

Neutral grasslands

Neutral grasslands, or mesotrophic grasslands, are used for hay making, water meadows and grazing pasture. They tend to be enclosed fields, and are the typical type of meadow that many people think of when asked to describe wildflower grassland.

Hay meadows and grazing pasture

Hay meadows and grazing pasture are present in both the lowlands and uplands. Plants include common/black knapweed, oxeye daisy, lady's bedstraw and bird's-foot trefoil, along with a range of orchids such as common spotted-orchid, green-winged orchid and pyramidal orchid. One of the dominant grasses is crested dog's-tail. There are some differences between the plants of lowland and upland hay meadows, with flowers such as rare ladies'-mantles, great burnet, pignut

and wood crane's-bill present at higher altitudes. Sweet vernal-grass gives cut meadows the fresh smell of hay. One of the main features of hay meadows is the presence of yellow-rattle which is a hemi-parasite on grass. It has the effect of reducing vigorous growth allowing wildflowers to grow.

The National Vegetation Classification (NVC) calls species-rich lowland meadows 'MG5 crested dog's-tail - common knapweed grassland'. Lowland grasslands have dramatically declined over the past 50 years - by an estimated 97% and are still being lost. Approximately 5000-10000 ha survives today, in scattered, small isolated fields, with small amounts present in other environments such as recreational grounds and churchyards. There are important concentrations of this grassland in Worcestershire, south-west



Upland hay meadow

© Peter Poworth / Natural England



Floodplain grazing pasture

England, east Midlands, east Anglia, parts of Wales, Fermanagh in Northern Ireland, and 2000-3000 ha present in crofting areas around Lochaber, Skye and the Western Isles of Scotland. Upland meadows are categorised as ‘MG3 sweet vernal grass - wood crane’s-bill grassland’ and are restricted to the North Pennines, Yorkshire Moors and County Durham, with a few examples in Cumbria, Lancashire, Northumberland, Perthshire and as far north as Aberdeenshire. There are no known examples in southern England, Wales or Northern Ireland. There is less than 1000 ha in northern England and less than 100 ha in Scotland.

Floodplain grasslands

There are two separate types of floodplain grassland. Both are present along watercourses and are a result of seasonal flooding. Species-rich flood meadows are referred to as the ‘MG4 meadow fox-tail - great burnet grassland’ and develop where traditional hay meadow management has

been undertaken. Species-rich inundation pasture is categorised as ‘MG8 crested dog’s-tail - marsh marigold grassland’ and is traditionally managed as pasture. There are slight differences associated with the plants present in these communities with great burnet, pepper saxifrage, meadow sweet, and rarities such as snake’s-head fritillary, present in the flood meadows. Marsh marigold is a distinguishing characteristic of inundation pasture, as the leaves are unpalatable to livestock.

Both floodplain meadow communities are very rare with flood meadows being localised along the Thames Valley, Ouse Valley in Yorkshire, Welsh Borders and Midland waterways. The grasslands are scattered and isolated, with less than 1500 ha surviving. Less than 1000 ha of inundation pasture remains, with an estimated 600-800 ha in Scotland. Drainage, agricultural improvement and neglect of the infrastructure surrounding water meadow systems are the main causes of decline for floodplain grasslands.

Management of neutral grasslands

The later summer and higher rainfall in the north of the UK and uplands mean that flowers bloom slightly later, compared with lowland meadows. Hay-cut meadows should be left until the main bulk of flowering has finished and the flowers have set seed, which varies from mid-July in an early season onwards to late September. Following hay-making, the fields are usually aftermath grazed with cattle and/or sheep over the autumn. The fields are shut-up in early spring to allow the grass to grow for the hay crop.

Lowland grasslands may also be managed as pasture with low-intensity (termed extensive) grazing especially with cattle or ponies followed by sheep. This is important as it opens the vegetation, creating small areas of bare ground, which wildlife need. Animals also trample fallen seed into the soil helping wildflowers to germinate.

It can be difficult to restore and recreate hay meadows and floodplain pasture. It is essential that we maintain the existing extent of such grasslands through careful management, and then concentrate on grassland restoration and recreation.

Grasslands that have been agriculturally improved are categorised as 'MG6 perennial rye-grass - crested dog's-tail grassland'. There are fewer wildflowers and grasses compared with hay meadows. Restoration can be undertaken to increase the diversity of wildflowers present. Restoration of intensive agricultural grassland (classified as 'MG7 perennial rye grass grassland') improved with

increased fertiliser inputs, re-seeding or over-seeding with perennial rye-grass and white clover may be difficult, as wildflowers need low nutrient levels.

The major funding support for maintenance, restoration and recreation of wildflower grasslands on farmland, both upland and lowland, has been through agri-environment schemes. However, this funding source is tied to the use of the land as part of an agricultural holding and is not necessarily available in other situations such as small-holdings, or grasslands in towns or urban areas. There may be local grants available, or fundraising may be required to support the work, if the land is in public ownership such as a village green.

Further information

[JNCC \(2008\) UK Biodiversity Action Plan Habitat Descriptions: Lowland Meadows.](#) Last accessed 08-10-2014.

[JNCC \(2008\) UK Biodiversity Action Plan Habitat Descriptions: Upland Meadows.](#) Last accessed 08-10-2014.

Peterken, G. (2013) Meadows. British Wildlife Publishing Ltd.

Rodwell, J.S. (1992) British Plant Communities Volume 3: Grasslands and montane communities. Cambridge University Press.



Cattle grazing a lowland meadow