



TRansition paths to sUustainable
legume-based systems in EEurope

Applied research along the whole value chain: introduction of ÖMKi

Orsolya Papp deputy director



Background



Ökológiai Mezőgazdasági Kutatóintézet
Research Institute of Organic Agriculture | Forschungsinstitut für biologischen Landbau

PARTNER OF FIBL SWITZERLAND



Aim: Fostering scientific research of organic agriculture in Hungary

2011: Foundation of ÖMKi

Founder: FiBL Switzerland, Funder: Pancivis Foundation

2012: Launch of on-farm participatory research network

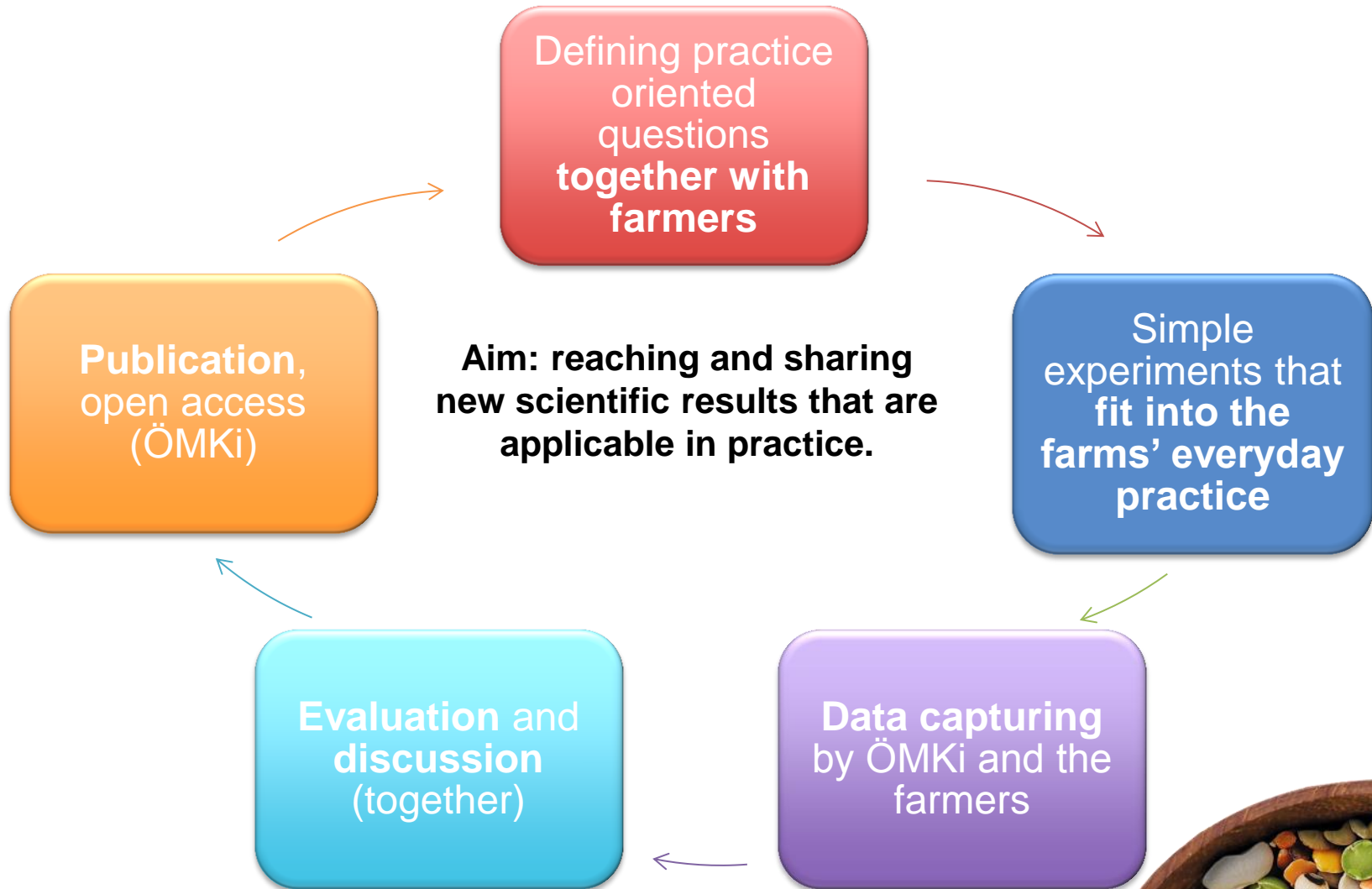


EXCELLENCE FOR SUSTAINABILITY





On-farm experimentation network



1. Investigation of hulled wheat species in organic production (einkorn, emmer landraces)



Mihály Földi

Advantages of minor cereals

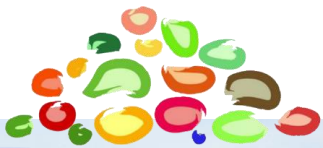
- drought and disease **resistance**, weed suppression
- **low gluten** content, high digestibility
- diverse traditional cereal species: **agrobiodiversity**
- new **premium product** line for food industry



On-farm research network
14 varieties of einkorn and emmer were compared and tested on organic farms and on experimental sites



Stakeholder interviews
(*integrators, millers and bakeries, farmers, research institutes, consumer organizations*):
19 actors (einkorn)
15 actors (emmer)



DIVERSIFOOD





Minor Cereals in Hungary: Market positioning

2017 Price: 300 Euro/t

No self-organization among the farmers

Underdeveloped and unpredictable local market

Lack of organic seeds

Challenges

Lower yield → unsecure livelihood

Lack of information among consumers

Production technology (sowing, harvesting, husking)

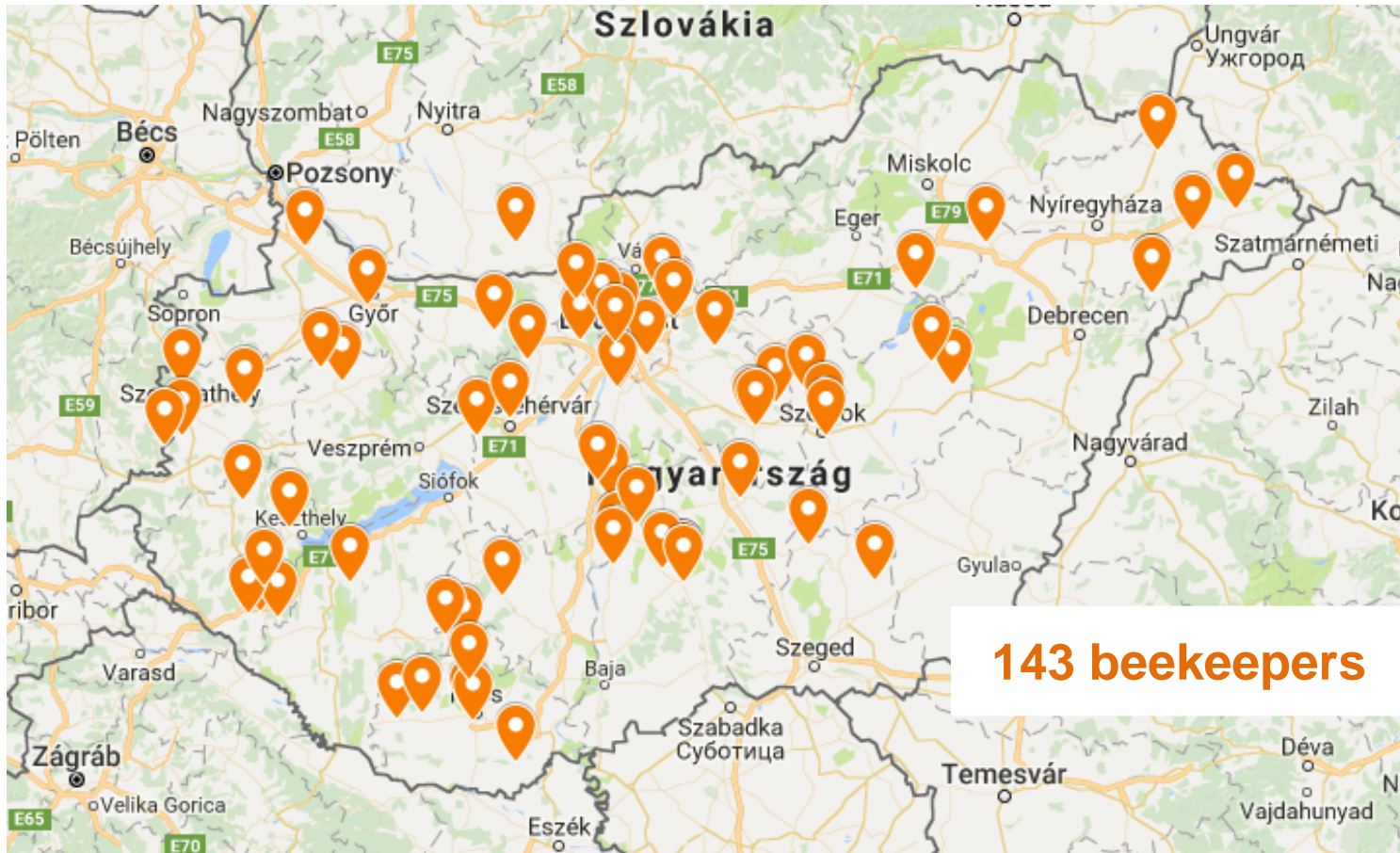
Higher price than other grains → targets an elite niche market



2. Testing the efficacy of different types of varroa control treatments and hive management practices



Tamás Csáki



143 beekeepers





143 cooperating beekeepers have changed their conventional practices to using organic acids (lactic acid and oxalic acid) due to the on-farm network of ÖMKi, and are converting to organic beekeeping in an increasing number.



3. On-farm experiment for developing species-rich seed mixtures for Hungarian vineyards



Ádám Donkó

Why do we need cover crops? Because of climate change the likelihood of extreme weather conditions is rising (f.e. heavy rainstorms) which results soil degradation on steep slope plantation.



Mixtures	Biocont-Ecowin	Legumes mixture	Grass-herb mixture
<i>Centaurea cyanus</i>			1,0
<i>Achillea cf. millefolium</i>			1,5
<i>Sanguisorba minor</i>	0,5		
<i>Linum perenne</i>			1,5
<i>Phacelia tanacetifolia</i>	2,7		
<i>Trifolium repens</i>	8,1	15,0	5,0
<i>Medicago lupulina</i>	16,2	15,0	10,0
<i>Silene vulgaris</i>			1,5
<i>Centaurea jacea</i>			1,0
<i>Plantago lanceolata</i>	1,1	5,0	10,0
<i>Salvia nemorosa</i>			1,5
<i>Daucus sp.</i>	1,6		
<i>Sinapis alba</i>	5,4		
<i>Fagopyrum esculentum</i>	8,1		
<i>Festuca rupicola</i>			30,0
<i>Lotus corniculatus</i>	2,7	15,0	10,0
<i>Onobrychis viciifolia</i>	37,3	15,0	
<i>Coronilla varia</i>		10,0	10,0
<i>Galium verum</i>			1,5
<i>Vicia sativa var. fuliginosa</i>	16,2	10,0	10,0
<i>Trifolium pratense</i>		15,0	5,0
Species (n)	11	8	15



← Mixture of legumes



Grass-herb mixture →



← Biocont –
Ecwin
mixture.....





Völgy



MÉSZÁROS PÁL

BORHÁZ ÉS PINCE



Stefán Tibor



BOCK



Vida



First ÖMKi product: ,ÖMKi Élő Sorköz' seed-mixture



As a result of the 4 years long experimental work, ÖMKi Élő Sorköz' seed mixture is available from this autumn, it is produced by a Hungarian seed company (Lajtamag) and can be ordered through ÖMKi also. Under the first preorders 1 ton of seed mixture was already sold.



ÖMKi Élő Sorköz

Fajgazdag
sorköztakaró-magkeverék
szőlő-ültetvényekbe

2940 Ft/kg + ÁFA

Előjegyezhető: 2018. július 31-ig
5% Kedvezmény: 2018. július 6-ig



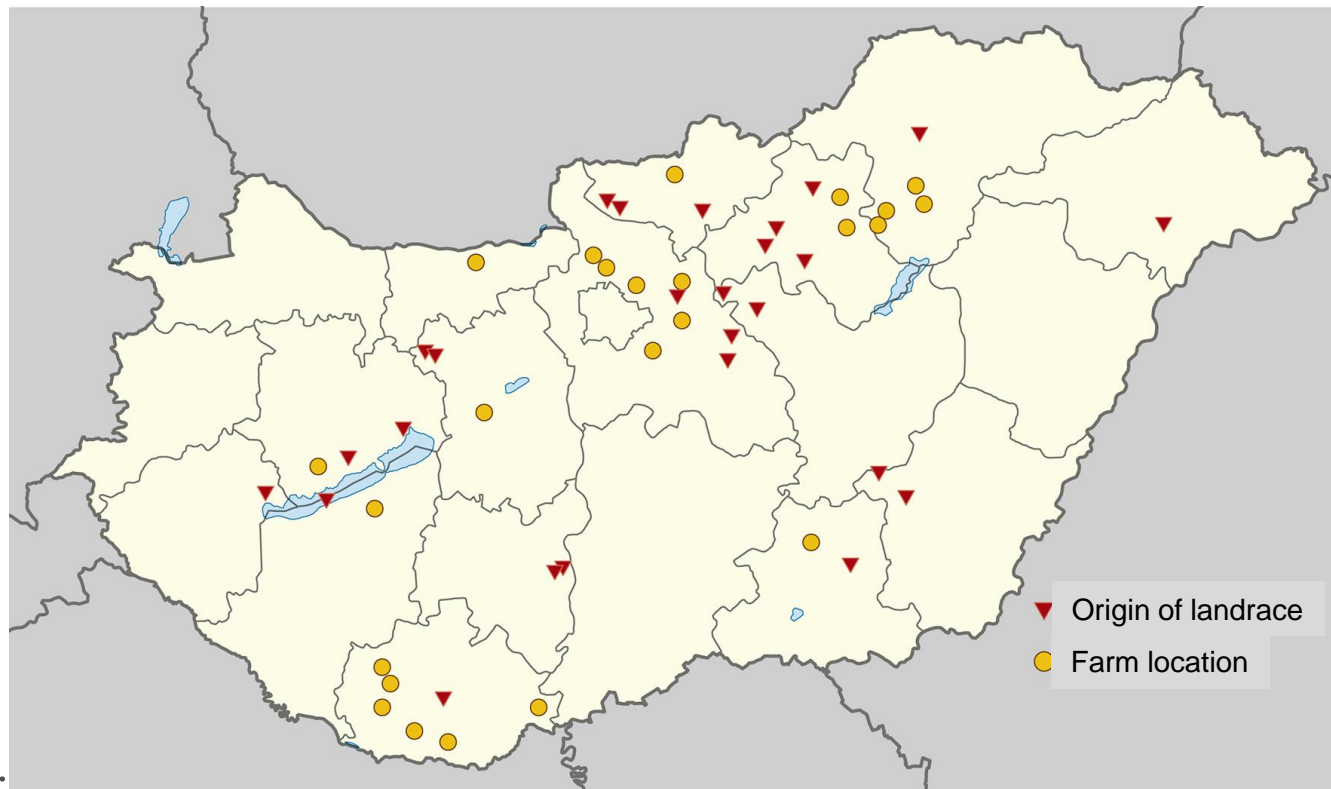
Életet viszünk a szőlőbe!



4. Land race tomatoes and their processing possibilities



In cooperation with NÖDIK gene bank (Center for Plant Diversity) promising landrace tomato samples were raised from storages and were propagated. The testing of the 27 landrace tomato varieties took place in 47 organic vegetable farms.





Tastings with chefs and consumers

Parallely with the 4 years long on-farm trial, several tastings were arranged with chefs and consumers. As a result the 6 best landrace tomato landraces were selected.



Selection of 6 best performers

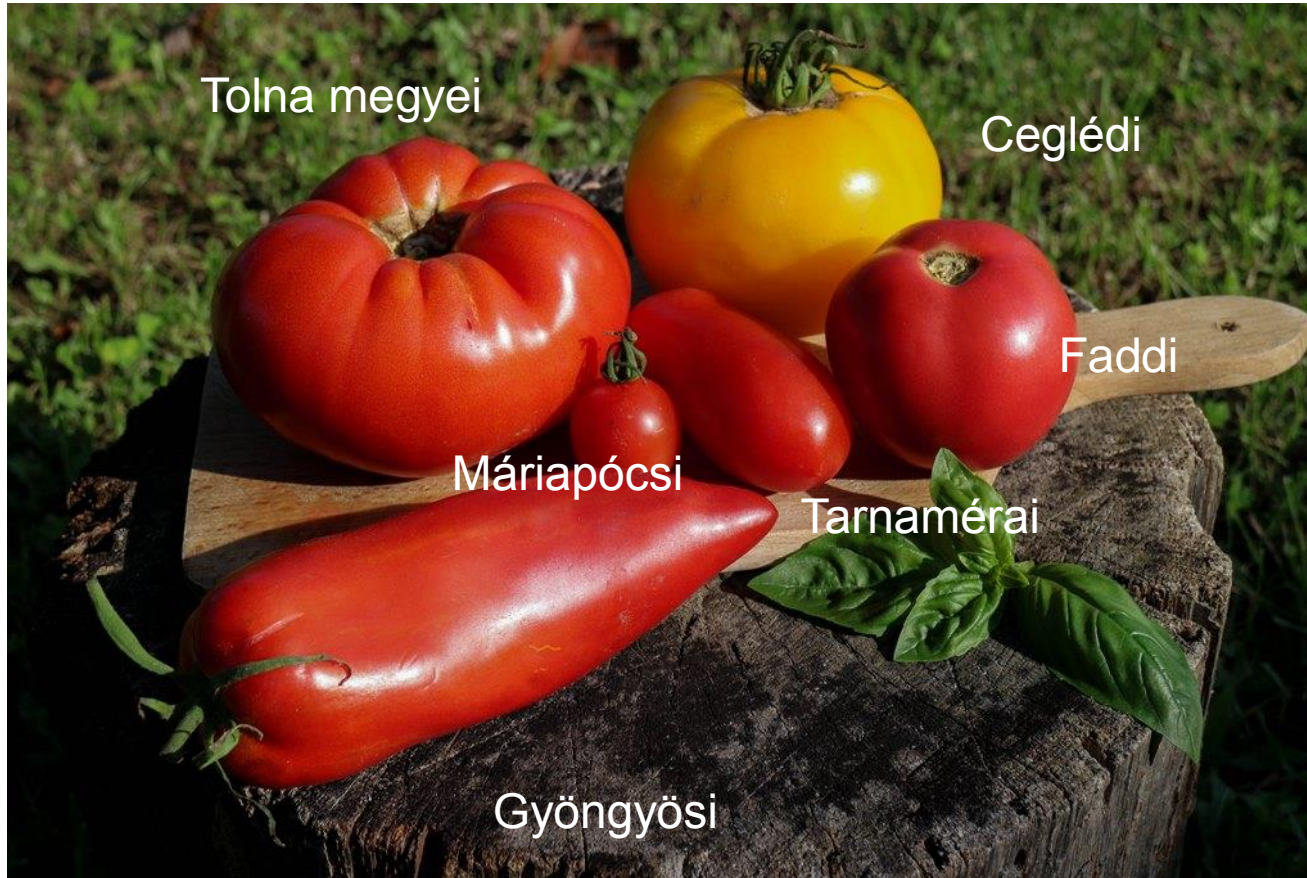


Photo: Boziné Pullai Krisztina





General contact information

Website: www.biokutatas.hu

Email: orsolya.papp@biokutatas.hu

Phone number: 0036 20 321 7014



TRansition paths to **sU**stainable legume-based systems in **E**urope (**TRUE**) has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 727973

