

It's all about the buzz...

Why it's important to have a variety of pollinators

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Pollination requires the transfer of pollen from the male part of a flower (the stamen) to the female part (the stigma) of another, or sometimes the same, flower. In grasses, hazels and birches, the wind moves the pollen. Such plants often have exposed stamens (e.g. catkins), which produce and disperse a lot of pollen. But this is an expensive method as lots of pollen is lost...literally on the wind...only a fraction will be blown onto female flowers.

Most plants (87%) are pollinated by animals such as bees, hoverflies and butterflies. These must be enticed or tricked into becoming unsuspecting "postmen". So plants will produce colourful, scented and sometimes intricate flowers (orchids, for example) to attract their pollinators. They also need to produce the nutritious nectar in their flowers to keep the pollinators coming back.

Mostly, the pollinators are unaware they have been duped into transporting the pollen, which gets attached to their bodies when they brush against the stamens of one flower. It falls off onto a stigma when they visit another flower. That's cross-pollination.

Of all the insects in Ireland that help to pollinate plants, bees are exceptional in that their entire lifecycle depends totally on both pollen and nectar and hence they are the best pollinators. Beekeepers move hives around in the country to areas where there is an abundance of plants in flower in order to get lots of honey for the beekeeper. In return the fruit



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growers get better fruit set.

There are more bees than just honeybees. Ireland is also home to about 20 species of bumblebee and 77 species of solitary bees. Honeybees are good as crop pollinators because they are generalists, not fussy about what crop to visit. But they have their drawbacks too. For one, they have short tongues that do not suit plants where the nectar is deep within the flower such as melons and as a result are not interested in them.

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Secondly, as they also use pollen as a food source, they collect pollen in pollen sacs on their legs, which is then not available for pollination. Thirdly, when they visit flowers they do so rather calmly, as opposed to bumble bees who buzz-pollinate. The vibration they produce helps release pollen from the stamens. Crops such

as blueberries and tomatoes need buzz-pollination.

Wild bees tend to visit trees more often than honeybees who focus mainly on densely blooming plants. Wild bees will also start to pollinate at lower temperatures and when there is more wind than honeybees. As a result, a combination of both honeybees and wild bees is most likely to give the best pollination of crops and hence better fruit set.

As 75% of all crop plants are animal pollinated, the importance of pollinators to growers is clear. Within Ireland alone, it is estimated that animal pollination is worth €53m. Keeping our bee hives thriving but also supporting our wild populations of (bumble)-bees and other pollinators, is really worthwhile.

Creating pollinator friendly habitats, supporting beekeepers, informing ourselves and raising awareness among the public will all help make Ireland more pollinator-friendly.

For more information, read the all-Ireland pollinator plan 2015-2020 (www.pollinators.ie). You'll find guidelines there on how to make your area more pollinator friendly and a series of how-to-guides for pollinator friendly actions.