



## **Bumblebees as commercial pollinators: risks and opportunities**

Although bumblebees are now established across Tasmania, they still carry their original status as exotic environmental pests and so their use for commercial purposes is prohibited.

Unlike European honey bees, bumblebees are not susceptible to varroa mite, so their commercialisation for pollination services may be a valuable tool for fruit growers into the future.

At the 2025 Fruit Growers Tasmania industry conference, Dr Jon Finch, from the Tasmanian Institute of Agriculture, outlined the Hort Innovation Frontiers project on bumblebees as effective pollinators in Tasmania (PH23001).

Bumblebees are well-adapted to cool climates, with origins in the Himalayas and Western Europe, successful establishment following intentional introduction to New Zealand in the late 1800's and then accidental introduction to Tasmania in 1993. They are very effective pollinators of many crops, including blueberries, apples, avocados, tomatoes and other crops requiring buzz pollination.

Bumblebees are more active in cool and overcast weather, so they are well positioned to complement honeybees which are less active in these conditions. They may also be a valuable means to buffer the potential decline in honeybee populations should varroa mite spread to Tasmania.

Legislative restrictions apply to bumblebees in Australia due to the concerns about their potential environmental impacts including competition with native pollinators, spread of invasive plant species and the risk of bumblebees establishing populations on mainland Australia.

It is illegal to import bumblebees into Australia or move them from Tasmania to mainland Australia, and their commercialisation for crop pollination is prohibited in Tasmania. In 2017, a Federal Senate Report recommended the Environmental Protection and Biodiversity Conservation Act 1999 be amended to allow the use of existing feral bumblebee populations in Tasmania for commercial pollination, subject to strict controls and a review to identify any adverse environmental impacts after two years. However, parliament never voted on the recommendations due to an election.

Funded through Hort Innovation Frontiers, the Rubus Levy Fund and contributions from the Australian Government, the Tasmanian Institute of Agriculture has partnered with Western Sydney University and James Cook University to undertake new research to uncover some of the potential benefits and risks of bumblebees in Tasmania. The project will use cutting edge-technologies such as miniature radio transmitters and audiovisual monitors together with visual

surveys, flower bagging and pollinator attractive plantings. These technologies will help investigate whether bumblebees enhance the spread of weeds more than honeybees, how they compete with native pollination species, quantifying the economic value of bumblebees to apple, berry and cherry crops, and exploring options to attract wild bumblebees to fruit crops to improve pollination. Dr Jon Finch said that “By providing high quality science based evidence, we can help inform the debate around bumblebee use in Australia”.

The project is progressing well with the following activities underway:

- crop surveys measuring bumblebee visitation to strawberry, blueberry, raspberry, cherry and apple crops,
- weed experiments to understand the impact of bumblebee pollination on weed species,
- trials of a pheromone lure to monitor and control bumble bees in “sensitive areas” like ports,
- trials of additional nesting resources to increase pollination on farms.

This research will provide insights into how landscape features and floral plantings can impact bumblebee and other wild pollinator populations around Tasmanian farms and will run until May 2028.