

SPECIES RICH GRASSLAND MANAGEMENT AND CREATION

DEVON
GREATER
HORSESHOE
BAT PROJECT



Photo: David Chamberlain

Why are wildflower grasslands important?

Wildflower meadows are one of the key habitats needed by greater horseshoe bats in the landscape around their summer maternity roosts. Wildflower grasslands support huge numbers of insects which bats feed upon. They particularly need moths, cockchafers, crane flies and other large bugs found in wildflower grasslands. Around 2% of this type of habitat remains compared to a century ago and this is mirrored in a decline in the range and numbers of greater horseshoe bats.

Small traditional meadows surrounded by tall bushy hedgerows are perfect for bats. Greater horseshoe bats have a very high frequency call, which is both quiet and directional. This means that it disappears rapidly if it has nothing to bounce back from. Because they need

to hear the echo of their call in order to find their way around, they require navigational features, such as hedges or trees, within a few metres of their feeding grounds.

Wildflower grasslands, grazed with cattle after a hay cut, add even more benefit both to the structure and diversity of the meadow and to the bats. The dung beetles which feed on cow dung are particularly important to young greater horseshoe bats. If cattle are not available, then grazing by other livestock types is still beneficial, but their dung may not support the same quantities of dung beetles.



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A brief history of meadows

Meadow plants have co-evolved with traditional agriculture over thousands of years. Initially hay cuts were taken over the course of the summer as it was a long and tiring process. This meant that many plants had a chance to set seed, and insects and small mammals could find refuge before grass was cut and many areas were left untouched each year. More recently however, this practice has been replaced by the use of large agricultural machinery which can cut the grass very quickly. This has been coupled with the use of agricultural grass mixes and chemical fertilisers which favour the growth of competitive grass species rather than the more delicate wild flowers. Although this process has made fields more agriculturally productive, it has meant a huge reduction in the biodiversity of our precious meadows and species rich grassland.

Ways to fund meadow creation and management:

Grants are often available for meadow creation and restoration. Talk to a farm advisor or to Natural England for the most up to date information.



Managing meadows for bats and biodiversity:

- Try to leave a 2-6 m margin uncut around the edge of the meadow. This creates a refuge for insects and small mammals when a hay cut is taken. Ideally try to cut one side of this margin each year, so in a roughly square field the margin will be cut once every 4 years.
- When taking a hay cut, try to cut from the middle towards the outside, to prevent the trapping of small mammals in the centre.
- Taking a hay cut later in the summer is beneficial for most wild flower species as this allows them to set seed. Ideally from mid-July onwards.
- Consider introducing wild flower seeds to improve biodiversity. Aftermath grazing by cattle is a great way to ensure seeds get trampled in and sward structure remains uneven. Cattle can be let in to a meadow a few weeks after hay cut.
- Alternatively, sheep can be used for grazing and removed before the grass starts to grow again in the spring, or before poaching of the ground occurs.

Speak to an advisor for specific information on your land

Visit www.floralocale.org and look at the restoration pages for more information on creating species rich grassland



Photo: Kevin New

Establishing new wild flower meadows:

- Fields dominated by vigorous grasses (such as perennial rye grass and Yorkshire fog) will need to be either nutrient stripped over the course of a few years by repeated cutting without the addition of fertilisers, sprayed off using a broad spectrum herbicide or turf stripped in order to allow finer wild flower species a competitive chance when introduced.
- Treat thistles and docks prior to overseeding or spreading green hay if the land is not being ploughed first.
- Taking a soil test can be a useful way of determining nutrient levels. Phosphate levels below 2 are generally needed for a successful meadow creation project.
- Introducing local provenance seeds is a great way to ensure the species you are introducing are most suited to the local environment.
- Spreading green hay on to a nutrient poor site which has been harrowed and has at least 60% bare ground is a great way to ensure seeds can start to compete with existing vegetation.
- In the first year or two of growth it may be necessary to top thistles, docks and grasses to encourage tillering and to allow wild flowers to access space and light.
- Continued management will be required and it may take five years or more to achieve a good wildflower meadow.



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