

Grazing for wild plants and biodiversity



ADVISORY NOTE

Photo: Dal Harries



Wild meadows are grasslands rich in wild flowers, grasses, rushes and sedges

Grazing, or grazing and hay-making, are vital to maintain the diverse flora of wild meadows and to prevent the growth of tussocky vegetation, scrub and trees.

Most plants of wild meadows are perennials. These die back in the autumn and re-grow from rootstock in spring and are not dependent on regenerating from seed every year. Grazing at light to moderate levels will only remove part of the above-ground growth and will not kill the plants. Failure to graze or cut a wild meadow during spring and/or summer will encourage coarse vegetation, causing the number of wild flowers to rapidly decline.



**Wild
Meadows**

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In summary, grazing has the following effects:

Defoliation: Grazing animals eat the leaves, flowers and stems above ground. What is eaten varies with different types of grazing animal, which have differing preferences, behaviour and digestive systems. The quantity and choice of plants that are grazed are also affected by the frequency, timing and intensity of grazing.

Nutrient transfer: Grazing transfers nutrients from the pasture to the grazing animals, enabling them to grow or put on fat. Some nutrients are returned to the soil through dung and urine. In winter, dung can accumulate and create nutrient-rich patches on the grassland.

Trampling: The weight of the animal through its hoofs causes some physical damage to plants and may expose the soil.

Indicators of well-maintained pastures in good condition

- ❁ A lack of Bracken, scrub and tall weeds, such as Clustered or Broad-leaved Dock, Common Ragwort, Creeping or Spear Thistle.
- ❁ No significant areas of bare ground.
- ❁ No significant areas dominated by Creeping Buttercup, White Clover, Perennial Rye-grass, Cocksfoot or False Oat-grass.
- ❁ An abundance and diversity of wild plants characteristic to the grassland type with lots of flowers visible between late spring and mid-summer; at least 15 species of wild flowers, grasses, sedges and rushes per square metre (30+ in many instances).
- ❁ A strong, sustainable, breeding population of key invertebrates and birds (e.g. Lapwing for coastal grazing marsh, Common Blue Butterfly for most grassland types).
- ❁ A healthy dung flora and fauna.

Livestock types

Sheep can be useful on well-drained pastures and for early-spring grazing. They will preferentially graze flower-heads, so should be kept at a relatively low stocking density between early spring and mid-summer.

Cattle, especially native breeds, are especially good for managing coarse vegetation. Native breeds are usually quiet, but handling equipment will be needed on site.

Horses Native breeds such as Section A semi-feral Welsh mountain ponies and other native British breeds thrive on the diverse and highly fibrous diets of wild meadows and other semi-natural habitats.

A combination of livestock types can be useful to reduce parasite burdens, such as intestinal worms.



In a lightly grazed grassland, many plants will flower and set seed.

Photos: Grassland: Ivy Berkshire
Southern Marsh Orchid: Sue Everett



Scrub, coarse grasses and rush have encroached into an under-grazed wild meadow. Photo: Ivy Berkshire



A lack of grazing results in a thatch of leaf litter that will kill most wild flowers and encourage weeds such as Stinging Nettle. Photo: Ivy Berkshire



Overgrazing leads to nutrient enrichment, an increase in weeds and loss of wild flowers. Photo: Sue Everett

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Grazing neglected grasslands

At higher than normal stocking rates animals will be forced to eat older, tougher plant material and coarser vegetation, such as Purple Moor-grass and False Oat-grass. This can be a useful way of restoring neglected grasslands or controlling unpalatable species. Moderate trampling, using cattle or ponies, can also help to break up accumulated dead grass (litter) and crush coarse vegetation, such as Bracken.

Factors influencing the condition of wild meadows:

- ✿ the stocking density (number of animals kept at a time);
- ✿ the type of animal (e.g. sheep, cattle, horse), its size and the breed;
- ✿ the length of time the animals are grazed in the field;
- ✿ the length of time and season when the field is grazed;
- ✿ the ground conditions; and
- ✿ supplementary feeding – which can encourage pasture damage and enrichment.

Grazing in winter

Winter grazing should normally be avoided, because there is usually very little for animals to eat and the ground is at high risk of being damaged, especially in areas where animals congregate. Bare ground caused by heavy trampling (poaching) provides an ideal seedbed for thistles, docks and other opportunistic plants, such as Creeping Buttercup. Pastures on well-drained ground, where a good amount of standing grass and flower stems remain standing, may be able to support light winter grazing.



Photo: Ivy Berkshire

Grazing regimes for wild meadows

The tables below are for guidance only, and example species are indicative. Outcomes may be related to the meadow habitat as a whole or there may be a particular species of plant or animal which management seeks to encourage. To receive the correct advice for your wild meadow please contact Pori Natur a Threftdaeth [PONT] in Wales (Grazing Advice Partnership in England).

Neutral pastures that are not cut for hay

| Time of year | Desired outcome | Recommended management |
|---------------------|--|--|
| Feb-March | This will vary between sites. The grassland will have no significant patches of open muddy ground | Some early-spring grazing is normal on well-drained sites. Damp, rusty fields should not be grazed |
| April to May | Abundant spring wild flowers, such as Cuckoo Flower, Cowslip and Green-winged Orchid | No grazing during April to May, to allow spring flowers to blossom and set seed |
| Mid-May to mid-July | Summer wild flowers frequent throughout the pasture | Light grazing (e.g. between 0.4-1 Livestock Units) per hectare. Grazing can start in the spring and continue for part, or all, of the spring and summer. The pastures can be rested (not grazed) for some of this period, and then grazed again later in the year. |
| June to September | A mosaic of grazed, and lightly or ungrazed vegetation. Frequent flower-heads of later summer flowers provide a habitat for common butterflies, which are often seen on sunny days | Animals will eat the standing vegetation. Too few animals and the vegetation will get too long; too many will eat all the wild flowers and reduce the value of the wild meadow for butterflies, bees and other buglife |
| By mid-October | Much of the vegetation has been grazed, leaving sparse patches of ungrazed vegetation. Suggested height of vegetation: 5-15 cm | Livestock are removed when vegetation is sparse and no longer growing, or before if the ground becomes wet and liable to damage. See Butterfly Conservation leaflet for specific advice on grazing damp pastures holding Marsh Fritillary butterfly |

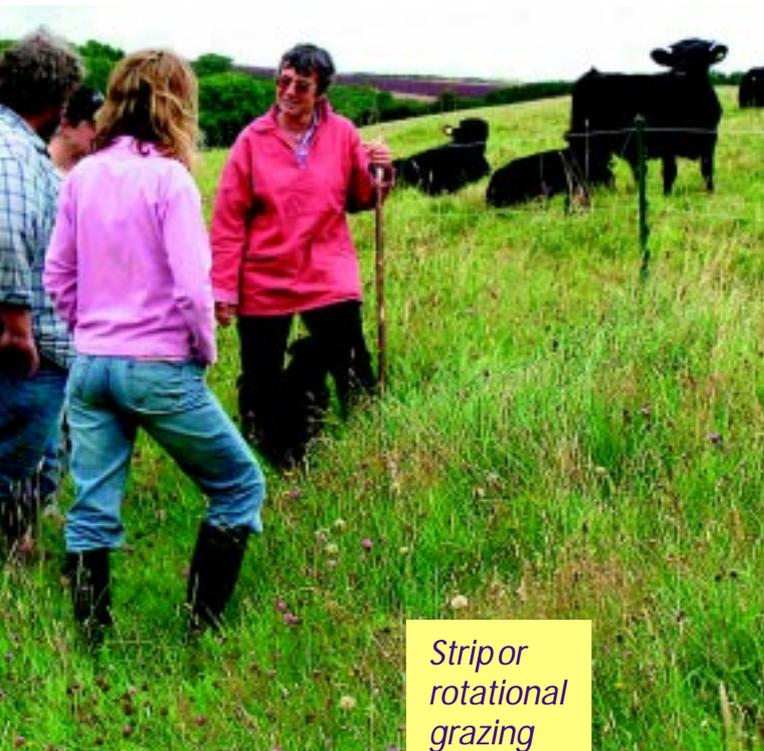
Hay meadows

Hay meadows should be 'closed up' (not grazed) for at least eight weeks between May and August, before cutting in mid-summer. Grazing, to remove all the standing vegetation in early spring (on well-drained sites) and again in the autumn to remove the 'aftermath', encourages hay meadow flowers to thrive.

| Time of year | Desired outcome | Recommended management |
|--------------------|---|--|
| February and April | Ideal sward height of 25 cm by mid-April; no significant areas of bare ground | On well-drained sites: grazing between February and April, or until the field is closed up for hay. Some sites may be too damp to tolerate spring grazing and this should be monitored to avoid poaching |
| May-August | Abundant hay meadow flowers. Common butterflies are frequently seen on sunny days | No grazing for at least eight weeks between May and August. Cut the hay as the majority of flowers and grasses are setting seed |
| July-August | Hay removed – no visible flowers or standing crop | Cut and remove the hay between mid July and August, when the mid-summer flowers are setting seed |
| August-November | Total grassland height of 25 cm* | Graze the aftermath between August and November. Remove animals when vegetation is close-cropped and no longer growing, and before ground conditions become wet |

*Important for enabling Yellow Rattle (an annual) to germinate.

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Strip or rotational grazing

Photo: Sue Everett

This can be used to confine grazing to part of the grassland at any one time. Strip grazing is a good way to ensure that grassland is not overgrazed and will enable wild plants to flower in areas of the grassland that are not grazed at particular times.

Further information

- ✿ Grazing Advice Partnership (GAP): www.grazinganimalsproject.org.uk
- ✿ GAP in Wales: Pori Natur a Treftdaeth (PONT), Email: pontcymru@btconnect.com Tel: 01550 740 333.
- ✿ *Wild about Meadows*. A manifesto for the wild meadows of Wales. 2008. *Flora locale* and the Grasslands Trust.

Other management

Topping pastures

Cutting the vegetation at around 15–20cms height between mid-July and mid-August may be necessary, especially if the pasture is to be grazed by sheep in late summer and autumn. Topping can be useful to reduce the quantity of coarse vegetation on under-managed pastures.

If grazing isn't possible It is difficult, but possible, to manage some smaller wild meadows, such as those in towns, solely by cutting – at least two, and up to four, grass cuts per year will be needed. Cuttings must be removed in mid-summer but can be left *in situ* at other times.

Weed control

Docks and thistles (Creeping, Spear) should be controlled by cutting just as they come into flower or their leaf rosettes spot-sprayed when young using an appropriate herbicide applied using a hand-held sprayer or weed wiper. Monitor soft rush growth, and top in August if they are encroaching. Many 'specific' herbicides will kill other non-target wild flowers and should never be applied using a spray boom. Ragwort should be pulled, or leaf rosettes spot-sprayed in spring before grazing animals are put in the field.

- ✿ *Restoring wildflower grasslands in Wales*. *Flora locale* Advisory Note.
- ✿ *Discover Wild Plants*. *Flora locale* Advisory Note. For information on identifying British wild plants.
- ✿ *Habitat management for Marsh Fritillary butterfly*. [www.butterfly-conservation.org/uploads/marsh_fritillary\(1\).pdf](http://www.butterfly-conservation.org/uploads/marsh_fritillary(1).pdf)
- ✿ Wild Meadows: www.wildmeadows.org.uk – for links to all the above and many other resources.

www.wildmeadows.org.uk



Flora Locale, Postern Hill Lodge, Marlborough, Wiltshire SN8 4ND
Tel: 01672 515723 Email: info@floralocale.org www.floralocale.org

Flora locale seeks to restore wild plants and wild-plant communities to lands and landscapes across the UK, and by this means raise the biodiversity, environmental quality and enjoyment of town and countryside.

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Grazing Advice Partnership