profitability of the selected plant and animal products is quantified.

Key words: comparison, costs, yields, economic result, profit, profitability

Abstrakt: Príspevok sa zaobera komparáciou a hodnotením vývoja ekonomických ukazovateľov, ako sú náklady, výnosy, hospodárske výsledky, rentabilita v SR a ČR za obdobie rokov 1997–2000. Ekonomické ukazovatele hodnotí a komparuje na základe výsledkov výberových štúdien VÚEP Bratislava a VÚZE Praha. V prvej časti sa hodnotia a komparujú náklady, výnosy a hospodárske výsledky za poľnohospodársku výrobu a jej odvetvia, v prepočte na 1 ha poľnohospodárskej pôdy, v druhej časti ukazovatele intenzity výroby (ha úrody, úžitkovosti), náklady na ha, 100 krmných dní a jednotku, realizáciiny ceny poľnohospodárskej produkcie a na ich základe sa kvantifikuje nákladová rentabilita vybraných rastlinných a živočišných výrobkov.

Kľúčové slová: komparácia, náklady, výnosy, hospodársky výsledok, zisk, rentabilita

In relation with the prepared entry of the Slovak and Czech agriculture into the European structures, the experts in the agrarian sector have been dealing with the issues of its competitiveness. The latter is assessed from various aspects, including, for instance, the agricultural and food production prices. We share the opinion that in general, the competitiveness of agricultural subjects closely relates to the economics of their product branches which entirely depends on the production costs and realized production prices as well as on other agrarian policy tools.


Different international comparisons of the production and economic indicators have shown that it is difficult to compare the agricultural production cost-rate (Poláčková et al 1996). The reason lies in different methodical approaches, resp. cost calculation methods. While in the market economy countries the calculation preferred uses the method of incomplete costs divided into variable and fixed costs, both in the SR and CR, the calculation applied was and is based on the complete costs divided into direct and indirect (overhead) costs.

Following the above mentioned facts, the objective of this article is to compare and to evaluate the development of the cost-rate and profitability of the agricultural production branches and of the selected agricultural products in the SR and CR for the period of years 1997–2000.

MATERIAL AND METHODS

We compared the costs of the selected SR and CR agricultural products on the basis of data compiled by sample surveys in the SR and CR, focused on the cost-rate of agricultural products of legal entities.

These data are fully comparable because their construction has followed comparable methods of cost calculation, the compilation of which is of a long-term tradition in the SR and CR based on identical methodological approaches.
The comparison of product calculations allows to classify and to compare data on the costs and yields for the major branches, i.e. plant and animal production, resp. agricultural production.

In the article, we compare:
– intensity of the animal and plant production,
– costs of the plant, animal and agricultural production recalculated per 1 ha a.l. and per 1 SKK,
– yields of the plant, animal and agricultural production recalculated per 1 ha a.l. and per 1 SKK,
– production costs per 1 ha, resp. 100 feeding days (FD) and per unit, i.e. 1 ton (t), liter (l), kilogram of live weight (kg l.w.) recalculated to SKK.

The product costs are qualified as complete, what means that they contain both direct and indirect (overhead) costs.
– realized production prices.

At the evaluation of the cost-rate development, we apply the index and comparison methods. The data on costs and prices expressed in CZK and SKK are recalculated to the values in SKK at the following exchange rates:

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>1.065</td>
</tr>
<tr>
<td>1998</td>
<td>1.097</td>
</tr>
<tr>
<td>1999</td>
<td>1.196</td>
</tr>
<tr>
<td>2000</td>
<td>1.197</td>
</tr>
</tbody>
</table>

We express the economic result on the basis of data on costs and yields recalculated per 1 ha a.l. and qualify it as the difference between the costs and yields. Regarding the production branches, we qualify the profit indicator as the difference of the own costs per unit and realized production price.

We quantify the profitability indicator in % as the quotient of:

\[ R = \frac{\text{Profit per unit}}{\text{Proper costs per unit}} \times 100 \]

We compare and evaluate the data for the period of years 1997–2000.

RESULTS AND DISCUSSION

The most important factors influencing the agricultural production cost-rate from the viewpoint of producers are prices of inputs and of production factors. Besides this, production profitability is influenced by the agricultural producers prices (product prices), re-distribution mechanisms (subsidies and taxes) as well as internal factors of the producers (organization of work, quality of management etc.).

In order to illustrate the development of the economic conditions and prices, in Table 1 we show the comparison of the price indices levels in the CR and SR which in summary characterize the economic conditions.

It is obvious from the table data that in the CR, there is a more favorable development of the prices of inputs into agriculture than in the SR. While in the CR the prices of inputs increased as late as in 2000 during the monitored period, in the SR we have been recording their permanent inter-annual growth.

On the other hand, after the inter-annual drop of the agricultural producer prices in the SR, the prices increased as late as in 2000, but their growth rate was lower than with the input prices. In the CR (except for 1999), the agricultural producer prices were gradually raising but their growth rate was lower (except for 1998) than that of the input prices.

The development of costs, yields and economic result in the agricultural production branches

The costs per 1 ha a.l. in the agricultural production (Table 2) in the SR and CR slightly decreased during the monitored period (down to 97.4% in the CR and 98.8% in the SR). The common feature of this period was a divergent development in the plant and animal production branches. While in the CR and SR plant production branch the costs slightly increased, the animal production branch recorded their drop. The cost-decrease rate was higher in the CR than in the SR.

The animal production branch has been sharing the agricultural production costs to a greater extent in both republics. The animal production costs represent up to 60% of the agricultural production costs.

Based on the comparison in SKK, we have found out that in the CR, the volume of costs per 1 ha a.l. was higher by 26–40% than in the SR.

Another common feature of the cost-rate in both countries are inter-regional differences resulting mostly from different natural and economic conditions. In worse natural conditions, the costs per 1 ha a.l. reached approx. 50% share of the costs in better natural conditions. More expressive differences are recorded mostly in the plant production branches. The costs in worse natural condi-

Table 1. Inter-annual summary price indices in the Czech and Slovak Republics (CR and SR)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Prices of agricultural producers</td>
<td>CR</td>
<td>102.3</td>
<td>88.3</td>
</tr>
<tr>
<td></td>
<td>SR</td>
<td>99.7</td>
<td>98.2</td>
</tr>
<tr>
<td>Prices of industrial producers of foodstuffs and beverages</td>
<td>CR</td>
<td>105.5</td>
<td>96.6</td>
</tr>
<tr>
<td></td>
<td>SR</td>
<td>103.4</td>
<td>101.4</td>
</tr>
<tr>
<td>Consumer prices of foodstuffs and beverages</td>
<td>CR</td>
<td>104.6</td>
<td>95.2</td>
</tr>
<tr>
<td></td>
<td>SR</td>
<td>105.8</td>
<td>102.7</td>
</tr>
<tr>
<td>Prices of inputs into agriculture</td>
<td>CR</td>
<td>98.2</td>
<td>93.6</td>
</tr>
<tr>
<td></td>
<td>SR</td>
<td>104.1</td>
<td>104.1</td>
</tr>
</tbody>
</table>

Source:
The report on the state of in agriculture of the CR for 2000
The report on agriculture and food industry in the SR (2001)
Table 2. The development of the costs in the agricultural production branches in the CR and SR per 1 ha a.l.

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant production</td>
<td>CR in CZK</td>
<td>14 219</td>
<td>14 079</td>
<td>14 072</td>
<td>14 513</td>
<td>102.1</td>
</tr>
<tr>
<td></td>
<td>CR in SKK</td>
<td>15 143</td>
<td>15 445</td>
<td>16 830</td>
<td>17 372</td>
<td>101.3</td>
</tr>
<tr>
<td></td>
<td>SR in SKK</td>
<td>11 365</td>
<td>11 386</td>
<td>10 717</td>
<td>11 511</td>
<td>101.3</td>
</tr>
<tr>
<td>Animal production</td>
<td>CR in CZK</td>
<td>19 152</td>
<td>19 153</td>
<td>17 850</td>
<td>17 980</td>
<td>93.9</td>
</tr>
<tr>
<td></td>
<td>CR in SKK</td>
<td>20 397</td>
<td>21 011</td>
<td>21 349</td>
<td>21 522</td>
<td>101.1</td>
</tr>
<tr>
<td></td>
<td>SR in SKK</td>
<td>16 756</td>
<td>17 085</td>
<td>16 316</td>
<td>16 273</td>
<td>97.1</td>
</tr>
<tr>
<td>Agricultural production</td>
<td>CR in CZK</td>
<td>33 371</td>
<td>33 232</td>
<td>31 922</td>
<td>32 493</td>
<td>97.4</td>
</tr>
<tr>
<td></td>
<td>CR in SKK</td>
<td>35 540</td>
<td>36 456</td>
<td>38 179</td>
<td>38 894</td>
<td>98.8</td>
</tr>
<tr>
<td></td>
<td>SR in SKK</td>
<td>28 121</td>
<td>28 471</td>
<td>27 033</td>
<td>27 784</td>
<td>98.8</td>
</tr>
</tbody>
</table>


Table 3. The development of yields in the agricultural production branches in the CR and SR per 1 ha of agricultural land (a.l.)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant production</td>
<td>CR in CZK</td>
<td>15 754</td>
<td>15 046</td>
<td>14 408</td>
<td>15 723</td>
<td>99.8</td>
</tr>
<tr>
<td></td>
<td>CR in SKK</td>
<td>16 778</td>
<td>16 505</td>
<td>17 227</td>
<td>18 820</td>
<td>98.7</td>
</tr>
<tr>
<td></td>
<td>SR in SKK</td>
<td>12 936</td>
<td>11 895</td>
<td>11 227</td>
<td>11 479</td>
<td>88.6</td>
</tr>
<tr>
<td>Animal production</td>
<td>CR in CZK</td>
<td>17 125</td>
<td>17 577</td>
<td>16 304</td>
<td>17 681</td>
<td>103.2</td>
</tr>
<tr>
<td></td>
<td>CR in SKK</td>
<td>18 238</td>
<td>19 282</td>
<td>19 500</td>
<td>21 164</td>
<td>105.4</td>
</tr>
<tr>
<td></td>
<td>SR in SKK</td>
<td>15 846</td>
<td>16 353</td>
<td>15 922</td>
<td>16 288</td>
<td>102.8</td>
</tr>
<tr>
<td>Agricultural production</td>
<td>CR in CZK</td>
<td>32 879</td>
<td>32 623</td>
<td>30 712</td>
<td>33 404</td>
<td>101.6</td>
</tr>
<tr>
<td></td>
<td>CR in SKK</td>
<td>35 016</td>
<td>35 787</td>
<td>36 727</td>
<td>39 984</td>
<td>102.7</td>
</tr>
<tr>
<td></td>
<td>SR in SKK</td>
<td>28 782</td>
<td>28 248</td>
<td>27 149</td>
<td>27 767</td>
<td>96.5</td>
</tr>
</tbody>
</table>


tions, e.g. in the SR, reached only 1/3 of the costs in better natural conditions. Inter-regional conditions are the reason why the share of the plant production falls in favor of the animal one towards worse natural conditions.

The yields per 1 ha a.l. developed differently during the monitored period (Table 3). In the CR, the agricultural production yields slightly raised (101.6) but in the SR they dropped (96.5). In both republics, the plant production yields dropped to the contrary of those in the animal production which slightly raised.

Similarly as with the costs, the share in the yields was higher with the animal production, mostly in the SR, than with the plant production.

Based on the comparison in SKK, we have found out that the agricultural production yields reached per 1 ha a.l. were higher by approx. 28.0–44.0% in the CR than in the SR.

Due to a different cost-yield development, economic result developed differently as well (Table 4). In the CR, after the loss which had been reached in 1997–1999, the profit reached CZK 911 per 1 ha a.l. already in 2000, while in the SR, this indicator was rather oscillating (the profit-loss oscillation). In 2000, because of unfavorable climatic conditions, the loss reached SKK 17.0 per 1 ha a.l. Nevertheless, the plant production branch was profitable (resp. with a slight loss in the SR in 2000), but the animal production branch was loss-making in both republics. Finally in 2000, the SR animal production branch reached positive economic result of SKK 15.0 per 1 ha a.l.

Table 4. The economic result in the agricultural production branches in the CR and SR per 1 ha a.l.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant production</td>
<td>CR in CZK</td>
<td>1 535</td>
<td>967</td>
<td>336</td>
<td>1 210</td>
</tr>
<tr>
<td></td>
<td>CR in SKK</td>
<td>1 635</td>
<td>1 060</td>
<td>397</td>
<td>1 448</td>
</tr>
<tr>
<td></td>
<td>SR in SKK</td>
<td>1 571</td>
<td>509</td>
<td>510</td>
<td>-32</td>
</tr>
<tr>
<td>Animal production</td>
<td>CR in CZK</td>
<td>-2 027</td>
<td>-1 576</td>
<td>-1 546</td>
<td>-299</td>
</tr>
<tr>
<td></td>
<td>CR in SKK</td>
<td>-2 159</td>
<td>-1 729</td>
<td>-1 849</td>
<td>-358</td>
</tr>
<tr>
<td></td>
<td>SR in SKK</td>
<td>-910</td>
<td>-732</td>
<td>-394</td>
<td>-15</td>
</tr>
<tr>
<td>Agricultural production</td>
<td>CR in CZK</td>
<td>-492</td>
<td>-609</td>
<td>-1 210</td>
<td>911</td>
</tr>
<tr>
<td></td>
<td>CR in SKK</td>
<td>-524</td>
<td>-669</td>
<td>-1 452</td>
<td>1 090</td>
</tr>
<tr>
<td></td>
<td>SR in SKK</td>
<td>661</td>
<td>-223</td>
<td>116</td>
<td>-17</td>
</tr>
</tbody>
</table>

The development of the cost-rate and profitability of the major agricultural products

**Plant products**

Regarding plant products, we may state that a lower production intensity is reached in the SR, expressed by per hectare yields (Table 5). During 1997–1998, only the crops yields of wheat were higher in the SR than in the CR. With other plant products, within the entire monitored period, production intensity was lower in the SR than in the CR. Regarding cereals and rape, the per hectare yields level in the SR reached only 82% of the level in the CR, with sugar beet 96% and with potatoes only 62%. A more critical situation occurred mainly in 2000, when Slovak agriculture was more affected by the unfavorable climatic conditions. However, the cost level (Table 5) per 1 ha of cereals and oil-plants (recalculated in SKK) was almost equal in both republics. In the SR, lower costs were spent per 1 ha of sugar beet but, to the contrary of this, the costs per 1 ha of potatoes in the SR were higher by 35–52% than in the CR. The set trends in per hectare cost and production intensity development caused that:

- 1 ton of cereals and oil-plants are produced more expensively in the SR than in the CR
- sugar beet (except for the unfavorable year 2000) is produced with lower unit costs in the SR than in the CR
- low crops of potatoes in the SR but considerably higher per hectare inputs than in the CR caused that 1 ton of potatoes was produced twice more expensively in the SR than in the CR.

The plant products were realised at higher prices in the SR, except for wheat and rape.

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**Table 5. The development of the intensity of the cost-demand and realization prices of the selected plant products in the CR and SR**

<table>
<thead>
<tr>
<th>Product</th>
<th>Country</th>
<th>Yield in t/ha</th>
<th>Cost per hectare</th>
<th>Yield in t/ha</th>
<th>Ø realiz. price</th>
<th>Yield in t/ha</th>
<th>Cost per hectare</th>
<th>Yield in t/ha</th>
<th>Ø realiz. price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>CR in CZK</td>
<td>4.69</td>
<td>13482</td>
<td>2.529</td>
<td>3094</td>
<td>4.53</td>
<td>13965</td>
<td>2711</td>
<td>3719</td>
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<tr>
<td></td>
<td>CR in SKK</td>
<td>14358</td>
<td>2693</td>
<td>4158</td>
<td></td>
<td>15320</td>
<td>2974</td>
<td>4080</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SR in SKK</td>
<td>4.96</td>
<td>15193</td>
<td>2950</td>
<td>3919</td>
<td>4.72</td>
<td>15332</td>
<td>3135</td>
<td>3654</td>
</tr>
<tr>
<td>Barley</td>
<td>CR in CZK</td>
<td>4.35</td>
<td>12200</td>
<td>2385</td>
<td>3450</td>
<td>4.07</td>
<td>11436</td>
<td>2391</td>
<td>2871</td>
</tr>
<tr>
<td></td>
<td>CR in SKK</td>
<td>12993</td>
<td>2540</td>
<td>3674</td>
<td></td>
<td>12545</td>
<td>2623</td>
<td>3149</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SR in SKK</td>
<td>4.00</td>
<td>12743</td>
<td>3048</td>
<td>4039</td>
<td>3.87</td>
<td>12540</td>
<td>3097</td>
<td>3588</td>
</tr>
<tr>
<td>Rape</td>
<td>CR in CZK</td>
<td>2.71</td>
<td>15466</td>
<td>5717</td>
<td>6583</td>
<td>2.65</td>
<td>15063</td>
<td>5675</td>
<td>7069</td>
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<tr>
<td></td>
<td>CR in SKK</td>
<td>16471</td>
<td>6089</td>
<td>7011</td>
<td></td>
<td>16524</td>
<td>6225</td>
<td>7755</td>
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<tr>
<td></td>
<td>SR in SKK</td>
<td>2.59</td>
<td>18058</td>
<td>6948</td>
<td>6954</td>
<td>2.24</td>
<td>19769</td>
<td>8796</td>
<td>7203</td>
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<tr>
<td>Sugar beet</td>
<td>CR in CZK</td>
<td>38.28</td>
<td>36676</td>
<td>958</td>
<td>851</td>
<td>41.43</td>
<td>39294</td>
<td>948</td>
<td>781</td>
</tr>
<tr>
<td></td>
<td>CR in SKK</td>
<td>39060</td>
<td>1020</td>
<td>906</td>
<td></td>
<td>43106</td>
<td>1040</td>
<td>857</td>
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<tr>
<td></td>
<td>SR in SKK</td>
<td>36.27</td>
<td>37412</td>
<td>870</td>
<td>981</td>
<td>39.25</td>
<td>40594</td>
<td>1004</td>
<td>681</td>
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<td>Potatoes</td>
<td>CR in CZK</td>
<td>23.38</td>
<td>58866</td>
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<td>2353</td>
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<td>CR in SKK</td>
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<td>2506</td>
<td></td>
<td>67883</td>
<td>2647</td>
<td>2745</td>
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<td></td>
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<td>18.71</td>
<td>94487</td>
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<table>
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<tr>
<th>Product</th>
<th>Country</th>
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<th>Cost per hectare</th>
<th>Yield in t/ha</th>
<th>Ø realiz. price</th>
<th>Yield in t/ha</th>
<th>Cost per hectare</th>
<th>Yield in t/ha</th>
<th>Ø realiz. price</th>
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<td></td>
<td></td>
<td>1999</td>
<td>2000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheat</td>
<td>CR in CZK</td>
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<td>2746</td>
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<td>4.73</td>
<td>13012</td>
<td>2419</td>
<td>3269</td>
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<td>3519</td>
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<td>2896</td>
<td>3913</td>
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<tr>
<td></td>
<td>SR in SKK</td>
<td>4.25</td>
<td>11533</td>
<td>2487</td>
<td>2272</td>
<td>4.29</td>
<td>11350</td>
<td>2250</td>
<td>2879</td>
</tr>
<tr>
<td>Barley</td>
<td>CR in CZK</td>
<td>3.94</td>
<td>13793</td>
<td>2974</td>
<td>2717</td>
<td>13586</td>
<td>2693</td>
<td>3446</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CR in SKK</td>
<td>3.29</td>
<td>12036</td>
<td>3504</td>
<td>3452</td>
<td>22.24</td>
<td>13052</td>
<td>5619</td>
<td>3886</td>
</tr>
<tr>
<td>Rape</td>
<td>CR in CZK</td>
<td>2.85</td>
<td>15533</td>
<td>5457</td>
<td>5473</td>
<td>2.81</td>
<td>15779</td>
<td>5608</td>
<td>6162</td>
</tr>
<tr>
<td></td>
<td>CR in SKK</td>
<td>18577</td>
<td>6526</td>
<td>6545</td>
<td></td>
<td>18887</td>
<td>6713</td>
<td>7376</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SR in SKK</td>
<td>2.33</td>
<td>17587</td>
<td>7536</td>
<td>7140</td>
<td>1.62</td>
<td>18803</td>
<td>11550</td>
<td>7370</td>
</tr>
<tr>
<td>Sugar beet</td>
<td>CR in CZK</td>
<td>45.55</td>
<td>37495</td>
<td>823</td>
<td>799</td>
<td>47.89</td>
<td>34673</td>
<td>762</td>
<td>1038</td>
</tr>
<tr>
<td></td>
<td>CR in SKK</td>
<td>44484</td>
<td>984</td>
<td>956</td>
<td></td>
<td>43658</td>
<td>912</td>
<td>1242</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SR in SKK</td>
<td>43.94</td>
<td>37665</td>
<td>842</td>
<td>872</td>
<td>34.79</td>
<td>41026</td>
<td>1161</td>
<td>1068</td>
</tr>
<tr>
<td>Potatoes</td>
<td>CR in CZK</td>
<td>22.14</td>
<td>62427</td>
<td>2819</td>
<td>2943</td>
<td>26.29</td>
<td>63621</td>
<td>2420</td>
<td>3106</td>
</tr>
<tr>
<td></td>
<td>CR in SKK</td>
<td>74663</td>
<td>3371</td>
<td>3519</td>
<td></td>
<td>76154</td>
<td>2897</td>
<td>3718</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SR in SKK</td>
<td>13.62</td>
<td>88067</td>
<td>6464</td>
<td>6177</td>
<td>17.85</td>
<td>116485</td>
<td>6528</td>
<td>6155</td>
</tr>
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</table>


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Table 6. The development of profitability of the major plant products in the CR and SR (%)

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>CR</td>
<td>54.4</td>
<td>37.2</td>
<td>31.6</td>
<td>35.1</td>
</tr>
<tr>
<td></td>
<td>SR</td>
<td>32.9</td>
<td>16.6</td>
<td>–0.3</td>
<td>–10.7</td>
</tr>
<tr>
<td>Barley</td>
<td>CR</td>
<td>44.7</td>
<td>20.1</td>
<td>–8.6</td>
<td>28.0</td>
</tr>
<tr>
<td></td>
<td>SR</td>
<td>32.5</td>
<td>15.8</td>
<td>–1.5</td>
<td>–30.8</td>
</tr>
<tr>
<td>Rape</td>
<td>CR</td>
<td>15.2</td>
<td>24.6</td>
<td>0.3</td>
<td>9.9</td>
</tr>
<tr>
<td></td>
<td>SR</td>
<td>0.1</td>
<td>18.1</td>
<td>–5.3</td>
<td>–36.2</td>
</tr>
<tr>
<td>Sugar beet</td>
<td>CR</td>
<td>–11.2</td>
<td>–17.6</td>
<td>–2.9</td>
<td>36.2</td>
</tr>
<tr>
<td></td>
<td>SR</td>
<td>12.8</td>
<td>–32.2</td>
<td>3.6</td>
<td>–8.0</td>
</tr>
<tr>
<td>Potatoes</td>
<td>CR</td>
<td>–6.6</td>
<td>3.7</td>
<td>4.4</td>
<td>28.4</td>
</tr>
<tr>
<td></td>
<td>SR</td>
<td>–3.2</td>
<td>1.6</td>
<td>–4.4</td>
<td>–5.7</td>
</tr>
</tbody>
</table>

Source:

On the basis of the cost-rate and realised production price development, we may state that the production of cereals was profitable in both republics (except for the year 2000 in the SR). In the CR, production of rape and potatoes was also profitable to the contrary of the loss-making production in the SR. Sugar beet production in the CR was loss-making up to 2000 because it was realised at higher prices. The sugar beet production profitability in the SR was oscillating (the profit-loss oscillation). The data on profitability are shown in the Table 6.

Animal products

The animal production branch in the SR was also reaching lower utility parameters than in the CR (Table 7). The utility in the SR reached only 93% of the value in the CR during the monitored period. For instance, the average milk production per 1 cow was by 360 l lower in the SR compared to the CR in 2000. Similar trends in the intensity development are shown also in the fattening of cattle and pigs but the increments in the cattle fattening slightly raised but still reached only 97% of the increment level in the CR. A different situation was in the pigs fattening when the increments dropped in the last period and reached 84% of the increment level in the CR.

Based on the comparison of the costs per 100 heads of cattle (Table 7), we have found out that the SR spends less costs for milk production but more costs per 100 heads of cattle in the cattle fattening.

From the stated development of the production intensity and cost-rate of the selected animal production items, it is obvious that:
– in milk production, more costs per 100 heads of cows were spent in the CR than in the SR. Despite a higher utility in the CR, 1 liter of milk was produced in the SR with approx. by 5% lower costs than in the CR,

Table 7. The development of the utility, cost-demand and realization prices of the selected animal products in the CR and SR

<table>
<thead>
<tr>
<th>Products</th>
<th>Country</th>
<th>Utility in l, kg l.w.</th>
<th>Costs per 100 cattle</th>
<th>Costs per 1 kg l.w.</th>
<th>Ø realiz. price</th>
<th>Utility in l, kg l.w.</th>
<th>Costs per 100 cattle</th>
<th>Costs per 1 kg l.w.</th>
<th>Ø realiz. price</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>CR</td>
<td>4 490</td>
<td>11 263</td>
<td>8.3</td>
<td>6.48</td>
<td>4 771</td>
<td>11 648</td>
<td>8.08</td>
<td>7.25</td>
</tr>
<tr>
<td></td>
<td>CR in SKK</td>
<td>11 995</td>
<td>8.85</td>
<td>6.90</td>
<td>4 450</td>
<td>11 482</td>
<td>8.53</td>
<td>7.95</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SR in SKK</td>
<td>10 702</td>
<td>8.52</td>
<td>7.41</td>
<td>4 053</td>
<td>10 382</td>
<td>8.16</td>
<td>7.95</td>
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<tr>
<td>Fattening of cattle</td>
<td>CR</td>
<td>76 686</td>
<td>3 081</td>
<td>46.15</td>
<td>34.84</td>
<td>79.15</td>
<td>3 066</td>
<td>43.41</td>
<td>38.26</td>
</tr>
<tr>
<td></td>
<td>CR in SKK</td>
<td>3 281</td>
<td>49.15</td>
<td>37.10</td>
<td>3 363</td>
<td>18 720</td>
<td>36.53</td>
<td>47.62</td>
<td>41.97</td>
</tr>
<tr>
<td></td>
<td>SR in SKK</td>
<td>3 856</td>
<td>47.44</td>
<td>37.92</td>
<td>4 053</td>
<td>19 100</td>
<td>38.92</td>
<td>47.62</td>
<td>41.97</td>
</tr>
<tr>
<td>Fattening of pigs</td>
<td>CR</td>
<td>62 067</td>
<td>1 707</td>
<td>35.54</td>
<td>34.30</td>
<td>63.13</td>
<td>1 669</td>
<td>35.48</td>
<td>33.66</td>
</tr>
<tr>
<td></td>
<td>CR in SKK</td>
<td>1 818</td>
<td>37.85</td>
<td>36.53</td>
<td>1 831</td>
<td>38.92</td>
<td>36.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SR in SKK</td>
<td>2 006</td>
<td>39.78</td>
<td>39.56</td>
<td>1 997</td>
<td>40.55</td>
<td>39.52</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 8. The development of profitability of the major animal products in the CR and SR (%)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk</td>
<td>CR</td>
<td>−22.0</td>
<td>−10.3</td>
<td>−23.8</td>
<td>−6.8</td>
</tr>
<tr>
<td></td>
<td>SR</td>
<td>−13.0</td>
<td>−5.2</td>
<td>−8.8</td>
<td>−7.9</td>
</tr>
<tr>
<td>Fattening of cattle</td>
<td>CR</td>
<td>−24.5</td>
<td>−11.9</td>
<td>−16.5</td>
<td>−13.0</td>
</tr>
<tr>
<td></td>
<td>SR</td>
<td>−20.1</td>
<td>−22.1</td>
<td>−23.0</td>
<td>−16.6</td>
</tr>
<tr>
<td>Fattening of pigs</td>
<td>CR</td>
<td>−3.5</td>
<td>−5.1</td>
<td>−0.2</td>
<td>10.5</td>
</tr>
<tr>
<td></td>
<td>SR</td>
<td>−0.6</td>
<td>−2.5</td>
<td>−0.6</td>
<td>−0.6</td>
</tr>
</tbody>
</table>

Source:

– a different situation was in the cattle fattening. At a higher utility in the SR but slightly higher costs per 100 heads of cattle, 1 kg l.w. was produced somewhat cheaper in the SR than in the CR,
– a different situation was in the pigs breeding. Due to a lower utility in the SR but higher costs per 100 pigs, 1 kg l.w. was produced with higher costs in the SR than in the CR.

By comparing the price development (recalculated to SKK), we have found out that in Slovakia, the producers realised milk and pork at higher prices than in the CR (except for milk in 2000). In the SR, cattle was realised at lower prices in average than in the CR.
At the reached cost and price levels of the realised production in the monitored years, the compared animal products were realised unprofitably in both republics. The profitability was reached only in the CR in 2000, in the fattening of pigs (Table 8).

CONCLUSION

The cost comparisons per 1 hectare of agricultural land in the Slovak Republic and in the Czech Republic have shown that the costs of agricultural production have fallen mildly for the evaluated period. In both republics the costs of vegetable production have fallen mildly and so have in the animal production. The Czech Republic has expended 26 to 40 per cent more costs per 1 hectare of agricultural land than Slovakia.

The yields per 1 hectare of agricultural land have grown slightly in the Czech Republic, but have fallen in Slovakia. The yields in vegetable production in both republics have fallen, but went up in animal production. The Czech Republic has been able to achieve higher levels of yields per 1 hectare of agricultural land than Slovakia (by approximately 28 to 44 per cent).

As a result of different development of yields and costs, the economic results (profit/loss) have also developed differently. The Czech Republic has experienced loss per production on 1 hectare of agricultural land until 1999 but profit in 2000. In Slovakia profits and losses have been alternating over the years in question. The animal farming has been making losses in both republics (except in the Slovak Republic in 2000). Profits have been achieved in both republics as far as vegetable production is concerned (Slovak Republic has experienced a mild loss in 2000).

The costs per hectare of cereals and oil vegetables production have been almost the same in both republics. The Slovak Republic has expended less costs per hectare of sugar beets. On the other hand Slovakia has expended about one half more for one hectare of potatoes than the Czech Republic. The development of costs, of the price level and of the intensity of production have lead to profitability of cereal production in both republics. The Czech Republic has been able to produce colza and potatoes with profit, while the Slovak Republic has been making losses in this production. Sugar beet has been produced with losses in the Czech Republic, while in Slovakia profits have been alternating with losses in this production.

In animal farming lower costs has been achieved per 100 cows in milk production in the Slovak Republic, but more costs in beef and pork production. Slovakia has achieved lower parameters of effectiveness, but milk and pork has been sold at higher prices in Slovakia than in the Czech Republic. On average beef has been sold at lower prices in the Slovak Republic. The animal products have been produced with losses at this cost and price level, and production intensity in both republics.

REFERENCES

Poláčková et al. (1996): The comparison of the results from the processing of the proper costs by the CR and EU methods using the data for 1994 and 1995. A research task. Prague, RIAE, 9 p.

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