SCOTIA SEEDS
Wildflowers of Scotland
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Establishing a meadow by adding wildflowers to existing grassland

Trying to change an existing grassy area into a wildflower meadow is much less effective than sowing into a seed bed of open, clean soil as the competition that grass provides is often too much for wildflowers to establish. Seed may not make good contact with the soil and fail to germinate or if the seed germinates, seedlings are smothered by the more vigorous grass. Steps can be taken however to maximise chances of successful establishment of wildflowers into existing grassland, by disturbing grass that has become a dense sward.

Sowing

Using seeds rather than plugs ensures a greater number and diversity of plants for less cost. Seed is usually more successful and plug plants rarely spread throughout the sward.

Our meadow mixes can be provided as 'wildflower only' mixes to add to existing grassland, at a rate of 2g/m^2.

The grassy area to be sown should be harrowed or rotovated robustly to produce open soil and discourage the grass. Seed should be hand sown across the surface area and rolled, or trodden in.

Preparation

If possible, long-term preparation before sowing as above can greatly increase successful wildflower establishment.

Establishing Yellow Rattle (*Rhinanthus minor*) over several seasons is very helpful. Yellow Rattle is an attractive, yellow-flowered annual plant that is a good source of nectar for bees. This plant species is a hemi-parasite which photosynthesizes for itself but also parasitizes the roots of some plants, especially grasses. Because it removes nutrients from the grasses, they produce less growth and the balance of competition is changed in favour of the wildflower species in a mixture. Yellow Rattle can also build up in patches and then die out as its host grasses thin out. The bare patches are then open for colonization by wildflowers. It is also known as Hay Rattle and is part of most ancient, wildflower-rich grassland communities.

Yellow Rattle should be sown in late autumn, to ensure that it receives the prolonged period of cold required for its germination. It is most successful where grass is cut back and then harrowed or rotovated before sowing, as very healthy grass, with access to high levels of nutrients can resist the attempted parasitization of Yellow Rattle. Alternatively the area could be grazed by animals before sowing, this provides additional benefit of animals 'poaching' the ground and opening up the grass sward. The 'Rattle' seed can be sown onto the harrowed or poached areas and then trodden or rolled in - all it really needs is good contact with the soil.

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Yellow Rattle germination occurs in spring and the annual plant grows and sets seed which then spreads through the meadow area.

It is worth noting that Yellow Rattle must be sown in autumn. Unlike other plant species that require a period of cold to germinate but can have an artificial cold treatment (stratification), in a fridge for example, in the case of Yellow Rattle the time required for a cold treatment is impractically long (several months) and in practice is ineffective as Yellow Rattle also apparently needs to develop a relationship with its host's roots to survive. Consequently it is not successfully grown or transplanted independently of a grass sward. Yellow Rattle seed also does not store well and so using germination tested or fresh seed is advisable.

As Yellow Rattle does not readily spread into healthy vigorous grassland, neighbouring areas managed for hay, silage or lawns are unlikely to be affected. Cutting the plants before they set seed is an effective way to control the Rattle if it is no longer wanted.

Using Yellow Rattle may not always be desirable or possible and an alternative, in the season preceding sowing wildflowers, is to cut the grass as often and as short as possible and remove the cuttings.