EIP-AGRI Workshop
‘Enabling farmers for the Digital Age: The Role of AKI S’

26-27 April 2018
Jūrmala, Latvia

All information of the workshop available on www.eip-agri.eu at the event webpage

Welcome to Day 2
Outcomes Day 1 and introduction to Day 2 agenda

Enabling farmers to the digital era: tools and practices Carousel of inspiring examples

10.15 – 10.30 Mini Quiz about Farmers’ Information Needs

10:30 – 11:00 Coffee break

Understanding and accessing digitisation opportunities: what farmers need
• EKONmod milk – Miroslav Záhradník and Josef Kanoš (Slovak Republic)
• Breakout session 3

12:15 – 12:45 Results of working groups and general reflection

12:45 - 13:00 Closing of the workshop

13:00 - 14:00 Light lunch and goodbye
Enabling farmers for the digital age: the role of AKIS

Understanding and accessing digitisation opportunities: what farmers needs

EkonMOD milk - the decision support tool for dairy farm management
"Bringing tailored decision support tools for dairy farm management to remove bottlenecks to the delivery of practice-oriented research to end-users"
EkonMOD milk platform continuously integrates applications developed in the sphere of dairy cow husbandry into one platform under the title

Interactive model of a dairy farm
Type of thesis: Dissertation thesis

Thesis title: The Sustainability of Milk Production in Slovakia

Author: Ing. Miroslav Záhradník, PhD.

Department: Department of Economic Policy (FEM)

Thesis supervisor: prof. Ing. Ján Pokrivčák, PhD.

Opponent 1: prof. Ing. Iveta Ubrežiová, CSc.

Opponent 2: doc. Ing. Viera Papcunová, PhD.

Opponent 3: Ing. Pavel Ciaian, PhD.
## Dairy production systems in Slovakia

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Intensive</th>
<th>Extensive</th>
<th>Semi-intensive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per feeding day</td>
<td>&gt;7 €</td>
<td>&lt;4 €</td>
<td>5-6 €</td>
</tr>
<tr>
<td>Herd size (dairy cows)</td>
<td>&gt;200</td>
<td>1-100</td>
<td>&lt;200</td>
</tr>
<tr>
<td>Geographical location</td>
<td>Southern low lands</td>
<td>Mountainous and foothill areas</td>
<td>Uplands and foothills</td>
</tr>
<tr>
<td>Feeding management</td>
<td>All-year round silage based TMR</td>
<td>Dairy cows and heifer on seasonal pastures with minimum concentrate feed</td>
<td>Heifer on seasonal pastures (for dairy cows additional only)</td>
</tr>
<tr>
<td>Management target</td>
<td>20 kg lifetime daily yield</td>
<td>healthy cows, with good locomotion</td>
<td>Various combinations</td>
</tr>
<tr>
<td>Technology level</td>
<td>High level of innovation</td>
<td>Low cost technology</td>
<td>Various combinations</td>
</tr>
<tr>
<td>Prevailing breed</td>
<td>Holstein</td>
<td>Pinzgau, Simmental-Fleckvieh</td>
<td>Various cross-breds</td>
</tr>
<tr>
<td>Milk sale - processing</td>
<td>Industry</td>
<td>Own processing, direct sale</td>
<td>Various combinations</td>
</tr>
</tbody>
</table>

Source: Udržateľné systémy chov dojníc na Slovensku (2016)
## AKIS – Agricultural Knowledge and Innovation Systems in Slovakia

<table>
<thead>
<tr>
<th>Kind of Infrastructure</th>
<th>Names</th>
<th>Places</th>
<th>Sector</th>
<th>Holder</th>
<th>Users</th>
<th>Funders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Infrastructure</td>
<td><a href="http://www.agroporadentvo.sk">www.agroporadentvo.sk</a></td>
<td>No</td>
<td>All</td>
<td>Agroinstitut Nitra and Institute for Forestry Extension and Education</td>
<td>Agricultural extension and food production</td>
<td>Agroinstitut Nitra and Institute for Forestry Extension and Education</td>
</tr>
<tr>
<td>Working places</td>
<td>Info-terminals</td>
<td>All regions and some districts</td>
<td>All</td>
<td>Frame of Central Agricultural Advisory System.</td>
<td>All</td>
<td>Agroinstitut Nitra and Institute for Forestry Extension and Education</td>
</tr>
<tr>
<td>Dialogs</td>
<td>Advisory forum</td>
<td>during the exhibitions, conferences, field days</td>
<td>All</td>
<td>Agroinstitut Nitra and Institute for Forestry Extension and Education</td>
<td>All</td>
<td>Agroinstitut Nitra and Institute for Forestry Extension and Education</td>
</tr>
<tr>
<td>Meetings</td>
<td>All over Slovakia</td>
<td>All</td>
<td>All</td>
<td>Research institutions and agri institutions agencies</td>
<td>All – farmers, clients</td>
<td>Research institutions and agri institutions agencies</td>
</tr>
<tr>
<td>Network</td>
<td>National Rural Network (NRN)</td>
<td>8 regional secretariats</td>
<td>All</td>
<td>partially outsourced and managed by the Agency for Rural Development</td>
<td>All</td>
<td>Ministry of Agriculture and Rural Development of the Slovak Republic</td>
</tr>
</tbody>
</table>
Rationale of the tool:

- better understand the dynamics of the herd structure
- improve economically sensible decision-making abilities
- including farm-focused calculator for GHG emissions

This approach could contribute to the successful deployment of the existing scientific and practical knowledge
Background information:

- detailed and **long run cooperation** with dairy farms
- Development is being **debated with farmers** continuously
- **Sensitivity analysis** belongs to the basics of any farm

**Making this process more clear and easy to tailor**
The application **EkonMOD milk tool** is used to evaluate the economic consequences of different on-farm strategies.

**Why?**

Market volatility means that ‘optimal decisions’ for an individual dairy farm are constantly changing. Even the on-farm conditions change rapidly.

To ensure productivity, dairy farmers need to be constantly aware of useful adjustments which can be made.

The NPPC Teaming activity resulted in developing the parallel adaptation for pig farms - **EkonMOD pig** and the first modifications for **beef cattle and sheep breeders**
How?

Scientific background based on cooperation with 30 dairy farms

Regular meetings to update the development team on any changes

Well planned and scheduled field trips as an irreplaceable part of deployment

Interactive workshops to confront new ideas and to ensure the improvement
Farm analysis

Evaluation of production and reproduction indicators - current state

What we could improve and how?

Model calculations

Setting a financial framework

Evaluation of scenarios

Economic impact in future perspective for each option available

Managerial measures

Taking action!

Replicable procedure
The concept of restoration of mountain agro-ecosystems by low emission system intelligent dairy farming technology to design and create a model dairy farm using the state-of-the-art technological equipment and pasture to manage the transition to robotic milking and feeding and to evaluate the possible combinations of dairy cows grazing pastures with robotic milking systems
Thank you for your attention

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