In one of the MIXED farmer networks in Denmark, 11 farmers are managing livestock and farmland in the vicinity of streams flowing into the shallow and nutrient vulnerable waters of Limfjorden - an inland fjord system connected to the sea. Reduction of nitrate leaching from agriculture is required to improve the aquatic conditions in Limfjorden.

The network consist of a mix of pig and dairy farms with crop production, small-holder farms, and arable farms. The farmland soils are dominated by sandy soils with varying clay content. 90 % of the farmland is cultivated with arable crops mainly winter wheat, spring barley, winter oilseed rape, and maize and 8 % is cultivated as grassland mostly concentrated on the dairy farms. Network farmers are already aware of the importance of reducing nitrate leaching. Farmers have widely adapted the use of biogas plants and a targeted use of catch crops to improve nutrient utilization and reduce nitrate leaching.

There is a need for a joint effort among farmers to find viable solutions addressing the environmental issue of nitrate leaching in the region. We recommend that farmers discuss the issue together and consider the potential for in collaboration cultivating more grassland targeted to areas with the lowest groundwater nitrogen retention. In addition, farmers should discuss their willingness to cooperate on a local biorefinery of green biomass coupled with grasslands and a biogas plant. We also advice farmers to reflect on integration of crop and livestock production, exchange of resources between farmers (e.g. nutrients, knowledge, machinery, farmland, and livestock), and inclusion of other relevant stakeholders to improve nutrient management.
In Denmark MIXED is implemented by Innovation Centre for Organic Farming and Aarhus University in collaboration. The project is working with two groups of farmers practicing MiFAS (Mixed Farming and Agroforestry Systems) in different ways.

Agriculture in Denmark can be characterized as highly specialized, intensively managed and in general very productive. The highest concentration of livestock is in the western part of the country, where soils in general are more sandy and less fertile than in the eastern part of the country.

Many organic farmers in Denmark are taking the potential contributions of the organic system to public goods into consideration. The drivers for the group of farmers that MIXED is working with is specifically to improve biodiversity, c-sequestration, animal welfare and environment.

MIXED partners from Denmark:

AARHUS UNIVERSITY

Innovationscenter for Økologisk Landbrug

About the project

MIXED (Multi-actor and transdisciplinary development of efficient and resilient MIXED farming and agroforestry systems), an EU-project, is supporting the development of European Mixed Farming and Agroforestry Systems (MiFAS) that are more efficient and resilient to climate changes.

7M€ budget
19 partners
10 countries

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