CORE organic Cofund

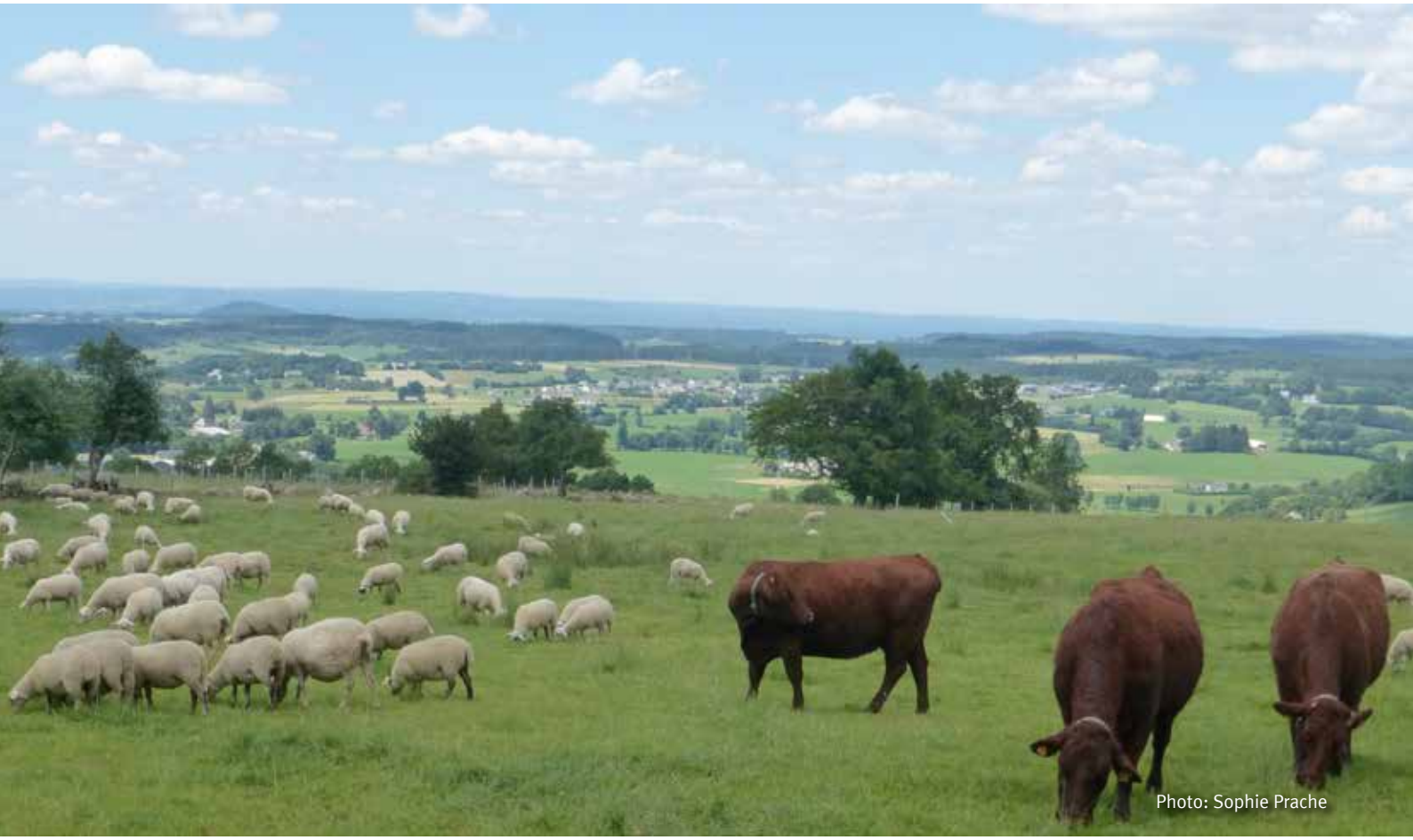
Photo: Sophie Prache

Strategies for sustainable and robust organic mixed livestock farming

MIX-ENABLE

Aim of the project:

Explore the conditions of sustainability and robustness of European organic mixed livestock farms, integrating two or more animal species. Especially the influence of integration between farm components.


Photo: Gunnela Gustafson

Introduction

Diversified farming systems are brought forward by scientists as an answer to many problems of sustainability and robustness related to modern industrial agriculture (air, soil and water pollution, biodiversity loss, etc.). However, at the farm scale, the proof of concept seems rather limited. More attention should be paid to the conditions for enhanced sustainability and robustness, especially on how interactions between enterprises within the farm are managed.

The project will explore the conditions of sustainability and robustness of organic mixed livestock farms in Europe, especially the influence of integration between farm components on the aforementioned factors. Then, we will co-design with farmers more integrated, sustainable and robust organic mixed livestock farms or pathways from specialized towards organic mixed livestock farms.


Photo: Karin Ullvén

Background

Integrating two or more animal species with crop production or agroforestry on a farm potentially provides various benefits, including more efficient pasture use and parasite management. However, most organic livestock farms are specialized and the few organic


Photo: Malin Bernhard, Gård & Djurhälsan

mixed livestock farms tend to display limited integration between farm components (crops, pastures and animals), i.e. limited interactions over space and time between these components. This limited integration may reduce the potential benefits of having more than one animal species.arbuscular mycorrhizal fungi, which can consequently improve plant health and soil conditions.

Expected results

- A guide on best management practices in organic mixed livestock farming
- A literature review on the advantages, drawbacks and challenges of mixed livestock farming in Europe
- A comparison of specialized and mixed livestock farms in Europe
- Conditions for the sustainability and robustness of organic mixed livestock farming in Europe
- Patterns of integration in organic mixed livestock farms in Europe
- Comparison of mixed livestock farming strategies in response to climatic and economic variability
- Farmer-based innovative options for organic mixed livestock farming in Europe

Societal and long term benefits

In an organic agriculture context, given the restrictions on the use of agricultural inputs and the cost of organic inputs, seeking for integration within farms should be a priority to improve economic, ecologic and social performances.

References for practice and policy-makers will be produced to shed light on the potential of organic mixed livestock farms, and more specifically ways to manage these farms sustainably, as well as how to convert from a specialized farm.

How to reach target groups

A participatory approach will be implemented through several tasks, e.g. co-design workshops to identify innovative forms of organic mixed livestock farms and dissemination actions, e.g. farmer field days.

Main activities:

- Survey 20 farms per country to assess the level of integration
- Propose an indicator system for integrated assessment of organic mixed livestock farms
- Characterize the conditions for the sustainability and robustness of organic mixed livestock farms in Europe
- Conduct farm-level experiments comparing specialized and mixed livestock production, for the comparison of specific aspects of animal husbandry (e.g. pasture use or animal health).
- Integrate obtained knowledge into models that can simulate organic mixed livestock farm performances during climatic and economic variability
- Together with farmers, co-design more integrated, sustainable and robust organic mixed livestock farms or pathways from specialized towards organic mixed livestock farms.

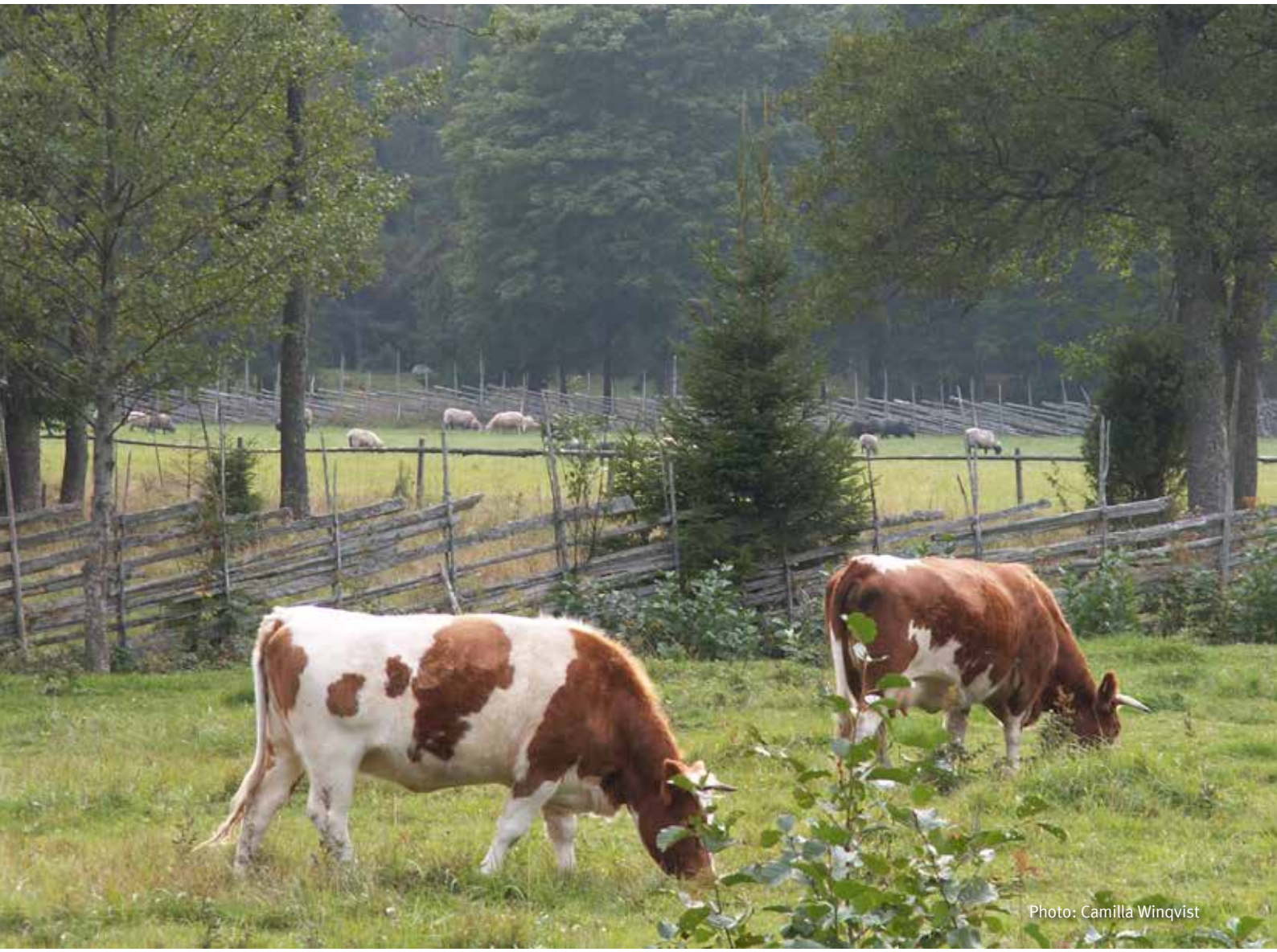

Photo: Camilla Wingvist

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Further information

This transnational project is funded via the ERA-net CORE Organic Cofund based on funds from participating countries and funding from the European Union.
CORE Organic Cofund is a collaboration between 26 partners in 19 countries/ regions on initiating transnational research projects in the area of organic food and farming. CORE Organic Cofund has initiated 12 research projects. Read more at the CORE Organic Cofund website: **http://projects.au.dk/coreorganiccofund/**

The MIX-ENABLE project can also be followed at:
https://www.facebook.com/Mix-Enable-1528955847215768/

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