

Growing and managing your meadow

Meadows are plant communities that are made up of wild grasses and wildflowers. They can grow on a range of sites from the very exposed such as the coast to more sheltered sites such as woodland glades with very light shade. Dry and wet soils can support meadows and they will grow on acid and calcareous sites

Preparation

Remove existing vegetation by spraying or by ploughing or digging it in (cutting it short first may help). Even existing grass should be killed, although if this cannot be done it may be possible to over-sow the grass to introduce wildflowers and other grasses but often this is less effective and sometimes fails.

Prepare a fine seed bed with the soil broken down as much as possible. In small areas break soil down with a fork or rake and in larger areas rotovate with a garden rotovator. For 'agricultural' size areas, rotovate or harrow.

In engineering projects or house building where soil is being added, a mixture of topsoil and subsoil (about 50:50) to a depth of about 10-30cm over existing subsoil is ideal, as long as the topsoil is not excessively weedy (especially with Docks and other perennial weeds). Subsoil alone can be used but if the soil structure is poor and the fertility low there will be a very slow establishment of wildflowers and often domination by plants such as clovers which do not depend on nitrogen in the soil for their growth.

If large numbers of weeds are expected on a site, for example a site which has been very weedy over a couple of years, a 'stale seed bed' technique should be used before sowing otherwise unwanted perennial weeds such as docks will dominate in your meadow. This technique involves preparing the soil for sowing and allowing weed seeds to germinate then killing them off by rotovating or spraying, repeating the process once or twice more. This delays sowing but can be worthwhile in reducing weeds. Sites which have had grass growing on them for a long time often have a relatively low number of weed seeds present in the soil.

Sowing

Sowing rate for all mixes: **3g per m²** , except **Simple Impact Mix** which is sown at: **2.5g per m²** .

How to Sow: the mixture should be sown on or very close to the soil surface. It is vital to mix the seed at the start and keep mixing whilst sowing as the seeds of different species vary in size and can separate out. As the sowing rate is low you can use an equal amount of dry sand to bulk up the seed so that it is easier to spread and you can see where it has been spread.

When to sow: you can choose a Spring sowing (March to June) or Autumn sowing (Mid-August to late September). In Spring sowing can begin as soon as the soil starts to warm up (later on wet soils). Late sowing after April is possible up to the end of June but there is a risk in some areas of the country after May that seedlings will appear in very warm weather and young plants will be vulnerable to drought. In other areas, the risk is quite small and depending on weather conditions, sowing can be done throughout the summer. Autumn sowing gives plants the advantage of an early start in spring but the disadvantage is that the site will look bare over winter with the possibility of soil erosion on some sites and seedlings that unexpectedly appear may later be killed by frost.

If sowing by hand: choose a calm day as seed can be blown away easily. Divide the site up into at least four equal areas. Divide up the seed into the same number of equally-sized lots. Use the first lot of seed on the first area to get used to sowing at the correct sowing rate. Seed can be spread by hand from a box or bag using a wide swinging action (to cover up to 2m width). Walk up and down in a regular pattern, remember that it can be difficult to see the seed on the ground so you may have to look at your footprints or use a marker. If you can, use half of the seed for each area sowing in one direction and then use the other half sowing at right angles. This helps to avoid leaving any empty patches.

If sowing mechanically: broadcast by seed or fertilizer spreader. Cut the rate down to a very low level to start with and sow twice as above. A seed drill can be used but it must be set to allow the seed to be sown on or very close to the surface.

After sowing: roll the ground after sowing - for small areas, seed can be trampled in by foot; any method that will press the seed into the soil surface so that it makes better contact with the soil and will absorb water from the soil more effectively. A very light raking or harrowing before rolling can help to settle the seed into the soil, especially for sowings late in the spring or if dry conditions are expected but the seed should not be buried.

Meadow management principles

Native species in our meadow mixes compete very well on land that has low fertility, so fertilizer should not be added.

Meadows almost always require maintenance by annual cutting or grazing, without which they eventually turn into rank grass then scrub or woodland.

Finding ways of reducing fertility, including removing any cuttings from your meadow will preserve and improve your meadow. Leaving cuttings will add fertility and can also mulch out your meadow smothering your meadow plants.

Our meadow mixes contain a range perennial wildflowers and grasses that grow and mature at different rates. In the first summer season after sowing there should be fairly open growth. Occasionally a very few of the quickly maturing perennial plants (such as Red Campion, Ox-eye Daisy and Yarrow) will flower in the first season but most of the wildflowers will begin to flower in subsequent years. Occasionally if fertility is very low, growth, including grasses, might be very slow.

Early meadow cut in the first year: an early cut can be useful after sowing if unwanted annual weeds from an existing seed bed appear and grow rapidly. Cutting down unwanted annual weeds allows light into the perennial meadow species which have been sown and removes competition for water and nutrients. Some judgement is required to decide whether and when a cut is helpful but when annual weeds grow to around 30 cm (1 foot) tall they can usually be cut to about 10 cm (4"). The meadow grass seedlings can often be seen at this stage and the aim of cutting is to remove most of the weed growth without cutting the meadow grasses and wildflower seedlings. For early spring sowings this cut can be done after about eight weeks. The cut material should be removed so that it does not lie on top of the seedlings and smother them. Cutting annual weeds may not be necessary if there is little growth, few weed plants or the appearance is acceptable. Perennial species will often survive even quite a heavy infestation of annual weeds. Annual weeds disappear once a meadow is established.

Ongoing management for meadow mixes (except Highland Grassland and Flowering Lawn): Meadows should be cut and the cuttings removed once a year at the end of the growing season (normally September). Often this is the only management required. Cutting for hay earlier in the season is also possible as long as the Yellow Rattle has finished flowering and shed its seed. Grazing with animals may be used for managing the meadow by grazing at the end and/or beginning of the growing season, leaving the meadow ungrazed during the middle of the season to allow the plants to flower. Heavier grazing over a short period of time is preferable to light grazing for a long period as there will be less selection of particular plants by the animals.

Ongoing management for Highland Grassland mix: this mix is designed for high, exposed sites that are often inaccessible for annual cuttings, and which do not support lush growth. On these sites the Highland Meadow mix does not need cutting unless the growth is unusually heavy and rank.

Ongoing management for Flowering Lawn mix: this should be kept cut to approximately 10cm all season except July and August when it should be allowed to grow taller.

Yellow Rattle: if the grass in your mix appears to be dominating then it is worth considering adding more Yellow Rattle (*Rhinanthus minor*). This is a hemi-parasite which photosynthesizes for itself but also parasitizes the roots of some plants, especially grasses, removing nutrients from the grasses so they produce less growth. This allows the balance of competition to be changed in favour of the wildflower species. As Yellow Rattle also builds up in patches and the host grasses are thinned out the more open patches can be colonized by wildflowers.

Weeding: pull out or spot spray any perennial weeds such as Docks, Nettles and Ragwort. If the site is free of the seed of these weeds, then they are not usually a problem once the meadow is established.