

Best practice bee management for blueberries

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Bees (Honey and Native bees) and other insects play a pivotal role in pollinating berry crops. Inadequate pollination can result in smaller or imperfect fruit as not all the seeds and drupelets are formed. Therefore, it is important to protect bees and other insect pollinators during flowering to ensure successful pollination.

Strategies to consider for protecting bees

Communication

- Communication between beekeeper, grower, spray operator and neighbours are vital especially as honeybees can easily fly two kilometres from their hive to forage on flowers.
- The BeeConnected app is a great digital tool for growers who would like to be informed of, and connected with, beekeepers near their farm, and beekeepers who want to be informed of crop protection activities near their beehives.
Visit www.croplife.org.au/resources/programs/beeconnected to download the BeeConnected app
- When engaging in commercial pollination services growers and beekeepers should agree upon each other's responsibilities in the following areas:
 - Pesticide applications
 - Number of frames/health of hives
 - Date and location for placement
 - Payment terms
 - Accessibility of colonies to beekeepers
 - Date of hive removal from the orchard

Hive placement and bee care

- Hives should be placed:
 - Where they are accessible and convenient at all hours for servicing and removal
 - With northern and eastern exposures for hive openings to encourage bee flight
 - Away from areas prone to shade or flooding
- To maximise pollination and guard the bees from drinking pesticide-contaminated water, beekeepers and growers should ensure clean water is always available. Covering or removing water sources for bees before a pest control treatment or emptying and refilling water after a treatment is made is good practice. Water supplies will need to be cleaned and refreshed regularly.
- Providing alternative pollen sources for good colony strength and bee health should be considered. This could include flowering boundary plants.
- Hive quality and strength should be assessed upon arrival, either by the beekeeper or a third-party auditor. This inspection should be observed by a grower. Hives should be inspected for colony strength and the other parameters agreed upon between the grower and the beekeeper.
- Place hives evenly throughout the orchard for better pollination.



Photo Credit: Jane Richter



Photo Credit: Steve Fuller, Bee Services

Spray Management

- Always warn nearby beekeepers of your intention to spray in time for steps to be taken to protect the bees. Give at least two days' notice and advise nearby farmers and neighbours.
- Spraying should occur late in the afternoon or evening (be aware of inversion layer conditions), when bees are not foraging, and pollen is not present.
- Turn off nozzles when near beehives, even if at night.
- Avoid directly spraying bees in flight or beehives. Bees that come in contact with agricultural sprays will not be able to fly because of the weight of the spray droplets on their wings.
- **Always avoid spray drift.** Always monitor wind speed and direction prior to spraying and avoid spraying in conditions where spray might drift onto adjacent areas which could be supporting foraging bees.
- Mow all flowering weed growth before spraying orchards.

Chemical choice

- Always choose the short acting chemical option. Application should finish at least 6 hours prior to bee activity.
- Follow the warnings on pesticide container labels.
- Dispose of waste chemicals or used containers correctly via ChemClear or drumMUSTER.
- Surfactants are used to improve the effectiveness of chemicals, to decrease the droplet size or to increase the penetration of chemicals on a plant or insect. Surfactants allow the water to penetrate the body hairs, which will kill bees.

**DO NOT SPRAY
WHEN BEES ARE ACTIVE**



ChemClear is the national program for the collection & disposal of unwanted agvet. chemicals. The objective of the program is to minimise the accumulation of unwanted agvet chemicals held in storage which may create potential risks to the environment, public health and trade.

Visit www.chemclear.org.au or 1800 008 182 to register your unwanted chemicals



drumMUSTER

drumMUSTER is the National program that has been set up for the collection and recycling of cleaned eligible non returnable crop production and on-farm animal health chemical containers and provides chemical users with a defined route to safely dispose of used chemical containers.

Visit www.drummuster.org.au or 1800 008 707 to find a drumMUSTER siteicals