



How-to-guide

Collecting and using pollinator friendly wildflower seed

**National
Biodiversity
Data Centre**
Documenting Ireland's Wildlife



**All-Ireland
Pollinator Plan
2015-2020**



Implementation coordinated by the

National Biodiversity Data Centre

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The best possible plants we can have for our bees are native Irish plants. This how-to-guide will show you how to collect seed from native plants and save them successfully for sowing yourself. It is aimed at people who want to collect wildflower seed and use it to provide more food for bees in their garden, school, farm or local area. If you're trying to create a wildflower meadow these methods can also be used to increase the diversity of flowering plant species in place of purchasing seed mixes.

Finding your population

During the summer look out for the kinds of flowers you could collect seed from. You'll know if you have found a population of plants that bees like because many bees will be feeding from their flowers when the air is warm and the flowers are in full bloom.

You should only collect seeds from plants that are in your local area already. We have suggested twelve common native plants that are an important food source for pollinators in Ireland. Collecting wildflower seed from these species and sowing it locally will increase the amount of food for bees and help them to have a healthy, balanced diet. The table shows you what these species are, what habitats they occur in and the best time of year to collect and use their seed. If you choose to collect seed from other plants you should make sure that they aren't on an endangered plant list.



Info Box:

You will need to ask permission from the land owner before you collect seeds.

Assessing the readiness of the population

Once you've identified a good population of pollinator friendly wildflowers, you'll need to keep an eye on the plants to see when the flowers begin to seed. This usually takes place 6 to 8 weeks after flowering and only happens once the flowers have been pollinated.

To check if the seeds are ready to be harvested, you'll have to sacrifice a few. Pick some seeds out of a few different dried and crispy flower heads and sprinkle them onto your palm. They usually look brown when they are ready, but as a more reliable way to check use your thumb nail to crack a few in half. If they give a "click" when they break, then the seed coat has formed and the seed inside is ready to harvest. A good seed also has a white fleshy substance inside (the cotyledon). If the seed is black or mushy inside then it probably hasn't developed properly. If the seeds are still green or a creamy colour, they're still developing, so it's best to wait a bit longer until they're brown and feel dry on the outside. You might want to use a hand lens to view this.



Knapweed seed that hasn't developed properly due to lack of pollination



Out collecting

Work out how much you need in advance

Once you've tested about 10 seeds (by cracking them open), note how many were good. If say half are good, and you want 50 seeds, you know that you have to collect 100 seeds to get 50 good ones. Furthermore, if you count the average number of seeds in each seed head you can work out how many seed heads/pods to collect. You should work out in advance how much seed you need to avoid over-harvesting of populations.

Don't over collect from one population

You should make sure you leave enough seeds to have a healthy wild population the following year. The best code of conduct is to pick one in five seed heads, so you're taking only about 20% of the available seeds. Ideally collect from each population just once in the year, so choose a time when most seed heads are ready. Nature spreads out the time when seeds mature. When you visit some will be still green, some will be brown and some will have already dispersed. It's best to visit when most seeds are ready for collection and when doing so, choose the flower heads that are distinctly full and brown.

Collect as much diversity as possible

Another consideration is the genetic diversity of your collection. You should pick each seed (head) from a different plant as this increases the diversity of your future population. To get the most out of your harvest, it's best to choose a large, healthy population to collect from.

How to store seed as you collect it

As you collect your seeds put them into paper or cloth bags, or open tubs so they can breathe and keep them out of direct sunlight/hot cars etc. Collect directly from the plants, seeds on the ground may be diseased. Remember to clearly label your collections with the species, date and location.

Healthy population of wild flowers



Collecting bags



Info Box:
Collect your seed on a warm sunny day!

The drying and cleaning process

Once your seeds are safely home, tip them out onto a big tray and clean off any leaves, stalks, insects or other debris.

How to dry seed

Leave the seeds on the tray, or hang them up inside a bag in a nice warm airy place out of direct sunlight and out of the way of mice who love eating seeds! 18°C is a good temperature. After a couple of weeks the seeds and chaff should be much drier.

How to clean seed

After a few weeks of drying you should clean off as much of the chaff as you can. Using a sieve with small holes can get rid of dust. A sieve with larger holes that the seeds fall through will hold on to the big bits of chaff, which you can then throw away. Your kitchen sieve and colander may do nicely if you're allowed!



Sieves


Don't Forget
Just let Dandelions grow.
They are a great source of
pollen for bees.

You could also have a go at winnowing the seed. On a warm, sunny and not too windy day, empty your collection out onto a big tray with shallow sides and harnesses the power of the breeze to get rid of more chaff. Gently toss the seeds into the air, catch the seeds but let the breeze lift away chaff (like gently tossing a pancake!).

The more you work at it the cleaner you'll get the seeds, but it's ok to leave some chaff in with them.

Important –
check for
insect visitors!

Once you've cleaned your seed it is important to check with a magnifying glass and tweezers that they're not inhabited by little creatures! These residents will happily munch their way through your stored seeds while it's cold outside. Remove any infested seeds you find and put them outside (in the compost heap if you have one).



Cleaned
knapweed
seed



Storing your seed

Put your dry seeds into an air-tight container. If you have some dry silica sachets then put them in as well. You can dry out silica sachets in a low heat oven – this takes a good hour and let them cool a bit before putting the seeds in with them. If you have room in the fridge over winter then the seeds can be stored there as long as they stay dry. If the fridge is full they'll also be fine in a metal (mouse proof) biscuit tin in an outside shed away from any source of direct heat or sunlight. Dry and cool is the key for storage.

How to use your seed to provide wildflowers for bees

In nature, plants produce a lot of seeds because many won't make it into new plants. If you sow your seeds directly into your garden or a grassy meadow it is less likely that they will be able to compete with the flowers and grasses that are already there. It is much better to grow them on first in a seed tray and then add them as plugs when they are big enough.

Either in the autumn (saves on storing) or next spring you can sow your seeds in seed trays.

Some seeds will require a period of chilling to break dormancy. These species will need to be sown in the autumn. Wildflowers like to be nursed when they're little. Sow them in compost and cover lightly with sand or vermiculite. Keep them in a greenhouse or on a cool windowsill until they are well established.



The reason wild flowers do better in impoverished soil in the wild is because the grass doesn't out compete them. In truth, without the competition from grass and other weeds your wild flowers will do better in enriched fertile soil.

Once they're big enough to look after themselves and its warm enough outside, clear a patch of soil and plant them in. It's helpful to the young plants if you can keep the area free from weeds which may choke them. Once the plants get a chance to grow in the first year they'll pretty much be able to look after themselves and you'll have established a wild plant in a new area.

Well done for saving your own seed and restoring our precious habitats. Once you practice a few times it becomes much easier!

If you're interested in learning more about seeds and seed saving have a look at our web site www.trueharvestseeds.co.uk or follow us on Facebook.


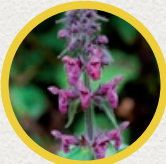






Table of pollinator friendly wildflowers - collect seed locally and plant locally

These wild flowers have been chosen as good sources of nectar and/or pollen for all types of bees. They will also provide food for other insects like butterflies.



Wildflower	Where to find	Flowering	Best time to collect seed	Notes
Knapweed <i>Centaurea nigra</i>	Grassland, roadsides, wasteland	July-October	September	Can collect when seed are greeny-brown. Very popular with birds, so you have to get there first! Sow in autumn or spring
Devil's-Bit Scabious <i>Succisa pratensis</i>	Grassland, roadsides, marshes	July - October	September	Sow in autumn in trays. Germination can take from 1 – 6 months. Tolerant of ordinary soil but prefers neutral to mildly acidic. Does better in cooler positions.
Field Scabious <i>Knautia arvensis</i>	Dry grassy places	July-September	September	Sow in autumn and leave outside to break seed dormancy (protect from mice). Prefers sunny dry places. In future years, you can divide fully grown plants in spring to propagate easily.
Bird's-foot-trefoil <i>Lotus corniculatus</i>	Grassland, roadsides, sand dunes	June-September	August	Seeds are in pods. Can grow on poor soil and will benefit the surrounding plants because of its nitrogen fixing properties. Also collect Greater Bird's-foot-trefoil. Sow in autumn or spring
Meadow Vetchling <i>Lathyrus pratensis</i>	Grassland, roadsides, wasteland, hedgerows	May-August	When pods are brown	High quality pollen. Germination may take some time, sow in small pots or modules in early spring. Protect from mice.
Other Vetches <i>Vicia</i> spp	Roadsides, wasteland, hedgerows	April-October	When pods are brown	Bush, Common and Tufted Vetch provide a source of high quality pollen for bees. Will spread. Germination may take some time, sow in small pots or modules in early spring. Protect from mice.

	Wildflower	Where to find	Flowering	Best time to collect seed	Notes
	Selfheal <i>Prunella vulgaris</i>	Grassland, roadsides, wasteland, woods	June-August	From July on	Sow in autumn. Germination occurs in a few weeks. Care for young plants over winter in greenhouse. Plant outside any time in spring.
	Woundwort <i>Stachys</i> spp	Hedgerows, roadsides	June-October	From July on	Produces seed as it goes along, upwards along the stem, a few seeds at a time. Hard to collect in great volume at any one time, be persistent. Sow in autumn. Most suited to verges, or hedge-banks with light shade.
	Red Bartsia <i>Odontites vernus</i>	Roadsides, wasteland	June-September	End of September	Used primarily by bumblebees. Red Bartsia parasitises the roots of grasses. This provides it with an additional source of nutrients. Needs grass to grow with. Sow into the soil in short grass after raking out excess plant material. This should be done in autumn.
	Yellow-rattle <i>Rhinanthus minor</i>	Grassland, sand dunes	May - June	July	Yellow rattle parasitises the roots of a wide range of meadow plants especially grasses. Good to keep down grasses in meadows and clear the ground for other wild flowers. Sow into the soil in short grass after raking out excess plant material. This should be done in autumn.
	Oxeye Daisy/ Dog Daisy <i>Leucanthemum vulgare</i>	Grassland, roadsides, wasteland	July - August	September	Used primarily by solitary bees and hoverflies. Sow in autumn or spring into little pots or modules in greenhouse. Harden off and plant out when large enough.
	Harebell <i>Campanula rotundifolia</i>	Dry grassland, heaths, sand dunes	End July - September	September	Uncommon wildflower – most likely to be found in the north and west. Particularly good for solitary bees. Sow in autumn in a seed tray, harden off in spring and plant out once established.

Red Bartsia and Yellow-rattle are annuals, the other species are perennial plants

Info Box:

When you reduce mowing to create a grassy meadow first check what wild flowers appear naturally. Some of these may already be in your soil bank waiting for the chance to grow!



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About the National Biodiversity Data Centre

The National Biodiversity Data Centre is a national organisation that collects and manages data to document Ireland's wildlife resource, and to track how it is changing.

Find out what biodiversity has already been recorded in your local area:

maps.biodiversityireland.ie

Help us to build up the knowledge of biodiversity in your local area by submitting sightings to **records.biodiversityireland.ie**

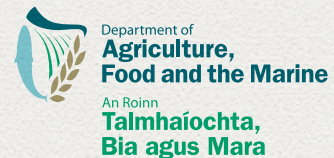
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