

PRACTICE ABSTRACT

SHARING EXPERIENCES FROM: DENMARK

How to improve biodiversity in agroforestry livestock systems

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Combining wide hedgerows with pasture-based livestock rearing in agroforestry makes a more diverse system. The true biodiversity of such system will not only be the species sown and planted on the area, but the sum of species supported in the habitat.

Ongoing observational studies of bird species on a Danish organic pig farm with agroforestry shows that trees do increase the diversity and number of breeding birds in the area. The observations found both bird species associated with trees, and bird species associated with open areas. Providing wide hedgerows does not only benefit the livestock with shade, skin care and enhance exploration opportunities. Also, the natural biodiversity benefits from the diverse environment supporting more insects and bird species.

Agroforestry will in general improve biodiversity compared to monoculture farmland practices. However, the type and management of agroforestry will have a great impact on the true effect, as a tall monoculture forest with nonnative tree species will support relatively few species. A biodiversity high impact hedgerow should contain a variety of native tree species. If same species are planted in clusters, they will support each other and limit the management of nearby faster growing trees. Furthermore, clustering the trees will make a larger habitat for species specific insects and birds. The recommended size of clusters will depend on the chosen species, e.g. smaller and/or slow-growing trees and bushes should have bigger clusters, were as fast-growing trees have less demand for clustering. Biodiversity high impact hedgerows can still contain some fast-growing nonnative species for the sake of fast implementation, nurse trees, and providing high value habitat for the livestock.





ABOUT MIXED IN DENMARK

In Denmark MIXED is implemented by Organic Denmark and Aarhus University in collaboration. The project is working with two groups of farmers practicing MiFAS (Mixed Farming and Agroforestry Systems) in different ways.

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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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:

