

Biosecurity Induction Manual for Bundaberg Horticultural Farms

Help reduce the risk of new pests entering, impacting
and spreading across the Bundaberg region

Version 1.0





Plant Health Australia (PHA) is the lead national coordinating body for plant health in Australia. PHA works in partnership with industry, governments, researchers and others, providing national coordination to improve biosecurity policy and practice across Australia's plant industries and to build capacity to respond to plant pest emergencies.
www.planthealthaustralia.com.au



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www.bfvg.com.au

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Overview

2 This manual has been designed to assist farm staff in helping the farm manager protect the property from the introduction and establishment of exotic (new) pests. The measures in this manual will also aid in reducing the spread of endemic (those already established in the region) pests.

By having all workers and visitors to the farm aware of these measures, farm managers are minimising the risks to their livelihoods, your jobs and the region's economy.

The information in this manual is in no way comprehensive, but is designed to act as a guide for biosecurity best practice. Specific measures will vary between farm and production systems. However, with greater awareness and vigilance by all farm workers and visitors, the threat of pest incursions can be greatly reduced.

What is biosecurity?

Biosecurity is a set of measures that can be put in place at the **national, regional and farm level**. These measures help to protect against the introduction and spread of new pests, and to effectively deal with them should they arrive.

What is farm biosecurity?

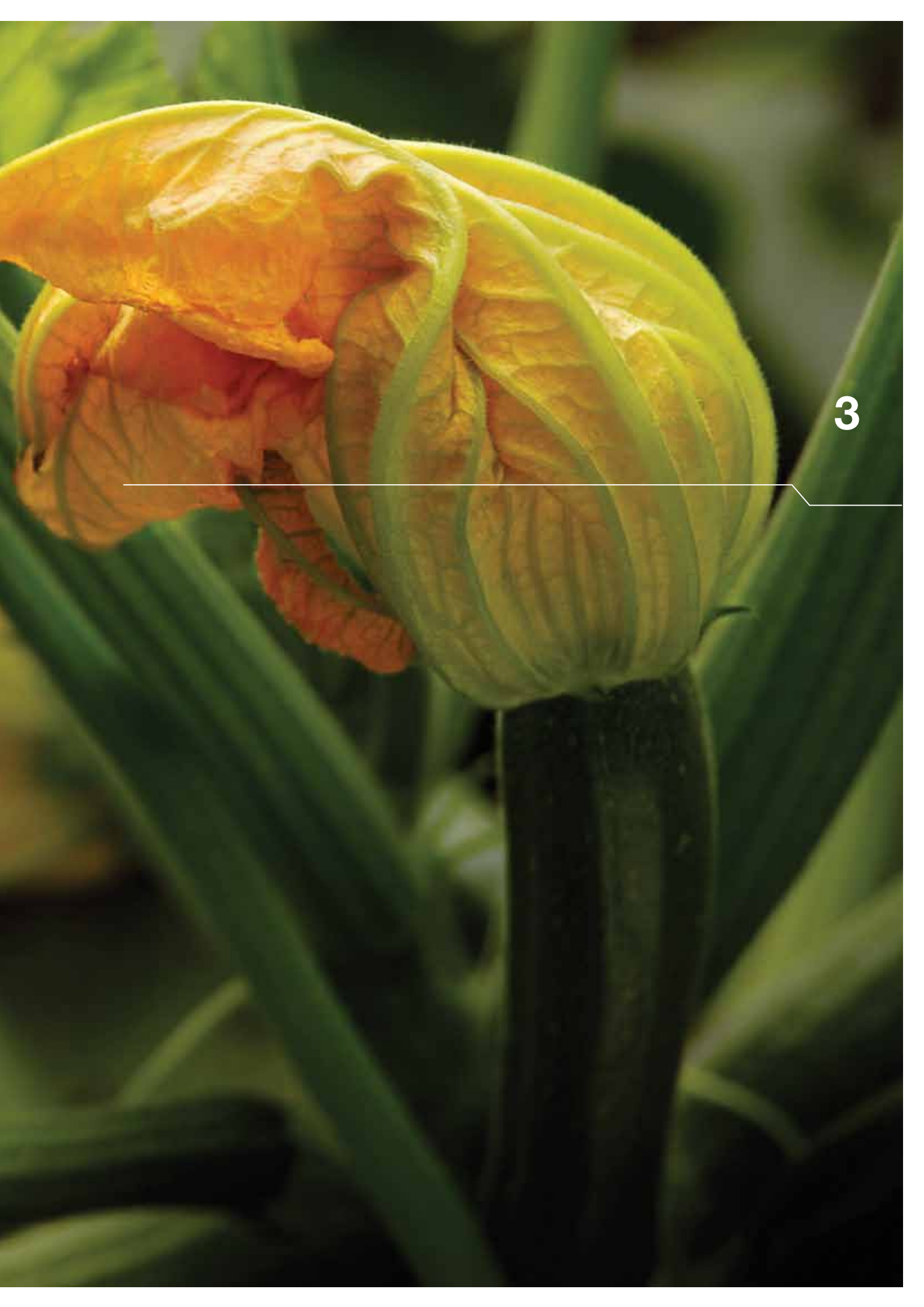
Farm biosecurity is a set of management practices and activities that are carried out on-farm to protect properties from the entry and spread of pests. Farm biosecurity is essential for protecting livelihoods and is the responsibility of every person working on or visiting the farm.

The farm biosecurity measures in this manual will help protect properties and minimise the impact of exotic and endemic pests of the Bundaberg region. These measures are supported through **regional biosecurity** activities and the actions outlined here are applicable to all properties you visit.

Hive biosecurity is also important, as the pollination services provided have a direct impact on the productivity of many fruit and vegetable crops and the region's economy. Be on the lookout for any unusual bee behaviour or the presence of new bees, as these can negatively impact crop production in the long term.

Early detection and immediate reporting increases the chance of effective eradication of any new pest.

As a new worker on this farm, it is your responsibility to understand the potential biosecurity risks outlined and actions that may need to be taken in this manual. The checklist on page 14 should be completed with your supervisor.



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Farm biosecurity risk summary

This is a summary of key risks and priority actions to consider while working on this farm. More information on these summary points is provided through this manual.

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Key risks to biosecurity	Primary actions to help minimise these risks
Suspect or new pests	Many pests become established by people not reporting them <ul style="list-style-type: none">• If you suspect a new pest or see unusual plant symptoms, report it to the farm manager or your supervisor.
Product management and waste disposal	<ul style="list-style-type: none">• Do not bring plant material or fruit from another region onto the farm.• Follow waste disposal procedures in place on the farm.• Do not remove waste from farms unless authorised.
People movement	<ul style="list-style-type: none">• Sign farm register on arrival or report immediately to a supervisor.• Ensure clothing and footwear is clean before entering the farm.• Use footbaths, if provided, before entering high-risk areas.
Equipment and vehicles	<ul style="list-style-type: none">• Park in designated parking areas.• Know the location of, and how to use, wash-down facilities.• Know how to clean equipment, vehicles and tools.• Only use the equipment and clothing provided (if applicable).• Make sure your own equipment is cleaned before entering new properties.

If you see anything unusual, call the Exotic Plant Pest Hotline

EXOTIC PLANT PEST HOTLINE
1800 084 881

Looking for and reporting pests

6 The introduction of new pests onto a property will nearly always result in increased costs and reduced profitability.

This can be through extra on-farm management practices and treatments, or through loss of production and access to markets for sale of produce. However, if a new pest is detected early enough, it may be eradicated or contained for a fraction of the cost of ongoing management.

The definition of a **pest** used in this manual covers all insects, mites, snails, nematodes, pathogens (diseases) and weeds that may harm plants or plant products. In this manual, **exotic** pests are those absent from the Bundaberg region, while **endemic** pests are present within the region.



Scott Bauer

Pest surveillance involves looking for, recording and managing pests. The farm may have a pest surveillance program and you may have an active role in this program. There are a number of things you can do to add to surveillance activities carried out at the farm level.

If you suspect you have found a new plant pest or any unusual plant symptoms, inform the farm manager or your supervisor immediately. They may instruct you to take the following actions:

- **Contain the problem** by preventing people, equipment and plant material from leaving the affected area without prior disinfestation.
- **Stop movement** of people, equipment and plant material near the affected area as this can rapidly spread pests.
- **Wash hands, clothes and boots** that have been in contact with affected plant material or soil before leaving the affected area.
- **Do not touch, move or transport** affected plant material from that location. The farm manager will contact Biosecurity Queensland (part of the Department of Employment, Economic Development and Innovation) who will provide protocols for handling and transport of samples. Incorrect handling could spread the pest further or make samples unfit for diagnosis.



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Scott Bauer, USDA Agricultural Research Service, Bugwood.org

Case in point: Fire ants

Fire ants originate from South America and were first detected in Brisbane in 2001. These lifestyle pests impact social, economic and environmental aspects of life in Queensland.

The National Fire Ant Eradication Program is currently implemented by the Queensland government, with funding from all Australian states and territories together with the federal government. This eradication program includes on-going surveillance in conjunction with treatment and containment measures, costing more than \$210 million to date.

Case in point: Citrus canker

Citrus canker is an exotic bacterial pest of citrus trees that causes canker development and lesions on leaves, stems and fruit. Yield is severely reduced on trees infected with the bacterium. Citrus canker was detected in Queensland in 2004, resulting in trade restrictions and lost income for growers. An eradication program removed all citrus trees in the affected area. Australia was declared free of Citrus canker in 2009.

Even though the outbreak was localised to the Emerald region, the eradication of Citrus canker cost over \$26 million and impacted all citrus growing regions throughout the country. When combined with the loss of trade due to restrictions during the eradication, the Citrus canker incursion had a severe negative impact on the Australian citrus industry.



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Farm biosecurity risks

Product management

Planting material and farm inputs

Pests can be brought on to the farm in new planting material and other farm inputs. While the risks are reduced by using certified planting material, all farm inputs should be checked closely to ensure no pests are introduced.

Poor quality or infected planting material has the potential to threaten the business.

If you suspect any pests or unhealthy planting material entering or leaving the farm, let the farm manager or your supervisor know immediately.

Harvested produce

Transport of farm produce within and between farms has the potential to spread pests. Examine produce for the presence of pests or unusual symptoms before transporting.

In addition, when transporting any produce ensure that people and vehicle movement recommendations (page 10) have been followed.

Any pests or unusual symptoms in harvested produce, or any transport activities compromising farm biosecurity, should be reported to the farm manager or your supervisor immediately.



Crop waste

Crop waste that is not disposed of correctly can breed pests and contaminate new crops. This includes crop residues and prunings, as well as packing shed waste.

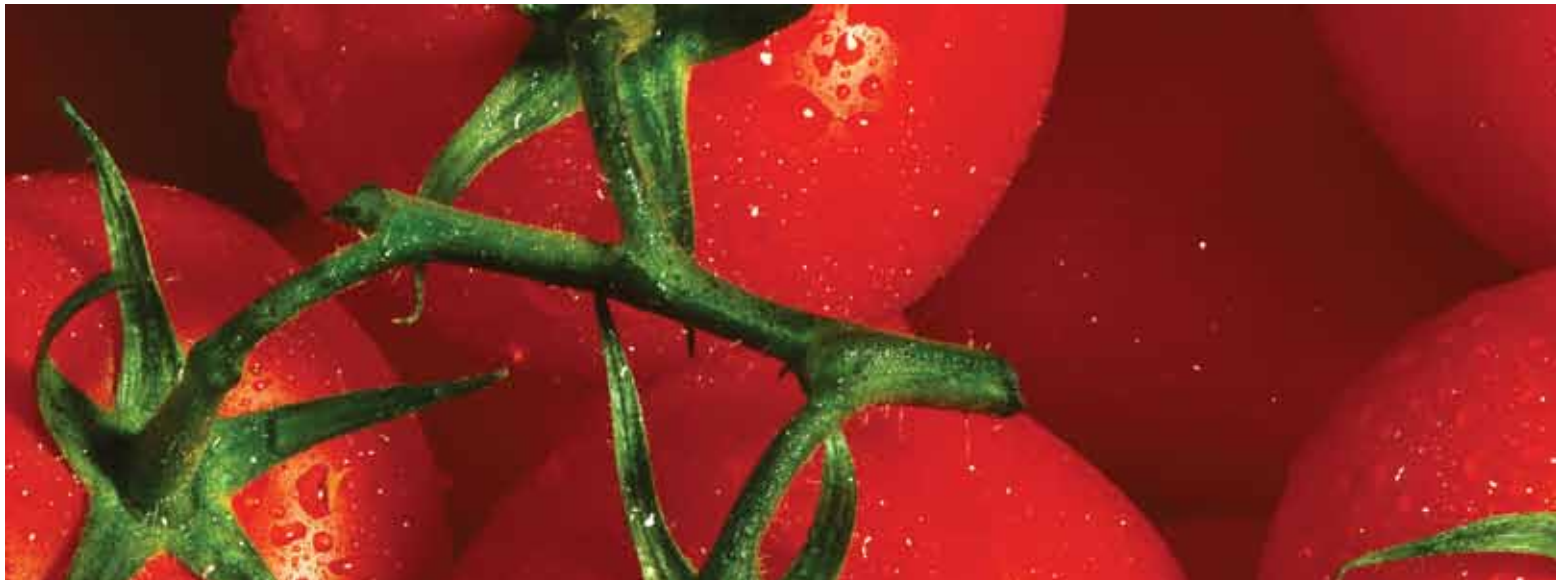
Follow the procedures put in place on the farm to dispose of waste properly. These procedures could include the following:

- Crop residues and prunings removed or ploughed in directly after harvest.
- Any waste from crops or packing sheds disposed of away from farm production areas and water sources. Waste material may be disposed of by burying, hot-composting or transport to a waste management facility.

- Crop waste to be used as animal fodder must be treated before transport to ensure the removal of all pests.
- Load fruit and vegetables onto trucks on a sealed pad outside production areas.
- No soil, plant material or pests are left on, or in bins and storage areas.

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10 People, vehicle and equipment movement

Movement between different farms and regions can spread pests. They are easily spread in soil and plant material on footwear, clothes, vehicles and equipment.

You can help reduce the spread of pests by carrying out these steps:

- When entering the property, use the parking or meeting area and call at the office. Staff should report immediately to their supervisor. Enter your details on the visitor or farm register.
- Read all biosecurity signage and follow the instructions on them.
- Be aware of the biosecurity measures in place on the property.



- Soil, plant material and pests should be removed from vehicles, equipment and tools before entering the farm. Cleaning vehicles and equipment should be done in a wash-down area, preferably with high pressure water. Using an appropriate wash-down area will restrict waste water and new pests to a single, easily managed site. When using wash-down areas:
 - Ensure plant material and soil isn't blown or washed into crop, packing or storage areas.
 - Check whether cleaning products are available and can be used on equipment or machinery.
 - Check whether machinery should be dismantled for cleaning and if so, how to do so.
- Clean and disinfect tools (such as pruning equipment) between each block.
- Use equipment, tools and boots if provided on farm. If using your own equipment, make sure it is clean before you enter the property.
- Where scrubbing brushes and footbaths are provided, use them to clean and disinfect footwear.
- If you have recently arrived from overseas or from another region, make sure your clothes have been washed and your boots cleaned and disinfected before entering the farm.

Cleaning and disinfecting equipment, tools and machinery

Tools and equipment need to be cleaned and preferably disinfected within and between properties. This is done by first removing all soil and plant material then disinfecting with an appropriate solution.

Equipment should be disinfected, but the approach will vary depending on the equipment, farm and potential pest threats:

- Check with the farm manager or supervisor as to whether any specific cleaning procedures or chemicals are recommended or provided.
- If an appropriate chemical is not available, hot soapy water will kill many pests.
- Equipment may also be cleaned by soaking for 10 minutes in bleach solution (1% available chlorine), although long periods of soaking can rust metal and bleach clothes.
- Dipping equipment such as pruners in methylated spirits will disinfect them and kill many pests.
- Machinery will need to be dismantled and cleaned using farm specific instructions.



Further information

12 More information on biosecurity, farm hygiene, pest details and the horticultural industry can be obtained through the following sources.

Organisation	Contact details
Plant Health Australia	Phone: 02 6215 7700 Email: biosecurity@phau.com.au Website: www.phau.com.au
Farm Biosecurity	Phone: 02 6215 7700 Email: info@farmbiosecurity.com.au Website: www.farmbiosecurity.com.au
Bundaberg Fruit and Vegetable Growers Cooperative	Phone: 07 4153 3007 Email: bfvg.info@bfvg.com.au Website: www.bfvg.com.au
AUSVEG	Phone: 03 9544 8098 Email: info@ausveg.com.au Website: www.ausveg.com.au
Horticulture Australia Ltd.	Phone: 02 8295 2300 Website: www.horticulture.com.au
Queensland Department of Employment, Economic Development and Innovation	Phone: 13 25 23 or 07 3404 6999 Email: callweb@dpi.qld.gov.au Website: www.deedi.qld.gov.au
Pest and Disease Image Library (PaDIL)	Website: www.padil.gov.au

If you see anything unusual, call the Exotic Plant Pest Hotline

EXOTIC PLANT PEST HOTLINE
1800 084 881



Induction and farm biosecurity risk checklist

Name: _____ Date: _____

Pests			
Who do you report suspect pests to?	Name: _____		
	Contact number: _____		
Product management			
Crop waste is disposed of	Location: _____		
	How: _____		
Packing shed waste is disposed of	Location: _____		
	How: _____		
Cleaning and disinfecting equipment, tools and machinery			
Equipment to be disinfested with, and the frequency	Hot soapy water		
	Equipment	By whom	How often
	Bleach		
	Equipment	By whom	How often
	Methylated spirits		
	Equipment	By whom	How often
	Other specified products: _____		

People, vehicle and equipment movement

Parking area

Location:

Wash-down area

Location:

Equipment/vehicles to be cleaned:

Cleaning products available:

**On-farm equipment,
clothing and tools**

Available items:

Location:

Footbaths

Location:

When to use:

**Farm-specific
biosecurity measures**

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Notes

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Farm biosecurity risk summary

SUSPECT OR NEW PESTS

Many pests become established by people not reporting them.

- If you suspect a new pest or see unusual plant symptoms, report it to the farm manager or your supervisor.

PRODUCT MANAGEMENT AND WASTE DISPOSAL

Do not bring plant material or fruit from another region onto the farm.

- Follow waste disposal procedures in place on the farm.
- Do not remove waste from farms unless authorised.

PEOPLE MOVEMENT

Sign farm register on arrival or report immediately to a supervisor.

- Ensure clothing and footwear is clean before entering the farm.
- Use footbaths, if provided, before entering high-risk areas.

EQUIPMENT AND VEHICLES

Park in designated parking areas.

- Know the location of, and how to use, wash-down facilities.
- Know how to clean equipment, vehicles and tools.
- Only use the equipment and clothing provided (if applicable).
- Make sure your own equipment is cleaned before entering new properties.

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