

PIRSA

Bee management plan during fruit fly eradication

August 2025



Contents

1. Overview	3
2. Background.....	4
3. PIRSA responsibilities	4
4. Beekeeper responsibilities	5
5. Grower responsibilities.....	5
6. PIRSA Hive Notification Form.....	6
7. PIRSA activities: Bee protection and chemical use	6
8. Communication Plan	7
9. Poisoning investigations	8
10. Bee deaths	8

1. Overview

South Australia's fruit fly free status is critical to its billion dollar horticultural industry. The Riverland Pest Free Area (PFA) helps secure domestic and international market access. During fruit fly outbreaks, eradication activities such as baiting, spraying, and sterile insect release may affect bees and other pollinators. With around 75,000 hives in SA contributing over \$1.7 billion in pollination services and \$15 million in products each year, this Bee Management Plan ensures fruit fly eradication is carried out with care for managed hives, native pollinators, and the environment.

PIRSA responsibilities

- Avoid baiting within 50m of hives or on flowering plants with active bees.
- Investigate all reports of chemical impacts on bees.
- Comply with pesticide labels and regulator directions.
- Provide staff training and ensure checks are made before entering properties.
- Publish baiting and spray locations on the PIRSA website.
- Maintain a hive notification system for outbreak areas.
- Apply chemicals in accordance with Standard Operating Procedures.
- Update field staff devices with hive and treatment data within 6 business days.

Beekeeper responsibilities

- [Register with PIRSA](#) and keep hive locations current.
- Actively manage pesticide risk (Communicate with growers; Avoid drift zones and active spray areas; Remove hives after pollination).
- Display Hive Identification Codes on all hives.
- Use industry notification apps and the PIRSA notification system.
- [Notify PIRSA before placing or removing hives in outbreak zones.](#)

Grower responsibilities

- Follow pesticide label directions, especially regarding bee protection.
- Avoid spraying flowering crops during bee activity.
- Use low-risk products when possible.
- Notify nearby beekeepers at least 48 hours before spraying.
- Avoid drift near hives or water sources.

PIRSA Notification System

Beekeepers must submit a Fruit Fly Response Hive Notification Form at least 6 business days before placing hives in an outbreak area. This enables PIRSA to establish 50m chemical buffer zones. Notification must also be given once hives are removed. Email fruitfly@sa.gov.au and check the map of current outbreak zones: fruitfly.sa.gov.au/outbreak-map

If you suspect pesticide poisoning

PIRSA will investigate and work with affected parties to manage risks and support hive recovery. You will need to:

- Collect and freeze bee samples (sample size of approx. 300 bees).
- Record symptoms, timing, and potential exposure sources.
- Contact PIRSA Rural Chemicals Hotline: 1300 799 684.

2. Background

South Australia is the only mainland Australian state free from fruit fly. Fruit fly free status has significant benefits for the state and is vital to its billion-dollar horticultural industry. This industry supports 4,000 horticultural businesses and employs 37,500 people.

Bees play an essential role in this system. Around 65% of Australian plant-based industries depend on pollination, including crops such as almonds, apples, cherries, blueberries, lucerne, and clover.

South Australia's approximately 75,000 beehives produce over \$15 million of products and provide pollination worth around \$1.7 billion to agriculture and horticulture industries.

A key part of South Australia's biosecurity framework is the Riverland Pest Free Area (PFA). The PFA is recognised by domestic and international trading partners as free from permanent fruit fly populations. This status gives Riverland growers valuable advantages and market opportunities.

When an outbreak occurs in the Riverland, parts or all of the PFA are temporarily suspended while eradication efforts are undertaken. These eradication activities include:

- chemical treatments (eg organic bait spot applications and non-organic cover sprays)
- ground treatments for larval detections
- the installation of Attract and Kill Devices (AKDs)
- sterile insect technique (SIT), which involves introducing sterile flies to help reduce and eradicate the wild Queensland fruit fly numbers
- technical inspections for larvae
- fruit hygiene (eg picking up fallen fruit).

Chemicals used for fruit fly eradication can have effects on non-target species such as bees.

This Bee Management Plan outlines how PIRSA will continue efforts to eradicate fruit fly from the Riverland, while reducing potential impacts on the environment, managed beehives, and other pollinators.

It also sets out the shared responsibilities of PIRSA, beekeepers, and growers to ensure bees are protected during eradication operations, including the use of pesticides and chemicals.

3. PIRSA responsibilities

PIRSA must:

- refer all reports of chemical impacts on bees to the Rural Chemicals Operations team for investigation and follow up by rural chemical specialists
- comply with pesticide label directions and/or other directions from chemical regulators
- publish the locations where PIRSA baiting or spraying may occur on the PIRSA website
- maintain a notification system that allows beekeepers to register hive locations in fruit fly response outbreak areas (read more in Section 6).
- follow internal Standard Operating Procedures for pesticide application, including the use of fruit fly bait, cover spray, Attract and Kill Devices, and ground treatments
- update field staff devices with the register of beehive locations and treatment sites within 6 business days of notification from a bee owner
- check the record of hazards, arrangements, and hive locations **before** any property visits
- exercise caution on properties with registered hives and confirm hive locations on site
- provide appropriate training to staff on the risks associated with treatment activities.

4. Beekeeper responsibilities

To support bee health and protect hives during agricultural activity, beekeepers must

- [register with PIRSA](#) and keep their contact and location details up to date
- clearly display their Hive Identification Code (HIC) on each hive as required.

Because chemicals and pesticides used to control pests and diseases – especially during crop flowering – can harm bees, beekeepers must actively manage risks to their hives, including:

- communicating regularly with growers and neighbours to agree on apiary locations and the timing of hive placement and removal
- notifying growers and neighbours of any intended pesticide use, including the type of product and conditions for application
- assessing the risk of pesticide exposure from nearby crops within foraging range of bees
- placing hives and water sources outside of crop spray drift buffer zones
- remaining easily contactable and prepared to:
- monitor hive activity and health
- reduce pesticide exposure risks,
- replenish water supplies, and
- remove hives immediately after pollination is complete
- begin hive removal in the last quarter of the flowering period of the last-flowering crop, as retaining hives beyond this point does not improve yield and increases the risk of bees foraging elsewhere.

Beekeepers are also encouraged to:

- use and promote industry pesticide notification apps that help growers, contractors, and beekeepers to share hive locations and crop protection activities
- use the PIRSA Notification System (see below) and promptly update information, including when hives are removed.

5. Grower responsibilities

Growers are legally required to follow directions on pesticide labels and any instructions from chemical regulators, including those relating to protection of bees. These directions are often found under the “**Protection of Livestock**” section and may include:

- avoid direct application or drift of the spray mix onto beehives and
- do not spray flowering plants if bees are active.

Best practice for bee-safe pesticide application

To minimise risks to pollinators, growers should use the following industry-recognised best practices:

- select pest control methods with the least risk and toxicity to bees where possible
- not spraying close to hives and water sources
- minimising spray drift
- formally communicate plans to use pesticides with nearby beekeepers 48 hours prior
- maintain awareness of nearby hives
- monitor crops to determine:

- if pesticide application is needed
- the presence of bees and flowers in the spray area
- best pesticide application timing
- before or after crop flowering,
- mowing off-target flowering weeds in the crop and spray drift buffer zones prior to application
- not spraying flowering crops during the day if bees are active
- ensuring sprayer is cleaned of previous pesticide residues
- avoiding the use of pesticide mixes
- For growers who own bee hives, use the PIRSA Hive Notification Form.

6. PIRSA Hive Notification Form

The PIRSA Hive Notification Form supports communication between PIRSA and beekeepers during declared Fruit Fly Outbreaks. It helps ensure hive locations are known and factored into chemical treatment plans.

Responsibilities

PIRSA will:

- notify beekeepers via email using the Hive Identification Code (HIC) register as to the declaration of a Fruit Fly Outbreak Area
- provide beekeepers with PIRSA Fruit Fly Response Hive Notification form
- recorded hive presence and update property details in internal systems
- set up a 50-metre buffer zone around notified hive locations.

Beekeepers must:

- complete all sections of the PIRSA Fruit Fly Response Hive Notification form if they wish PIRSA to establish buffer zones around hives in an outbreak area
- email the completed form to fruitfly@sa.gov.au at least 6 business days before moving their hives into a declared Fruit Fly Outbreak Area
- notify PIRSA at fruitfly@sa.gov.au when hives are removed from their location in the Outbreak Area.

7. PIRSA activities: Bee protection and chemical use

Property access procedures

Before applying bait, field teams must:

- check the PIRSA notification register and vicinity before baiting
- thoroughly survey the area, including beyond barriers, hives, water, the other side of fences, shrubbery, and/or other obstructions
- confirm if any water bodies or hives are present.

Chemical requirements

PIRSA takes care when applying chemicals, and will not spray/apply:

- within 50 metres of a managed beehive
- on flowering plants when bees are active
- near people or pets, including fish, birds, or bee hives
- where chemicals may drift into aviaries, ponds, or water intended for consumption.

PIRSA will continue to apply bait and cover sprays according to the conditions in the Naturalure® [APVMA permits](#) and [product label](#). The Naturalure® label requires that bait is applied onto foliage, and not onto flowering plants if bees are active. We also avoid direct application or spray drift onto beehives.

Crop pollination periods

During scheduled crop pollination events, PIRSA will:

- avoid applying bait and cover sprays into orchards when they are in full flower
- continue to apply bait and cover sprays into areas more than 50 metres from orchards.

Risk assessments indicate that applying bait and cover sprays around almond orchards during pollination is low risk, as bees are likely to be fully occupied foraging within blossoms.

Alternatives to baiting and spraying

PIRSA considers other tools as part of the fruit fly outbreak eradication effort. These include:

- cover sprays, (diluted insecticide over tree canopies) to kill adult flies on contact (eggs or larvae in the fruit are not affected)
 - wind breaks and ornamentals are also targeted during the cover spray, as they can shelter fruit flies
 - trees or shrubs in flower will not receive a cover spray.
- ground treatments, which are used when a larval infestation is confirmed.
 - The chemical is applied under infested trees as a soil drench (usually Lambda-Cyhalothrin).

In cases where chemical treatments are urgently necessary for the eradication of a declared pest in a particular area, PIRSA reserves the right to take responsive actions, including using chemicals outside the parameters in this plan. In such instances, PIRSA will notify beekeepers of their intent to apply chemical treatments and will work with the beekeeper/s to minimise impacts on bees.

8. Communication Plan

PIRSA Notification Arrangements

PIRSA will communicate the Bee Management Plan with apiary and relevant bee pollination dependent industries as early as possible to prepare them for the coming season.

9. Poisoning investigations

If you suspect your bees have been poisoned, you should:

- determine if pesticide poisoning is likely
- record any symptoms or signs of poisoning
- take photos and record any other information that may be relevant
- notify PIRSA rural chemicals as soon as possible by calling the PIRSA Agricultural and Veterinary Chemicals Hotline on 1300 799 684
- collect and store representative samples of dead bees for possible pesticide residue testing
- collect samples immediately
- place them into clean containers that have not previously contained chemicals
- freeze the samples to prevent further deterioration
- implement measures to prevent further pesticide exposure and colony decline.

Once PIRSA has been notified of a suspect pesticide poisoning, PIRSA's Rural Chemicals Operations team will undertake an investigation. This may include:

- investigating pesticide applications undertaken in the area by PIRSA and other parties
- undertaking on-site inspection and assessment and collecting evidence, including beekeeper samples/additional samples.
- arranging for laboratory testing of samples and providing advice on interpreting the results
- providing advice with ongoing hive management and recovery
- reviewing pesticide application and control measures, potentially including work with beekeepers, growers and PIRSA, to improve communication and awareness.

10. Bee deaths

Mass bee/larvae deaths should always be investigated. Poisoning events are just one of many potential causes of mass deaths in a hive. Pest and virus incursion can also lead to mass deaths. For a guide to [testing for Varroa mite in bee colonies](#), please visit the PIRSA website.

PIRSA Fruit Fly Outbreak Response Hive Notification Form



You can send this form to fruitfly@sa.gov.au to voluntarily notify PIRSA of the presence of hives in a declared Fruit Fly Outbreak Area. So that PIRSA can update its systems accordingly, please submit notifications at least **6 business days before moving hives** into the outbreak area.

Hive Owner Details

Name	
Role	<input type="checkbox"/> Owner of Hives <input type="checkbox"/> Hive Manager <input type="checkbox"/> Other (please specify below)
Phone Number	
Email	

Hive Details

Hive ID Code																					
Number of hives	to be within a declared Fruit Fly Outbreak Area (Red and Yellow Zones) <i>(Check Riverland Outbreak areas here: fruitfly.sa.gov.au/outbreak-map)</i>																				
GPS location of hives	<p>within Fruit Fly Outbreak Area</p> <table border="1"> <tr> <td>S</td> <td>E</td> <td>S</td> <td>E</td> </tr> <tr> <td>S</td> <td>E</td> <td>S</td> <td>E</td> </tr> <tr> <td>S</td> <td>E</td> <td>S</td> <td>E</td> </tr> <tr> <td>S</td> <td>E</td> <td>S</td> <td>E</td> </tr> <tr> <td>S</td> <td>E</td> <td>S</td> <td>E</td> </tr> </table>	S	E	S	E	S	E	S	E	S	E	S	E	S	E	S	E	S	E	S	E
S	E	S	E																		
S	E	S	E																		
S	E	S	E																		
S	E	S	E																		
S	E	S	E																		
Street address	of hives within Fruit Fly Outbreak Area																				
Type of orchard																					
Duration	<p>of Hives Present: <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary (Please Specify Date Range)</p> <p>from:</p> <p>until:</p>																				

Declaration

I declare the above information to be true and accurate to the best of my knowledge.

Signed:

Print Name:

Date:.....

By completing this form, you help ensure that PIRSA can take reasonable steps, as outlined in the Bee Management Plan, to reduce the impact of our activities on your apiary. **Please email fruitfly@sa.gov.au once hives have been removed from the Fruit Fly Outbreak Area.**