



## EJP Soil Science Days 2024

**Identifying farmers' priorities in soil management for climate adaptation to develop attractive support measures**

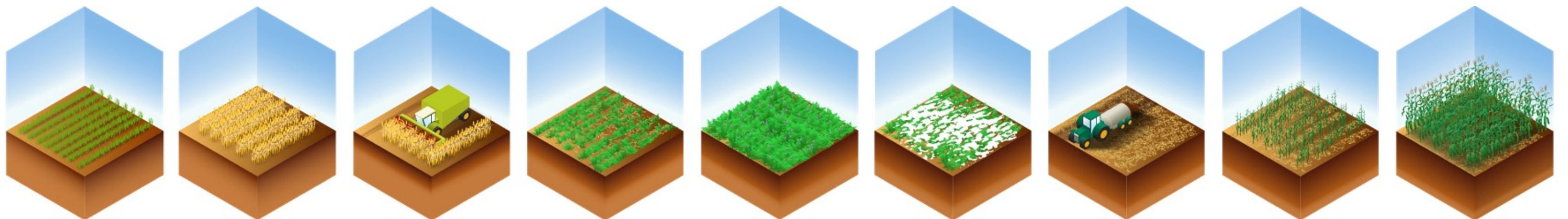
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## Overview

- **SoilX project & research questions**
- **Method: Q Methodological interviews**
- **Results: Farmer Viewpoints**
- **Implications**



# The SoilX project

SoilX = Soil management to mitigate climate change-related precipitation eXtremes



Image: Bano Mehdi-Schulz

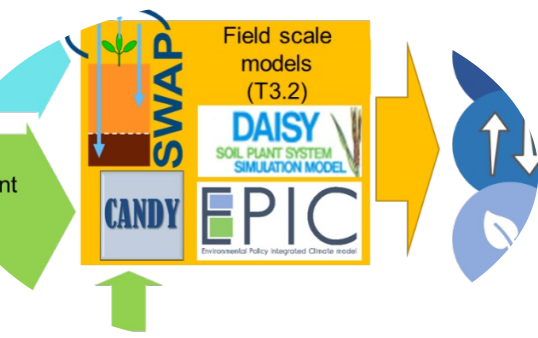


Image: SoilX consortium



Image: Mariella Schreiber

1. How did **soil management** alter soil hydraulic properties in long-term field experiments across Europe?
2. Can soil structural improvements enhance the **resilience** of cropping systems to future **precipitation extremes**?

## Our focus:

1. Which **socio-economic factors** hinder/enable soil management improvements? What priorities do different farmer types have in their soil management?

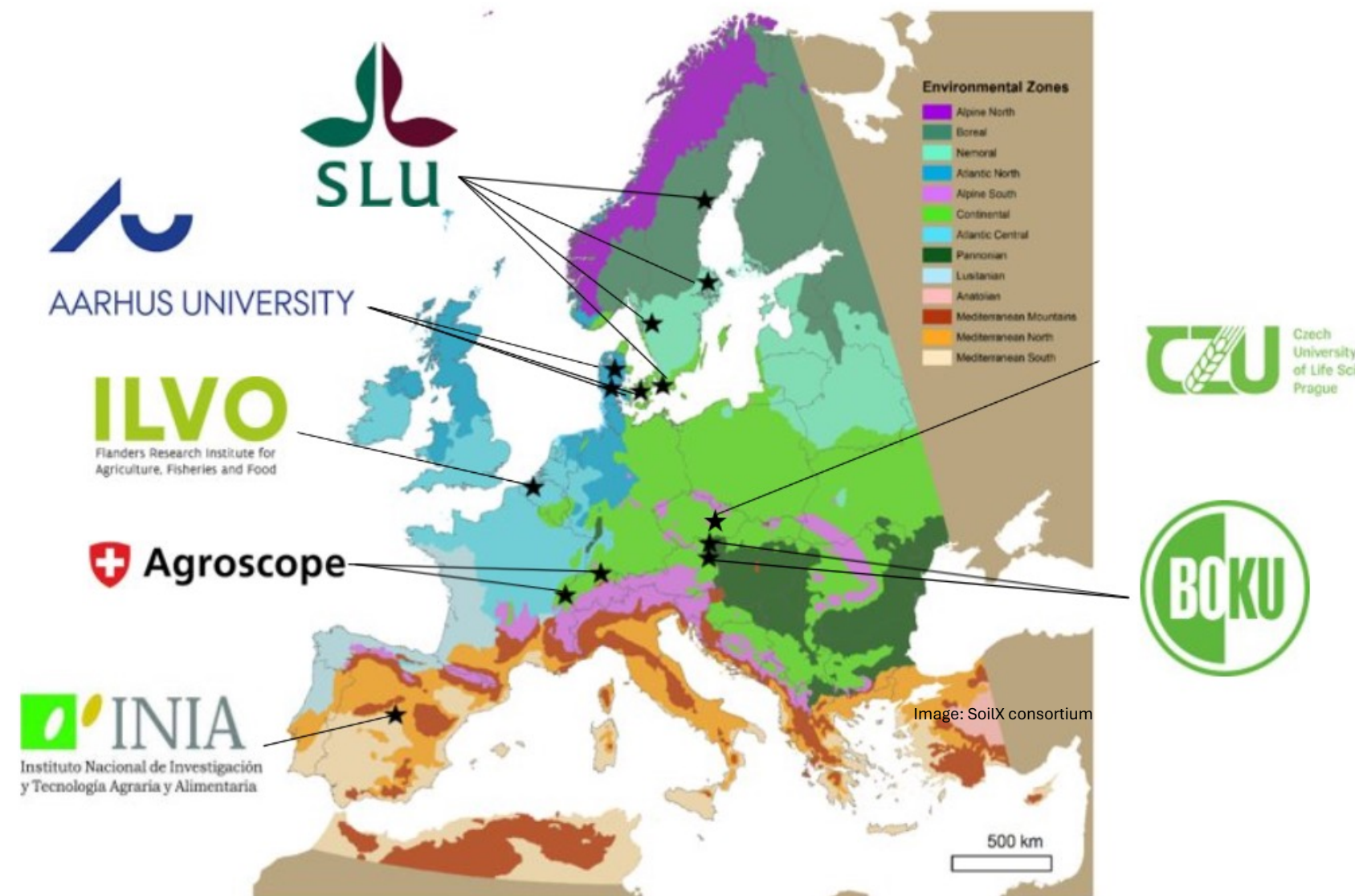


Image: SoilX consortium



# Why farmers' viewpoints & priorities?

Underlying idea:

- Uptake of soil management practices depends on farm context and (related) **subjective views**
- Subjective views differ between farmers, but they can be grouped into „**typical**“ **viewpoints**



Goals:

- Identify **viewpoints** & priorities on soil management
- Identify **support measures** fitting viewpoints



Method:

- Mixed Method Approach
- Q Methodology, as part of semi-structured interviews with farmers



# Q Methodology to identify viewpoints

Collect statements



Literature & stakeholder interviews

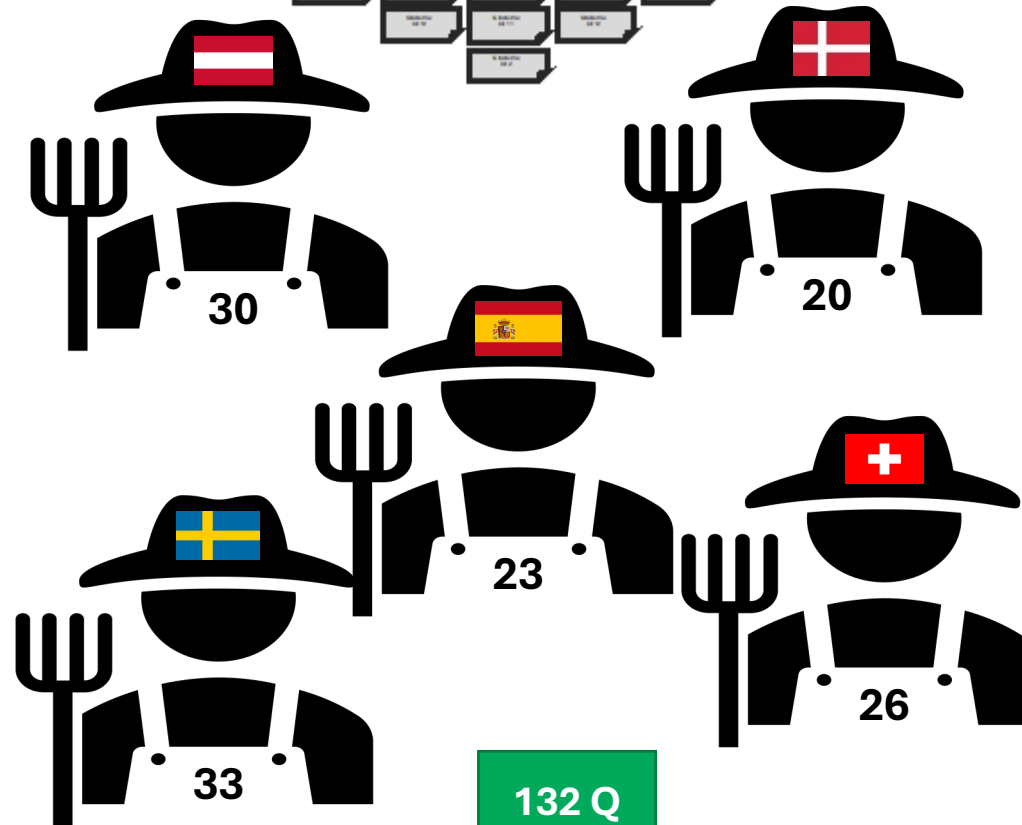
45 statements

*When I work with my soil, it is important for me...*

- Statement
- ... that my plots look tidy and neat.
  - ... to preserve the soil for future generations.
  - ... to consider the costs involved.
  - ... to ensure the long-term economic viability of my farm.
  - ... to prioritize short-term profit
  - ... to receive subsidies for what I do.
  - ... to maximize crop yields in this year.
  - ... how far a plot is away from the farmhouse.
  - ... to hand it over to my successors in a good condition.
  - ... that it is possible to work with the machines I have access to...
  - ... to make a difference between the land I own and the land I do not own myself.
  - ... to rely on what I learned in my training or education.
  - ... to rely on the experiences of colleagues.
  - ... to rely on my own practical experiences.
  - ... to do what I believe in.
  - ... to consider how neighboring plots are farmed.
  - ... to consider how my actions impact my surroundings/neighborhood.
  - ... to minimize working time.
  - ... to rely on traditional, handed-down knowledge.
  - ... to rely on the advice from advisory services.
  - ... how long I will continue to farm.
  - ... that I don't have to deal with more bureaucracy than necessary.
  - ... to rely on the latest recommendations from research.
  - ... not to come in conflict with legal regulations.
  - ... to mitigate negative effects from extreme weather events.
  - ... to reduce soil erosion.
  - ... to prevent pests.
  - ... to know the plot's soil quality data.

- Farm economics
- Farm structural aspects
- Personal values
- Institutional aspects
- Natural aspects
- Social aspects

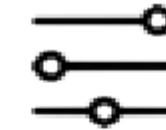
Sort statements



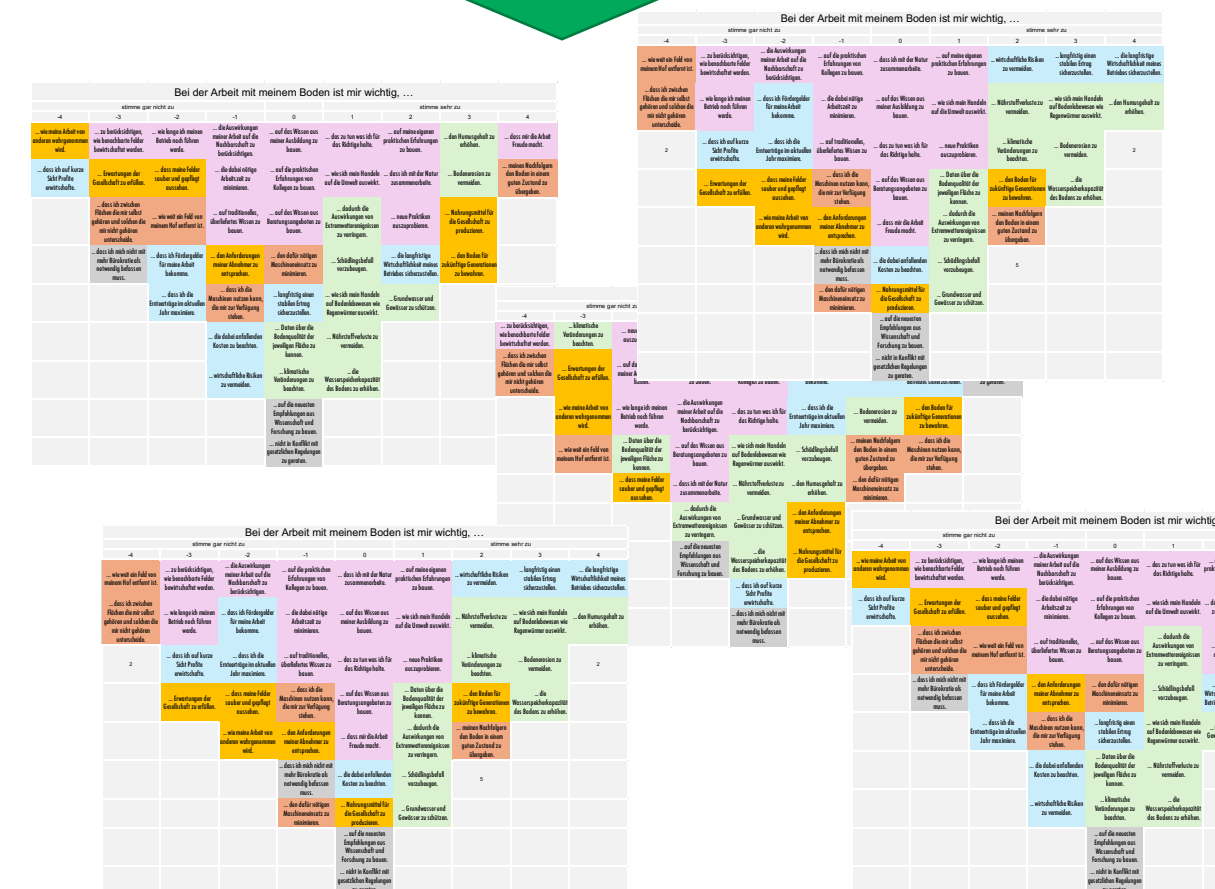
132 Q sorts



Analyse (group) sortings



5 view-points

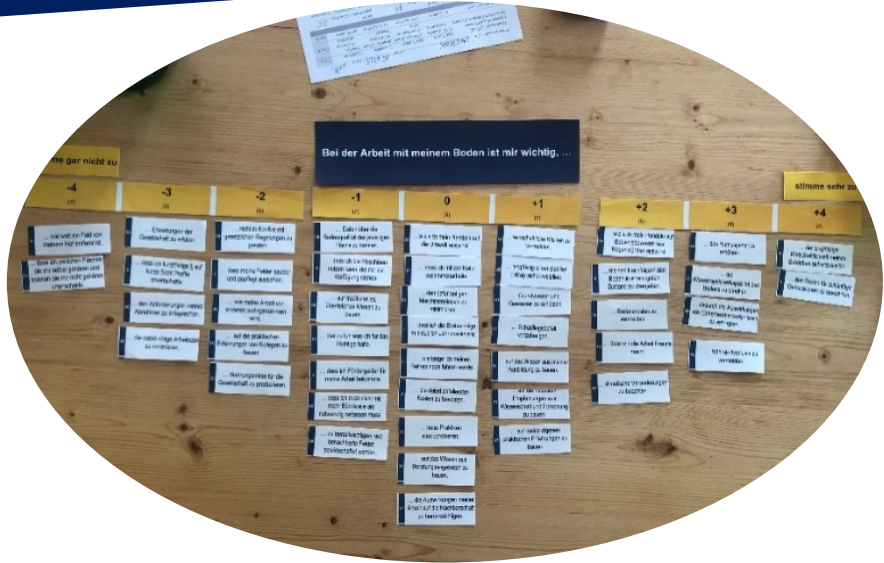


Images: Mariella Schreiber, Heidi Leonhardt, Michael Braitto

# Semi structured Interviews

- LTE case study regions in 5 countries (Austria, Denmark, Switzerland, Sweden & Spain)
- Farms farming at least *some* cropland
- Diversity (organic/conventional, size, etc.)
- General information on farm & soil management, Q part, other questions

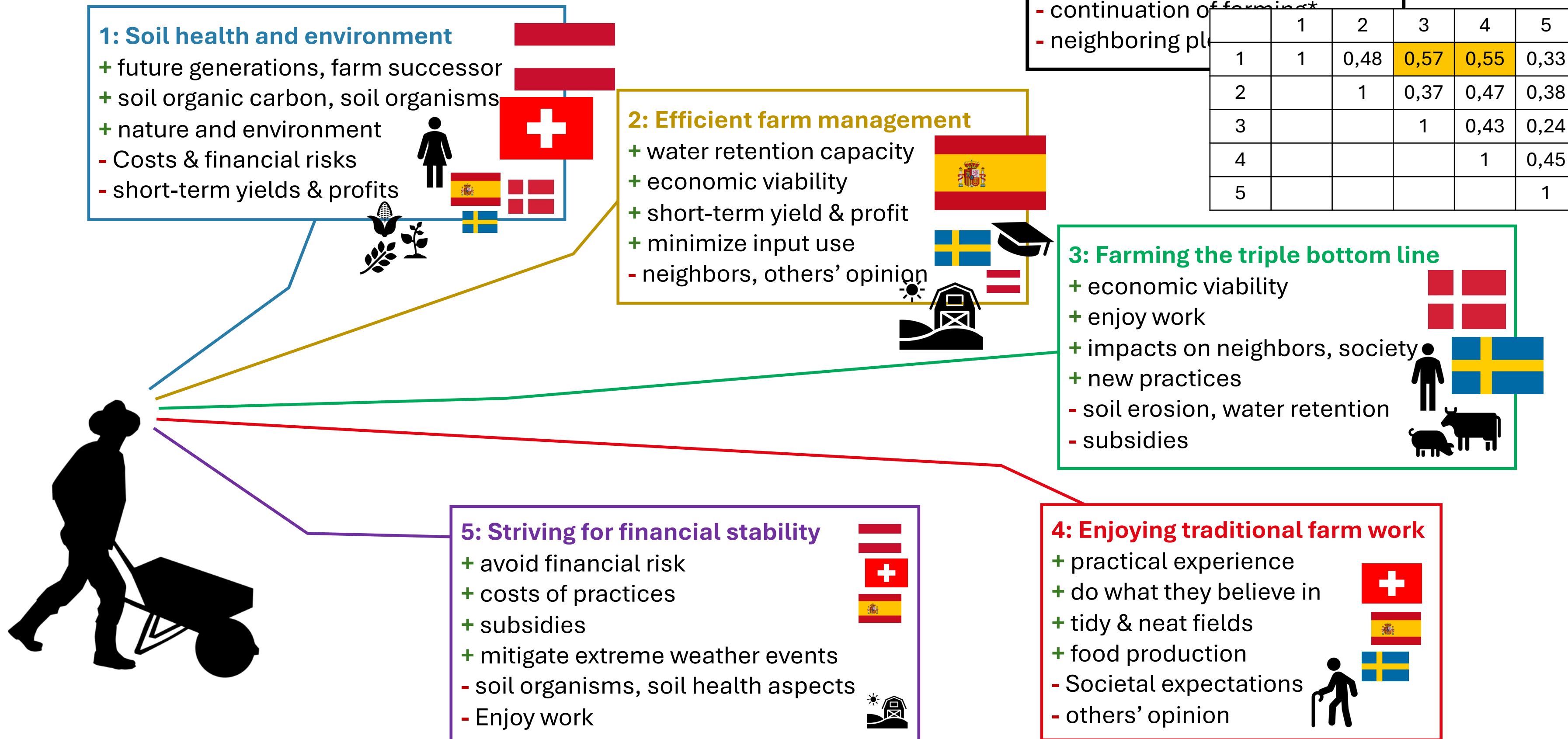
*When I work with my soil, it is important for me...*



Descriptives	value
N farms	130
Ø ( $\tilde{x}$ ) ha Cropland	250 (150)
N only field crops	66
N with livestock	54
N (partly) organic	49
N part time	24
N female	9
Ø age	50.1
N univ. education	29
Ø N crops in rotation	5.9



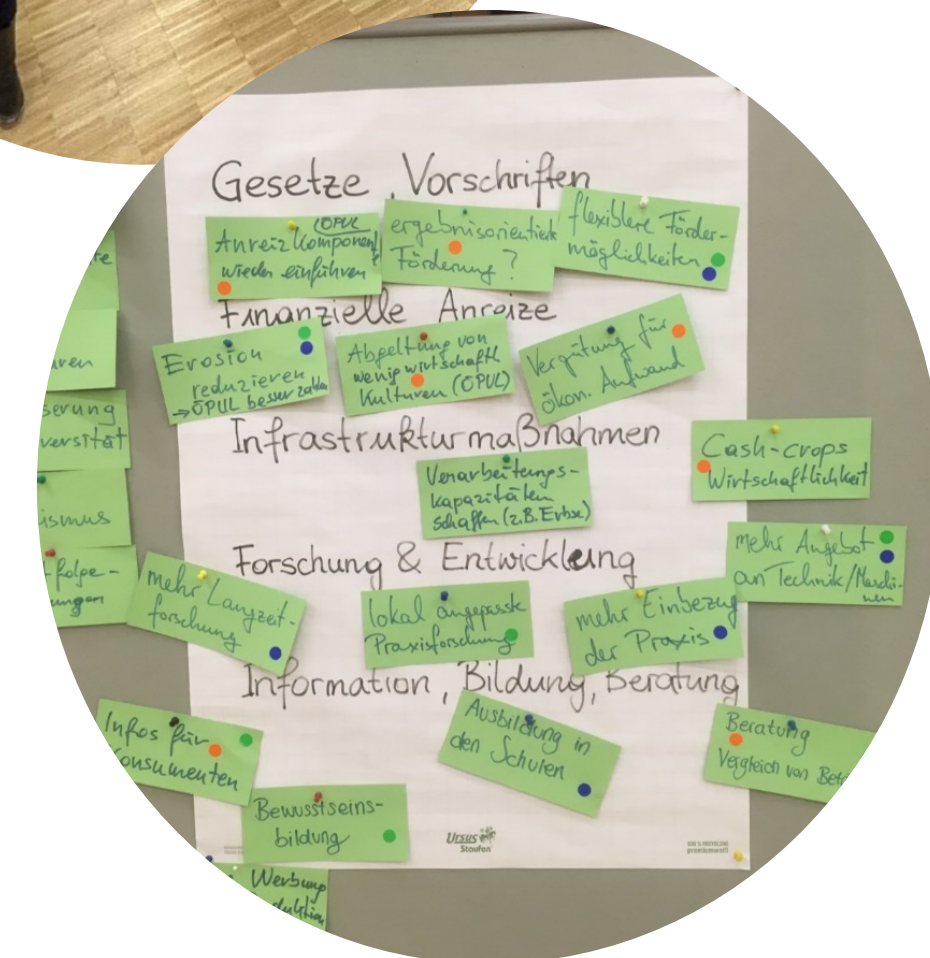
# Results: 5 viewpoints



# Implications

Different priorities → different attractiveness of incentives/support, e.g.,:

- Information and practical support in implementation
- Monetary benefits, input reductions, markets
- Societal recognition, environmental benefits
- Fit with traditional value systems
- Risk minimization through financial support
- ...





**[Merci BOKU]**

# Thank you for listening!

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<https://ejpsoil.eu/soil-research/eom4soil/into-dialogue/soilx>

