

## Buttercups



Buttercups are probably one of the most well known and easily recognisable meadow plants in the UK. There are many different types of buttercup, from the more well known Meadow, Bulbous and Creeping buttercup to the lesser known Goldilocks buttercup. They are everywhere, from grasslands, to verges to ponds; there are many different opinions on buttercup from those who call them a grassland weed to others who view it as a classical plant in a wildflower meadow.

The most commonly known buttercup is probably Meadow Buttercup which is seen in vast swathes in old pastures across the UK and will grow on the majority of soil types. The majority of buttercups are found across older meadow ground, however there is a little known buttercup called the Goldilocks Buttercup which resides in woodland and hedgerow areas. This buttercup often looks disheveled, sporting deformed petals and sometimes it never grows any petals at all! The Goldilocks Buttercup is usually the first in its family to flower, as soon as the leaf canopy begins to close up in woodland areas it will start to die back. You will often find it in groups in woodland areas where they are able to get more sunlight. The Goldilocks Buttercup is not very competitive which is why it's not usually found in fields.

Buttercups are considered a weed by many, and the most notorious buttercup to receive this status is Creeping Buttercup which is a common feature in over grazed grassland and lawns, which can be hard to distinguish from the Bulbous Buttercup. The best way to tell the difference is to go to the base of the stem on the Bulbous Buttercup where the base will be swollen. Though the name implies there is a bulb this is not the case it just refers to the swollen basal tuber. Meadow Buttercup will grow on the majority of soil types however, it does prefer damper sites and calcareous soils. Bulbous Buttercup prefers free draining sites.

Creeping Buttercup is low growing with rapidly spreading runners or rhizomes across the ground which is why it can quickly colonise an area of open or poor ground. Another reason it can colonise an area quickly is because like other buttercups it is rarely grazed by livestock which gives it a greater opportunity to spread. It grows strongly on heavier, clay soils, potentially

creating a dense smothering blanket.

The toxin in buttercups is poisonous to grazing animals. All buttercups contain this toxin however, some have more than others! The relatively unknown Celery-Leaved Buttercup is the most poisonous buttercup of the family and contains the highest amount of the substance protoanemonin. In high doses this substance can cause severe skin irritation, blisters and if ingested it can cause death in livestock. The Celery-Leaved Buttercup is found in wetter areas, preferring pond areas and ditch edges. It can often be found on the edges and sometimes in slow running stream edges. It can be distinguished from other buttercups by its small petals which are bunched together on multiple branches and its large stem which has celery like leaves, hence its name. Unlike other buttercups the celery leaved buttercup is an annual so is reliant on seed reproduction and therefore not often found in grazing pastures.

Controlling buttercups can be a difficult task. It usually takes a good amount of determination and perseverance! There are a number of ways to bring buttercups under control, which vary from changing management practices, altering soil acidity and chemical or fertiliser applications. Firstly improving the sward can help to reduce an infestation. Since buttercups tend to thrive on over grazed pastures, a healthy thick, grass sward will be able to compete much better than an open sward. Overseeding existing pastures with grass seed will help to re-introduce more vigorous grasses that will help to close up any bare patches and over time decrease the dominance of buttercups.

Along with overseeding, changing the grazing system may also help to keep the buttercups dominance to a minimum. Don't allow livestock to graze the sward right down to its base, rotate livestock on the field so they are not on one area for too long and give the sward time to recover, while creating a taller residual sward length.

Improving soil structure can also help to reduce buttercups as the majority like wetter anaerobic conditions, except Bulbous buttercup which tends to be found on drier sites. Introducing deeper rooting plant species will help to improve soil drainage and make sites less appealing to buttercups. Cutting the area to stop buttercups from seeding will also help to reduce the amount of seed that is shed. If the fields are cut and used for hay this can still be fed to livestock as once dried buttercups are harmless to livestock.

Creeping Buttercup thrives in lower pH, more acidic soils, especially if this coincides with low soil fertility. Ensuring lime is

applied to bring up the soil pH to neutral and adding fertility through manure or fertiliser can reduce the likelihood of buttercups persisting in these conditions.

Chemical control is another option for controlling buttercups. Using glyphosate will kill buttercups but will also kill all other plants on the areas as well. Selective herbicides are a better option; these will target the buttercups along with other broadleaf plant species and leave the grass intact. Chemical control is usually a last resort as sprays can affect other species in the sward. Making changes to grazing and improving swards over time will begin to reduce the dominance of buttercups.

Buttercups come in many different shapes and sizes and though they can be considered a weed by many they are a reliable source of pollen and nectar for bees and other insects, so shouldn't be written off entirely! Careful management of swards will help to keep buttercups under control and will help to stop them from becoming dominant. It will take time but is worthwhile if you want to gain a more balanced and diverse sward.

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Date Posted: 19th January 2021