HABITAT MANAGEMENT GUIDE

Low-input Cereal

Low-input cereals can provide excellent opportunities for the development of diverse arable plant communities and can encourage the growth of rare arable plant species, along with other arable wildlife, such as pollinating insects and farmland birds. The arable plants that this management focuses upon have little competitive impact upon the crop.

Habitat for arable plants ★★★★★

Habitat for farmland birds ★★★★☆

Habitat for invertebrates ★★★★☆

Habitat for small mammals ★★★★☆

Arable plants and the seeds that they produce provide valuable food for overwintering farmland birds. The establishment of a diverse arable plant community helps to support a variety of insects which do not harm the crop, and in turn, support predatory insects which help to control crop pests.

Many farmland birds feed their young on insects associated with low-input cereals. For example, Grey Partridge chicks forage on the ground within the sheltered habitat created by open cereal crops. If the crop is too dense it can soak them in wet weather. Cereal crops can also provide nesting habitat for farmland birds such as Skylark. If cereal stubble is left overwinter, the benefits are multiplied.

Where should low-input cereal be located?

Low-input cereal management is most suited to light soils in locations that do not have high weed infestations, or a problem with cleavers or competitive grass weeds.

What benefits will low-input cereals deliver?

The objective of low-input cereal is to provide an open cereal crop creating habitat for arable wildlife including arable plants, invertebrates and farmland birds and mammals that will eat seeds and invertebrates.


Poppies growing amongst a spring barley cereal © EL Cooke

Management of low-input cereals

The cereal crop is best established by ploughing the soil between 4-8 inches in depth (10-20 cm), depending on the thickness of the topsoil. Direct drilling and minimum tillage reduces the soil turnover limiting seed germination of many arable plants and does not bring buried seed to the soil surface.

Arable plants germinate at different times of year but tend to be autumn/winter germinating or spring germinating. If there are rare or threatened arable plants present seek advice on the germinating periods of these species to decide when best to cultivate. In general, management of spring-sown cereals tend to be less intensive than winter-sown cereals, so better suits this management approach, and are a good option to conserve a wide range of arable plants.

Best practice for low-input cereals includes no application of broad-spectrum herbicides and reduced application of fertilisers and pesticides. In some situations, stopping the use of broad-spectrum herbicides alone can hugely enhance the arable plant community. Selective herbicides could be used to spot-treat problem weeds and invasive species as they may directly affect rare and threatened arable plants, but if the management is part of an agri-environment scheme advice should be sought about restrictions to the use of chemical control.

Rotating low-input cereal management around the farm can prevent a build-up of problem weed species. As most rare arable plants are able to survive temporary periods of being over-sown with grass, this can also be a useful technique for managing problematic weeds.

Reducing fertiliser input enables less competitive arable plants to grow alongside the crop. It may also reduce undesirable weeds, as many of these prefer soils that are richer in nutrients and get a boost from the application of fertiliser. There are no restrictions to fungicide and plant growth regulator use, but to encourage arable wildlife the use of pesticides should be avoided. Within agri-environment schemes there may be dates within which no pesticides should be applied.

A reduced drill rate to create a more open sward can be undertaken, especially in areas with higher soil nutrients, and a cereal variety that does not produce too many tillers can be used to also establish a more open sward.

Harvest should be left for as long as possible to allow arable plants to complete their lifecycle and set seed. Many arable plants seed by mid-August if conditions are favourable. Low growing arable plants missed by the combine or forage harvester will continue to flower and set seed after harvest, and some species, like Red Hemp-nettle can re-grow after harvest.

Grazing winter stubbles to remove excess plant growth can also be incorporated into the farm management, depending on any existing agri-environment options. However, this can have an impact on overwintering birds that rely on the seed drop and weed seeds for sustenance over the lean period.