

Native bees and berry crops

Julian Brown, Joshua Coates & Saul A. Cunningham, Australian National University

In our research, we investigated native bees in berry farms in and around the Yarra Valley, Victoria. We identified several native bee species visiting the flowers of raspberry, blackberry, and blueberry. The native bees most frequently detected visiting these flowers, and carrying large amounts of their pollen, were reed bees (*Exoneura* sp.) and white-banded bees (*Lasioglossum* sp.).



Native Reed bee (*Exoneura* sp.) on *Rubus*

Photo credit: Alison Hoelzer Photography

We performed experiments to determine whether blackberry fruit quality was enhanced by visits from native bees and honeybees. We found that one visit from a native bee (reed bees or white-banded bees) was just as effective as one visit by a honeybee when it comes to pollinating a blackberry flower and increasing the number of drupelets in a fruit.

Actions to increase the abundance of these native bees will support better fruit production and reduce the risk of relying on one pollinator species.

We also investigated the habitat requirements of these native bees. White-banded bees, which nest in the soil, were more abundant when there were grassy areas in the landscape. Reed bees, which build their nests inside pithy stems of plants such as tree ferns, were more abundant when there was native vegetation in the landscape. Importantly, though, we found that reed bees can nest inside old canes within raspberry and blackberry rows. Reed bees forage for most of the year, so require floral resources outside of crop flowering times. We found reed bees foraging on native plants such as *Acacia* and *Hakea* before crops were flowering, and *Kunzea* and *Pultenaea* after crops finished flowering.



**Australian
National
University**

To learn more about this research, and our plans for further investigating techniques for managing native bees as crop pollinators, please come along to our information session on 13 November 2020 at Chappies U-pick, 21 Parker Road in Silvan, VIC.