



# Chapter 5

Post-border biosecurity –  
Eradicating new plant pests

**While Australia's border biosecurity is second to none, exotic pests still enter Australia. They might arrive with imported goods or the packaging it is sent in, with illegally imported goods, in luggage or via natural pathways such as wind and water currents. In some cases, an existing plant pathogen will evolve to become a pest of a new species.**

**Since pests can make it into the country despite all the precautions in place, Australia has established a unique and highly effective post-border biosecurity system to provide additional protection against exotic pests.**

**The next few chapters cover different aspects of post-border activities that together are aimed at limiting the impact of any detected pest or disease.**



*Image courtesy of the Northern Territory Department of Primary Industry and Resources*

## Responding when new plant pests are found

Even with a highly effective biosecurity system, including strong border controls, there is still a risk that new plant pests will enter the country. Passenger arrivals and imports are increasing with time and, together with natural entry pathways such as wind and water currents, the risk of exotic pest incursions is ever present.

As a result, Australia has post-border biosecurity mechanisms in place to rapidly and effectively respond to plant pests to minimise any negative impacts.

Reports of new plant pests and diseases are referred to state departments of agriculture in the first instance. An Exotic Plant Pest Hotline has been set up for such reports. The national number, 1800 084 881, is directed to the state agency, and all calls are confidential and treated seriously.

**IF YOU SEE ANYTHING UNUSUAL,  
CALL THE EXOTIC PLANT PEST HOTLINE**

**1800 084 881**

A report to the Exotic Plant Pest Hotline triggers investigations by the state agency to identify the pests or the unusual plant symptoms.

Diagnosticians in state and territory agencies are tasked with determining if the suspicious pest is indeed exotic. Information on Australia's diagnostic system is in Chapter 7.

In cases where a new pest that warrants further action is identified, state and territory agencies will take immediate steps as stipulated under Australia's pest response arrangements.

If a new pest is considered to primarily impact the environment or social amenity, and where the response is for the public good, the National Environmental Biosecurity Response Agreement (NEBRA) will be activated. NEBRA was signed by the Australian Government and state and territory governments in January 2012.

In 2017 an independent review was undertaken of the implementation and effectiveness of the NEBRA agreement in the five years since its commencement. The final report has been provided to the National Biosecurity Committee which will consider its findings and recommendations in conjunction with the relevant Intergovernmental Agreement on Biosecurity Review recommendations.

Serious exotic pests that would affect agricultural industries are dealt with under the provisions of the Emergency Plant Pest Response Deed, and the majority of this chapter focuses on those arrangements.

Exotic production weeds are also responded to, although at this time there is no formal national response agreement in place.



*Emergency responses are coordinated from a state biosecurity operations centre*



## The Emergency Plant Pest Response Deed

The Emergency Plant Pest Response Deed (EPPRD) is a formal, legally binding agreement between PHA, the Australian Government, all state and territory governments, and, at the end of 2017, 33 plant industry peak bodies.

PHA is the custodian of the EPPRD, bestowing on the company the dual roles of ensuring that responses are carried out in accordance with the provisions of the agreement and of progressively improving the provisions to meet the needs of Signatories.

In this chapter, terms defined under the EPPRD are identified through capitalisation. For the full list of definitions, refer to clause 1 of the EPPRD available at [planthealthaustralia.com.au/epprd](http://planthealthaustralia.com.au/epprd).

This chapter, which is focused on the implementation of the EPPRD, uses the EPPRD definition of a Plant Pest: *any species, biotype or strain of invertebrate pest or pathogen injurious to Plant Health, Unprocessed Plant Products, Bees or Fungi provided that it is discrete, identifiable and genetically stable, but excludes Genetically Modified Organisms.*

In order for a new detection to be considered under the EPPRD, the species detected must first meet the definition of a Plant Pest. Note that the EPPRD definition of a Plant Pest does not include weeds.



## DEFINITION OF AN EMERGENCY PLANT PEST

For a pest to be covered by the EPPRD, it must be an Emergency Plant Pest (EPP) as defined in the agreement. Some pests have already been accepted as EPP, through the process of categorisation, and these appear in *schedule 13 of the EPPRD*.

Otherwise, a Plant Pest is an EPP if it meets one of the following criteria:

- A known exotic Plant Pest that could have an adverse economic impact regionally and nationally if established in Australia.
- A variant form of an established Plant Pest which can be distinguished by appropriate investigative methods, and could have an adverse economic impact regionally and nationally if established in Australia.
- A serious Plant Pest of unknown or uncertain origin which may be an entirely new plant pest.
- A Plant Pest restricted to a defined area of Australia through the use of regulatory measures, that is not native to Australia or under a national instrument of management, and has been detected outside the defined area and is likely to have an adverse economic impact such that an emergency response is required to prevent an incident of regional and national importance.

The honey bee industry is also covered by the EPPRD, since a Plant Pest affecting honey bees would also affect plant industries that benefit from pollination. In 2017, edible fungi were also added to the EPPRD so that Plant Pests that are injurious to edible fungi (for example truffles) can be considered under the agreement.

## EPPRD ERADICATION RESPONSES

The EPPRD is designed to ensure a rapid and effective response to the detection of an EPP, and to provide certainty on the governance, decision making and funding of that response.

It specifies Parties' roles in the decision making and operational processes of the EPP response and how government and Industry Parties will share the costs, based on an assessment of the relative public and private benefits of eradication.

### Decision making committees that drive eradication responses

The terms of the EPPRD ensure that no single Party is exclusively responsible for making decisions on responses to EPPs. Instead, formal committees are assembled to agree to actions. These committees are made up of representatives from government and Industry Parties that are likely to be Affected by the EPP. Only EPPRD signatories can take an active part in these decision-making groups.

The National Management Group (NMG) is responsible for making the key decisions on a response under the EPPRD. The group is formed when an EPP is detected and consists of representatives from PHA, the Australian Government, all state and territory governments and Industry Parties identified as Affected by the EPP.

The NMG is responsible for approving a Response Plan, including the budget, if it is agreed that eradication of the EPP is technically feasible and cost beneficial. The NMG is advised on technical matters by the Consultative Committee on Emergency Plant Pests (CCEPP).

The CCEPP is a technical committee that makes recommendations to the NMG on a response under the EPPRD. As with the NMG, the CCEPP is formed when an EPP, or a suspected EPP, is detected.

The CCEPP is comprised of the Australian Chief Plant Protection Officer, all state and territory Chief Plant Health Managers, and nominated representatives from the Australian Government, PHA and each Industry Party identified as Affected by the EPP.

The CCEPP is responsible for assessing the grounds for eradication and for providing the technical advice needed for the NMG to make decisions. A Scientific Advisory Panel may be convened by the CCEPP, as required, to provide advice on specific technical matters.

## PLANTPLAN

PLANTPLAN is the agreed technical response plan used by governments and industries in responding to a Plant Pest Incident in accordance with the EPPRD. PLANTPLAN underpins the EPPRD as part of *schedule 5* and is endorsed by all EPPRD signatories.

It provides nationally consistent guidelines for response procedures under the EPPRD, outlining the phases of an incursion (investigation and alert, operational, stand down and transition to management), as well as the key roles and responsibilities of industry and government Parties during each of these phases. It incorporates best practice in EPP responses and is further updated each year to incorporate the findings of Incident debriefs and simulation exercises. PHA manages the continued development of PLANTPLAN on behalf of EPPRD Parties.

PLANTPLAN is supported by several documents providing detail on specific topics to make access to information easier in training and emergency response situations. In 2017 Parties endorsed a number of new and revised supporting documents, all of which are available at [planthealthaustralia.com.au/plantplan](http://planthealthaustralia.com.au/plantplan).

## CATEGORISATION OF PESTS

Investment in a response plan by government and Industry Parties is guided by the category of the EPP. Each category is based on the public versus private benefit of eradication of the EPP and falls into one of four categories, as shown in Table 47.

Assessments are made by a Categorisation Group comprising nominated representatives from the Affected Industry Parties, relevant technical experts nominated by government and Industry Parties, an economic expert and an independent chair from PHA.

Relevant Parties must agree unanimously to the category recommended by the Categorisation Group in order for it to be formally recognised.



*Giant pine scale was reported for the first time in Australia in late 2014. It was found in pine trees in Melbourne and in Adelaide, sparking an eradication response under the EPPRD. Image courtesy of the Department of Economic Development, Jobs, Transport and Resources*

**Table 47. Emergency Plant Pest categories and the associated Affected Party Cost Sharing splits**

### Category 1

The eradication of Category 1 EPPs would have very high public benefits and would be 100 per cent government funded. These are EPPs which, if not eradicated, would:

- cause major environmental damage to natural ecosystems; and/or
- potentially affect human health or cause a major nuisance to humans; and/or
- cause significant damage to amenity flora; and
- have relatively little impact on commercial Crops.

This category also covers situations where the EPP has a wide range of hosts, including native flora, and there is considerable uncertainty as to the relative impacts on Crops.

In short, it is almost impossible to properly determine which Cropping Sectors benefit from eradication and to what extent, and in any case the incursion primarily affects native flora and/or amenity plants, and/or is a major nuisance, if not a health risk to humans.

### Category 2

The eradication of Category 2 EPPs would have high public benefits and so would be funded 80 per cent by governments and 20 per cent by Affected Industry Parties.

These are EPPs, which if not eradicated, would:

- cause significant public losses either directly through serious loss of amenity, and/or environmental values and/or effects on households; or indirectly through very severe economic impacts on regions and the national economy, through large trade losses with flow on effects through the economy; and
- impose major costs on the Affected Cropping Sectors such that the Cropping Sectors would benefit significantly from eradication.

### Category 3

The eradication of Category 3 EPPs would have moderate public benefits and would be funded 50 per cent by governments and 50 per cent by Affected Industry Parties. These are EPPs, which if not eradicated, would primarily harm the Affected Cropping Sectors, but there would also be some significant public costs as well (that is, moderate public benefits from eradication). The EPP could adversely affect public amenities, households or the environment, and/or could have significant, though moderate trade implications and/or national and regional economic implications.

### Category 4

The eradication of Category 4 EPPs would mainly, if not wholly, have private benefits and would be funded 20 per cent by governments and 80 per cent by Affected Industry Parties. These are EPPs, which if not eradicated, would:

- have little or no public cost implications and little or no impacts on natural ecosystems.
- the Affected Cropping Sectors would be adversely affected primarily through additional costs of production, extra control costs, or nuisance costs; and generally there would be no significant trade issues that would affect national and regional economies.

## TRANSITION TO MANAGEMENT

In some cases, EPPs are not able to be eradicated. In 2016 a Transition to Management (T2M) Phase was incorporated into the EPPRD and PLANTPLAN following approval by all EPPRD Parties.

T2M may only be initiated under certain circumstances and its aim is to provide a formalised structure for transitioning a response from the eradication of an EPP under the EPPRD to management of the EPP outside of the EPPRD processes.

The objectives and activities undertaken during a T2M phase depend on the biology of the pest and the circumstances relating to the stage of the response, and are considered on a case by case basis. Activities might include development of control options, improving knowledge of the pest, negotiating new trading protocols, and communication, engagement and training.

Prior to the inclusion of a T2M phase in the EPPRD, once a decision that an EPP was not eradicable had been made, the processes of the EPPRD ceased. This left no clear path for decision making and cost sharing of any further programs that may be in the national interest.

Parties agreed that the T2M phase in the EPPRD would only apply in a situation where an eradication program fails. That is where a Response Plan has been agreed and implemented and subsequently NMG has determined that it is no longer feasible to eradicate the EPP.

## Transition to management for giant pine scale

Transition to Management arrangements under the Emergency Plant Pest Response Deed were used for the first time in 2017 for the exotic forestry pest, giant pine scale (*Marchalina hellenica*).

Giant pine scale was reported for the first time in Australia in late 2014. It was found in pine trees in Melbourne and in Adelaide, sparking an eradication response under the EPPRD.

In Victoria, infested trees were treated with an insecticide, but the chemical injection treatments were not completely effective. Eventually, surveillance revealed that more than 4,300 trees were infested in the south east suburbs of Melbourne.

While the Consultative Committee on Emergency Plant Pests considered alternative eradication options in Victoria the group eventually concluded that giant pine scale could not be eradicated. The decision was based on the following factors:

- Chemical controls were ineffective.
- The only other control option was to remove all infested trees, an action not likely to be publicly acceptable.
- Low confidence that the pest is detectable at very low densities.
- High cost of achieving full eradication of the pest.

As a result, the NMG for giant pine scale – comprising all Australian Government, all state and territory governments, Affected Industry Parties and Plant Health Australia – agreed that the pest was not technically feasible to eradicate from Victoria. In May 2017, the group agreed to a Response Plan incorporating Transition to Management, to prepare the industry and the community for ongoing management of the pest and minimise future impacts.

The amended National Giant Pine Scale Response Plan includes a 12 month T2M program which is being implemented by the governments of Victoria and SA. This allows for ongoing management of the pest to minimise future impacts.

The current arrangements in place in Victoria have restricted giant pine scale to urban areas and, to date, there have been no reports of infestation in soft wood plantations. SA has advised that they have no infected trees at this time and surveillance will continue towards attaining proof of freedom for the state.

The Australian Government, all state and territory governments, and the Australian Forest Products Association are contributing to the cost of the response under the EPPRD.



## Responses to Emergency Plant Pest incursions in 2017

Seven Cost Shared responses to EPPs were ongoing or initiated in 2017. These responses, and descriptions of past actions and key activities in 2017, are provided in Table 48. A number of new and ongoing responses that have not progressed to a Cost Shared Response Plan in 2017, and for which significant activity occurred in 2017 are also included in Table 48.

In addition to the Cost Shared responses, a number of pests were detected that did not proceed to a Response Plan. Some have been assessed as requiring no further action, while others are still under investigation and further actions may still be taken. These pest detections are listed in Table 49 (page 149).

For more information on the EPPRD and emergency response provisions go to [planthealthaustralia.com.au/plantplan](http://planthealthaustralia.com.au/plantplan).

### EVALUATING ACTIVITIES UNDER THE EPPRD

To maintain the ongoing relevance and integrity of the EPPRD, PHA and Signatories to the EPPRD undertake continual evaluation of its performance, including specific response debriefs.

The Evaluation and Lessons Management Specialist Task Group is a skills-based working group that ensures best practice is applied to all processes and systems nationally, and that lessons learnt from evaluations are effectively shared across the biosecurity sectors.

Table 48. Responses to plant pests under EPPRD arrangements

| Scientific name  | Common name                          | Crops affected                             | Region        | Past action  | Current (2017) situation and status   |
|--|--------------------------------------|--|---------------|--|---|
| <i>Bactrocera dorsalis</i>   | Oriental fruit fly                   | Various fruits and vegetables              | Torres Strait | Exotic fruit flies are sporadically detected in the Torres Strait and eradicated to protect mainland Australia. In November 2015 the National Management Group (NMG) endorsed the Exotic Fruit Flies in the Torres Strait Response Plan for the period July 2015 to June 2018. Surveillance and eradication activities will occur on an annual basis.  | Surveillance and eradication activities in the Torres Strait are ongoing in response to sporadic fruit fly detections.  |
| <i>Bactrocera trivialis</i>  | New Guinea fruit fly                 |  |               |  |   |
| <i>Zeugodacus cucurbitae</i>   | Melon fly                            |  |               |  |   |
| <i>Bactericera cockerelli</i>  | Tomato potato psyllid                | Tomatoes, vegetables, production nurseries | WA            | New incursion in 2017  | Detected in Perth in February 2017. Treatment and surveillance activities undertaken. NMG endorsed a Response Plan for eradication however subsequently agreed that it was not feasible to eradicate tomato potato psyllid. A Response Plan incorporating Transition to Management was approved by the NMG. The plan is aimed at managing ongoing risks and impacts of the psyllid and providing proof of freedom from the pathogen it can vector, <i>Candidatus Liberibacter solanacearum</i> haplotypes A and B, which have not been detected in Australia to date. |
| <i>Candidatus Liberibacter solanacearum</i> haplotypes D and E             | Vegetative disorder, yellows decline | Vegetables, production nurseries           | NSW           | New incursion in 2017  | Haplotypes D and E detected in parsley seed imported from overseas. Tracing of imported seed undertaken by state and territory governments. To date, the bacterium has only been detected in unsown imported seeds and not within any of the host crops being grown in Australia.   |
| <i>Cryphonectria parasitica</i>  | Chestnut blight                      | Chestnuts                                  | Vic           | First detected in September 2010. NMG endorsed a Response Plan in November 2010 and eradication activities were undertaken.<br>Further detection in June 2014. Revised Response Plan endorsed by NMG August 2014. All infected trees were destroyed.<br>Single detection in July 2016. Diseased tree and surrounding host trees destroyed. Tracing and surveillance activities undertaken with no further detections. Response Plan under revision and surveillance ongoing. | Revised Response Plan endorsed by the NMG in May 2017.<br>Seven infected trees subsequently detected in late 2017. All infected trees were destroyed. Containment measures remain in place and surveillance activities ongoing. The Response Plan is under review.<br>A Scientific Advisory Panel convened to consider technical information on spore dispersal and latency of the pathogen.  |
| <i>Fusarium mangiferae</i>   | Mango malformation disease (MMD)     | Mangoes, production nurseries              | Qld, NT       | The CCEPP considered the technical advice of the Scientific Advisory Panel and prepared recommendations on each individual <i>Fusarium</i> species for consideration by the NMG.   | <i>F. steriliphyosum</i> sensu lato was initially reported in association with MMD. The species was subsequently reidentified to be the newly described species, <i>F. parvisorum</i> .   |
| <i>F. proliferatum</i>   |                                      |  |               |  | CCEPP recommendations on the EPP status and technical feasibility of eradication of <i>F. proliferatum</i> , <i>F. pseudocircinatum</i> and <i>F. parvisorum</i> were provided to the NMG for consideration.  |
| <i>F. pseudocircinatum</i>   |                                      |  |               |  | The CCEPP agreed that three unrelated Incidents of <i>F. mangiferae</i> should be considered separately, consistent with the EPPRD. The CCEPP agreed to recommend to the NMG that the Incident of <i>F. mangiferae</i> in Qld and one incident of <i>F. mangiferae</i> in NT have been eradicated. A third unrelated Incident of <i>F. mangiferae</i> in the NT remains under consideration by the CCEPP, with further targeted surveillance to be undertaken in order to inform a decision on technical feasibility of eradication.                                  |
| <i>F. steriliphyosum</i> sensu lato (rediagnosed as <i>F. parvisorum</i> ) |                                      |  |               |  |   |

Table 48. Responses to plant pests under EPPRD arrangements (continued)

| Scientific name                 | Common name                | Crops affected   | Region             | Past action  | Current (2017) situation and status  |
|---------------------------------|----------------------------|--|--------------------|--|--|
| <i>Halyomorpha halys</i>        | Brown marmorated stink bug | Various fruits and vegetables, hazelnuts, cotton, grains, production nurseries         | NSW                | New incursion in 2017  | Detected in imported cargo. Treatment, surveillance and trapping activities undertaken, and tracing and surveillance ongoing. A Response Plan has been prepared by the CCEPP for consideration by the NMG.     |
| <i>Liriomyza sativae</i>        | Vegetable leafminer        | Tomatoes, vegetables, cotton, legumes, onions, production nurseries                    | Torres Strait, Qld | First detected in the Torres Strait in 2008 and additionally in May 2014. In August 2014 the CCEPP determined that it was not technically feasible to eradicate from the Torres Strait. This recommendation was agreed by the NMG.<br>Detected in the Cape York Peninsula in May 2015 and considered by the CCEPP. Surveillance activities ongoing.  | The NMG endorsed the CCEPP recommendation that <i>L. sativae</i> is not technically feasible to eradicate from Qld's Far Northern Biosecurity Zone.  |
| <i>Marchalina hellenica</i>     | Giant pine scale           | Pine trees, production nurseries   | SA, Vic            | Detected in Vic and SA in October 2014. Tracing and surveillance undertaken.<br>Response Plan endorsed by NMG in March 2015. Eradication activities and surveillance undertaken.<br>In October 2016 NMG supported the CCEPP recommendation that it is not technically feasible to eradicate <i>M. hellenica</i> . A revised Response Plan incorporating Transition to Management is being prepared for consideration by the CCEPP and NMG. | Updated Response Plan incorporating Transition to Management endorsed by the NMG. The plan is aimed at preparing industry and the community with ongoing management of the pest and minimising future impacts. |
| <i>Phyllosticta cavendishii</i> | Banana freckle             | Bananas, production nurseries  | NT                 | Detected in July 2013. NMG endorsed a Response Plan in October 2013 and eradication activities were undertaken.<br>Destruction of host material continued and host free period commenced May 2015.<br>Sentinel planting phase commenced May 2016 with the controlled reintroduction of banana plants and ongoing surveillance activities.  | Surveillance activities are continuing to provide proof of freedom from banana freckle and the program remains on track to achieve eradication in 2018.  |
| <i>Trogoderma granarium</i>     | Khapra beetle              | Almonds, ginger, vegetables, walnuts, cotton, dried fruit, grains, pistachios and rice | SA                 | Detected on imported goods in SA. Response Plan endorsed by the NMG in May 2016 and eradication, tracing and surveillance activities undertaken. There have been no further detections and precautionary surveillance activities are continuing.   | Surveillance activities are ongoing with no further detections.  |
| <i>Varroa jacobsoni</i>         | Varroa mite                | Honey and various pollination-reliant crops  | Qld                | Detected on Asian honey bee ( <i>Apis cerana</i> ) in Qld in June 2016. Response Plan endorsed by the NMG in September 2016 and eradication activities undertaken. Surveillance activities ongoing.  | There have been no further detections of Asian honey bee or <i>V. jacobsoni</i> . Surveillance activities to provide proof of freedom from <i>V. jacobsoni</i> are ongoing.                                    |

Table 49. Pest detections notified under the EPPRD in 2017\*

| Scientific name  | Common name                   | State                              |
|--|-------------------------------|------------------------------------|
| <b>New detections</b>  |                               |                                    |
| <i>Collophora rubra</i>  | No common name                | Vic                                |
| <i>Dickeya dianthicola</i>   | Black leg of potato           | WA                                 |
| <i>Eriophyes</i> cf. <i>exilis</i>                                   | Eriophyoid mite               | Tas                                |
| <i>Kilfia acuminata</i>  | Acuminate scale               | Qld                                |
| <i>Lasiodiplodia citricola</i>                                       | Dieback                       | SA                                 |
| <i>Liothula omnivora</i>   | Common bag moth               | NSW                                |
| <i>Papaya meleira virus</i>  | Papaya sticky disease         | Qld                                |
| <i>Peronospora belbahrii</i>   | Downy mildew of basil         | Qld                                |
| <i>Plicothrips apicalis</i>  | No common name                | Ashmore Reef, external territory   |
| <i>Puccinia striiformis</i> f. sp. <i>tritici</i> pathotype 64 E64 A | Wheat stripe rust             | Vic                                |
| <i>Thecaphora</i> sp. on <i>Oxalis</i> spp.                          | Smut fungus                   | Vic                                |
| <i>Trionymus</i> sp. on <i>Tasmannia lanceolata</i>                  | Root mealybug                 | Tas                                |
| <i>Ustilago sporoboli-indici</i>                                     | Smut of Sporobolus grasses    | Qld                                |
| <i>Wahlgreniella nervata</i>   | Strawberry tree aphid         | WA                                 |
| <b>Extensions of geographic or host range</b>                        |                               |                                    |
| <i>Acanthococcus coccineus</i>                                       | Cactus spine scale            | Vic                                |
| <i>Aphelenchoides ritzemabosi</i>                                    | Chrysanthemum foliar nematode | Vic                                |
| <i>Aphis spiraeicola</i>   | Spiraea aphid                 | Qld                                |
| <i>Arthrocladiella mougeotii</i>                                     | Powdery mildew                | Qld                                |
| <i>Austropuccinia psidii</i>   | Myrtle rust                   | Norfolk Island, external territory |
| <i>Botryotinia porri</i>   | Botrytis rot                  | Tas                                |
| <i>Bursaphelenchus</i> aff. <i>vallesianus</i> / <i>sexdentati</i>   | Pine nematode                 | Qld                                |
| <i>Coccotrypes dactyliperda</i>                                      | Palm seed borer               | Norfolk Island, external territory |
| <i>Corynespora cassicola</i>   | Corynespora leaf spot         | Qld                                |
| <i>Corythucha ciliata</i>  | Sycamore lace bug             | WA                                 |

| Scientific name                           | Common name                        | State    |
|---|------------------------------------|----------|
| <i>Cucumber green mottle mosaic virus</i> | Cucumber green mottle mosaic virus | Qld, SA  |
| <i>Diatrypella vulgaris</i>               | Dieback                            | Vic      |
| <i>Diuraphis noxia</i>                    | Russian wheat aphid                | NSW, Tas |
| <i>Dothiorella sarmentorum</i>            | Dieback                            | Vic      |
| <i>Fusarium oxysporum</i> on coriander    | Fusarium wilt                      | Qld      |
| <i>Hop latent viroid</i>                  | Hop latent viroid                  | NSW      |
| <i>Hop stunt viroid</i>                   | Hop stunt viroid                   | NSW      |
| <i>Neofusicoccum australe</i>             | Dieback                            | NSW      |
| <i>Neofusicoccum luteum</i>               | Dieback                            | Vic      |
| <i>Oulema rufotincta</i>                  | Crabgrass leaf beetle              | SA       |
| <i>Phenacoccus solenopsis</i>             | Cotton mealybug                    | NSW      |
| <i>Pseudomonas viridiflava</i>            | No common name                     | Vic      |
| <i>Sclerotinia sclerotiorum</i>           | Stem rot                           | WA       |
| <i>Shivaphis celti</i>                    | Asian woolly hackberry aphid       | WA       |
| <i>Sweetpotato leaf curl virus</i>        | Sweetpotato leaf curl virus        | NT       |
| <i>Tetranychus evansi</i>                 | Tomato red sider mite              | Qld      |
| <i>Tilletia nigrificans</i>               | Leaf smut                          | Vic      |

\* These pests may be new detections, extensions of geographic range or new host records. Pests reported in 2017 that have progressed to a Response Plan are identified in Table 48. Some pests not listed in this table are still under investigation. If further action is implemented these pests may be reported in future publications.

## Maintaining the capacity to respond to incursions

For an EPP response to work effectively, there must be enough people who understand their role ahead of time. Trained personnel are required at all levels of a response, including representatives from both industry and government, and from members of the national decision making committees through to the surveillance officers carrying out field activities.

Training on emergency responses is provided by PHA, the Australian Government, state and territory governments and peak plant industry bodies. Training is offered in a variety of forms, from short presentations and e-learning courses, through to formal educational qualifications.

Signatories also undertake simulation exercises, where responders are put through their paces for a simulated scenario, on a regular basis. This provides both practice in EPP responses and improved preparedness by identifying any aspects of the system that need improvement.

Evaluation of incursions and of simulated response exercises are also critical for effective EPP responses and the ongoing relevance and integrity of response systems in Australia. Regular evaluation activities are undertaken by all stakeholders, including PHA.

In addition to emergency response training, a range of skills-based training is offered to members of the plant biosecurity system. For example, plant pest diagnostic training is available to members of the National Plant Biosecurity Diagnostic Network to address any identified gaps in skills or capacity and industries may request crop-specific workshops to improve grower practices.

### ENSURING TRAINING IN BIOSECURITY EMERGENCY PREPAREDNESS IS EFFECTIVE

The Training Specialist Task Group (TSTG) is a skills-based working group that guides training to enhance Australia's biosecurity emergency preparedness, response and initial recovery arrangements.

In its national capacity, the TSTG identifies risks, gaps and duplication in biosecurity emergency training, and provides advice and support to trainers. The TSTG also ensures that biosecurity emergency training is consistent with contemporary emergency management practices.

The TSTG reports to the National Biosecurity Emergency Preparedness Expert Group (NBEPEG) and supports delivery of *schedule 7 of the Intergovernmental Agreement on Biosecurity*.

### EDUCATIONAL QUALIFICATIONS IN BIOSECURITY EMERGENCY RESPONSE

Three biosecurity emergency response qualifications have been developed and nationally endorsed as part of the Public Safety Training Package. These align with the emergency response role training delivered by jurisdictions, allowing people to achieve formal qualifications based on their work experience and training.

Achieving these qualifications puts biosecurity response personnel on the same footing as those in other emergency response areas, such as police and firefighters. The system ensures that biosecurity emergency response training across the country meets the desired standard.

Qualifications available are:

- PUA33112 – Certificate III in Public Safety (Biosecurity Response Operations)
- PUA42912 – Certificate IV in Public Safety (Biosecurity Response Leadership)
- PUA52412 – Diploma of Public Safety (Biosecurity Response Management).

### NATIONAL EPP TRAINING PROGRAM

PHA conducts the National EPP Training Program on behalf of its members, delivering training to industry and government representatives, growers and other biosecurity stakeholders. Training is delivered through a combination of face-to-face sessions and simulation exercises. The aim is to highlight the key elements of the EPPRD and PLANTPLAN, ensuring that members can fulfil their roles and obligations as EPPRD Parties.

#### Biosecurity Online Training

The e-learning platform BOLT (Biosecurity Online Training), managed by PHA, supports the National EPP Training Program.

Current courses available on BOLT are:

- **PHA Foundation Course** – provides a summary of the Australian biosecurity system and how emergency responses to plant pests are managed under the EPPRD.
- **National EPP Response Management** – introduces the purpose of the CCEPP and the NMG, the roles and responsibilities of and their members, and the decision making process in an incident.
- **Reporting a Suspect Emergency Plant Pest** – provides information on when and how to report an exotic plant pest.

- **Bee Biosecurity Awareness** – a short awareness course that adds to the Biosecurity Manual for the Honey Bee Industry. It provides an introduction to biosecurity best practice, hive inspections, surveillance, moving hives and how to report a suspect EPP.
- **Biosecurity for Beekeepers** – provides advice on keeping honey bees healthy using industry best practice. This course supports the Australian Honey Bee Industry Code of Practice.

BOLT courses are open to all plant biosecurity stakeholders and can be accessed through [planthealthaustralia.com.au/bolt](http://planthealthaustralia.com.au/bolt).



### University qualifications

At several universities across Australia online training extends to postgraduate studies. Participating universities are Charles Darwin University, La Trobe University, Murdoch University, the University of Queensland and the University of Adelaide.

Postgraduate students can undertake a Graduate Certificate of Biosecurity, Graduate Diploma of Biosecurity, Masters of Biosecurity or Masters of Food Security.

Students can also complete a Bachelor of Biosecurity Science on campus at Box Hill Institute, Lilydale.





## Managing biosecurity incidents

Across all sectors biosecurity incidents are managed in accordance with the Biosecurity Incident Management System (BIMS).

BIMS is an 'all hazards' approach, which:

- Co-exists with and complements current, sector specific and jurisdictional response arrangements.
- Is contextualised to a biosecurity environment.
- Can be applied to all biosecurity incidents, irrespective of sector or scale of response.
- Provides a guide for personnel working within operations centres established at national, state, territory, local and field levels.

Importantly, BIMS is consistent with contemporary incident management systems employed by other emergency response agencies across Australia and in other countries, including Australasian Inter Services Incident Management System, Australia Emergency Coordination System and the New Zealand Critical Incident Management System.

In a biosecurity incident, responses are conducted by teams, and Figure 88 shows one example of the team structure. A range of positions and functions may be needed, depending on the level of the incident.

Since the system is consistent with other emergency response systems, response capacity can be boosted more easily in the event of a large or long term response. With roles consistent across the systems, people who have been involved in one response can be more readily co-opted into another.

### THE NATIONAL BIOSECURITY RESPONSE TEAM

The National Biosecurity Response Team (NBRT) is a group of trained and experienced personnel that can be deployed to a jurisdiction to boost capacity temporarily to assist in a response to a biosecurity incident. Deployment might be in response to an animal, plant, aquatic or environmental biosecurity incident.

Members are government officers with knowledge, experience and training in emergency management, incident management or more specifically, responding to biosecurity incidents. They may be deployed in a State Coordination Centre or Local Control Centre to perform functions including incident management, liaison, public information, planning, operations and logistics.

The NBRT has two cohorts of members: a cohort of experienced functional response personnel and a cohort of highly experienced mentors.

Animal Health Australia manages the NBRT outside of any biosecurity response activities. During a biosecurity response, members are deployed by the Australian Government Department of Agriculture and Water Resources. Members of the team participate in relevant professional development opportunities and maintain their skills in exercises and responses.

## COMMUNICATION IN AN EMERGENCY PLANT PEST RESPONSE

During an EPP response, the relevant state government takes the lead in ensuring that the public and any stakeholders are kept informed about activities. Given the multiple Parties involved, messaging is based on nationally agreed talking points, which are determined by the Consultative Committee on Emergency Plant Pests that oversees the response.

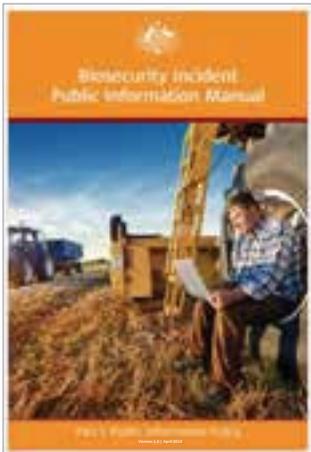
Talking points are circulated through members of the Biosecurity Incident National Communication Network (NCN), which consists of communication managers from the Australian Government, state and territory agencies, and biosecurity organisations including PHA and Animal Health Australia.

This allows input from these agencies and relevant plant industry peak bodies. Agreed talking points are circulated, allowing consistent messaging nationally.

The NCN also advances preparedness and prevention awareness activities for issues that warrant a national approach to communication.

## THE BIOSECURITY INCIDENT PUBLIC INFORMATION MANUAL

Effective communication is vital in responding to a biosecurity incident. Keeping the public informed improves the effectiveness of actions taken to assist with operations as well as perceptions of effectiveness.

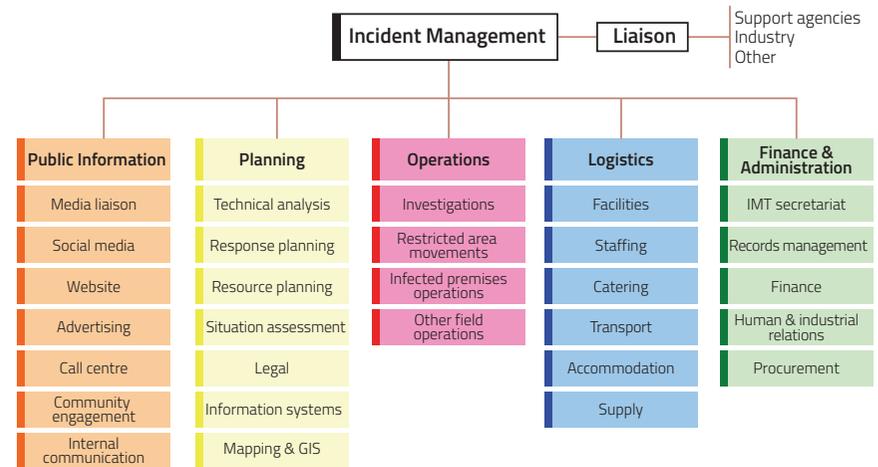


During a response, agricultural agencies and affected industries all refer to the Biosecurity Incident Public Information Manual (BIPIM), developed by the NCN. Manual content is in line with the Public Information function set out in the Biosecurity Incident Management System. Use of the manual ensures that anyone performing a function in public information knows the role they are to play.

Setting out roles in this way allows a temporary boost in capacity when needed in a lengthy or large biosecurity incident. National consistency allows communication experts from other jurisdictions to slot into a response to assist during large or lengthy responses.

The BIPIM is available from the Animal Health Australia website [animalhealthaustralia.com.au](http://animalhealthaustralia.com.au).

Figure 88. Incident management team structure for biosecurity incursion responses



A range of positions and functions in the response team may need to be established, depending on the level of the incident. Image courtesy of the Department of Agriculture and Water Resources