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Practical Research for Climate Protection in Organic Agriculture:

Experiences from the SOLMACC Project

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Strategies for Organic- and Low-input-farming to Mitigate and Adapt to Climate Change (SOLMACC)

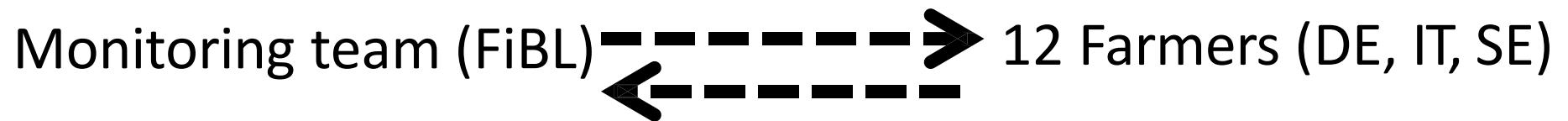
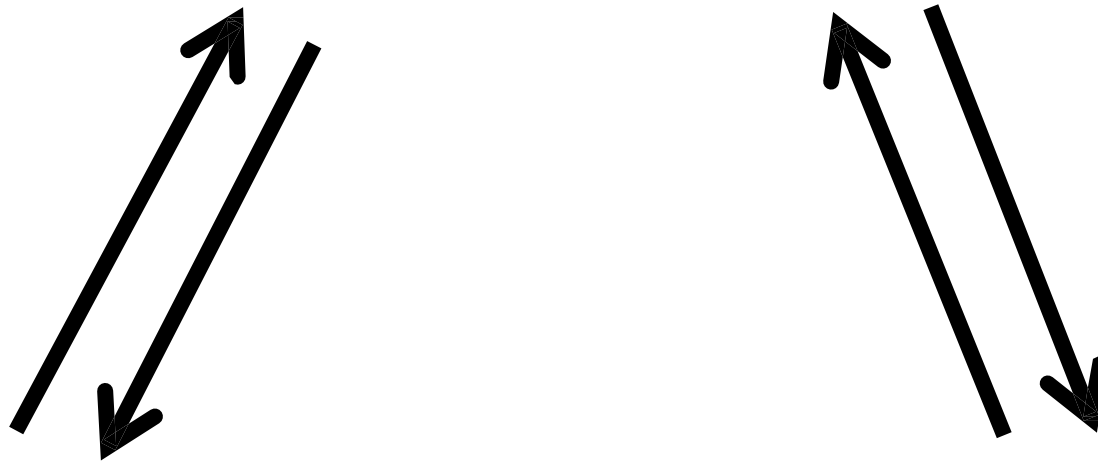
- PROJECT LOCATION: DE, IT, SE, Brussels
- DURATION: Start: 01/09/2013 - End: 30/09/2018
- PROJECT'S IMPLEMENTORS:
 - Coordinating Beneficiary: Ekologiska Lantbrukarna, SE
 - Associated Beneficiaries: IFOAM EU Group (Day-to-day Coordinator), Brussels; AIAB, IT; Bioland Beratung GmbH, DE; FiBL, DE



Practical Research in SOLMACC



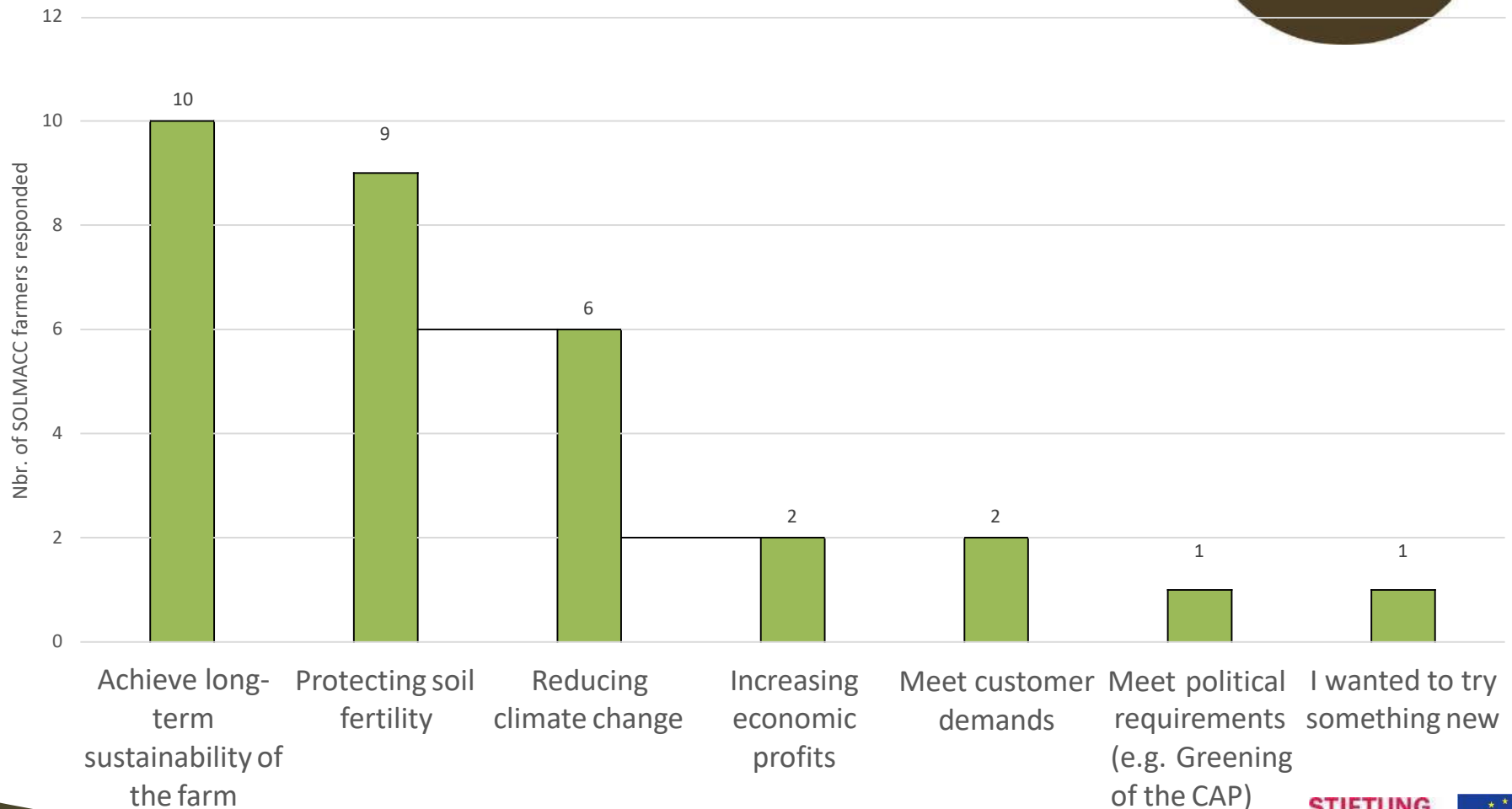
Regional advisors (AIAB,
Bioland, Ekolantbrukarna)



Motivation of Farmers?



Motivation for SOLMACC farmers to implement climate-friendly practices





“Thanks to the SOLMACC practices, I will play a role in the fight against the climate change!”

Claudio Caramadre (IT)



*“Agricultural challenges are that we now must repair the life supporting systems such as a stable climate and beyond producing more food for more people. **We want to take part in the implementation of these two tasks.**”*

Ylva and Kjell Sjelin (SE)



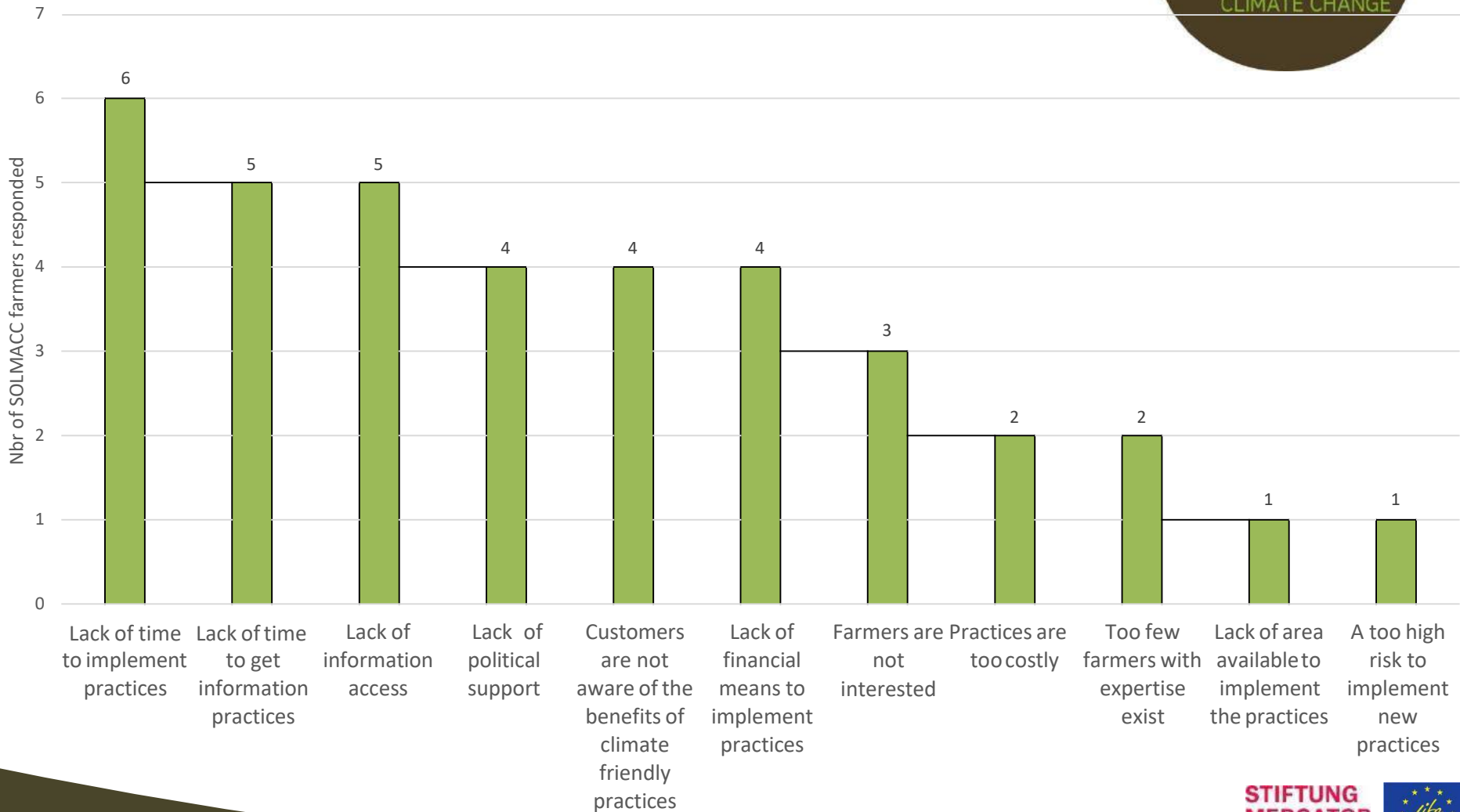
*“Through participating in the SOLMACC-Project I hope to find a **better adapted management** in my plant production. Moreover, the measurements and assessments of the climate relevance of my farm are also exiting.”*

Dirk Liedmann (DE)

Hindering Factors?



Hindering factors for farmers to implement climate-friendly practices



Decide together!

Locally, **farm-specific solutions** (48 measures) were **decided collaboratively** to implement and monitor climate-friendly and resilient organic agriculture practices:

1. Optimized nutrient management
2. Optimized crop rotations
3. Optimized tillage management
4. Agroforestry



Monitor and Evaluate!



All practices were chosen to **scientifically assess** their:

- GHG mitigation potential
- Adaptation potential
- Environmental benefits
- Technical feasibility
- Economic performance

Involve!

Results and possibilities for climate-friendly farming are **exchanged** with:

- Other farmers, neighbours (field days, manuals)
- EU politicians (seminars, events)
- Students and future farmers (student tool box)
- Food system actors (socio-economic roundtable, newsletters)



Pictures (from top): ©Maria Dirke, © Oscar Franzen, © Paula Cederberg, © D. Fontanive

Summary and Conclusions



Practical Research for climate change can help to:

- **motivate** farmers to implement climate friendly practices
- to successfully **monitor** the results of the practices
- to **develop** alternative **solutions**
- to efficiently **spread and communicate** the existing knowledge with diverse stakeholders



Thank you for your attention!

Further information: www.solmacc.eu

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Practices on different farms in different countries: Sweden

Farm	Hånsta Ö.gärde	Trägsta Gård	Sötåsens N.gymnasium	Körslätts Gård
Improved on-farm nutrient management	On-site, mobile livestock systems	Anaerobic treatment (biogas) of liquid and solid manure	Anaerobic treatment (biogas) of liquid and solid manure	Controlled storage of on-farm residues
Optimised crop rotations with legumes	Maintenance of existing forage legumes	Extending usage of forage legume leys by 1 year	Maintenance of existing grain and forage legumes	Maintenance of existing grain and forage legumes
Optimised tillage systems	Reduced tillage through combined planting of winter and spring cereals and perennial wheat cropping	Reduced tillage through extending usage of forage legume leys	Reduced tillage and undersown crops	Reduced tillage
Agroforestry	Hedgerows and tree strips along agricultural fields	Silvopastoral system	Hedgerows and tree strips along agricultural fields	Hedgerows and tree strips along agricultural fields

Practices on different farms in different countries: Germany

Farm	Kreppold (south)	Pfänder GbR (south)	Gut Krauscha (east)	Kornkammer (west)
Improved on-farm nutrient management	Forage-manure cooperation and composting of on-farm residues	Composting of on-farm residues	Composting of on-farm residues	Anaerobic treatment (biogas) of on-farm residues
Optimised crop rotations with legumes	Introduction of grain legumes and maintenance of existing forage legumes	Maintenance of existing grain legumes as well as summer and winter green manure lay with legume grasses	Maintenance of existing grain and forage legumes	Maintenance of existing grain and forage legumes
Optimised tillage systems	Reduced tillage and undersown crops	Reduced tillage and undersown crops	Reduced tillage	Reduced tillage
Agroforestry	Hedgerows and tree strips along agricultural fields	Hedgerows and tree strips along agricultural fields	Hedgerows and tree strips along agricultural fields	Hedgerows and tree strips along agricultural fields

Practices on different farms in different countries: Italy

Farm	Azienda agricola Fontanabona	Azienda agricola Caramadre	Azienda agricola Mannucci Droandi	Azienda agricola Tamburello
Improved on-farm nutrient management	Improved composting of on-farm residues	Forage-manure cooperation and composting of on-farm residues	Improved composting of on-farm residues	Composting of on-farm residues
Optimised crop rotations with legumes	Increasing proportion of forage legumes	Increasing proportion of forage legumes	Increasing proportion of forage legumes	Increasing proportion of forage legumes
Optimised tillage systems	Reduced tillage	Minimum tillage	Minimum tillage	Minimum tillage
Agroforestry	Hedgerows and tree strips along agricultural fields	Hedgerows and tree strips along agricultural fields	Diversifying the usage of existing tree crops	Diversifying the usage of existing tree crops