



The DAFM Pollinator Newsletter

1st Edition, May 2018



Pollinating insect such as bees, wasps, hoverflies, and butterflies, are **vital** for high **quality, diversified** foods and crops, farming and agriculture **sustainability**, and for protecting our **biodiversity**, landscape and regulating our natural **environment**. The DAFM, in conjunction with stakeholders of the farming, agricultural and horticultural sectors of Ireland, are making considerable efforts to make Ireland more pollinator friendly.

The 1st Edition of the DAFM Pollinator Newsletter provides an overview of the different divisions of the DAFM with pollinator protection responsibilities.



The DAFM Laboratories & Bee Health

The Entomology Unit of the Plant Health, Pesticides and Seed Testing Division conducts diagnostics to identify arthropod bee pests that could be detrimental to Irish & European bees. The main pests of concern are the Asian hornet (*Vespa velutina*), small hive beetle (*Aethina tumida*) and Tropilaelaps mite.



Small Hive Beetle



Asian Hornet

The DAFM undertakes surveillance of the latter two quarantine bee pests through a sentinel apiculture programme. This programme requires selected volunteer bee keepers to monitor their hive for the presence of these pests and to submit any suspicious samples to the laboratory for analysis. This monitoring scheme is very important for the early detection of harmful bee pests and thus enables us to limit their spread and deleterious consequences. The DAFM are actively progressing the entomology services provided to facilitate the detection of pollinator diseases through diagnostic testing.

Nitrates, Biodiversity & Engineering Division

We all depend on nature for our food, air, water, energy and raw materials. Nature and biodiversity make life possible, provide health and social benefits and drive our economy. However, natural ecosystems and their vital services are under pressure from urban sprawl, intensive agriculture, pollution, invasive species and climate change.

The Nitrates, Biodiversity & Engineering Division plays a supportive role in pollinator protection through:

- Active involvement on the *All-Ireland Pollinator Plan (2015-2020)* Steering Group;
- Funding for the *All-Ireland Pollinator Plan (2015-2020)* ‘How-to-Guide’ publication series and input into the Farmland guidelines in particular;
- Support for the selection and monitoring of European Innovation Projects – several of which have a biodiversity focus under Priority 4 of the Rural Development Programme (RDP); and
- Involvement in the development of policy for the next Common Agricultural Policy (CAP) and ensuring appropriate focus is given to biodiversity including pollinators.



In Ireland, crops pollinated by insects have an estimated value of at least €53 million. Irish crops such as apples, strawberries, tomatoes, and oilseed rape and approximately three quarters of our wild plants rely on insect pollination.



Pesticide Registration & Control Division (PRCD)

The PRCD of the DAFM is responsible for regulating and monitoring the safety of pesticides on the market to facilitate the sustainable production of safe and authentic food. The EU regulatory system, which Ireland fully implements, is the most stringent in the world. All pesticides on the market have been subject to a thorough assessment to ensure a high level of protection of both human and animal health and the environment. Pesticides are rigorously tested for their safety and must comply with the data requirements set under Commission Regulation (EU) 283/2013 and EU 284/2013 for honeybees, bumblebees, and solitary bees. The testing regime to demonstrate compliance with these regulations includes:

- Acute & Chronic toxicity (oral and contact) studies to assess and evaluate the risk of bees exposed to a pesticides, either via oral or contact, over a short and prolonged period of time respectively.
- Effects on honeybee development and other honeybee life stages testing to determine effects on bee development and brood activity.
- Sub-lethal effects testing to investigate bee and colony behavioural and reproductive effects.
- Cage, tunnel, and field tests to evaluate possible risks on bee behaviour, colony survival and development.
- Residue studies to evaluate possible risks to foraging bees from pesticide residue on crops via soil and plant matrices (flowers, dust, pollen and nectar, guttation fluid) or residues in hive matrices (wax, pollen, nectar).

Pesticides can **only be approved** if their use: (1) results in a negligible exposure of bees; or (2) has no unacceptable acute or chronic effects on colony survival and development.

Neonicotinoid insecticides: A proposal from the European Commission to prohibit all outdoor uses of 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. 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.

Further information on neonicotinoid insecticides is available on the Pesticides section of the Department's website:

<http://www.pcs.agriculture.gov.ie/sud/pollinators/>

DAFM Research Division

The DAFM is invested in commissioning and supporting meaningful National, EU, and citizen-led research projects via DAFM's competitive national programmes and the EU Horizon 2020 research funding programme. Research proposals commissioned under these programmes represent an important opportunity to engage and collaborate with the research community to address data-gaps, better inform policy development and implementation, increase citizen-awareness, and ensure the measures and activities we implement are successful in meeting our overall biodiversity objectives.

Given the increasing economic and environmental uncertainty there is a vital need to pursue resource, climate-smart and "eco-healthy" production and consumption systems through targeted research and innovative initiatives. The DAFM will announce details of funding in late Q2 (2018) to address mitigating the impacts of pesticide use on terrestrial ecosystems, with particular emphasis on protecting our native pollinator species.

Through our national and trans-national funding calls, DAFM will continue to support Irish researchers as they position themselves amongst world leaders in these areas and develop strategies and technologies that reduce the impact of food production systems on biodiversity and our pollinating species.

DAFM's competitive research funding calls: <https://www.agriculture.gov.ie/research/>

Horticulture & Plant Health Division (HPHD)

The honeybee is the most important managed pollinator species with ~3,000 Irish beekeepers maintaining approximately 23,000 colonies of honeybees nationally. Due to their key role in maintaining plants in the wild as well as field crop production DAFM's Horticulture and Plant Health Division is involved in a number of initiatives relating to beekeeping and honey.

Bee Health and the National Apiculture Programme

The DAFM currently meets the financial costs associated with laboratory analysis conducted by the Bee Disease Diagnostic Service. This service aims to improve bee health and to encourage beekeepers to submit samples for official laboratory diagnosis. In 2017, in excess of 700 samples were submitted by beekeepers availing of this service.

The National Apiculture Programme is co-funded by the European Commission and DAFM. The current programme commenced in 2016 and runs to July 2019 providing annual funding of €72,000 towards a research project aimed at improving overall honeybee health in Ireland. Work on the programme is conducted by University of Limerick working in association with Teagasc Oakpark. The programme explores the efficacy of alternative controls for Varroa under Irish conditions as well as monitoring Irish over-winter colony losses as part of the COLOSS international research network. The programme provides technical assistance to beekeepers through workshops and lectures at local beekeeper association level. The results of this applied research programme are disseminated to benefit all Irish beekeepers.



Financial Support for Beekeepers

DAFM pays annual grants to Irish National Beekeepers Associations to help their members pursue the craft of beekeeping and to inform the general public of the vital environmental role bees play in maintaining Irish biodiversity and crop production. This grant aid is restricted to Irish National Beekeepers Associations which have an agreed Memorandum of Understanding signed with DAFM. The beneficiaries of this support in 2017 were the Federation of Irish Beekeeper's Associations and the Native Irish Honeybee Society.

Individual beekeepers may apply for the Scheme of Investment Aid for the Development of the Commercial Horticulture Sector. This scheme facilitates capital investments in specialized buildings and equipment in order to facilitate environmentally friendly practices as well as diversification of on-farm activities; improve quality of products; and improve working conditions.

Honey Production and Safety

Beekeepers who wish to sell their honey commercially are encouraged to register with DAFM for food hygiene purposes so they can sell their produce legally. To ensure the safety of Irish honey samples are taken each year as part of Ireland's National Residue Control Plan and tested for the presence of a range of residues and potential environmental contaminants. Separately DAFM's Veterinary Inspectorate at the Border Inspection Posts are responsible for sampling imported honey from outside the EU.

In addition Horticulture and Plant Health Division is also responsible for conducting inspections at apiary level regarding honey hygiene and the use of animal remedies.

Honey must comply with the EU marketing standards for honey as well as separate legislation relating to labelling. The Horticulture and Plant Health Division takes samples at apiary and honey packer level as well as conducting labelling inspections to verify compliance with the legislation. Laboratory analysis includes pollen analysis to verify the correct labelling of the country of origin.

A number of documents are available on DAFM's website to assist beekeepers achieve their legal obligations.

Agri-Environment & Structures Division

With over 50,000 participants approved for the Green, Low-carbon, Agri-Environment Scheme (GLAS) scheme, part of the Rural Development Programme (RDP), aims to protect and enhance biodiversity, improve water quality, and help mitigate the impacts of climate change. The scheme is delivering in terms of the environment and public goods on a range of actions including the **bee actions**. It is also important to recognise the buy in to the scheme by the farming community in achieving and, in some instances, surpassing the targets set out in the RDP.

There are two **specific bee measures** within GLAS for the conservation of solitary bees on farms: Bee Boxes and Bee Sand. These measures aim to enhance biodiversity within the agricultural landscape and offer alternative nesting habitats where suitable natural habitats have been lost through changes in farming practice.

There are several other actions within GLAS which support measures that have potential for positive effects on pollinators, e.g. maintaining cover of Low Input Permanent Pasture (LIPP) & Traditional Hay Meadows (THM) preserves native flowers which are important food sources for pollinators while restrictions on pesticide use associated with these actions reduces use of potentially toxic chemicals in the wider landscape used by pollinators.

These achievements will deliver public goods across the key areas of Water Quality, Biodiversity and Climate Change to be addressed under the scheme, with the targeted bee actions delivering in terms of biodiversity. These achievements will also place Ireland in a favourable position in discussions on future agri-environment schemes.

What can I do to help Pollinators?

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.

See:

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

Here are some things you can do:

1. 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.
2. Use integrated pest management techniques to ensure pesticides are used sustainably.
3. Take part in some monitoring programmes (e.g. Bumblebee Monitoring Scheme, Solitary Bee Monitoring Scheme or Rare Species watch) or submit casual sightings of bees and hoverflies.



We all NEED to Act

These tiny organisms are key drivers of the food chain and are essential for sustainable food production, supply, affordability, and security. Without pollinators it would be impossible for farmers or gardeners to affordably produce many of the fruits and vegetables we need for a healthy diet.

Our economic, social and environmental interconnectedness and dependency on insect pollination are undeniable. In addition to food and agricultural benefits insect pollinators are also crucial players for other sectors including medical, construction, transport and energy, textile, and cosmetics. Insect pollinators also afford an emotional and ethical value because of their effects on our health, the quality and beauty of our natural resources and green spaces, and their role in helping conserve numerous other flora and fauna.

It is important Ireland, as a whole, collectively and actively pursues meaningful measures and activities to safeguard our pollinating community and the vital ecosystem services they afford us.

World Bee Day 2018



Minister of State Andrew Doyle

To mark **World Bee Day** this Sunday the **20th of May**, Minister of State Andrew Doyle launched the DAFM's beehive initiative at Backweston with Jim Donohue (Master Beekeeper) on the 17th of May 2018. This initiative will contribute to the *All-Ireland Pollinator Plan (2015-2020)*, promote DAFM's role with regard to the Irish beekeeping sector and help raise awareness of pollinators and beekeeping within the campus.



John Eivers, Rachel Wisdom, Donal Coleman, Aidan Moody, Minister of State Andrew Doyle, Barry Delany, Aisling Redmond, and Jim Donohue.