

Neonicotinoid Insecticides - FAQs (May 2018)

What is an insecticide?

Insecticides are a class of pesticide used to kill, harm, repel or otherwise control one or more species of harmful insect. There are different classes of insecticides and these are distinguished according to the different ways in which they work.

Why are insecticides used?

Insects can destroy crops and contaminate food or animal feed commodities. Sometimes it is necessary to use insecticides to prevent or eradicate pest populations that can cause disease and harm crops. Insecticides are therefore an important component of crop protection and public disease prevention.

Insecticide usage in Ireland?

Insecticide usage in Ireland is very low compared to many other countries, with neonicotinoid usage representing about 0.1% of the total pesticide use in Ireland.

What is a neonicotinoid insecticide?

Neonicotinoid insecticides, also referred to as 'neonics', are a class of insecticides that act on the central nervous system of insects in a specific manner.

How do neonicotinoid insecticides work?

Neonicotinoids are systemic insecticides, which means they are taken up by and transported throughout a plant to all its tissues (leaves, flowers, roots and stems). When an insect pest feeds on plant tissue containing a neonicotinoid substance, a particular process is initiated leading to fatal overstimulation of the insect's nervous system.

What is the current status of neonicotinoids in the EU and what is changing?

A proposal from the European Commission to prohibit all outdoor uses of three neonicotinoids (clothianidin, imidacloprid and thiamethoxam) was endorsed by Member States, including Ireland, on 27 April 2018. The only use that can be approved is in permanent greenhouses where the crop stays its entire life cycle within the greenhouse and is not replanted outside. This will mean that in the near future use of these three substances will no longer be approved for outdoor use.

Why?

The proposal was based on comprehensive scientific assessments and evaluations published by the European Food Safety Authority (EFSA) at the end of February 2018 of all relevant scientific information that had become available since previous partial restrictions were implemented in 2013. The Commission will adopt Regulations shortly to give legal effect to the new measures, which are expected to be applicable by the end of 2018 at the latest. This process of scientific assessment is used for all pesticide approval decisions.

What is the link between neonicotinoids and bees?

There is increased concern regarding the effects of clothianidin, imidacloprid and thiamethoxam on bee health. Research has indicated that these neonicotinoids can potentially negatively impact bee health by affecting their immune system, navigation skills, capacity to forage and communicate, and ability to reproduce. Research is ongoing to better understand the conditions under which harmful effects may occur. The toxicity of any substance is dependent on multiple factors, including pollinator species, product formulation, application site, plant stage, exposure dose and time and environmental conditions.

Two other neonicotinoids, acetamiprid and thiacloprid, are currently approved for use in the EU. In the case of acetamiprid, EFSA did not identify any critical areas of concern in an assessment published in November 2016. In the case of thiacloprid, a review process is ongoing to consider whether or not to renew its approval. The Commission will make a proposal after EFSA has completed its assessment and published a Conclusion report.

What alternatives to neonicotinoid insecticides are available?

Neonicotinoids are one option in the toolbox for managing harmful insects and protecting our agricultural, residential and recreational environments (crops, plants, landscapes and animals).

The possibility to use other measures such as physical or biological control methods, different cropping practices or other approved insecticides must always be carefully considered in an integrated pest management approach. The most sustainable option giving effective control of the pest problem should be used.

What is DAFM doing to support bees and other pollinating species?

DAFM recognises the vital importance of protecting our natural environment, including insect biodiversity, while supporting sustainable agricultural production. DAFM provides a range of measures, supports and initiatives to protect pollinating species including:

- stringent regulation of the beekeeping and honey sector through legislation, disease monitoring, inspection and certification, and auditing and inspection programmes to ensure compliance with EU and National Regulations on the safety, quality and traceability of honey products;
- stringent regulation and monitoring of pesticides;
- provision of funding for research and innovation (e.g. National Apiculture Programme, European Innovation Partnership for Agricultural Productivity and Sustainability);
- grant aids, incentives and supports, including the GLAS agri-environment scheme; and
- engagement with stakeholders and other regulatory authorities to coordinate efforts for the protection of pollinators.

The GLAS Scheme plays a key role in protecting and enhancing biodiversity across the Irish countryside with over 50,000 farmer participants. Installation of bee boxes and bee sand are two specific measures within GLAS aimed at supporting solitary bees through the replacement of lost

habitats. In addition under the Scheme there are several other actions which support measures that have potential to impact positively on pollinators, e.g. maintaining cover of Low Input Permanent Pasture and Traditional Hay Meadows. These two measures aim to preserve native flowers which are important food sources for pollinators.

DAFM also fully supports the national strategy to support pollinator needs – the *All-Ireland Pollinator Plan 2015-2020*, published by the National Biodiversity Data Centre.

What can I do to help support and protect bees and other pollinators?

Everyone – from expert researchers to home owners and gardeners – can contribute to protecting and promoting pollinator health. Homeowners, gardeners, farmers, businesses, local councils and communities can:

- create pollinator-friendly gardens, landscapes and habitats by sowing pollinator-friendly plants, creating pollinator nesting sites, growing and maintaining pollinator-friendly hedgerows and verges, reducing the frequency of mowing and allowing nature to be more natural rather than manicured;
- implement integrated pest management techniques to ensure sustainable use of pesticides; and
- take part in some monitoring programmes (e.g. the Bumblebee Monitoring Scheme, Solitary Bee Monitoring Scheme or Rare Species watch) or submit casual sightings of bees and hoverflies.

Ireland is one of a small number of countries in Europe that has developed a national strategy to address pollinator decline and protect the ecosystem services these species provide. The *All-Ireland Pollinator Plan (2015-2020)* provides guidelines, in the form of printable ‘How-to-Guides’, for supporting bee conservation and making our homes, schools, businesses, farmlands, councils and towns more pollinator friendly.

For more information on how you or your community can help, please visit The National Biodiversity Data Centre homepage:

www.biodiversityireland.ie or www.biodiversityireland.ie/projects/irish-pollinator-initiative/

For more information on the *All-Ireland Pollinator Plan (2015-2020)* and links to the aforementioned guidelines, check out the National Biodiversity Data Centre ‘Irish Pollinator Initiative’.

www.biodiversityireland.ie/projects/irish-pollinator-initiative/all-ireland-pollinator-plan/

