

Paludiculture as an Alternative to Peatland, Marsh and Bog Drainage


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Photo credit: WaterLANDS Project

Wetlands are sometimes drained to create firm, workable fields and boost short-term food production. Over time, this turns carbon sinks such as peatlands and bogs into emission sources by exposing peat to oxygen, triggering decomposition and releasing stored carbon in the form of carbon dioxide. This can lead to biodiversity loss, water pollution, soil degradation, subsidence and eventual loss of agriculturally productive land.

Raising the water table and rewetting peatlands or adapting farming to wetter conditions slows soil degradation and stabilises land contributing to regenerative farming. Paludiculture or wet agriculture involves growing wetland-adapted crops on peatlands/organic soils under high water tables. This practice can protect important habitats while contributing to farm profits.

Crop choice depends on peatland type. Sphagnum suits nutrient-poor bogs, while reed, cattail, sedges, willow and alder suit nutrient-rich peatlands and fens. These crops produce biomass for horticulture, construction, fodder and bioenergy.

Maintaining and restoring wetlands lowers carbon emissions, improves water quality and benefits biodiversity.

Practical recommendations

- Collaborate locally on water management where hydrology crosses farm boundaries. Be sure not to cause adverse impacts on neighbouring farms.
- Use perimeter drain or equivalent to ensure no spillover.
- Raise water levels by blocking drains and installing control structures to keep peat wet and slow soil loss.
- Select wetland-adapted crops suited to higher water tables and local conditions.
- Adapt machinery and timing to operate to minimise soil damage.
- Secure markets early for harvested biomass to ensure economic viability. This is vital but tricky.

Further Information on farmbionet.eu

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