



TRansition paths to sUustainable  
legume-based systems in EEurope

## Experiences from the first Continental LIN Workshop

---

November 2017 in Hohenheim, Germany



# Multi-Stakeholder-Workshop with participants from the whole value chain



# Multi-Stakeholder-Workshop with participants from the whole value chain



**Beans and  
field peas**



**lupin**



*CLIN-co-hosts:*  
**Legume model and  
demonstration  
networks -**  
as the main parts of  
the German protein  
strategy

**soybean**



# New network established in 2018 on small seeded /forage legumes



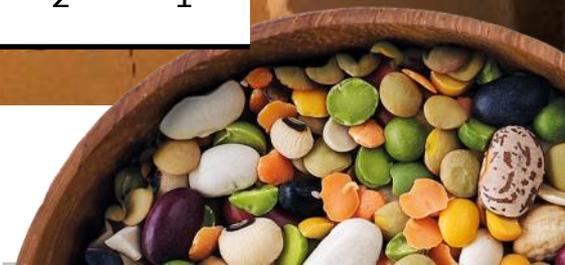
# Toolbox for Transdisciplinary Research and multi-stakeholder involvement



Markets & Economics  
 What is your market?



	local	national	intern.	conv.	organic	food	feed	other
peas	4	2	4	6	8	<b>10</b>	3	2
beans	4	6	6	6	8	<b>8</b>	3	-
soybeans	1	4	5	3	3	<b>3</b>	4	-
chickpeas	-	2	2	3	4	<b>3</b>	1	-
lupins	-	2	-	1	2	<b>2</b>	-	1
lentils	-	1	2	3	4	<b>8</b>	-	-
clover	-	1	2	3	2	-	2	1
alfalfa	-	1	2	2	1	-	2	1









**Exhibition of new legume based products**

# Exhibition of new legume based products



# Machinery for legume processing

A photograph of a large industrial machine, the EST (Effizient Soja Toasten) soybean toasting machine, in a factory setting. The machine is white with a large sign on its side. The sign features a green leaf logo above the text "EST" and "Effizient Soja Toasten". The machine is situated in a dark environment, possibly a grain elevator or processing plant, with a large pile of brown soybeans visible on the left. A control panel with a screen and buttons is visible on the right side of the machine.

**est**  
Effizient Soja Toasten

Hohe Energieeffizienz  
weniger als 100 kWh pro Tonne Soja





## Legume based lunch



# Which changes are needed for more legumes in Europe?



## CHANGES NEEDED

**General**

- Sustainable Legume Production
- Developing needed in terms of
- Breeding
- Education
- Consulting
- Research
- What would it take for farmers to grow more legumes?
- Recommendations

**Legume-Specific**

- Crop-livestock integration
- high prices for N-fertilizer → higher legume production
- Mineralization of external rats
- technical solutions to integrate legumes into crop rotations
- training & extension service
- Ecology as fundamental for sustainability
- Free for legumes
- recompensation for ecosystem services
- direct payments for good practice
- Encourage farmers to market their ecosystem services

**Actor-Specific**

- Producers
- Communities
- Subsidy seeds to reduce farmers' risk
- educate educators
- Ecology as fundamental for sustainability
- better image of legume crops
- pick crop app and system approach
- farmer associations, marketing, machinery, knowledge
- farmer to farmer training and extension

**Region-Specific**

- Synergies betw. farmers + researchers
- Basic legume Education
- National Protein Crop Strategies
- Coordination of efforts (like breeding programmes)
- Communicate legume benefits existing
- Regional legume networks

## Topic PRODUCTION

**Hampering Factors**

- all
- yield level stability
- Climate change might lead to new species
- Less nitrogen fertilizers
- mixed cropping systems
- agroeological benefits
- crop rotation: System approach
- Green manuring
- improvement for pollinators
- legumes mitigate climate change
- legume cover crops instead of ploughing
- eat less meat
- Small seeded legumes much more effective

**Promoting Advantages**

- weed control
- diseases (seed quality, rotting)
- Post-harvest processing
- lack of experience
- Rotation problems
- specific organic
- varieties specific
- inoculation
- terminating in legumes
- autogenic rooting system → better soil
- mixed cropping needed!!!

**Sustainability**

- soy
- Peas
- Beans
- too little breeding programs
- Greening without pesticides
- herbicides in m
- Actor
- Consultants do not know
- Breeder
- policy



# Breakout group on production



- Regional Legume Networks
- Monetary incentives
- Communication
- Research
- Education and extension services
- General ecology as fundament for sustainability
- Producer groups



# Breakout group on markets



- Consumer education
- Consumer habits
- Transparency
- Marketing
- Processing
- Production
- Market supply
- Feed market
- Infrastructure
- high volume trading



# Breakout group on policies



- Education
- CAP
- Resource policy
- Research policy
- Organic & small scale farming
- Nutrition & Diet
- Climate adaption
- Policy coherence
- Market policy



# Final discussions

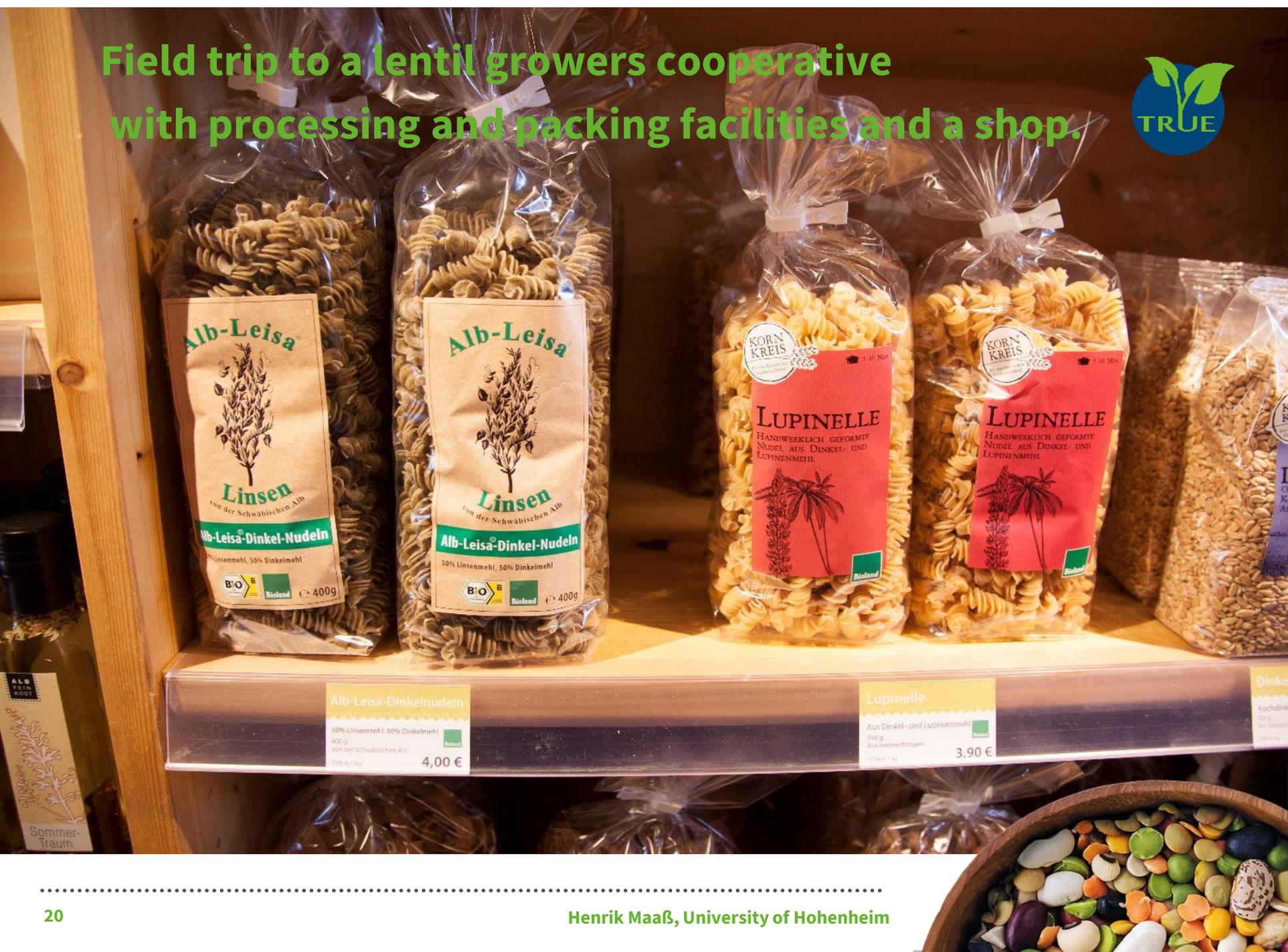




**Field trip to a lentil growers cooperative with processing and packing facilities and a shop.**



# Field trip to a lentil growers cooperative with processing and packing facilities and a shop.





## General contact information

Website: [www.true-project.eu](http://www.true-project.eu)

Email: [info@true-project.eu](mailto:info@true-project.eu)

Facebook/Twitter: [@TrueLegumes](https://www.facebook.com/TrueLegumes)



**TR**ansition 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

