Survey study of economic parameters in Holstein and Slovak dual purpose breeds

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Slovak milk sector in 2007-2011 (1)

• Number of cattle 478,4 heads
• Number of cows 207,3 heads
• Number of dairy cattle 162,1 heads
• National consumption of milk and milk products 156 kg per capita per year

34%

78%
Slovak milk sector in 2007-2011 (2)

• Gross agricultural output (GAO) 2 079 mil. €
• Gross output of milk production 16% from GAO
• Average milk purchase price at farm gate 29.16 € per 100 kg of milk
• Average milk production 6 728 kg per cow and lactation
• Fulfilment of milk quota 87%

Krupová et al., 2013
Balanced approach

- Costs

+ Revenues

Zero profit, zero loss
Biological approach

Start of animal production

Natural conditions + Suitable breed

Assumption of successful animal production
Aim of the study (1)

- To define production and economic parameters of Holstein cattle and its crosses with Slovak dual purpose cattle in:
  - lowland areas (9 farms, L)
  - mountain and foothill areas (13 farms, F)
Aim of the study (2)

• To evaluate the economic efficiency (farms L, F)

• To propose optimal parameters to achieve the economic sustainability

• Evaluated period 2007-2011

• The economic database of the Animal Production Research Centre in Nitra
## Results (1)

The production parameters in evaluated dairy cattle farms (2007-2011)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Farms L</th>
<th>Farms F</th>
<th>&quot;&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elevation of the farm (m above sea level)</td>
<td>353</td>
<td>547</td>
<td>-194</td>
</tr>
<tr>
<td>Heads per herd</td>
<td>447</td>
<td>234</td>
<td>213</td>
</tr>
<tr>
<td>Age at first calving (day)</td>
<td>897</td>
<td>1 032</td>
<td>-135</td>
</tr>
<tr>
<td>Calving interval (day)</td>
<td>455</td>
<td>427</td>
<td>28</td>
</tr>
<tr>
<td>Production life of cow (No. of lactations)</td>
<td>2.6</td>
<td>3.3</td>
<td>-0.7</td>
</tr>
</tbody>
</table>
Results (2)

The cost items proportion in dairy cattle farms (2007-2011)

Farms L

Farms F

The economic database of APRC Nitra, 2007-2011
### Results (3)

Changes in the individual cost items in the evaluated dairy cattle farms (2011 vs. 2007)

<table>
<thead>
<tr>
<th>Cost item</th>
<th>Farms L</th>
<th>Farms F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed costs</td>
<td>-3%</td>
<td>27%</td>
</tr>
<tr>
<td>Labour</td>
<td>-28%</td>
<td>-5%</td>
</tr>
<tr>
<td>Other direct costs</td>
<td>2%</td>
<td>16%</td>
</tr>
<tr>
<td>Depreciation</td>
<td>-9%</td>
<td>7%</td>
</tr>
<tr>
<td>Overheads</td>
<td>-17%</td>
<td>14%</td>
</tr>
<tr>
<td>Total</td>
<td>-6%</td>
<td>16%</td>
</tr>
</tbody>
</table>

The economic database of APRC Nitra, 2007-2011

Why? What happened?
## Results (4)

### Basic parameters of revenues in cattle farms (2007-2011)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Farms L</th>
<th>Farms F</th>
<th>&quot;&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average milk yield per cow and year (kg)</td>
<td>6 687</td>
<td>4 734</td>
<td>1 953</td>
</tr>
<tr>
<td>Marketability (%)</td>
<td>96</td>
<td>93</td>
<td>3</td>
</tr>
<tr>
<td>Milk price (€ per 100 kg)</td>
<td>33.02</td>
<td>32.81</td>
<td>0.21</td>
</tr>
</tbody>
</table>

| Revenues per cow and year in €                | 2 208   | 1 553   | 655 |
Results (5)

Profitability in the dairy cattle farms (2007-2011)

The economic database of APRC Nitra, 2007-2011
Conclusions (1)

• Suitable breed for natural conditions
• Quality of heifers rearing
• Promote to marketing associations
• Milk processing to final products and diversification
• Detailed recording
Conclusions (2)

Optimization in dairy cattle farms (L and F, resp).

• milk yield per cow and year 8 687 kg and 6 406 kg, resp.

• number of lactations per cow life 3.05 and 4.4, resp.

• calving interval 400 days and 390 days, resp.
Thank you for attention

Animal Production Research Centre Nitra

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Economic of:
- cattle,  - sheep,  - pig

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This presentation is in memory of Dr. Jozef Dano our colleague, friend and teacher.
This presentation took place during realization of project CEGEZ No. 26220120042, LAGEZ No.26220120051, “MLIEKO” supported by the Operational Programme Research and Development funded from the European Regional Development Fund and project financed by the Ministry of Agriculture and Rural Development of the Slovak Republic. The APRC Nitra economic team expresed big „thank you“ to all farmers for their trust, willingness and patience in providing production and economic indicators.