

Restoration of Species-rich Grassland from Intensively Managed Pasture at Denmark Farm Conservation Centre, Ceredigion

The Denmark Farm restoration project, near Lampeter in Ceredigion, was set up by the Shared Earth Trust in 1987 with the objective of demonstrating the reversal of agricultural improvement and enhancing the farm for wildlife. The farm had previously been intensively managed for at least 10 years by agriculturally improving the grasslands, draining the fields, sowing rye-grass (*Lolium perenne*) seed mixtures and spreading fertiliser; this management created low structural diversity throughout the grasslands, reducing the habitat available for invertebrates and small mammals. The Trust took the opportunity

to allow the flora to regenerate naturally by reinstating traditional farming methods rather than reseeding the fields, so that wildflowers could colonise at their own pace.

The drainage channels created under intensive agricultural management were blocked to slow water flow and increase the diversity of the grasslands. No fertiliser was spread on the fields, and a traditional farming system was put into place, consisting of seasonal cattle and pony grazing. In some sections a hay cut further reduced the nutrients in the soil.



A wider variety of grasses were able to establish as the soil fertility levels dropped and damp patches were created in the grasslands. Plants including bents (*Agrostis* spp.), fescues (*Festuca* spp.), sweet-vernal grass (*Anthoxanthum odoratum*), crested dogs-tail (*Cynosurus cristatus*) and various rushes and sedges started to colonise the grassland, and perennial rye-grass to decrease. Wildflowers either regenerated from the soil seed bank or germinated from seed carried in on the wind and by small mammals and birds.

After about five years, changes in the vegetation became apparent as yellow rattle (*Rhinanthus minor*) and eyebright (*Euphrasia* agg.) reduced the dominance of grasses in the sward and allowed other wildflowers to germinate and flourish.

Wildflowers that appeared included hawkbits (*Leontodon* sp.), cat's-ears (*Hypochaeris* sp.), and legumes such as

birds-foot trefoil (*Lotus corniculatus*) and tufted vetch (*Vicia cracca*).

Denmark Farm Conservation Centre is open to visitors, has holiday eco accommodation and runs regular courses on habitat restoration.

Further information:

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DESTRUCTION AND DEGRADATION OF DENMARK FARM 1978-84

Wet Meadow

Drained during WWII. Reseeded to rye-grass, 1981. Heavy fertiliser applications until 1986.

Remnant Molinia Marsh

Drained and severely damaged by machinery, 1984, but not reseeded.

All Hedgerows

Thin and over-grazed, no cover at base.

Wet Meadow

Drained and reseeded to rye-grass, 1982. Heavy fertiliser applications until 1986.

Hedgerow

Completely destroyed by over-grazing over many years.

Old Green Lane

Severely over-browsed and walls eroded by grazing animals over many years.

Remnant Traditional Meadow

Not ploughed in living memory, but heavy fertiliser applications until 1986, suppressing most wild plants

Marsh

Drained and destroyed, 1984.

Hedgerow

Ripped out, 1984.

Wet Meadow

Drained, deep-ploughed and reseeded to rye-grass, 1984. Heavy fertiliser applications 1984 and 1985.

Bluebell Wood

Felled and grubbed out, 1984.

Dry Meadows

Reseeded to rye-grass, 1978-9. Heavy fertiliser applications until 1986.

Old Farm Pond

Deepened and cleared out by machinery, 1984, and destroyed as invertebrate habitat.

Old Orchard

Cleared and destroyed, 1983.

Ditches

Cleared and deepened by machinery, 1984, and damaged as invertebrate habitat.

Remnant Marsh

Drained and damaged by machinery, 1984, but not reseeded.

RESTORING HABITATS OF DENMARK FARM

