

Low-input Root Crops

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

Arable plants and the seeds that they produce provide valuable food for overwintering farmland birds. Many farmland birds feed their young on insects associated with arable plants growing within low-input root crops, so there is benefit to birds throughout the year.

The establishment of a diverse arable plant community helps to support a variety of insects which do not harm the crop, and in turn, can support predatory insects that help to control crop pests.

Habitat for arable plants ★★☆☆☆

Habitat for farmland birds ★★☆☆☆

Habitat for invertebrates ★★☆☆☆

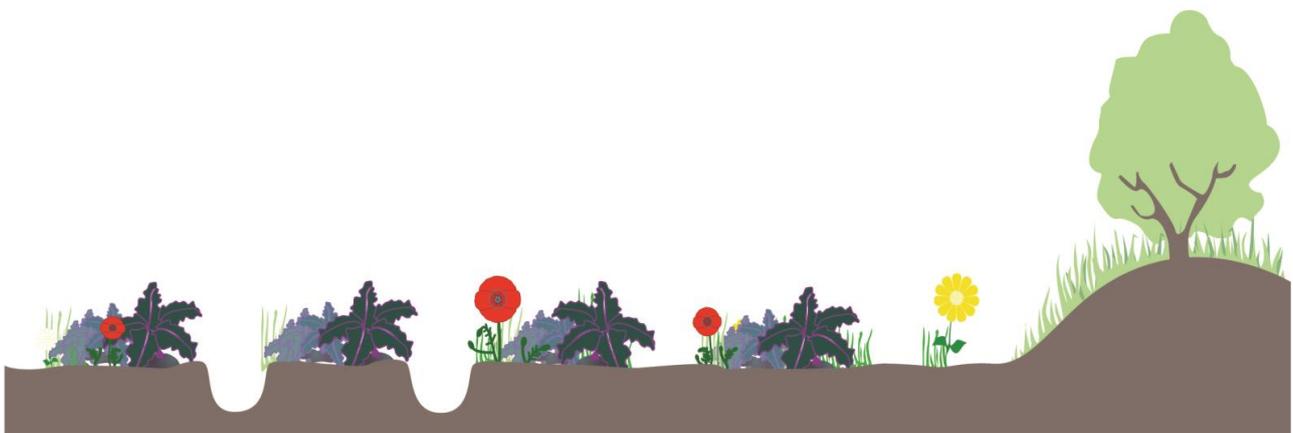
Habitat for small mammals ★★☆☆☆

Where should low-input root crops be located?

Low-input root crops are usually grown on light soils in locations that do not have high weed infestations, or a problem with cleavers or competitive grass weeds. They should not be grown in areas prone to soil erosion.

What benefits will low-input root crops deliver?

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



Illustrations by evansgraphic.co.uk © Plantlife

Management of low-input root crops

Generally, root crops are planted later than cereals, linseed and oil-seed rape, and it is recommended sowing should be undertaken before July.

Arable plants germinate at different times of year, but tend to be autumn/winter germinating or spring germinating. If there are rare and threatened arable plants present in a field, seek advice on the germinating periods of these species to decide how the field is best managed. Crop harvesting should be carried out once the plants have completed their lifecycle and set seed.

Establishing a low-input root crop is best achieved 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 limits seed germination as these cultivation methods do not turn over the soil and bring buried seed to the soil surface.

Best practice for low-input root crops includes no or low application of broad-spectrum herbicides and reduced application of fertilisers. 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 with the use of chemical control.

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 it is recommended that pesticides are avoided.

Rare arable plants that germinate in autumn/winter are not as suited to root crops being grazed as fodder crops over winter as young seedlings are likely to be disturbed. When used as a winter fodder crop, grazing should be undertaken from October onwards to allow plants time to complete their lifecycle.

Low-input root crops can be rotated around the farm to fit into the cropping cycle and farm management.



Mayweed growing alongside a potato crop © Cath Shellswell



Corn Marigold and Scented Chamomile © Cath Shellswell