



Managing farmland habitats for invertebrates:

# Hedgerows and Cereal Field Margins

**Invertebrates are fascinating creatures that form the vast majority of animal life and they play an essential role in the health of our countryside. Without a variety of insects, many of our crops and native plants would not be pollinated. Invertebrates such as ground beetles, spiders, ladybirds and hoverflies are useful to farmers as they eat crop pests such as aphids. Other wildlife such as bats and game birds are dependent on a good supply of invertebrates for food.**

There are lots of things that farmers can do to put the richness and colour back into the countryside. This leaflet contains suggestions and illustrations on how to do this and highlights some of the financial incentives on offer under current agri-environment schemes.



Conserving the small things that run the world

[www.buglife.org.uk](http://www.buglife.org.uk)



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# How to create features in hedges and cereal fields that will benefit invertebrates

Hedgerows and cereal field margins provide essential habitat for invertebrates, offering food, shelter and breeding sites for a wide range of species. The Single Payment Scheme requires a two metre buffer zone next to a hedge or water-course in fields that are greater than two hectares; this buffer must be two metres from the centre of the hedge to offer some protection from ploughing or spray drift.

## 1 Structure

Aim to create a tall, dense hedge with a wide base and few gaps to provide the best habitat for invertebrates. Do not cut back to the same height each time the hedge is trimmed. Instead, allow hedges to grow incrementally taller and wider with each cut.

## Rotational management

Avoid cutting all the hedges on a site in the same year – leaving some hedges uncut will increase the number of species that the hedge can support. Cut on a rotation of at least every three years. Where possible, cut only one side of a hedge in a single year to allow recolonisation of invertebrate species.

## 2 Laid hedge

Laying your hedges using traditional methods will produce a well-structured, dense hedgerow.

## 3 Mixed hedge

Hedges containing a variety of native plant species offer a greater range of invertebrate food sources. Flowering plants, such as blackthorn, honeysuckle and bramble, provide not only the nectar and pollen essential for adult insects, but also berries later in the year. Ivy flowers in late autumn are also an important source of nectar for insects such as hoverflies.

## 4 Trees

Leave strong saplings when trimming hedges or plant trees to ensure the future continuity of standard trees in hedgerows where this is already a feature in the local landscape. Mature trees provide shelter and added structural variety.

## 5 Dead wood

Dead wood is valuable to a large number of invertebrates. Leave some on both standard trees and on larger hedgerow shrubs. Some fallen dead wood should also be left on the ground where it will not obstruct machinery.

## 6 Conservation headland

Leave a sprayer's-width of the crop unsprayed to allow broad-leaved native plants to flower and set seed and provide food for invertebrates in the form of nectar, pollen, leaves and seeds. No insecticides should be used, and selective herbicide input should be reduced from early spring. Injurious weeds or invasive aliens can be spot-treated or weed-wiped.

## 7 Field margins

Leave these to colonise naturally or sow with native grass and flower species that benefit invertebrates, such as the pollen and nectar flower mixture option in Environmental Stewardship. Field margins can now be included in your set-aside allowance. Mow perennial grass margins on a rotation of 2-3 years and wild flower margins annually in late autumn. Avoid using pesticides – weed wipe or spot treat any problem weeds.

## 8 Beetle bank

Create low banks across cereal fields using two-directional ploughing and sow with a mix of native tussocky grasses such as Yorkshire fog, timothy and cocksfoot. These provide shelter for beneficial insects such as ground beetles and spiders that will eat crop pests and reduce the need to spray.

## 9 Field corner

Unproductive field corners can become good invertebrate habitat if taken out of cultivation and left unsprayed. They can also be included in the set-aside allowance.



White-letter hairstreak

Since Dutch Elm disease, elm suckers in hedgerows have become an important food source for the White-letter hairstreak butterfly (*Strymonidia w-album*)



Black clock ground beetle

Predatory insects such as this Black clock ground beetle (*Pterostichus madidus*) will colonise fields more quickly if beetle banks are present

# Funding and agri-environment schemes

Farmers who manage their land to benefit wildlife can obtain funding via the Environmental Stewardship scheme. Entry Level Stewardship (ELS), Organic Entry Level Stewardship (OELS) and Higher Level Stewardship (HLS) all have options for management of hedges and field margins.

## Priority habitats

Under Britain's commitments to protect biodiversity under the Rio Convention (1992) a number of habitats have been identified as being of particular importance for conservation, and Biodiversity Action Plans (BAPs) have been drawn up to identify how these habitats can be protected and enhanced.

**Ancient and/or species-rich hedgerows** and **Cereal field margins** have both been classified as BAP priority habitats.



Male Common scorpion fly (*Panorpa communis*). These spectacular insects are typically found in hedgerows

## Links

- For more detailed habitat management advice, Buglife has produced a series of guides and web pages on 32 BAP priority habitats. Further details can be found at [www.buglife.org.uk](http://www.buglife.org.uk)
- Information on Environment Stewardship is available from Rural Development Service (Natural England from October 2006) [www.defra.gov.uk/rds](http://www.defra.gov.uk/rds)
- The Farming and Wildlife Advisory Group (FWAG) website is at [www.fwag.org.uk](http://www.fwag.org.uk)

## Options that will benefit invertebrates in hedges and cereal field margins:

### ELS/OELS

- EB1 & 2/OB1& 2: Hedgerow management on both/one side of the hedge
- EB3/OB3: Enhanced hedgerow management
- EB4 & 5/OB4 & 5: Stone-faced hedgebank management (one/both sides)
- EB8, 9, 10/OB 8, 9,10: Combined hedge & ditch management
- EE1, 2, 3/OE 1, 2, 3: 2, 4 or 6m buffer strips on cultivated/rotational land
- EF1: Field corner management
- EF4/OF4: Pollen & nectar mix
- EF5/OF5: Pollen and nectar mix on set-aside
- EF6: Over-wintered stubble
- EF7/OF7: Beetle banks
- EF9/HF9: Conservation headlands 6-24m wide
- EF10/HF10: Conservation headlands without fertilisers or manure
- EF11/OF11: 6m uncropped, cultivated margins

### HLS

- HB12: Maintenance of hedgerows of very high environmental value
- HF14: Unharvested fertiliser-free conservation headland
- HF15: Reduced herbicide cereal crop management preceding over-wintered stubble and spring crop
- HF16: Cultivated fallow plots or margins for arable flora (enhanced set-aside)
- HF18: Reduced herbicide, cereal crop management preceding enhanced set-aside
- HF19: Unharvested fertiliser-free conservation headland preceding enhanced set-aside
- HF20: Cultivated fallow plots or margins for arable flora
- HG7: Low input spring cereal to re-create an arable mosaic
- HR6: Supplement for small fields (<2ha)

## Buglife-The Invertebrate Conservation Trust

is the only organisation in Europe devoted to the conservation of all invertebrates and is working tirelessly to save Britain's rarest bugs, bees, spiders, beetles and many other incredible creatures.

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