

Management of Wildflower-rich Grassland habitats for pollinators and other insects



Wildflower meadow © Robert Goodison

How are grasslands managed?

Most grasslands are farmed, either to provide grazing for livestock or cut for hay/silage to provide winter animal feed. Both grazing and cutting management are important for managing wildflower-rich grasslands and the insects they support; they remove annual vegetation growth, preventing an increase in soil nutrients. They also prevent the growth of tree and shrubs, which if left to grow would result in the grassland slowly turning into woodland.

What do insects need from my grasslands?

There are a very large number of insect species with a variety of different needs. Unless you have rare species with known habitat requirements the best advice is to develop a variety of vegetation conditions and encourage a range of plant species. It is important to provide conditions which can support the whole life-cycle of insects, including the provision of food (pollen and nectar over a long flowering season), nesting ground, over wintering cover and suitable vegetation/ground for hunting/foraging (see [grassland management](#)).

How should I manage my grassland for insect pollinators?

This will depend on the type of grassland you have, and the current wildlife (including plants, insect and bird populations) found both in it and in the local area. From a practical perspective the type of grazing animals or agricultural machinery you have to manage the land will influence what you can do.

Managing the grassland as pasture (through grazing) is a good option when managing for insect populations as it provides structural diversity (i.e. different heights of plants, bare ground and dense tussocks). Be careful with the timing and intensity of grazing to allow plants to flower and seed, and to ensure that some taller grown vegetation remains into the winter months to provide a refuge for insects.



© Rob Evans

Managing land as a hay meadow will provide very valuable nectar/pollen over the summer period, both for insects which live in the meadow and in the surrounding countryside.

Ideally cater for the requirements of many insects, by creating a mix of different types of grassland (managed in different ways) across a farm or wider landscape. Don't forget that other habitats on surrounding land such as hedgerows, scattered trees and shrubs and wetter areas will also provide important food and nesting resources for the insects found on your grasslands (see [grassland management](#)).



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What are the most important changes I should make to the management of my land?

The wildflowers and insects already present in existing grasslands are likely to be adapted to the current

cutting or grazing management, so it is advisable not to make rapid changes; in the short-term this may lead to loss of species and only gradual establishment of new ones. However a few simple changes will help protect and enhance both wildflower and insect populations:

- Reducing or stopping fertiliser inputs will benefit many wildflower species by slowing the growth of grasses
- Reducing or targeting the use of herbicides, and ceasing pesticide use will help both wildflower and insect populations

- By carefully planning your grazing and cutting management you can easily produce suitable conditions for the plants and invertebrates that live and grow in the grassland (see [advice on managing habitats](#)).

How can I produce the most suitable conditions for insects?

You can use both grazing and cutting management (and a mixture of the two) to change the structure of your grasslands. Some of the benefits to insects of different management techniques are shown in the table below.

What?	Grazing Pasture	Cutting Meadow	Why?	How?
Mix of vegetation structure (needed at a small and larger scale)	✓✓✓	✓	Tussocks provide valuable shelter and over wintering areas Taller vegetation, helps some insects locate mates. Also likely to increase flowering	Cattle or sheep grazing in autumn/winter, with lighter grazing in the spring/summer months. Cattle grazing will provide greater diversity of sward heights than using sheep or horses.
Bare ground	✓✓		Provides areas for hunting insects and also for nesting	Cattle grazing/trampling will provide small open areas.
Short turf	✓✓	✓	Often valuable for foraging insects	Graze with sheep or ensure high levels of grazing.
Manure/dung	✓✓	✓	Provides food source for a range of beetles	Produced by livestock (these need to be free of avermectins).
Diverse range of plant species	✓✓✓	✓✓✓	Provides range of pollen, nectar and other plant material for feeding	Can be achieved by both sensitive grazing and meadow management.
Long flowering season	✓✓	✓	Provides nectar and pollen supply from spring through to autumn	Well managed pasture can provide a long flowering season. Meadows only provide a short (1-2 months) flowering season, but leaving unmown areas/banks can extend flowering.
Pollen and nectar source	✓✓	✓✓✓	A good range of flowering plants	Both pastures and meadows can provide valuable pollen and nectar. Heavy summer grazing will reduce flowering, so autumn/winter grazing is preferred option.
Scattered trees and shrubs	✓		Provide both valuable shelter for invertebrates and also valuable food (shrubs supply important nectar)	Scattered shrub cover can be encouraged and maintained in pastures with careful planning of grazing period, stocking levels and choice of grazing animals.



Common bird's-foot trefoil (*Lotus corniculatus*) © Dr Chris Gibson



Brimstone (*Gonepteryx rhamni*) © Dr Chris Gibson



Hornet hoverfly (*Volucella zonaria*) © Ian Dawson

This is one of a series of B-Lines Fact Sheets which provides guidance as to how to restore, recreate and manage wildflower meadows and pastures. Other fact sheets include:

- Sheet 1 - **Grasslands for Insect Pollinators and other wildlife**
- Sheet 2 - **Wildflower-rich grassland restoration**
- Sheet 3 - **Wildflower-rich grassland creation**
- Sheet 5 - **Seeding the B-Lines; selecting species and seeds**

Further useful guidance includes:

Advice on Managing BAP habitats (see [Buglife](#))

Meadow Management (see [Bumblebee Conservation](#))

Butterflies and farmland (see [Butterfly Conservation](#))

Illustrated guide to managing neutral pasture for wildlife TIN088 (see [Natural England](#))

Illustrated guide to lowland chalk and limestone grassland TIN082 (see [Natural England 2](#))

Soil and agri-environment schemes: interpretation of soil analysis TIN036 (see [Natural England](#))

Sward Enhancement: choice of methods – TIN062 – (see [Natural England 2](#))

Seed sources for Grassland restoration and Re-Creation in Environmental Stewardship (see [Natural England 3](#))

Arable reversion to species-rich grassland: establishing a sown sward TIN067 (see [Natural England 4](#))

Information on Environmental Stewardship is available from Natural England (see [Natural England - Farming and land stewardship](#))

Information on the Campaign for the Farmed Environment can be found at (see www.cfeonline.org.uk)



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