

WILDFLOWERS FOR WILDLIFE

Summary

Wildflower plantings help many kinds of wildlife, common and rare, as well as being beautiful. They provide cover year round and food. Even small plantings have useful effects and there are several options that will benefit wildlife. A hayfield mix of flowers and grasses, an arable weed mix or just native grasses with a few common wild flowers.

While large areas may need a farmer's help create and manage, with smaller sites everything can be done with hand tools. No site is too small. The choice depends on what land is available, how it can be managed and the cost. You also need to know the pH of the soil and its nutrient status; both are easily checked.

Having decided what to aim for, the first step is to create a clean site so that the seed you sow will not have too much competition. That can take at least a year. Seed will be sown in July to September. It can be done by hand at whatever rate is recommended by the supplier - 3g-4g/m² is usual. For the hayfield option, you sow, cut it in late summer and then, ideally, graze it in autumn but, with a small site, raking may be enough. For arable weeds, you turn over the top few inches every spring. Native grassland need not be cut every year. With all options, in time you may need to control invasive plants like thistles and docks.

Although things may go wrong at times - ask any gardener - no effort need be considered a failure. Flower-rich habitats and native grasslands are scarce and they are vital for so many creatures. And as you progress your results will only get better.

Introduction

Wildflowers are essential for the survival of many creatures that have now become scarce, right across the spectrum from skylarks and song birds to butterflies and bumblebees. This means that new plantings are very beneficial, indeed essential, if we are to slow the decline and eventual loss of more species. And while bigger is better, even small plantings have benefits, especially for insects such as bees.

One group, the traditional hayfield flowers, are perennials, growing with grasses in the same site year on year. The precise mix of plants depends on how fertile the site is and when the hay is harvested. The more fertile the soil, the more grasses will flourish and reduce the variety and abundance of wildflowers. The later in the summer the hay is cut, the more kinds of plants set seed and survive in the long term.

Plants that once commonly grew in crops, the so-called arable weeds, are annuals. They produce abundant long-lived seed so that they can survive the annual ploughing of the land and spring up anew next year or, if conditions don't suit them, lie dormant for decades if needs be, until the ground is ploughed once again.

Grasses are also important wild plants. As one example, the caterpillars of nine kinds of the butterflies found in Somerset feed only on grasses. Yorkshire-fog and cock's-foot are preferred by several of them while others need fine-leaved grasses like sheep's fescue. None feed on the rye-grass cultivars that are grown to make the silage that has replaced hay on livestock farms.

The options

This means that anyone thinking of creating a new piece of habitat to benefit wildlife has several options. A proper hayfield mix of flowers and grasses, an arable weed mix or just a mix of grasses perhaps with a few common wild flowers.

Large areas may need the help of a farmer or contractor to create and manage. With smaller sites, everything can be done by vols with hand tools. Even very small sites can be used – a window box or a patch in a garden border can hold a colourful display of pheasant's-eye, cornflower, corn marigold and poppies that will in their season feed insects and finches.

Obviously, what land is available, the practicalities of management and the overall cost apply to all options and are likely to be the overriding considerations. However, there are two other matters that need to be taken into account.

Practical considerations

The alkalinity or acidity of the soil will determine what species of plants will thrive in it. As a farmer or gardener you will know what it is in your area but if not you can check it with a pH meter; they are not expensive. If you are buying a seed-mix you will find some that are composed of species suitable for different soil types.

Where hayfield flowers are concerned, soil fertility is a problem. Contrary to expectation, high fertility is a disadvantage as it enables the most vigorous species to outcompete the rest. The lower the fertility the more plant species can co-exist. Most farmland has a high nutrient level resulting from fertiliser applications and which is depleted only slowly; this is particularly true on heavier soils. And even roadside verges have high fertility due to nitrogen deposition from vehicle exhausts, with the result they tend to be grass-dominated.

If you know the history of the site you will know its nutrient status. If not, then for small areas, inexpensive test kits are available. Otherwise you may need to collect samples across the site, to be representative of conditions, and then send off for laboratory testing. Look at the options on-line but be aware that the general assumption will be that you will want a high status for crop productivity and any advice given may be couched in those terms unless you make clear your aims.

If the nutrient status is high, as it probably will be, you have choices.

- Go ahead anyway; you will deplete nutrients over time by taking off the crop of hay each year and then if possible grazing the site.
- Get the site deep ploughed to bury the most fertile soil layer.
- Grow arable weeds instead, cultivating the land every spring and never fertilising.
- Grow native grasses.

The hayfield option

Assuming that you have decided that you will plant a seed mix of native grasses and wild flowers and that you will be able to get them cut every year and, ideally, lightly grazed, you need to select a mixture that is right for the soil type. You can buy commercial mixtures which are perfectly suitable or make up your own. This may be the better choice if you are tackling a site high in nutrients as you can start with just a few robust species like knapweed and add others later. One very useful plant is hay-rattle as it will parasitise grasses through their root systems and thus reduce their vigour, benefiting other wild flowers as well as itself.

It may seem counter-productive to graze the site as animals produce dung which is a fertiliser but they also grow flesh and bone so that the net effect is that nutrients are taken off site. But don't in any case allow the sward to be grazed tight – leave it at least 10cm tall as lots of species, voles and field mice, queen bumblebees and grasshopper eggs will survive in it overwinter. Unsurprisingly, rough grassland is good hunting habitat for kestrels and owls too. Then let the plants grow on ungrazed in spring.

The arable weed option

If you decide to grow arable weeds, the essential requirement is for the land to be dug over or tilled every year. Timing is important; by leaving digging over or ploughing until the early spring the seed will provide a food resource for birds like skylarks, finches and buntings through the winter. Quite enough seed will survive for the plants to appear again as the weather warms. There are over 50 rare English arable weeds to choose from, though few of them still survive in Somerset and seed availability is a problem except for a few of the commoner ones.

The grassland option

There may be situations where a wildflower mix of whatever type is impractical but creating or managing existing grassland can benefit wildlife provided the tidy compulsion to cut it is resisted. You want the grasses to provide cover for the creatures that live within or feed on it. It needs to be as tall and tussocky as it will grow in summer and at least 15 cm tall over winter. Allow the tussocks to remain and grow larger over time. It need not be cut every year and a build-up of dead grass litter is beneficial. When it is cut, perhaps by a strimmer held well up, rake off and pile up the arisings to make warm hibernation sites for hedgehogs or egg-laying places for grass snakes.

Roadside verges

Not long ago many roadside verges were rich in wild flowers. Zealous County Highways departments herbicided them to save the cost of cutting and when that was stopped, resumed cutting. Even those designated as Roadside Nature Reserves and marked with posts have mostly been lost by now under the combined impacts of cutting in summer and nitrogen deposition from vehicle exhausts. Stands of cow parsley are undeniably attractive but their wildlife value is limited. So if you can find a wide verge where summer cutting is not required to maintain visibility and, ideally, you can come to some agreement with Highways about marking it with posts, then maybe it would be worth a try to establish some of the more vigorous hayfield species both for their beauty and their value to nature.

Preparing the ground

Having reviewed the options and decided what to aim for, the first step is to create a clean site so that the seed you sow will not have competition from vigorous plants like thistles, docks and barren brome. Depending on the site's history and what is growing at the moment, this may require herbicide use or repeat cultivation before flowering or a combination and it may take more than one year to achieve.

If it is established grassland, this treatment may not be required but as the sown seed needs to reach bare ground it will be necessary to open the sward, best done by ploughing and preparing a seed bed in autumn, though hard grazing or harrowing may do it.

Buying seed

There are several suppliers. Most give quite detailed advice. Some offer mixes designed for particular soil types but some mixes are general purpose so expect that some of the plants may

not thrive in your soil type. Some mix annuals and perennials so you get a colourful response in year one and then the annuals die out as the sward closes. All will have value for wildlife.

Sowing the seed

Seed will be sown in late summer – July to September. It can be done with a wheeled or a hand-operated spreader or simply by hand at whatever rate is recommended by the supplier - 3g or 4g/m² is usual. If hand spreading, it may be useful to mix it with a bulking agent like sand so that each handful contains about enough seed to cover a given area and you can more easily see what ground has been covered; trial and error will be needed to get consistent spread, especially if several people are helping to do it. Ideally, go from end to end of the plot and then crosswise scattering it over the surface which can then be raked or rolled or left for the autumn rain to wash the seed into the soil. There will be losses to birds of course and any bare areas may need re-doing the next year.

With the hayfield option, cut in late July or August, when fine weather is forecast. If you have sown hay-rattle, it is an annual so don't cut before its seeds rattle in their pods and are ready to be shed. Turn the cut hay daily for a week to dry and release its seed, then gather and bale if practicable as you can sell it. Once the grass has re-sprouted, it should be grazed or, if the site is too small for that, rake it over and remove litter and moss to leave the shed seed in contact with the soil.

Uninvited guests

While the closed sward of an established hayfield or grass plot is quite good at resisting invasion by plants with wind-borne seed such as thistles, they will appear eventually. Many of them have appreciable wildlife value. Thistles are important nectar sources for many insects; ragwort is the foodplant for cinnabar moth caterpillars. Dandelions, flowering early, are important for queen bumblebees emerging from hibernation. However, ragwort is toxic to livestock especially when in hay so depending on the management there may be circumstances where it should be eradicated. As well as ragwort, there are four other species that you should not allow to spread to grazing areas or land used to produce forage; they are spear thistle, creeping thistle, broad-leaved dock and curled dock.

As a general point, if any habitat creation schemes are carried out adjacent to cropped land, it may be necessary to take additional measures to prevent incursion into the crop by plant such as cleavers and barren brome that are difficult to control.

And finally, reassurance

Although the whole process may seem difficult, and it does introduce one to some of the kinds of challenges inherent in productive farming, no effort need be considered a failure. Flower-rich habitats and native grasslands are scarce and they are vital for so many creatures and as you progress with your management things will only get better.

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