

Cornfield Flowers

Cornfield flowers are annual plants that germinate, mature, flower and set-seed all in a single year. They have different habitat and management requirements compared with perennial wildflower meadows and are our fastest group of declining plants. It may be said that they have an identity crisis too. In the conservation world they are referred to as 'arable plants' but most of the time they are called 'weeds' - which after all is just a plant growing in the wrong place. So often what people think of as the wrong place, such as a field of wheat or barley, is actually perfect for an arable plant.

Arable plants can be spectacularly colourful, rivalling flowers found in meadows. Cornflower, corncockle and corn marigold are often used in amenity planting schemes and sometimes as a nursery crop for meadow restoration schemes to provide a burst of colour in the first year. However, they do not continue to bloom beyond the first year

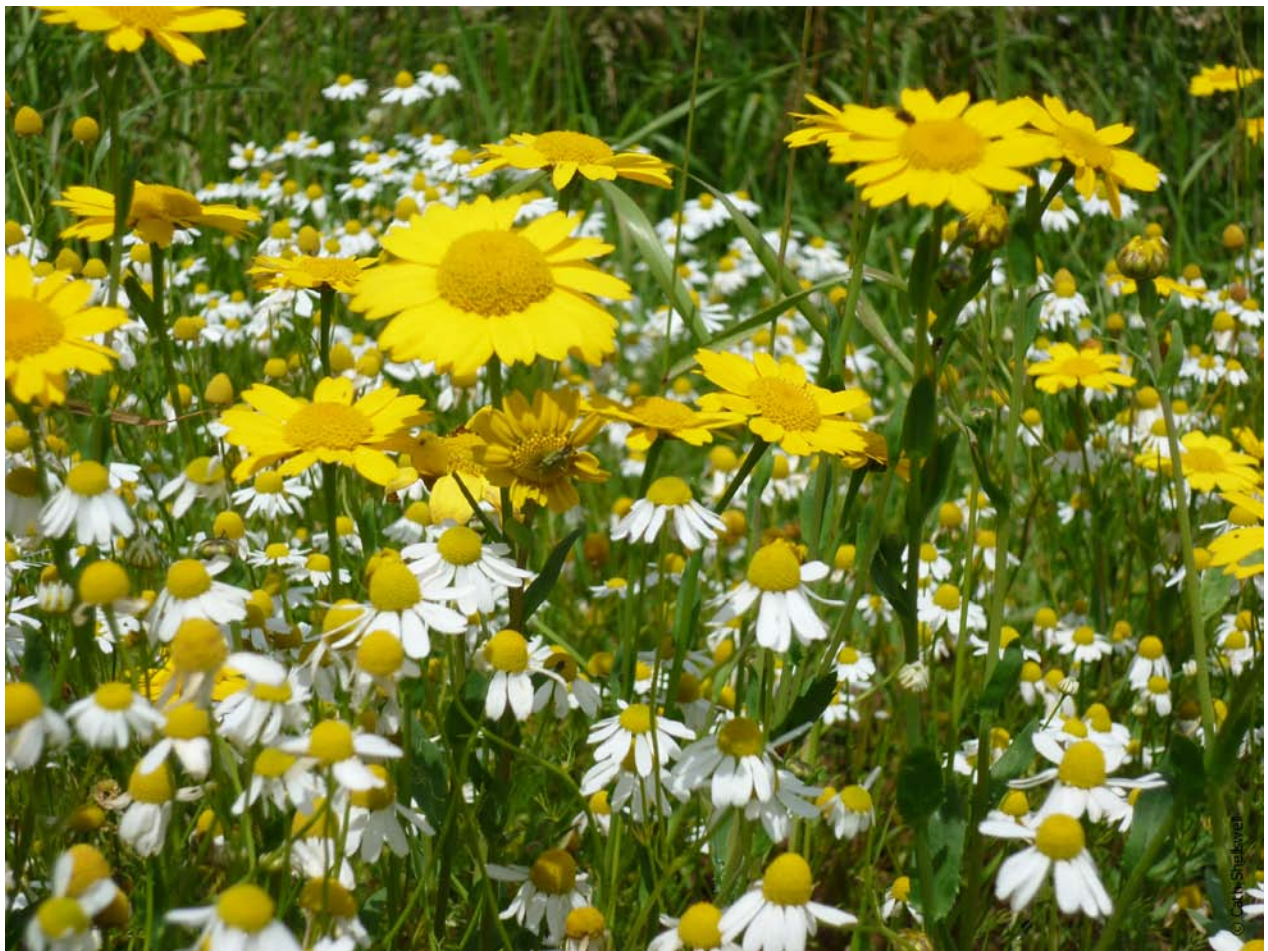
unless the habitat is managed specifically for them and the perennial plants take over to become the stars.

There are different associations of cornfield flowers depending on the type of soil. Sandy soils tend to have a community of plants that feature corn marigold, corn spurrey and field woundwort, whilst clay soils have hemp-nettles, dead-nettles and corn mint. There are some very rare plants that are tied to particular soil types and locations, such as ground-pine which is found on the North Down chalk ridge running from Kent into Surrey, and small-flowered catchfly which is located on the sandy soils in south-west England and Wales and the Isles of Scilly. However, there are no strict rules as often species will be present on different types of soils.

Plantlife have produced an [identification guide to arable plants across the UK](#) and a [Wales specific guide](#).



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Why are arable plants declining?

- Over the past century farming processes have been completely revolutionised arable plants have suffered as a result. This started in the 1960s with the first use of herbicides designed to remove weeds from crops.
- Seed cleaning, where stowaway weeds are taken out of crop seeds, has also had a huge impact on plants such as corncockle that rely on being spread in seed.
- There has been a change from spring cultivation to autumn cultivation. Although suitable for plants that can survive the winter, such as shepherd's-needle, others such as red hemp-nettle which is susceptible to frosts have struggled.
- More recently, ploughing has been replaced by minimum tillage or direct drilling of crop seed. This doesn't disturb the soil sufficiently to bring buried seed to the surface to germinate, nor does it sufficiently stimulate arable plant seeds on the surface to germinate.
- Competitive crop varieties have been developed that produce multi-stemmed plants and efficiently take-up fertilisers, quickly out-growing arable plants and shading them out or smothering them. This is a particular problem for plants that live in open habitat, such as annual knawel and cut-leaved germander.
- A very recent change to the landscape is solar farms. Many of these are on low-intensity arable fields, which also happen to be the last refuge for some arable plants. No cultivation takes place between the panels and arable plants suffer as a result. However, there are ways to undertake suitable management around the outside of solar farms, enabling the conservation of arable plants to be continued alongside our growing need for energy.

Managing habitat for cornfield flowers

Management for cornfield flowers is part of an annual regime starting with creating bare ground. The most common species mixtures that are available usually contain common poppies, cornflower, corncockle, Austrian chamomile (similar to our native corn chamomile) and corn marigold. Most of these are spring and autumn germinating. The ground needs to be cultivated once a year in March or October/November turning over the soil to create bare ground. In the first year the seeds should be spread thinly on the soil surface, perhaps mixed with sand to achieve an even distribution. They should not be buried into the soil as they will not grow if they are too deep but the soil does need to be pressed down to make sure that the seeds are in contact with the ground. Nothing more needs to be done to the area, just watch the flowers grow and bloom. They should flower from June onwards lasting until the end of summer, and possibly into autumn if the weather stays free of frosts. To stimulate the fallen seeds to germinate the ground should be cultivated again either in the spring or autumn. Only seeds in the top 5 cm of soil are likely to germinate, and some seeds like corncockle may not be able to survive damp conditions. As a result, new seed may need to be sown each year to create a dazzling display of cornfield flowers.

Cornfield flowers can be used as a nursery crop in wildflower meadow creation. Perennial wildflowers, such as oxeye daisy and common knapweed, form a rosette of leaves in the first year and do not flower. If added into a wildflower mixture, cornfield flowers will bloom in the first year creating a

burst of colour whilst the perennial wildflowers are quietly establishing. However, to sustain a wildflower meadow there should be limited soil disturbance otherwise this will pull-up perennial wildflower rosettes. As a consequence, wildflower meadow management is not suitable for the long term survival of cornfield flowers and they will slowly decline as the wildflowers take over. Generally, plants such as cornflower and poppies are not part of wildflower meadows and are only seen where there has been huge disturbance.

Management for threatened arable plants is only suitable if you know where they are growing, particularly the more threatened species. It needs to be targeted at specific locations to enable plants to grow and complete their lifecycle. There are certain parts of the UK that were known for their rare cornfield flowers, such as red hemp-nettle in Surrey, once widespread but now with a sole population in the North Downs. Pheasant's-eye was once so abundant in south-east England that it was sold at London markets under the name "Moroccan red". Sadly, there are very few surviving populations of this eye-catching plant left today.

Guidance for managing for threatened arable plants is provided for [England](#), [Scotland](#) and [Wales](#) and is usually restricted to farmland. Although some introductions are undertaken, management is usually focussed on finding out where there are remaining populations of rare and threatened arable plants and developing suitable management regimes to sustain them.

