

# “Impact matrix analysis and cost-benefit calculations to improve management practices regarding health status in organic dairy farming”



# Starting conditions

- Organic agriculture is a **pioneer** for the **development** of consumer oriented traits of product and process quality
- EU legislation: harmonised minimum standards (1804/1998)
- Animal health and welfare (AHW) increasingly important with respect to the buying decisions for organic products

Aim and scope of the Council Regulation (EC) No. 834/2007

*1. This Regulation provides the basis for the **sustainable development** of organic production ..., **guaranteeing fair competition**, ensuring consumer confidence and protecting consumer interests.*

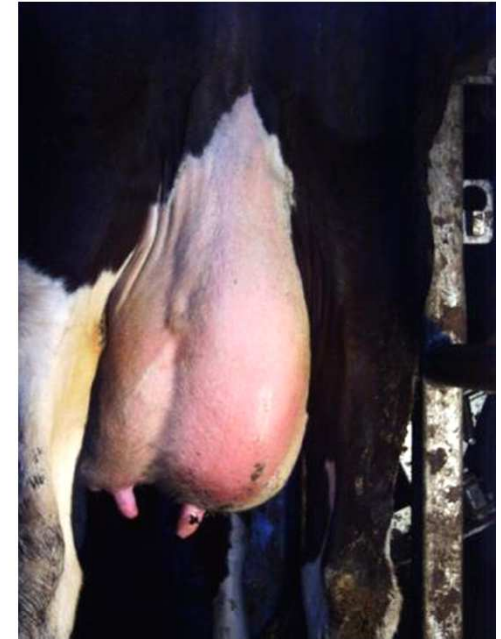


# Challenges in organic dairy production

- Production diseases in organic dairy production

# Assessment of production diseases

- Mastitis
- Lameness
- Metabolic disorders
- Fertility disorders



# Challenges in organic dairy production

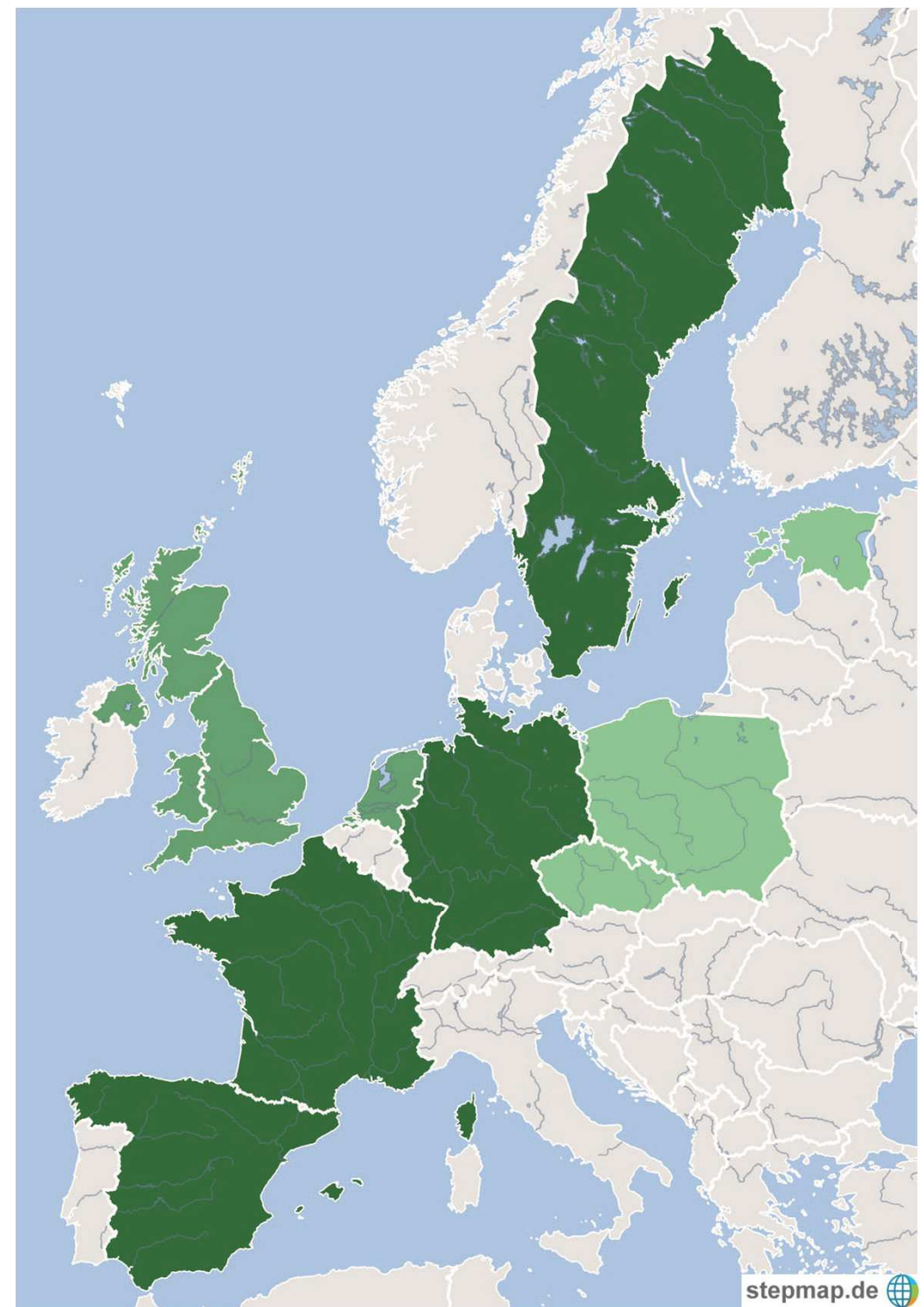
- Production diseases in organic dairy production
- Diversity of organic livestock systems





# IMPRO Consortium

U N I K A S S E L  
V E R S I T Ä T



■ Farm visits WP2, WP 3, WP4

■ Farm visits WP6

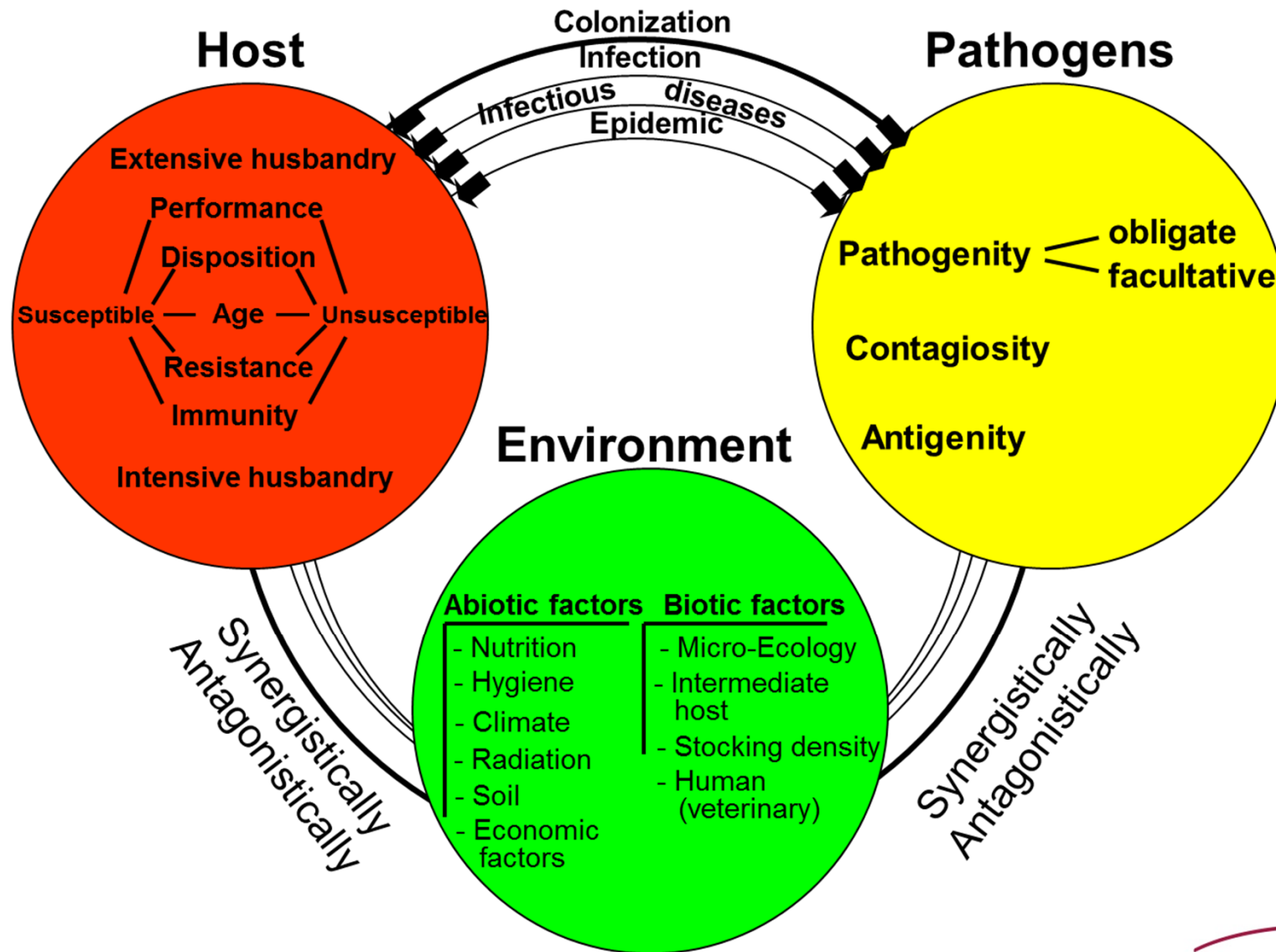
■ Roadshows

# Challenges in organic dairy production

- Production diseases in organic dairy production
- Diversity of organic livestock systems
- Complexity of multi-factorial syndromes



# Complexity of multi-factorial syndromes



(modified accord. to Mayr & Rojahn, 1968)

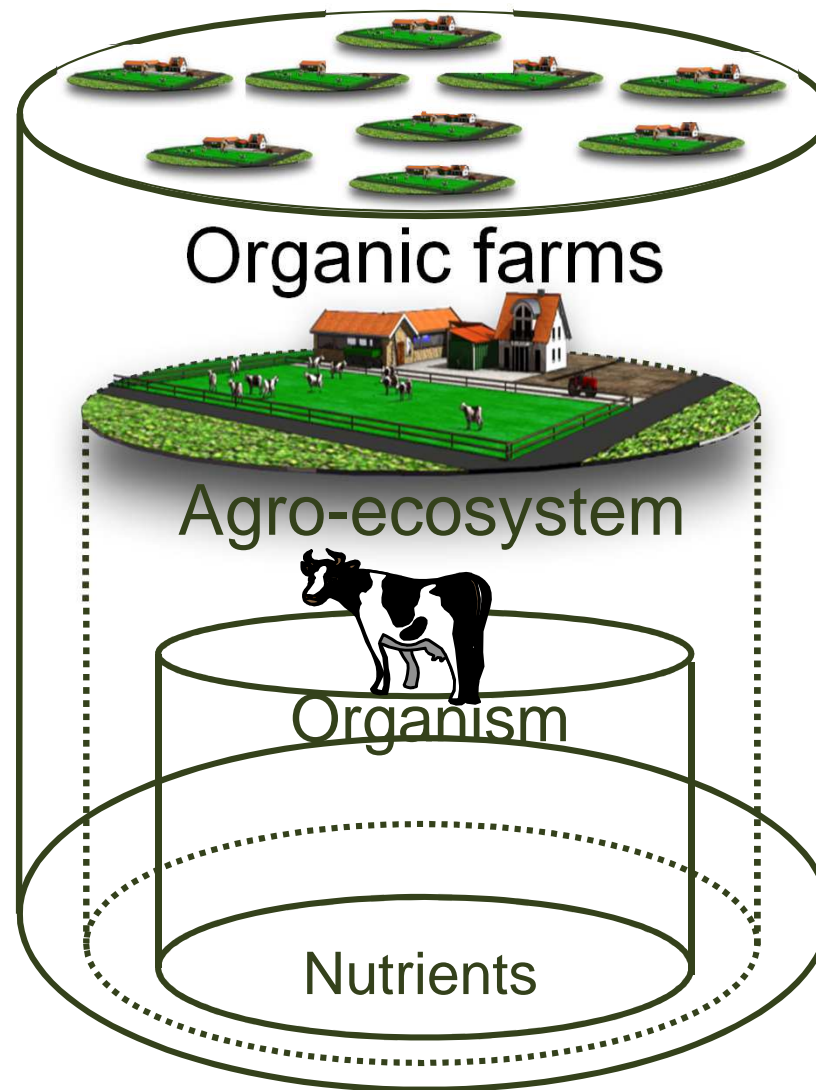


# Challenges in organic dairy production

- Production diseases in organic dairy production
- Diversity of organic livestock systems
- Complexity of multi-factorial syndromes
- Variation in the interconnectedness between numerous variables on various process levels

# Different process levels involved

Production diseases emerge from a lack of capabilities and resources to adapt to situations caused by interactions between super- and subordinate living systems



# Challenges in organic dairy production

- Production diseases in organic dairy production
- Diversity of organic livestock systems
- Complexity of multi-factorial syndromes
- Variation in the interconnectedness between numerous variables on various process levels
- Conflicting aims and economic interests



# Challenges through competition





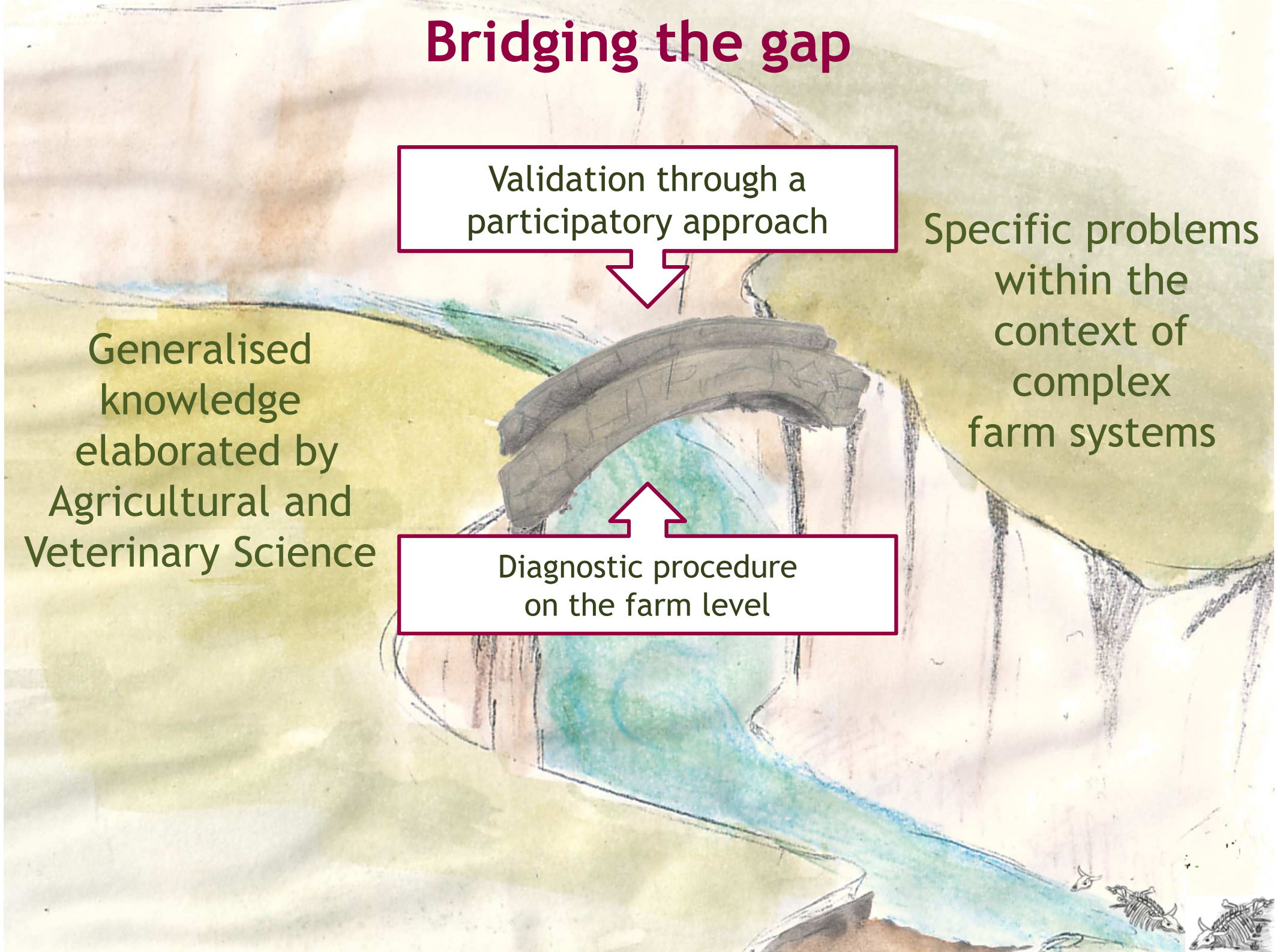
# Bridging the gap

Validation through a  
participatory approach

Specific problems  
within the  
context of  
complex  
farm systems

Generalised  
knowledge  
elaborated by  
Agricultural and  
Veterinary Science

Diagnostic procedure  
on the farm level



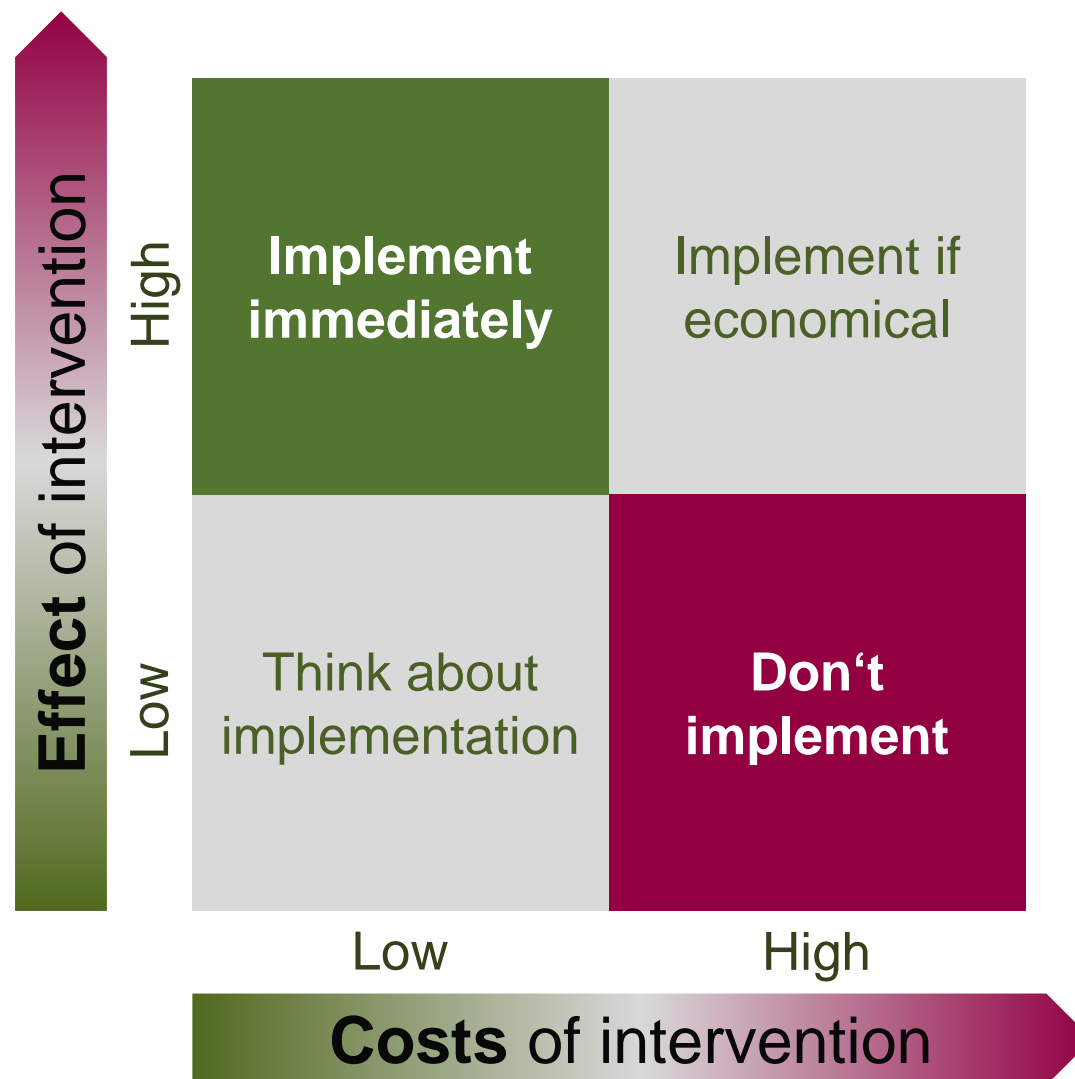
# Participatory approach



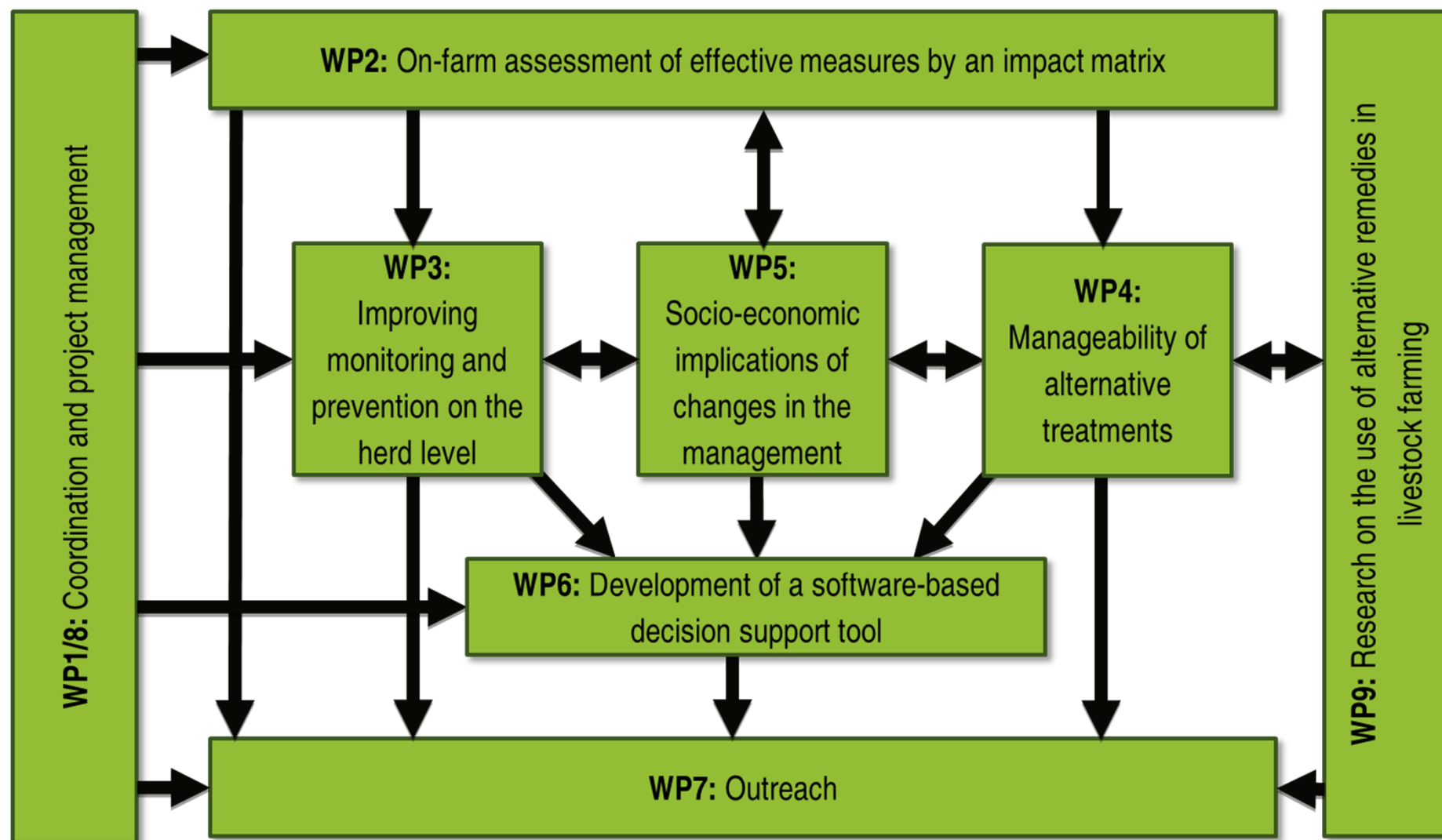
Complexity requires a participatory approach based on diagnostic tools to identify the farm specific weak points and starting points for improvements



# Farm specific effectiveness and efficiency



# Structure of the IMPRO project



# Innovative approaches as a reply to challenges

- **Challenges**

- Production diseases in organic dairy production
- Diversity of organic livestock systems
- Complexity of multi-factorial syndromes
- Conflicting aims and interests
- Variation in the interaction between variables

- **Innovative approaches**

- Recording of production diseases
- Impact matrix analyses and participatory approach
- Proactive protocols
- *Lege-artis* concept for a target oriented treatment
- Cost-benefit calculations

