



Is that a good weed?

**A landowner's guide to grassland
species and their benefits**

Is that a good weed?

Diverse grasslands are better for livestock – and for the farm

Before modern veterinary medicines, farmers used the wildflowers in their meadows to help keep livestock healthy. Welsh farms would often have a ‘Cae Ysbyty’, rich in a wide range of wild plants, where ill stock could intuitively graze the plants that would help treat their ailments.

Hay meadows rich in wildflowers have a higher nutritional value than pure grass, containing the proteins and other nutrients needed for stock to grow strong. Modern agricultural methods, particularly reseedling with rye-grass and the extensive use of slurry and fertilisers have largely eliminated wildflowers from our farms.

But modern farms have much to gain from traditional farming methods – managing grassland to encourage wildflowers improves the health of livestock and cuts costs, reducing dependence on chemicals and other inputs. Flower-rich fields have healthier soil and are more resilient to both drought and flooding.

Grassland types

This booklet sets out some of the important types of grassland you might have on your farm, as well as the benefits of plants to your livestock, your soil and your farm.

Grasslands can be acidic, calcareous (alkaline) or neutral, depending on the pH of the soil (pH is a measure of acidity).

Soil acidity is determined by the natural geology of an area but can also be affected by the land management practices, such as liming.

Acid grassland

Marshy grassland (Rhos pasture)

Neutral grassland

Calcareous grassland

Acid grassland



The most common type of semi-natural grassland in Wales.

Acid grassland is normally managed as permanent pasture and can host a range of different species if it isn't subject to artificial fertilisers or ploughed.



Tormentil

Identifying features:

Grows low to the ground (creeping) but can reach height up to 30cm.

Flowers have four yellow petals.

Leaves are 'maple shaped' and toothed, with silvery undersides.

Not to be confused with buttercups.

Flowers: May-September

Traditional benefits for livestock:

- Antioxidant
- Anti-inflammatory
- Antibacterial
- Aids digestion
- High in minerals

Benefits to the farm:

- Improves soil stability (deep roots)
- Helps improve drought resilience of grassland
- Attracts several species of pollinators and birds



Common Sorrel

Identifying features:

Perennial (returns year on year).

Shiny arrow/heart shaped leaves (in Sheep's Sorrel the 'wings' at the base are more pointed and curled around).

Reddish flowers on slender spikes.

Not to be confused with docks.

Leaves are edible and taste like apple skin.

Flowers:

Common Sorrel: May-July

Sheep's Sorrel: April-August



Sheep's Sorrel

Traditional benefits for livestock:

- Good for kidneys
- Cools fevers
- Soothes skin irritations
- Aids digestion
- High in vitamins and potassium

Benefits to the farm:

- Good for soil stability (deep roots)
- Helps improve drought resilience of grassland
- Attracts several species of pollinating insects and birds



Heath Bedstraw

Identifying features:

Perennial (returns year on year).

Delicate looking plant.

Flowers are very small and white.

Leaves are small and narrow, in 'sets' around the stem.

Flowers: June–August

Traditional benefits for livestock:

- Anti-inflammatory
- Antibacterial

Benefits to the farm:

- Attracts pollinators
- Helps improve drought resilience of grassland

Marshy grassland

(Rhos pasture)



A marshy, tussocky grassland found on very wet soil which is acidic, and occasionally peaty.

This grassland offers numerous benefits to both wildlife and farming – the wet soils retain water, which helps reduce flooding, as well as providing summer grazing for cattle whilst other areas rest.

Sheep are not well suited for grazing marshy grassland/Rhos pasture as they can't cope with the wet ground, long tussocks and tough vegetation – and in rush pasture they will poach the wet ground. The best thing to graze here are the native breeds of cattle that are well adapted to these environments.



Devil's-bit Scabious

Identifying features:

Perennial (returns year on year).

Found in damp and marshy grasslands.

Rounded heads of purple flowers.

Leaves can be smooth edged or with a 'tooth' shape.

Flowers: late July–October

Traditional benefits for livestock:

- Natural de-wormer for livestock
- Supports the respiratory system and reduce mucous
- Aids digestion
- Can improve appetite

Benefits to the farm:

- Attracts several species of pollinators
- Food plant of the caterpillars of the rare Marsh Fritillary butterfly



Ragged Robin

Identifying features:

Perennial (returns year on year).

Found in damp and marshy grasslands.

Bright pink 'tatty' looking flowers with five ragged petals.

Leaves narrow, grass like and rough to the touch.

Flowers: May-August

Benefits to the farm:

Although unpalatable to livestock, Ragged Robin brings benefit to the overall habitat by attracting many pollinators which in turn attract larger insects such as dragonflies, which feed on biting insects and pests.



Purple Moor-grass

Identifying features:

Large, tussock-forming grass.

Found in damp and marshy grasslands.

Perennial (returns year on year), turns yellow/brown in winter and green in spring/summer.

Flowers slightly purple coloured, hence its name.

Flowers: July–September.

Traditional benefits for livestock:

- Low in sugars and high in fibre
- Palatable when young

- Can increase liveweight gain in cattle on summer grazing

Benefits to the farm:

- Traditionally harvested for bedding
- Stabilises wetland soils, reducing erosion
- Helps reduce runoff and flooding
- Helps improve water quality
- Stores carbon
- Drought resilient
- Provides habitat for birds and small mammals



Lousewort

Identifying features:

Perennial (returns year on year).

Grows low to the ground, spreading.

Pink flowers.

Leaves very small, 'feathery' looking with bumpy edges.

Flowers: April-July

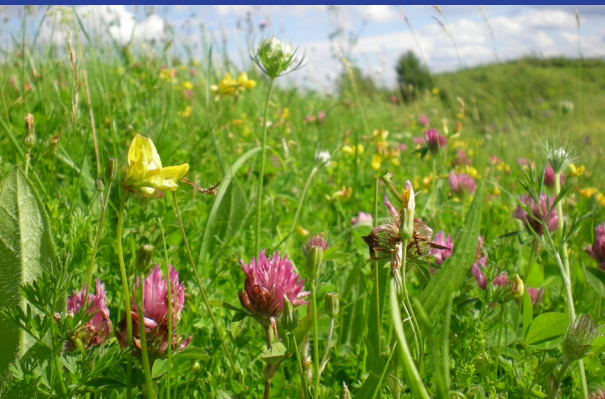
Traditional benefits for livestock:

- Antibacterial properties
- Anti-inflammatory
- Aids digestion

Benefits to the farm:

- Adds beneficial diversity to the grassland
- Helps improves soil quality
- Attracts several species of pollinators

Neutral grassland



Neutral grassland is found on free draining soils across Wales – and the traditional hay meadow is most often found on these neutral soils.

Because so much of Wales is acid, neutral grassland is often maintained through a long history of periodic liming with no artificial fertiliser added.

Neutral grassland is often very rich in wildflowers which provide immense health benefits for all species of grazing livestock.



Yellow Rattle

Identifying features:

Annual (completes its life cycle in a year).

Yellow flowers.

Distinct shaped leaves that grow opposite each other up the stem.

Brown seed pods have a distinct 'rattle'; hence its name.

Historically used as a cue for timing the hay cut.

Flowers: May–September

Traditional benefits for livestock:

- Helps to establish a more diverse sward for livestock
- Highly nutritious
- A valuable addition to the hay crop

Benefits to the farm:

- Yellow Rattle is parasitic to grasses
- Commonly used in meadow creation to increase the diversity of plants in a grassland



Common Knapweed

Identifying features:

Perennial (returns year on year).

Grows up to 1m height.

Looks a bit like a thistle – but isn't prickly.

Flowers are purple with a hard black-ish base; seed heads are dark and round in shape.

Leaves are narrow, can be smooth edged or toothed.

Flowers: June–September

Traditional benefits for livestock:

- Can improve appetite
- Historically used to help reduce bleeding
- Nutritional addition to hay, helping increase yield

Benefits to the farm:

- Good for soil stability (deep roots)
- Helps improve drought resilience of grassland
- Attracts several species of pollinating insects
- Seeds provide food for birds



Red Clover

Identifying features:

Perennial (returns year on year).

Reddish-pink flowers.

Typical clover leaf shape, with hairy edges.

Flowers: May–October

Traditional benefits for livestock:

- High in nitrogen, supporting growth and weight gain
- Anti-inflammatory
- Helps balance hormones
- Helps with skin conditions

Benefits to the farm:

- A nitrogen fixing legume, improves soil fertility
- Deep rooting, improves soil structure
- Good addition to hay crop
- Supports several species of pollinators



Bird's-foot Trefoil

Identifying features:

Perennial (returns year on year).

Five small leaves, often hairy.

Seeds have pods that look like a bird's foot shape when ripe.

Flowers most commonly yellow, but can also be orange or red.

Flowers: June–September

Traditional benefits for livestock:

- Antibacterial properties
- Anti-inflammatory
- Helps balance hormones

- High in nitrogen, supporting growth and weight gain
- High in tannins, reduces gut nematodes (roundworms)

Benefits to the farm:

- A nitrogen fixing legume, improves soil fertility
- Deep rooting, improves soil structure
- Helps improve drought resilience of grassland
- Attracts several species of pollinating insects



Lady's Bedstraw

Identifying features:

Perennial (returns year on year).

Similar to Heath Bedstraw, but generally larger plant.

Yellow flowers and square stems.

Leaves are small and narrow, in 'sets' up the stem.

Smells like fresh hay.

Flowers: June–September

Traditional benefits for livestock:

- High protein content, supporting growth and weight gain
- Very palatable to livestock

Benefits to the farm:

- Resilient to wet and dry conditions
- Helps improve drought resilience of grassland
- Nutritional addition to hay crop



Yarrow

Identifying features:

Perennial (returns year on year).

Dark green, feathery leaves.

White/dusty pink flowers in flat-topped clusters.

Flowers: June–August

Traditional benefits for livestock:

- Antibacterial
- Anti-inflammatory
- Aids digestion
- Helps reduce fevers
- Very palatable to sheep on dry ground

Benefits to the farm:

- Dries well in hay crop
- Attracts several species of pollinating insects
- Attracts ladybirds and lacewings that feed on pests



Selfheal

Identifying features:

Perennial (returns year on year).

Grows in acid, neutral and calcareous soils.

Flowers upright and violet colour.

Flowers: April-June

Traditional benefits for livestock:

- Known for its all-round medicinal properties
- Anti-inflammatory
- Antibacterial
- Helps reduce fever
- Eases diarrhoea

Benefits to the farm:

- Palatable to livestock for self-medication
- Attracts several species of pollinating insects



Betony

Identifying features:

Perennial (returns year on year).

Upright red-purple flowers.

Leaves very distinct 'bumpy' edges, stem feels square if rolled between fingers.

Flowers: June–October

Traditional benefits for livestock:

- Anti-inflammatory
- Antibacterial
- Analgesic (natural pain relief)

Benefits to the farm:

- Attracts several species of pollinating insects
- Resilient to fluctuating weather conditions: drought and waterlogging

Calcareous grassland



Relatively uncommon in Wales, calcareous grassland is found on chalk or limestone soils, such as the Great Orme near Llandudno, Northeast Wales, the Gower Peninsula, and Glamorgan Heritage Coast.

Calcareous grassland usually has shallow soil with rocky outcrops. Species in this habitat can be quite varied from other grassland habitats.



Wild Thyme

Identifying features:

Perennial (returns year on year).

Highly scented, like Thyme the kitchen herb.

Grows on short, dry grassland.

Grows low to the ground (creeping).

Pinky purplish flower heads.

Flowers: June–September

Traditional benefits for livestock:

- Antibacterial
- Antioxidant
- Natural de-wormer

- Aids digestion
- Treats respiratory problems
- A historic scabies remedy

Benefits to the farm:

- Improves soil productivity and structure
- Attracts several species of pollinating insects
- Helps improve drought resilience of grassland
- Pest resistant



Buttercups

Which buttercup?

There are many species of buttercup. But some of them can be easily distinguished when you know what to look for. Here are some of the more commonly found ones:

Creeping Buttercup (left)

Meadow Buttercup (middle)

Bulbous Buttercup (right)

Found in neutral grasslands. Distinct green sepals at the base of the flower are folded back and pointing downwards in Bulbous Buttercups only.

All species of buttercup are toxic when eaten fresh, but the bitter taste deters livestock so cases of poisoning are very rare. The toxin is destroyed by drying so presence in hay is harmless.

Benefits to the farm:

- Attracts several species of pollinators
- Attracts ladybirds which feed on aphids
- Improves soil stability (deep roots)
- Helps improve drought resilience of grassland

Further information

Books

Grassland Restoration and Management

Blakesley, D and Buckley, P (2016) Pelagic Publishing

RHS Weeds

Richards, G (2021) Welbeck Publishing Group in association with Royal Horticultural Society

Royal Botanic Gardens Kew Witch's Garden Plants in folklore, magic and traditional medicine

Sandra, L (2020) Welbeck, an imprint of the Welbeck Publishing Group

The Complete Herbal Handbook For Farm and Stable

De Bairacli Levy, J (1991) 4th edn. Faber and Faber Limited

Websites

Plants and Fungi

plantlife.org.uk/plants-and-fungi

The Glaswelltiroedd Gwydn Project

plantlife.org.uk/our-work/glaswelltiroedd-gwydn-project

Managing Arable Farm Land

plantlife.org.uk/managing-arable-land

National Plant Monitoring Scheme: Species List

npms.org.uk/sites/default/files/PDF/NPMS_Species%20lists_WEB_2ndEd.pdf

Wildflower web

wildflowerweb.co.uk

Agricology

agricology.co.uk

Nature Friendly Farming Network

nffn.org.uk

Science Direct

sciencedirect.com

Scan for more about
managing meadows





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plantlife.org.uk

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