

Guide to types of species-rich grassland



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This guide will help you to identify common types of unimproved, species-rich grasslands during the flowering season, from late spring to early autumn.

Species-rich grasslands can be found on land that has had few or no inputs of lime, fertiliser or herbicide over the last 10 years or more. These grasslands benefit from being grazed, although too much or too little grazing can reduce the number of species found there.

Species-rich grasslands can be acid, neutral or calcareous and this depends largely on the soil type on your farm. Wet grassland is a fourth type, found where drainage is poor.

These four types are described and illustrated below. Species-poor grasslands are described at the end.

Each of the species-rich grasslands described here corresponds to a 'Priority BAP Habitat', that is a habitat recognised as a priority for conservation action under the UK Biodiversity Action Plan. You can find further information about these habitats at www.ukbap.org.uk.

Acid grassland

Yellow tormentil and white flowered heath bedstraw growing together amongst fine-leaved bent and fescue grasses are good indicators of acid grasslands. There may also be grass-like sedges with grooved leaves and woodrushes with brown-tipped leaves. There is never a great variety of wildflowers but there may be blue harebells, purple devil's bit scabious or dog-violet, pink bitter vetch or the small red flowers of sheep's sorrel. There may also be heathers and blaeberry and there is usually a layer of moss.

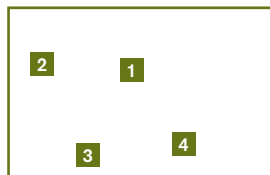
Productivity is generally low and the grazing season is quite short. The sward tends to be yellower in colour than improved grassland and often wetter, due to the moss content. The acidic nature of the soils tends to lock up minerals meaning that grazing stock can be deficient in trace elements such as cobalt, selenium and copper.

This habitat corresponds to the Lowland Dry Acid Grassland BAP Habitat.

Below

A close-up view of acid grassland showing:

1. Yellow tormentil
2. White heath bedstraw
3. The deeply grooved leaf of a sedge
4. The brown-tipped leaf of a woodrush.



Neutral grassland

A great variety of colourful herbs - small, medium and tall - are typical of neutral grassland. They include the purple common knapweed, the yellow-flowered bird's-foot trefoil, meadow vetchling, lady's bedstraw, meadow buttercup, cat's-ear, autumn hawkbit, tormentil and yellow rattle, the white-flowered yarrow and pink selfheal, and the less colourful ribwort plantain and common sorrel.

The grasses include the soft, velvety Yorkshire fog, dense flowered cock's-foot, spiky crested dog's-tail, and sweet vernal-grass, which contains coumarin and gives new-mown hay its characteristic scent.

Wetter neutral grasslands may contain rushes and sedges along with the large

yellow flowers of marsh marigold, the tall, creamy meadowsweet or the pale pink cuckooflower.

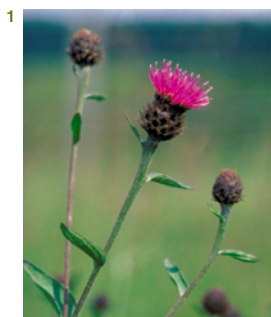
Species-rich neutral grasslands are easily converted to species-poor productive meadow or pasture, so few have survived the agricultural improvements of the last half-century. They tend to be fragments that are small, inaccessible to machinery or otherwise uneconomical to improve. An exception is in the western Highlands and Islands, where many species-rich neutral grasslands survive under management for hay or (more frequently these days) pasture.

This habitat corresponds to the Lowland Meadows Priority BAP Habitat.

Below

Some typical species of neutral grasslands:

1. Knapweed
2. Red clover and Bird's-foot trefoil
3. Yellow rattle
4. Lady's bedstraw
5. Lesser butterfly orchid



Calcareous grasslands

Thyme is the best indicator of calcareous grasslands since it is almost always present, growing amongst fine-leaved bent and fescue grasses. This type of grassland is usually herb-rich, with a variety of small plants such as the yellow rockrose and lady's mantles, white eyebrights and fairy flax, blue milkworts and violets, and purple thyme and field gentian. There may be small sedges with blue-green leaves and the distinctive quaking grass, with flowers that tremble in the wind.

Calcareous grassland is usually found in small scattered patches on shallow soils, on steep slopes or by rock outcrops, following the distribution of calcareous rocks and soils in the landscape.

This habitat corresponds to the Lowland Calcareous Grassland Priority BAP Habitat where it occurs within enclosed farmland, and Upland Calcareous Grassland Priority BAP Habitat where it occurs in the hills.

Below

A close-up view of calcareous grassland, showing:

1. Purple thyme
2. Yellow rockrose
3. Yellow bird's-foot trefoil
4. White eyebrights.



Species-rich rush pasture

Rush pasture is often species-rich where sharp-flowered rush is present, and species-poor where tussocks of soft-rush dominate.

Species-rich rush pasture will have a variety of tall herbs including white angelica, marsh bedstraw, sneezewort and meadowsweet, purple marsh thistle and the nodding

melancholy thistle, yellow greater bird's-foot trefoil and marsh hawk's-beard. Whorled caraway is found here, but only in the west of Scotland. Purple moor-grass and Yorkshire fog are commonest among the grasses and there will probably be sedges and mosses.

The habitat is sometimes

known as fen meadow. It is typical of poorly drained and unimproved or reverted pasture. Grazing will prevent scrub from invading or dense strands of meadowsweet from developing.

This habitat corresponds to the Purple Moor-grass and Rush Pastures Priority BAP Habitat.



Left

An example of species-rich rush pasture.

Right

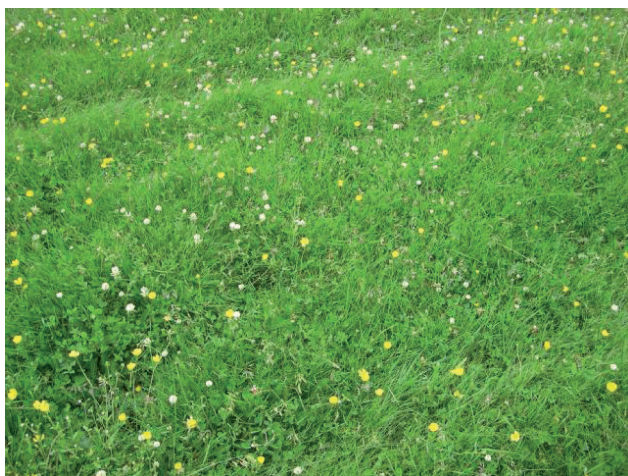
Another example of a rush pasture priority BAP habitat.



Species-poor grasslands

Grasslands become species-poor when fertilised because a few species such as rye-grass, Yorkshire fog and creeping buttercup can grow fast on highly fertile soils and out-compete the great majority of smaller or slower-growing herbs and grasses.

Grasslands also become species-poor when abandoned or under-grazed because the sward grows tall and dense, crowding out the smaller species. And, in contrast, grasslands become species-poor when they are over-grazed to such an extent that the herbs cannot flower or set seed.



Left

This species-poor sward is full of clover and buttercups but there are no other herbs.

Right

This grassland has been ungrazed for so long that false oat-grass has invaded and now dominates the sward.



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With help from Quality Meat Scotland

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