



BEE SPOKE

Benefitting Ecosystems through Evaluation of food Supplies for Pollination to Open up Knowledge for End users

SEED SELECTION

Use a native perennial mix, with at least ten wildflower species and less than 15% (by seed weight) of less-competitive grasses (e.g. crested dogtail, etc.). Sow at 1 g/m² if more flower seeds are included.

Use wildflower species with a range of floral structures, colours, and flowering times to support a broad suite of beneficial insects.

Tailor the seed mix to your area, soil type, exposure to sun/shade, drainage etc. Seed companies produce a range of seed for different conditions. Also think about what you are aiming to deliver, e.g., biodiversity, pollination, pest control, etc.

Avoid plant species known to benefit pests. Use native wild seed rather than agricultural varieties for greater habitat persistence.

PREPARATION

Prepare a firm, fine, weed free seedbed for broadcasting seed, ideally, in late summer (Aug/Sep). A second (less successful) option is to sow in spring (Mar/Apr). Ensure that pernicious weeds are completely controlled before sowing – this may take more than one season.

For successful wildflower establishment, avoid shaded, high soil fertility, and prone to waterlogging areas.

Remove dense ground cover, e.g. grasses using machinery during a dry period, or treat with a contact broad-spectrum herbicide. Then harrow-cultivate the soil bringing weed seeds to the surface.

Create a stale seedbed, allowing weed seeds to germinate, and then eliminate by mechanically weeding/harrowing or a non-residual herbicide. Be aware that some herbicides can persist and damage the flowering crop that follows.

SOWING

Broadcast the seed, do not drill as drilled seed goes dormant. Use a mechanical broadcaster, drill lifted clear from the ground, or broadcast by hand according to seed company recommendations.

Mixing the seed with sand, barley or wheat meal enables more even distribution when sowing by hand.

Roll area to firm the seed to soil surface, ideally just before rain is due.



How to Successfully Establish Perennial Wildflower Areas

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Female mining bee (*Lasiosomus leucozonium*) © Peter Thompson



Green with red cultivator © Marek Nowakowski



Garden bumblebee (*Bombus hortorum*) © E. Jackson-Smith



Roller © E. Jackson-Smith



MAINTENANCE

YEAR 1 (establishment year); after autumn sowing, a spring cut in late April at 8-10 cm height is very useful to control grass and encourage sown species to establish. Repeated mowing may be needed if annuals shade out sown species. If some annual flowers are included, do not cut in the first year unless they shade out the seeds of perennials that still need to germinate and grow.

YEAR 2 onwards; a spring cut in late April at 8-10 cm height might be needed and a second cut late Aug/ early Sep to 8-10 cm. Consider cutting half the plot in late June to encourage more flowering.

Ideally and for greater success, collect cuttings to reduce grass dominance, improve wildflower persistence and remove thatch.

Monitor wildflower areas and spot-treat pernicious weeds, e.g., docks and thistles, but avoid using herbicides when possible. Avoid fertiliser, herbicide, and other pesticide drift into wildflower areas.



TROUBLE SHOOTING



PROBLEM: The mix I sowed in spring has not established.

REASON: Weather was too dry following sowing, or seed was sown too late in the year followed by insufficient rain e.g. May/June.

SOLUTION: If sowing March-April, aim to do this while sufficient soil moisture exists, or consider irrigating. If possible, wait until August/September. You might have to re-sow your wildflower strips.

PROBLEM: I sowed perennial wildflowers last autumn; I can only see annual weeds.

REASON: Sward not being regularly cut to a height of 5-10 cm in the first year.

SOLUTION: Cut wildflower strip before the annual weeds (poppies, fat hen, mayweed) set seed and maintain with regular cutting throughout the establishment year.

PROBLEM: I cannot see all the flowers that I sowed in the mix.

REASON: Some species take several years before they flower, and the overall composition of wildflower strips will change with time.

SOLUTION: Sow a seed mix suitable for your farm conditions and increase the number of species sown to increase the possibility of species establishing well.

PROBLEM: In year two, after sowing there are lots of pernicious weeds (e.g. docks).

REASON: Weeds not well controlled before sowing or have been encouraged by cultivation.

SOLUTION: Remove by hand or spot-treat with selective herbicide until wildflowers are better established. If large patches of weeds are present, cut regularly to reduce vigour.

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