



EIP-AGRI Workshop 'Enabling farmers for the Digital Age: The Role of AKIS'

26-27 April 2018
Jūrmala, Latvia

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

<https://ec.europa.eu/eip/agriculture/event/eip-agri-workshop-enabling-farmers-digital-age>

EIP-AGRI Workshop 'Enabling farmers for the digital age: the role of AKIS Agenda day 2: 27 April 2018

9:00 – 9:20 **Welcome to Day 2**
Outcomes Day 1 and introduction to Day 2 agenda

9:20 – 10:30 **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

11:00 – 12:15 **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





NATIONAL AGRICULTURAL
AND FOOD CENTRE

RESEARCH INSTITUTE FOR ANIMAL
PRODUCTION NITRA

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



NATIONAL AGRICULTURAL
AND FOOD CENTRE

RESEARCH INSTITUTE FOR ANIMAL
PRODUCTION NITRA

EkonMOD milk
Ekonomický model chovu dojníc

"Bringing tailored decision support tools for dairy farm management to remove bottlenecks to the delivery of practice-oriented research to end-users"





NATIONAL AGRICULTURAL
AND FOOD CENTRE

RESEARCH INSTITUTE FOR ANIMAL
PRODUCTION NITRA

EkonMOD milk
Ekonomický model chovu dojníc

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



SLOVAK UNIVERSITY OF AGRICULTURE IN
NITRA
FACULTY OF ECONOMICS AND MANAGEMENT

FEM-17334-16472

THE SUSTAINABILITY OF MILK PRODUCTION
IN SLOVAKIA

Dissertation thesis

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

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

Source: Udržateľné systémy chov dojníc na Slovensku (2016)

AKIS – Agricultural Knowledge and Innovation Systems in Slovakia

Kind of Infrastructure	Names	Places	Sector	Holder	Users	Funders
Digital Infrastructure	www.agroporadens tvo.sk	No	All	Agroinstitut Nitra and Institute for Forestry Extension and Education	Agricultural extension and food production	Agroinstitut Nitra and Institute for Forestry Extension and Education
Working places	Info-terminals	All regions and some districts	All	Frame of Central Agricultural Advisory System.	All	Agroinstitut Nitra and Institute for Forestry Extension and Education
Dialogs	Advisory forum	during the exhibitions, conferences, field days	All	Agroinstitut Nitra and Institute for Forestry Extension and Education	All	Agroinstitut Nitra and Institute for Forestry Extension and Education
Meetings		All over Slovakia	All	Research institutions and agri institutions agencies	All – farmers, clients	Research institutions and agri institutions agencies
Network	National Rural Network (NRN)	8 regional secretariats	All	partially outsourced and managed by the Agency for Rural Development	All	Ministry of Agriculture and Rural Development of the Slovak Republic

EU Prices

EU Price
Feb-2018

Raw Milk **34.5** €/100 kg **- 3.0%**

EU Prices
(week 14)

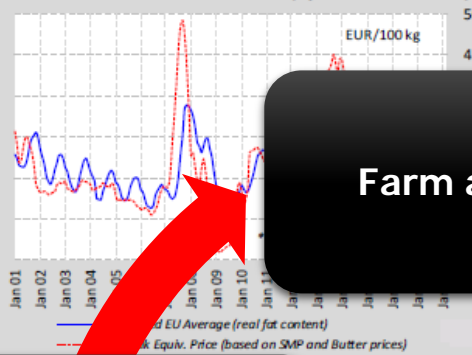
BUTTER **488** €/100 kg **+ 0.6%**

S.M.P. **132** €/100 kg **- 0.3%**

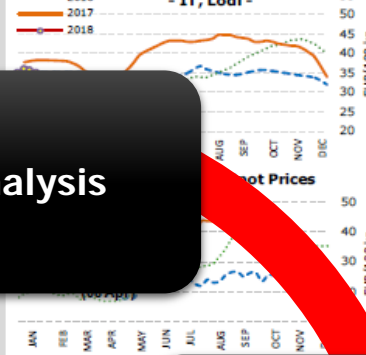
W.M.P. **261** €/100 kg **+ 0.1%**

CHEDDAR **325** €/100 kg **+ 0.2%**

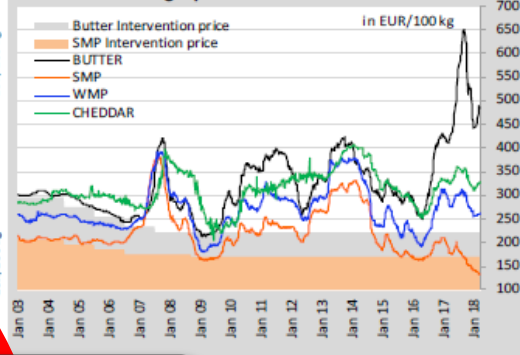
EU Raw Milk Prices Evolution (up to March 2018*)



WEEKLY Milk Spot Prices - IT, Lodi -



EU average quotations of main commodities



Farm analysis

World Quotations

LATEST WORLD QUOTATIONS

	EU	Oceania	USA
Butter	6 071	5 275	4 828
SMP	1 626	1 938	1 531
WMP	3 210	3 225	3 252
Cheddar	3 980	3 625	3 390

Managerial measures

USD/Feed/Energy



identifying opportunities

Feed / Energy quotations
(evolution compared to the previous 4 weeks)

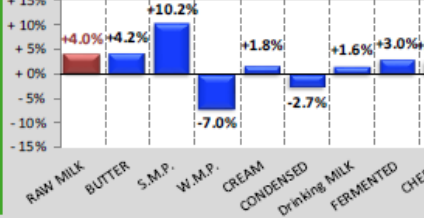
(week 14)

Feed costs **+ 2.4%**

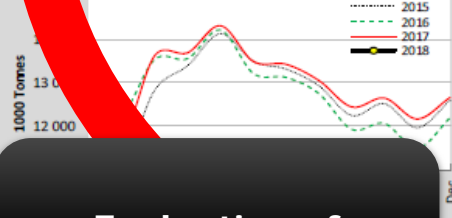
Energy costs **+ 1.9%**

EU Productions

EU Productions (Jan 2018 compared to Jan 2017)

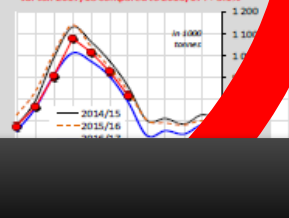


EU - Cows' milk collected

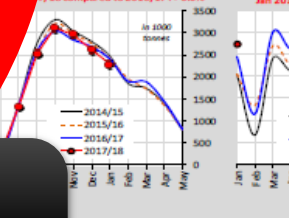


Productions

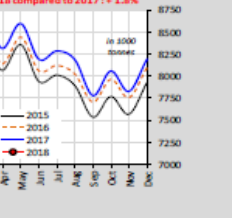
Australian milk production



U.S. milk production



U.S. milk production



Evaluation of scenarios

Model calculations

EU Trade

EU Exports - Top 3 destinations in 2018

In Tonnes	BUTTER			CHEESE		
	2016	2017	2018	2016	2017	2018
Extra-EU	26 143	19 705	24 886	116 004	125 917	128 661
USA	2 798	3 694	4 231	21 060	19 650	18 111
Saudi Arabia	3 050	1 415	2 495	10 050	14 510	12 835
Morocco	1 620	415	1 613	8 232	8 615	9 416

MAIN IMPORTING THIRD COUNTRIES

Jan-Feb 2018 compared to 2017	BUTTER(OA)		CHEESE		S.M.P.		W.M.P.	
	Qty in ktons /17	% 2018	Qty in ktons /17	% 2018	Qty in ktons /17	% 2018	Qty in ktons /17	% 2018
China	22	+10%	20	+3%	65	+12%	187	+12%
Japan	1	+	42	-2%	11	+10%	0	-16%
United States	5	+5%	55	+12%	117	+17%	4	+1%
Australia	2	-1%	26	-7%	25	-14%	12	+14%
Belarus	4	-15%	25	-1%	8	-3%	2	-15%
Argentina	1	+4%	8	+8%	1	-12%	15	+2%

GDT Auction

Event 209 3 April 2018

-0.6%

Average price (202/MT, FAS) \$ 3 477

Anhydrous Milk Fat **-7.0%**

Butter **+4.1%**

Butter Milk Powder **+1.0%**

Cheddar **+2.2%**

Lactose **+1.1%**

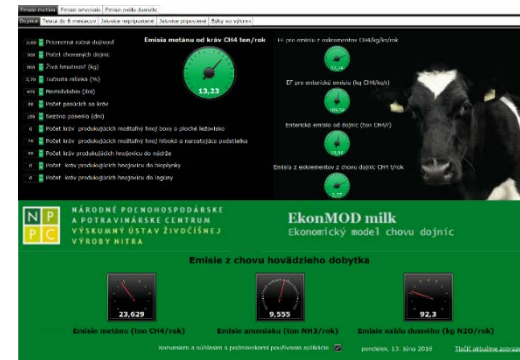
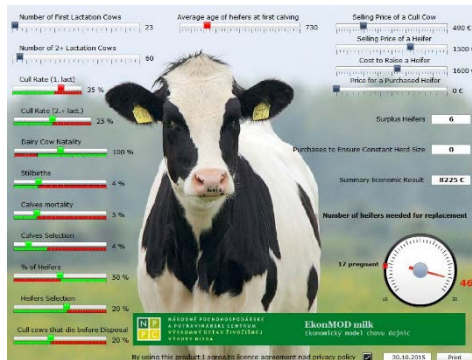
Nonfat Casein **+12.1%**

Skim Milk Powder **-1.8%**

Whole Milk Powder **+1.6%**

Rationale of the tool:

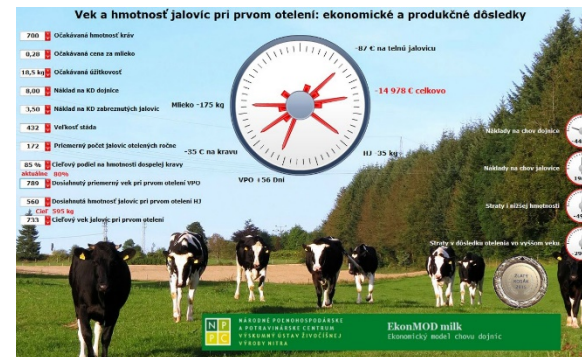
- better understand the dynamics of the herd structure
- improve economically sensible decision-making abilities
- including farm-focused calculator for GHG emissions



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



NATIONAL AGRICULTURAL
AND FOOD CENTRE

RESEARCH INSTITUTE FOR ANIMAL
PRODUCTION NITRA

EkonMOD milk
Ekonomický model chovu dojníc

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

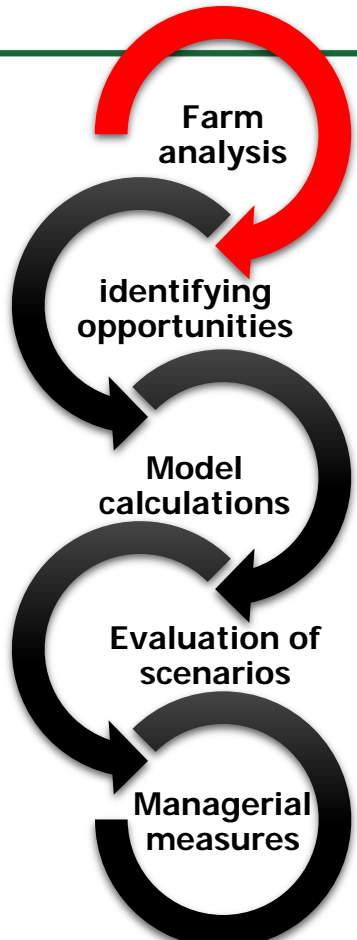




AGB BEŇUŠ
DRUŽSTVO



EkonMOD milk
Ekonomický model chovu dojníc



Evaluation of production and reproduction indicators – current state

What we could improve and how?

Setting a financial framework

Economic impact in future perspective for each option available

Taking action!

Replicable procedure



NATIONAL AGRICULTURAL
AND FOOD CENTRE

RESEARCH INSTITUTE FOR ANIMAL
PRODUCTION NITRA



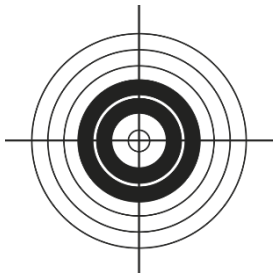
AGB BEŇUŠ
DRUŽSTVO



EkonMOD milk
Ekonomický model chovu dojníc



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



NATIONAL AGRICULTURAL
AND FOOD CENTRE

RESEARCH INSTITUTE FOR ANIMAL
PRODUCTION NITRA



Parametre intenzity ch... Obrat stá... Stav **Krmne dá...** Produk... Nákl...

Obsah živín v krmi... **Kr...** Telatá Jalovi... Výk... Potre...



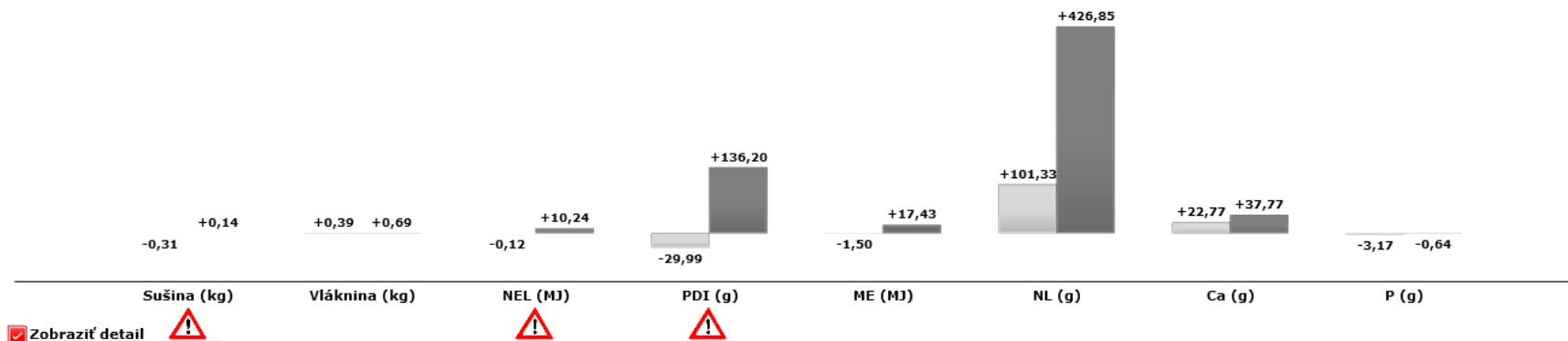
Produkčné kravy

Siláž kukuričná **28**
Siláž lucerna **9.5**
Seno lucernové **2**
DOVP **2**

Suché kravy - potreba na záchov a potreba živín a energie na produkciu: 8 litrov mlieka

27
9
2
2

Rozdiel medzi KD a potrebou pre produkčné kravy Rozdiel medzi KD a potrebou pre suché kravy



Zobrazit detail

Detail potreby živín									
Potreba/Živiny	Sušina (kg)	Vláknnina (kg)	NEL (MJ)	PDI (g)	ME (MJ)	NL (g)	Ca (g)	P (g)	
Potreba pre záchov	10,30	2,42	39,04	394,00	65,10	429,75	26,67	17,70	
Potreba na mlieko	5,02	1,17	53,06	836,99	88,39	1422,88	50,22	30,13	
Produkčné kravy	15,33	3,60	92,10	1230,99	153,49	1852,62	76,89	47,83	
Suchostojace kravy	12,70	2,98	64,40	794,00	107,34	1109,75	50,67	32,10	

Rozumiem a súhlasím s podmienkami používania aplikácie

pondelok, 16. apríla 2018

[Tlačiť aktuálne zobrazenie](#)



NATIONAL AGRICULTURAL AND FOOD CENTRE

RESEARCH INSTITUTE FOR ANIMAL PRODUCTION NITRA

EkonMOD milk
Ekonomický model chovu dojníc



MODERNÝ AGROBIZNIS

34. medzinárodný filmový festival
agrofilm
1.-6. október 2018
www.agrofilm.sk



ASSOCIATION OF SLOVAK SPOTTED CATTLE BREEDERS - COOPERATIVE



Association of Slovakian Young Farmers



KLUB POĽNOHOSPODÁRSKYCH ODBORNÍKOV pri SPU

Dairy Management



DEPARTMENT OF DAIRY SCIENCE
University of Wisconsin-Madison



AGROBIZNIS



NATIONAL AGRICULTURAL
AND FOOD CENTRE

RESEARCH INSTITUTE FOR ANIMAL
PRODUCTION NITRA

EkonomOD milk
Ekonomický model chovu dojníc

Thank you for your attention

National Agricultural and Food centre

Hlohovecká 2, 951 41 Lužianky
Slovak Republic

Miroslav Záhradník

Research and development worker
e-mail: zahradnik@vuzv.sk
tel. +421 902 480 531

AGB Beňuš, grange

976 64 Beňuš
Slovak Republic

Jozef Kanoš

chairman
e-mail: predseda@agbbenus.sk
tel. +421 915 857 301