

Chapter 1

Australia's plant biosecurity system



Australia's plant biosecurity system

It takes great effort to keep exotic pests out of Australia. With a total coastline stretching almost 60,000 km, our borders are best protected from plant pests by collaborative partnerships, and by coordination of activities.

Australia works across the three layers of the biosecurity continuum – pre-border, at the border and post-border – with activities to help prevent the introduction, spread and establishment of pests. Surveillance and monitoring of risk areas are critical to the integrity of the system, along with border control activities, which focus on assessing and managing potential biosecurity threats at Australia's airports, seaports and international mail centres.

The three layers of protection and the whole of system assets are expanded upon throughout this report (see Figure 5).

The enormous challenge of protecting Australia from plant pests can only be achieved by stakeholders operating in a coordinated fashion, referred to as the plant biosecurity partnership.

As global trade increases, biosecurity risks change, and pests can enter the country faster and in more complex unpredictable ways. The objective of the biosecurity system is to manage risk to a very low level – not to zero – to ensure the safe movement of people, animals, plants, food and cargo into Australia (see Chapter 4). To do this, complementary measures are applied across the biosecurity continuum, pre-border, at the border and post-border.

The activities of the Australian Government, such as restrictions on what comes in at international arrival points, are often the most visible aspects of the plant biosecurity system. In fact, all Australians have a role to play in keeping Australia free from new pests.

Key stakeholders with important roles to prevent the spread of pests include state government agencies, peak industry bodies and their growers, local councils, grower groups, transporters, research organisations, gardeners, anyone who visits a farm or a natural area where plant health is at risk, (including utility providers such as electricity and water service staff), and international and domestic travellers.

The principle of biosecurity partnerships was established in recognition that, in addition to plant producers and governments, the wider Australian community benefits from the biosecurity system. Benefits include improved productivity, product quality and cost, market access, trade, profitability, sustainability and environmental preservation.

Figure 5. Key components of Australia's plant biosecurity system



Plant biosecurity framework and legislation

The framework for managing the cooperative partnership that underpins Australia's effective plant biosecurity system is supported by a suite of strategies, agreements, review reports, policies and legislation, developed over many years. These not only provide the current structure but provide a vision of how the plant biosecurity system should operate into the future.

THE INTERGOVERNMENTAL AGREEMENT ON BIOSECURITY

For governments, Australia's partnership approach to biosecurity is documented in the Intergovernmental Agreement on Biosecurity (IGAB).

The IGAB sets out commitments for the Australian, state and territory governments by outlining the agreed national goals and objectives and clarifying roles, responsibilities and governance arrangements. It is signed by the Prime Minister, premiers and chief ministers.

The IGAB is an important part of Australia's biosecurity architecture. Its role is to:

- strengthen Australia's biosecurity system
- enhance national collaboration among Australian governments
- support our biosecurity system to meet current and future challenges.

The latest agreement came into effect on 3 January 2019, replacing the previous IGAB which started in 2012. A review of the IGAB was undertaken in 2016–17, with agriculture ministers agreeing, or agreeing in principle, to all 42 recommendations in 2018.

Agriculture ministers agreed on four key priority reform areas for the national biosecurity system, which are:

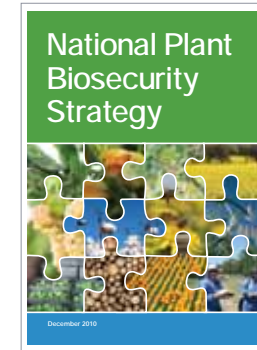
- a unified, strategic framework for the national biosecurity system
- enhanced national capacity to manage risks associated with priority pests and diseases
- reduced impediments to maintaining and growing market access
- improved system performance and accountability.

THE NATIONAL PLANT BIOSECURITY STRATEGY

The National Plant Biosecurity Strategy is a comprehensive ten-year plan that outlines a set of aims and activities to strengthen Australia's plant biosecurity system by 2020. The strategy has provided the focus and strategic direction for national plant biosecurity activities since 2010, and driven the way governments, plant industries and the community work closely together.

PHA developed the strategy by drawing together the views of stakeholders across Australia, aligning them with the original IGAB to ensure consistency. Ten strategies were formulated to respond to the challenges facing the system.

A review of the strategy in 2014 assessed progress against each recommended activity and produced an implementation plan for the remaining tasks to be completed. Towards the end of 2019, PHA commenced work on the development of a new ten year National Plant Biosecurity Strategy.



Key goals of the National Plant Biosecurity Strategy (2010)

- | | |
|-------------|---|
| Strategy 1 | Adopt nationally consistent plant biosecurity legislation, regulations and approaches where possible within each state and territory government's overarching legislative framework |
| Strategy 2 | Establish a nationally coordinated surveillance system |
| Strategy 3 | Build Australia's ability to prepare for, and respond to, pest incursions |
| Strategy 4 | Expand Australia's biosecurity training capacity and capability |
| Strategy 5 | Create a nationally integrated diagnostic network |
| Strategy 6 | Enhance national management systems for established pests |
| Strategy 7 | Establish an integrated national approach to plant biosecurity education and awareness |
| Strategy 8 | Develop a national framework for plant biosecurity research |
| Strategy 9 | Adopt systems and mechanisms for the efficient and effective distribution, communication and uptake of plant biosecurity information |
| Strategy 10 | Monitor the integrity of the plant biosecurity system |

NATIONAL COMMITTEES

While state and territory governments have responsibility for implementing many biosecurity activities within their borders, a level of coordination is required between the jurisdictions and with the Australian Government.

National committees provide a formal mechanism for developing and coordinating key plant biosecurity policy and procedures that are nationally consistent. As such, Australia's plant biosecurity committee structure plays a major role in facilitating partnerships between governments. Figure 6 (on page 22) shows the structure of Australian government biosecurity committees that are tasked with national coordination of plant biosecurity.

Agriculture Senior Officials' Committee

The Agriculture Senior Officials' Committee (AGSOC) is responsible for primary industry policy issues. The committee comprises the heads of primary industry government departments from the Australian Government, Australian states and territories and the New Zealand Government. AGSOC provides for cross-jurisdictional cooperative and coordinated approaches to matters of national interest. It also supports the Agriculture Ministers' Forum (AGMIN) in achieving its objectives.

National Biosecurity Committee

The National Biosecurity Committee (NBC) is responsible for managing a national, strategic approach to biosecurity issues and threats relating to plant and animal pests and diseases, marine and aquatic pests, and the impact of these on agriculture production, the environment, community wellbeing and social amenity. It does this by focusing its efforts on those areas that have been identified as priority reforms for the national biosecurity system, as well as managing ongoing or 'normal' commitments.

A core objective of the committee is to promote cooperation, coordination and consistency across and between Australian governments. The NBC provides advice to the AGSOC on national biosecurity matters and progress towards implementing the IGAB and priority reform areas.

The Secretary of the Australian Government Department of Agriculture¹² is a member of AGSOC and chairs the NBC. The Australian Government is also represented by the Department of Agriculture's Deputy Secretary responsible for biosecurity (or a delegate), and a Deputy Secretary from the Department of the Environment and Energy (or a delegate). Other members are senior representatives from the departments of primary industry and/or environment for each state and territory. Jurisdictions may have up to two representatives. PHA, Animal Health Australia (AHA), and the Australian Local Government Association are observers.

Plant Health Committee

Plant Health Committee (PHC) is the peak government plant biosecurity policy forum. Its role is to maintain or improve plant health in Australia to support the economy, environment and community. PHC's membership comprises representatives from the Australian, state and territory governments. PHA and the chairs of PHC subcommittees attend meetings with observer status.

PHC reports to the NBC and provides strategic policy, technical and regulatory advice, and national leadership on plant biosecurity matters. It is responsible for overseeing the implementation of the government aspects of the National Plant Biosecurity Strategy and the IGAB with respect to plant health.

In 2019, PHC continued implementation of the National Plant Biosecurity Strategy, using the document as one of the main guiding principles when determining work area priorities. PHC also continued to progress various lines of work to support and maintain trade and market access, both domestically and internationally.

Through its subcommittees the PHC also facilitates a consistent national approach to legislative outcomes and standards within the plant biosecurity sector.

Environment and Invasives Committee

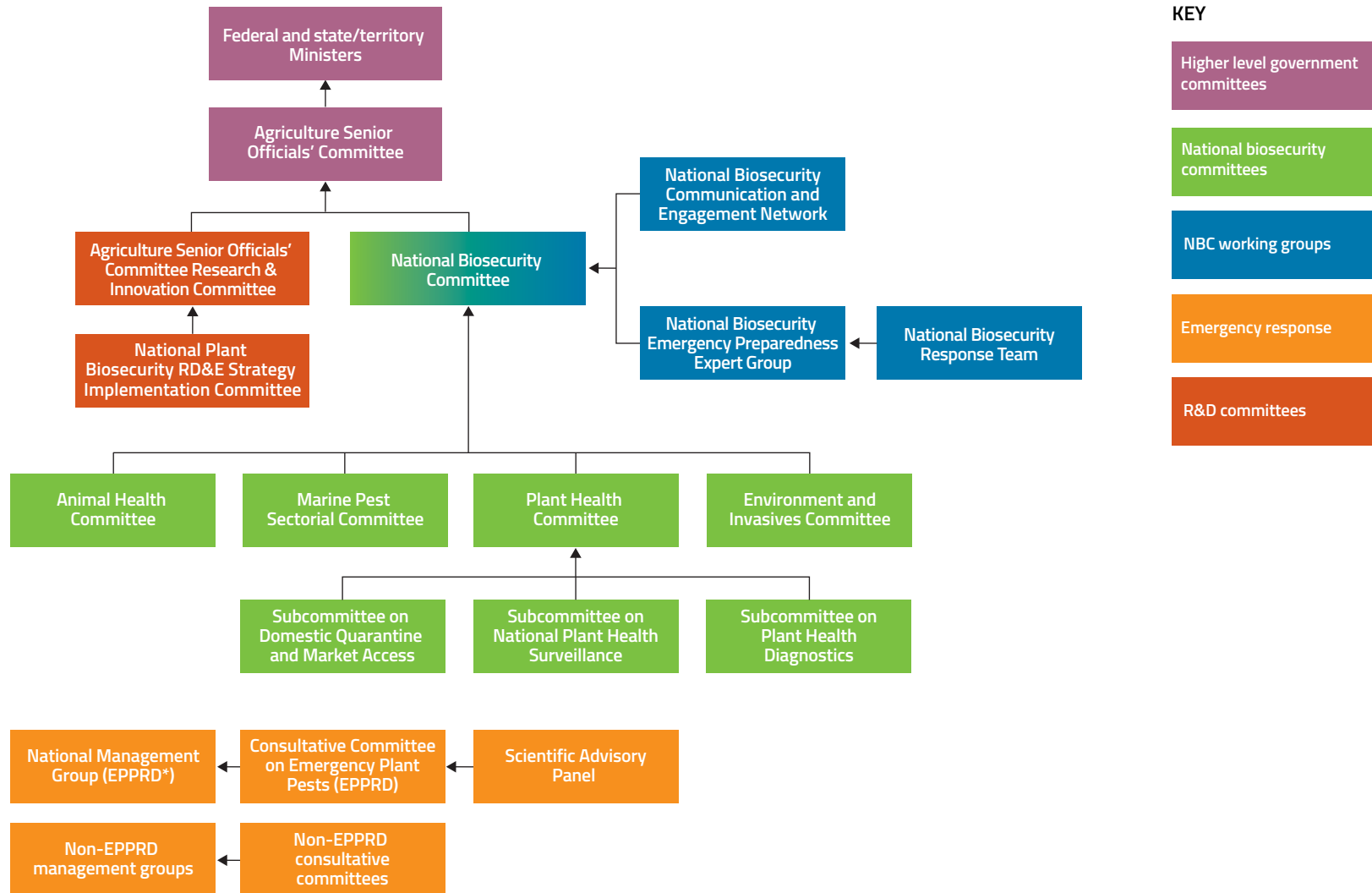
The Environment and Invasives Committee (EIC) provides national policy leadership on the identification, prevention and management of invasive plant, vertebrate and invertebrate species that adversely impact the environment, economy and community. Membership comprises representatives from the Australian state and territory primary industry and environment departments. Representatives from the Commonwealth Scientific and Industrial Research Organisation (CSIRO), PHA, AHA, Wildlife Health Australia, the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES), and the Centre for Invasive Species Solutions are observers on the committee.

The EIC is also advised by a community sector Environment Biosecurity Advisory Group, which includes the Invasive Species Council, WWF Australia, Bush Heritage Australia, Natural Resource Management Regions Australia and the Australian Local Government Association.

There are also several committees with government and industry representatives that oversee biosecurity. They include groups such as the Northern Australia Biosecurity Reference Group, the National Fruit Fly Council and the Plant Health Surveillance Consultative Committee, amongst others, such as biosecurity reference groups for each industry.

12. On 5 December 2019 the Prime Minister announced changes to the Australian Public Service. The Department of Agriculture, Water and the Environment would be established from 1 February 2020. The content in this document is written under the Australian Government's structure in 2019.

Figure 6. National government biosecurity committees and working groups with plant focus



*Emergency Plant Pest Response Deed (EPPRD)

BIOSECURITY LEGISLATION

Australia's biosecurity system operates under Commonwealth, state and territory legislation administered by the respective government agencies. Plant and environmental (where applicable) biosecurity legislation, current as at 31 December 2019, is listed in Table 1.

The Department of Agriculture administers a range of Commonwealth legislation to manage Australia's biosecurity system, manage imports and regulate export certification of agriculture, fish and forest products. As an Australian Government regulator, the department also carries the responsibility for monitoring compliance with import and export legislation.

There is also legislation covering aspects such as the collection of primary industry levies to cover the costs of biosecurity activities, reporting of suspicious pests and biosecurity incident responses.

Tasmania introduced a new *Biosecurity Act* in 2019. The new legislation aligns with Queensland's *Biosecurity Act 2014*, and NSW's *Biosecurity Act 2015* both of which introduced into law the principle that everyone has a responsibility for mitigating biosecurity risks under their control, known as the general biosecurity obligation or duty. Other state and territory governments have indicated that they will also formalise this responsibility in legislation in the future. More information about the general biosecurity obligation or duty is on page 204.

BIOSECURITY EMERGENCY RESPONSE AGREEMENTS

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 37 plant industry peak bodies (as at 31 December 2019). PHA is the custodian of the EPPRD which came into effect in October 2005. More information about the EPPRD and emergency responses is in Chapter 6.

National Environmental Biosecurity Response Agreement

If a new pest is considered to primarily impact the environment or social amenity and is not able to be dealt with under the EPPRD, then the National Environmental Biosecurity Response Agreement (NEBRA) may be activated.

The NEBRA establishes national emergency response arrangements, including for cost-sharing, for responding to biosecurity incidents such as pests and diseases that primarily impact the environment or social amenity and where the response is for the public good. The agreement was signed by the Commonwealth, state and territory governments in January 2012.

Table 1. Plant and environmental biosecurity legislation across Australia

Jurisdiction	Administering authority	Legislation
Commonwealth	Department of Agriculture	<ul style="list-style-type: none"> ▪ <i>Biosecurity Act 2015</i>, except to the extent administered by the Health Minister ▪ <i>Biosecurity (Consequential Amendments and Transitional Provisions) Act 2015</i>, except to the extent administered by the Health Minister ▪ <i>Biosecurity Legislation Amendment (Miscellaneous Measures) Act 2018</i> ▪ <i>Biosecurity (Exposed Conveyances – Exceptions from Biosecurity Control) Determination 2016</i> ▪ <i>Biosecurity Regulation 2016</i> ▪ <i>Biosecurity (Prohibited and Conditionally Non-prohibited Goods) Determination 2016</i>
Commonwealth	Department of the Environment and Energy	<ul style="list-style-type: none"> ▪ <i>Environment Protection and Biodiversity Conservation Act 1999</i> ▪ <i>Environment Protection and Biodiversity Conservation Regulations 2000</i>
ACT	Environment Planning and Sustainable Development Directorate	<ul style="list-style-type: none"> ▪ <i>Plant Disease Act 2002</i> ▪ <i>Pest Plants and Animals Act 2005</i>
NSW	Department of Primary Industries	<ul style="list-style-type: none"> ▪ <i>Biosecurity Act 2015</i> ▪ <i>Biosecurity Regulation 2017</i> ▪ <i>Biosecurity Order (Permitted Activities) 2017</i> and other supporting legislation such as Control Orders
NT	Department of Primary Industry and Resources	<ul style="list-style-type: none"> ▪ <i>Plant Health Act 2008</i> ▪ <i>Plant Health Regulations 2011</i>
Queensland	Department of Agriculture and Fisheries	<ul style="list-style-type: none"> ▪ <i>Biosecurity Act 2014</i> ▪ <i>Biosecurity Regulation 2016</i>
SA	Department of Primary Industries and Regions	<ul style="list-style-type: none"> ▪ <i>Plant Health Act 2009</i> ▪ <i>Plant Health Regulations 2009</i>
Tasmania	Department of Primary Industries, Parks, Water and Environment	<ul style="list-style-type: none"> ▪ <i>Biosecurity Act 2019</i>
Victoria	Department of Jobs, Precincts and Regions	<ul style="list-style-type: none"> ▪ <i>Plant Biosecurity Act 2010</i> ▪ <i>Plant Biosecurity Regulations 2016</i>
WA	Department of Primary Industries and Regional Development	<ul style="list-style-type: none"> ▪ <i>Biosecurity and Agricultural Management Act 2007</i> ▪ <i>Biosecurity and Agriculture Management Regulations 2013</i>

PLANT BIOSECURITY STATUTORY LEVIES

The Department of Agriculture collects, administers and disburses agricultural levies and charges on behalf of Australia's primary industries.¹³

Many of Australia's primary industries rely on the levy system and the support it provides for research and development (R&D), marketing and promotion, chemical residue testing, and plant health programs.

The rural research and development corporations (RDCs, see Chapter 8) are funded primarily by statutory R&D levies (or charges) on various commodities, with matching funding from the Australian Government. Much of the biosecurity R&D listed in Chapter 8 is funded via the levy system.

In addition to income from levies and charges being directed to R&D, marketing and promotion, plant industries can also direct revenue to biosecurity preparedness and emergency plant pest responses. Each industry decides the proportion of a levy or charge that is directed to each of these activities.¹⁴

Plant biosecurity levies include the PHA levy and the Emergency Plant Pest Response (EPPR) levy which can be utilised as follows.

Plant Health Australia (PHA) levy

The PHA levy can be used by industries to meet membership subscriptions to PHA and may also be used to undertake specific plant biosecurity projects, such as preparation of biosecurity manuals, holding workshops or training sessions and developing pest fact sheets.

Emergency Plant Pest Response (EPPR) levy

EPPR levies enable industries to raise funds in relation to Emergency Plant Pests (EPPs) under the EPPRD. This includes meeting their financial obligations to cost-shared national response plans in the event of an incursion (see Chapter 6). Once established, EPPR levies are generally set at zero and can be activated when needed, following industry agreement to a cost-shared response plan.

Government roles

THE AUSTRALIAN GOVERNMENT

Under national legislation, the Australian Government has responsibility for the bulk of biosecurity activities pre-border and at the border. This includes screening and compliance at the multiple entry points that make up the nation's border, international phytosanitary (plant health) obligations, carrying out risk analysis for proposed imports, and post-entry plant quarantine.

As well as regulating imports, the Australian Government's biosecurity activities also play a key role in the export of Australian produce.

The Australian Government assists in market access negotiation by working with states and territories and plant industry peak bodies to collect and analyse plant health surveillance data, to provide trading partners with evidence of freedom from pests and diseases.

The Australian Government also undertakes negotiations to determine what, if any, treatments or conditions need to be met to send Australia's plant products overseas.

In addition to bilateral and multilateral trade negotiations, Australia also plays a leading role in developing and implementing international phytosanitary agreements that aim to prevent the spread of plant pests.

Under the Agricultural Competitiveness White Paper, Stronger Farmers, Stronger Economy,¹⁵ the Australian Government invested \$200 million into improving biosecurity surveillance and analysis, to better target critical biosecurity risks and improve market access for Australian producers.

In May and June 2018, the Australian Government announced a major ongoing funding boost to strengthen the biosecurity system to further protect Australia's farm industries and environment. This amounted to a \$313 million investment over six years from 2017–18 to help detect, identify and respond to exotic pests and diseases earlier to keep Australia's clean, green image and favourable pest and disease status.

13. Australian Government Department of Agriculture. Biosecurity levies. Accessed online 18 February 2020 www.agriculture.gov.au/ag-farm-food/levies/biosecurity-levies

14. Australian Government Department of Agriculture. Rural Research and Development Corporations. Accessed online 16 March 2020 www.agriculture.gov.au/ag-farm-food/innovation/research_and_development_corporations_and_companies#operating-arrangements

15. Commonwealth of Australia (2015). Agricultural Competitiveness White Paper, Stronger Farmers, Stronger Economy, Canberra

Department of Agriculture agriculture.gov.au

Most of the responsibilities of the Australian Government are delivered through the agriculture portfolio, in collaboration with other agencies described in the following pages.

The Department of Agriculture focuses on maintaining a strong and resilient biosecurity system that will protect Australia from new biosecurity challenges, whatever they may be.

The millions of people, mail parcels, baggage, ships, animals, plants and cargo containers that enter Australia every year are screened and inspected by departmental staff, supported by x-ray machines, surveillance activities and detector dogs. Of equal importance are the pre-border measures to prevent pests and diseases from arriving in the country. Managing Australia's biosecurity is a big job and the department promotes a shared responsibility with clients, stakeholders and the general public, all of whom have a role to play.

The department also pursues international market access for Australia's plant production industries and access to the Australian market for our trading partners through bilateral, regional and multilateral engagement. Priority is given to:

- working to remove barriers to international trade
- progressing and resolving market access priorities and issues
- facilitating targeted technical assistance and agricultural cooperation
- assisting the development of international standards.

This work is supported and enhanced by a network of agricultural counsellors located in Belgium, China, Dubai, Europe, France, India, Indonesia, Italy, Malaysia, Japan, Taiwan, Korea, the Middle East, Thailand, Saudi Arabia, Vietnam, Chile, Mexico, the United Kingdom and the United States.

The agricultural counsellors' role is to build and maintain key relationships with Australia's trading partners. Counsellors organise and lead discussions, receive and respond to requests for information, facilitate visits and inspections to progress market access requests and promote Australian products. They work closely with industry, overseas authorities and the department in the process. The negotiations for access to overseas markets, including technical consultations about the importing nation's biosecurity requirements, can sometimes take years to work through. The department's overseas officers play a key role in facilitating this process.

Within the department, ABARES provides current scientific and economic advice to decision makers to support the plant biosecurity system.

Primary representatives and advisors for plant and environmental biosecurity

Australia's **Chief Plant Protection Officer** is the primary representative of, and an advisor to, the Australian Government on all matters relating to Australia's plant health status and its supporting systems. The role of the Chief Plant Protection Officer is to:

- promote a shared vision for plant health that protects and enhances Australia's valuable plant resources and production capacity
- be the official contact point for the International Plant Protection Convention.

Australia's **Chief Environmental Biosecurity Officer** position was established in 2018 to ensure the country's environment and amenity is safeguarded from the impacts of exotic pests and diseases. The position provides policy leadership on national environmental biosecurity issues. The role of the Chief Environmental Biosecurity Officer is to:

- enhance understanding and oversight of environmental biosecurity risks
- perform a national policy, engagement and leadership role including major source of advice to the Commonwealth on environmental biosecurity matters
- ensure environmental and community biosecurity risks are better defined and prioritised
- improve the maturity of environmental biosecurity preparedness, surveillance and response capacity
- support responses to detections and incursions of environmental pests and diseases.



The Chief Environmental Biosecurity Officer, Ian Thompson. Image courtesy of the Department of Agriculture

Department of the Environment and Energy

environment.gov.au

The Department of the Environment and Energy contributes to the development of national policies on pests and invasive plants that cause harm to the environment.

The *Environment Protection and Biodiversity Conservation Act 1999* establishes a list of specimens considered suitable for live import into Australia, known as The Live Import List. Amendments to the list to include live animal specimens are managed by the department. Imports of live plants are managed by the Department of Agriculture. The import of live plants and animals should not be inconsistent with the *Biosecurity Act 2015*.

The department is responsible for ensuring that Australia complies with its obligations under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and manages permits for the import of CITES listed species (plants or animals).

Advice is also provided to the Department of Agriculture on environmental issues in relation to risk assessments.

Department of Foreign Affairs and Trade

dfat.gov.au

The Department of Foreign Affairs and Trade helps make Australia stronger, safer and more prosperous by promoting and protecting our interests internationally and contributing to global stability and economic growth. The department helps progress Australia's international trade interests, including by promoting Australia's strong biosecurity system to trading partners. Other agencies within the portfolio include:

- **Austrade** – Australia's trade and investment promotion agency. Its global network of advisers are experts in connecting Australian businesses to the world to help them go further, faster.
- **Australian Centre for International Agricultural Research (ACIAR)** – a statutory authority that is part of the Australian Government's development cooperation programs. ACIAR encourages research collaboration between scientists in Australia and partner countries to jointly use their skills for the benefit of developing countries and Australia.

Department of Home Affairs

homeaffairs.gov.au

The Department of Home Affairs, formed in 2017, manages the security and integrity of Australia's borders. It works closely with other government and international agencies, in particular the Australian Federal Police, the Department of Agriculture and the Department of Defence to regulate and control the movement of goods and people across the Australian border.

The Inspector-General of Biosecurity

Australia's biosecurity system relies on various government programs, in cooperation with industry, to ensure the safe international movement of people and goods.

The Inspector-General of Biosecurity position was established to enhance the integrity of Australia's biosecurity systems through independent evaluation of the performance of these programs across the continuum: pre-border, at the border and post-border. The position is independent of the Department of Agriculture and its Minister. However, the Inspector-General may:

- consider requests for particular reviews
- review the performance of functions and the exercise of powers by the Director of Biosecurity (Secretary, Department of Agriculture)
- make recommendations for improvement to the overall system.

The Inspector-General role does not cover the assessment and review of issues related to human biosecurity, international trade and market access opportunities.

On 24 July 2019, the former Inspector-General of Biosecurity, Dr Helen Scott-Orr, completed her term as the inaugural Inspector-General of Biosecurity appointed under the *Biosecurity Act 2015*. During 2018–19, Dr Scott-Orr completed nine reviews.

On 29 March 2019, the Minister appointed Mr Rob Delane as the next Inspector-General, who commenced in the role on 25 July 2019.

A review program – set annually in consultation with the Minister for Agriculture and the Director of Biosecurity – is published on the Inspector-General's website at **igb.gov.au**. Reviews relevant to plant biosecurity in 2019 are:

- environmental biosecurity risk management in Australia (12 April 2019)
- effectiveness of biosecurity measures to manage the risks of brown marmorated stink bugs entering Australia (28 May 2019)
- pest and disease interceptions and incursions in Australia (29 May 2019)
- implementation of Inspector-General of Biosecurity recommendations (29 July 2019)
- effectiveness of Approved Arrangements in managing biosecurity risks in Australia (6 August 2019).

Other Australian Government organisations

For a list of Australian Government organisations that support plant biosecurity research, development and extension, such as the CSIRO, see Chapter 8.

Other Australian Government agencies that contribute to maintaining Australia's plant biosecurity system include the Australian Pesticides and Veterinary Medicines Authority and the Office of the Gene Technology Regulator.

National Biosecurity Statement

Industry, environmental groups and governments worked collaboratively to enhance the understanding of biosecurity across our community through the development of a National Biosecurity Statement. National feedback was sought on the statement in 2018 and it was finalised late that year. The statement's intent is to set out a national vision and define roles and responsibilities within the biosecurity system.

Nature makes Australia unique – biosecurity keeps it that way.

Biosecurity protects Australian livelihoods and is vital to strengthening and supporting our environment and economy, including tourism, trade and agriculture. It underpins many aspects of our way of life.

Australia prides itself on its unique natural environment, high-quality produce and trusted international reputation. We Australians benefit from this and have a duty to protect our land and seas from the arrival of new pests, weeds and diseases.

We are also obliged to limit the damaging and costly impacts of the pests, weeds and diseases already here and to avoid adding to that burden.

Our biosecurity system works both at the border and here at home to prevent and respond to the arrival and spread of harmful pests and diseases that could disrupt much of what we love about this country.

Due to our clean and green reputation we are regarded as a responsible and reliable trading nation. Strong biosecurity measures help us to continue to grow safe and sought-after Australian produce for ourselves and the rest of the world.

The arrival and spread of damaging invasive species could have wide-ranging short- and long-term consequences for industry, land use and community needs.

A single incursion could harm human health and the environmental resources we all need and use – including water supply, soil and ecosystems.

Australia's national biosecurity system relies on partnerships between the Australian and state, territory and local governments, industry, environmental bodies, land managers and the broader public. This system is facing new challenges arising from a significant increase in global trade and travel.

Maintaining Australia's resilient and world-leading approach requires continuous research and innovation and a constant commitment to prevention and response.

What you can do

Each one of us has a role to play in keeping Australia safe from harmful pests and diseases.

- If you see something unusual, report it.
- Know your legal responsibilities when travelling and moving goods.
- Recognise your role in promoting and raising awareness of biosecurity.

Everyone can share the vision of an effective and sustainable national biosecurity system. We should:

- strive for prevention and early action to ensure a very low risk of new harmful pests and diseases entering, establishing and spreading
- minimise the impact of established pests and diseases on our environment, economy, industries and communities
- maintain and grow domestic and international travel and trade access
- protect and restore Australia's unique biodiversity, ecosystems, natural resources and landscapes.

We all share the risks. We all share the benefits. We must all share the responsibility of protecting our unique natural environment.



STATE AND TERRITORY GOVERNMENTS

While the Australian Government has responsibilities for the majority of pre-border and border biosecurity activities, state and territory governments are responsible for the delivery of plant biosecurity operations and the supporting legislation within their borders.

Each state and territory has a different approach to the role, primarily due to the varied climatic conditions and legislative frameworks across the country. Jurisdictions each provide a number of core services, most of which involve the community.

Broadly, these are activities concerned with preventing the spread of existing plant pests within Australia, including any newly detected exotic pests. State and territory government responsibilities include:

- **Managing domestic imports and exports** into and out of their jurisdiction, primarily to prevent the spread of regionalised pests around Australia. There are two components to this:
 - domestic quarantine services for the clearance of passengers, cargo, mail, plants and plant products moving interstate
 - export and market access support for producers who want to sell their produce across state boundaries. This includes plant health certification services, surveys and inspections to support area freedom, and the accreditation and auditing of export compliance arrangements.
- **Providing quarantine services** involving activities to prepare for, and respond to, plant pest incursions in their jurisdiction, including communicating with communities.
- **Responding to emergency pest and diseases** by maintaining the capacity and capability to deliver responsibilities under the Emergency Plant Pest Response Deed (see Chapter 6), which is activated when a suspected Emergency Plant Pest is detected in their jurisdiction. Responsibilities may include setting up and enforcing quarantine zones, informing the public, and treating pests and plants. The lead agency also carries out surveillance to find out how far pests have spread, and at the end of the response, to confirm that eradication has been achieved.
- **Undertaking pest surveillance** in partnership with industry and community volunteers. There are 104 surveillance programs carried out by state and territory governments, requiring significant resourcing. Pest surveillance is crucial for the early detection of new pests, discovering the extent of pest spread (delimiting), and providing evidence of area freedom to facilitate market access.
- **Providing diagnostic services** to identify plant pests (both endemic and exotic) found in their jurisdiction, or to assist other jurisdictions. This includes holding reference collections for comparison of species.
- **Developing and maintaining information systems** to support routine and emergency plant biosecurity management.
- **Providing public information** to raise awareness of biosecurity threats and calls to action and raising awareness in the community of the importance of biosecurity.

- **Carrying out science-based risk analyses** to identify pest threats and inform plant biosecurity policy and operations.
- **Funding and providing research, development and extension** to support the continued improvement of pest management and protection capabilities.
- **Developing and administering plant biosecurity policies and legislation** and working on national committees to ensure that they are in line with other governments around Australia.

State and territory governments coordinate their activities through the IGAB, the PHC and subcommittees, through PHA and through the EPPRD.

Australian Capital Territory

Lead agency: Environment Planning and Sustainable Development Directorate (EPSDD)
environment.act.gov.au

The ACT Government manages plant biosecurity through the EPSDD, together with the Transport Canberra and City Services (TCCS) Directorate. EPSDD is responsible for policy development and shares operational implementation with TCCS.

Plant biosecurity activities in the ACT are underpinned by the *Plant Diseases Act 2002* and the *Pest Plants and Animals Act 2005*. Although the ACT does not have many plant production industries within its boundaries, the government participates on national committees during plant pest emergency responses and in the development of associated national frameworks and strategies when it has expertise to contribute. It has particular expertise in forestry, urban tree management and national parks.

Following the release of the ACT Biosecurity Strategy 2016–26, the ACT has commenced development of a comprehensive Biosecurity Bill to modernise the ACT's biosecurity legislative framework and align it with similar legislation in other jurisdictions, particularly NSW.

Modern biosecurity tools with enhanced emergency response powers will help address the biosecurity risks presented by international flights to Canberra Airport which began in 2016, as will the regular plant surveillance conducted around the airport to check for exotic pests such as exotic fruit flies, Asian gypsy moth and bee pests.

There were no major plant health incidents in the ACT in 2019. Poor health in urban oak trees was investigated and has been attributed to environmental stress, as diagnostic tests on leaves have not detected any causal pest or disease agent.

The ACT Parks and Conservation Service has continued the biological control of Sirex wood wasps in ACT Government softwood pine plantations. The program works by attracting wasps to 'trap trees' and inoculating their larvae with a parasitic nematode. The industry funded National Sirex Coordination Committee oversees the program across Australia and ensures that resources are directed towards high-risk plantations. Since the introduction of this nationally coordinated model there have not been significant outbreaks of Sirex wasp populations in the ACT or elsewhere in Australia.

New South Wales

Lead agency: Department of Primary Industries (NSW DPI)

dpi.nsw.gov.au

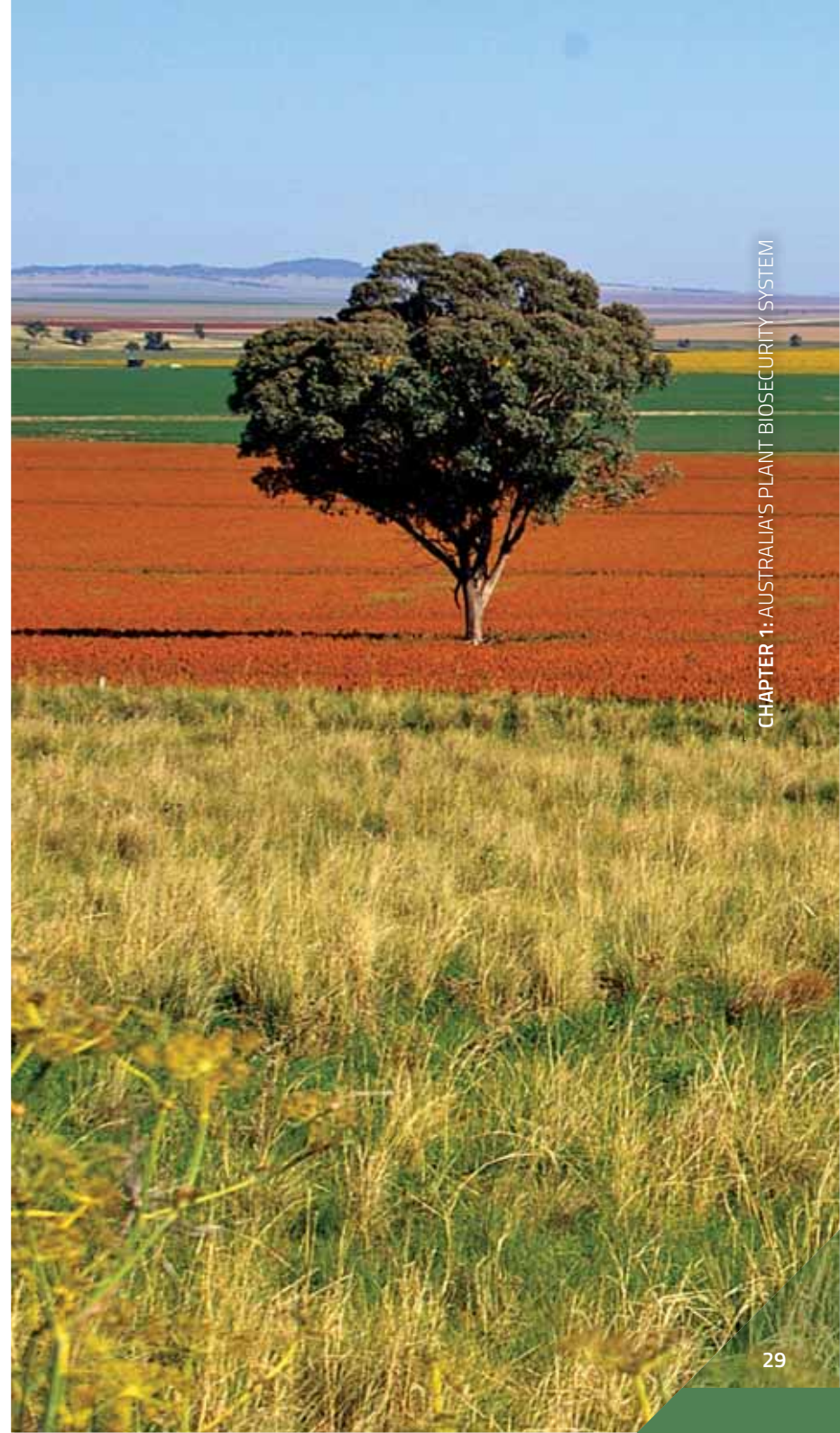
NSW DPI is the principal agency responsible for plant biosecurity in the state, ensuring that policies, management and procedures are in place to minimise the impact of existing, invasive and Emergency Plant Pests. NSW DPI maintains rapid response mechanisms for pest incursions in order to protect trade and market access, agricultural resources, regional economies and the environment.

The NSW Biosecurity Strategy 2013–21 defines how NSW DPI, in partnership with other government agencies, industry and the public, manages biosecurity risks to NSW.

Within the DPI, the Plant Biosecurity and Product Integrity unit develops plant pest policy directions and has oversight of operational responses to Emergency Plant Pests. The group provides advice to, and participates actively in, national decision-making forums for plant pests of national significance and interstate market access for NSW plants and plant products.

Surveillance and diagnostic activities are supported by the Plant Health Diagnostic Service at the Elizabeth Macarthur Agricultural Institute, the Biosecurity Collections Unit at Orange Agricultural Institute, the state-wide network of compliance officers, Local Land Services and the emergency management First Response Team. Close collaboration with entomology and plant pathology researchers is integral to these activities.

Following the commencement of the *Biosecurity Act 2015* in 2017, all NSW plant biosecurity incursions, infringements and investigations in 2019 were successfully managed under this new legislative structure. The act has proven to be an innovative and positive step forward in the way NSW DPI manages biosecurity.



Northern Territory

Lead agency: Northern Territory Department of Primary Industry and Resources (NT DPIR)
dpir.nt.gov.au

Plant biosecurity in the Northern Territory (NT) is managed by the Plant Biosecurity Branch, within NT DPIR's Biosecurity and Animal Welfare Division. The Plant Biosecurity Branch is responsible for the development and implementation of plant biosecurity policies, programs and procedures aimed at maintaining NT's freedom from plant pests that could adversely impact trade, market access, public health and the environment.

The NT agricultural sector provides over \$610 million to the Australian economy each year. Horticultural industries contribute almost a quarter of this value, in annual production of iconic Territory produce such as mangoes and melons. Other markets offer growth opportunities.

To protect this, the environment and social amenity, the Plant Biosecurity Branch undertakes the following services:

- maintaining and improving the plant health status of the plant and plant product industries of NT
- minimising the risk of exotic pests entering NT through education, engagement, surveillance and compliance
- facilitating interstate trade of plant and plant products through certification, inspection and the Interstate Certification Assurance program
- conducting active and passive pest surveillance to support market access nationally and within NT
- conducting active surveillance for the early detection of a range of exotic pests
- preparing effective response mechanisms in the event of an incursion
- developing, implementing and reviewing NT's plant health policy and legislation.

In 2015, browsing ant was detected in the NT. The NT Government, through the National Browsing Ant Eradication Program, is on track to eradicate browsing ant by the end of 2021.

In 2018, citrus canker was detected in the NT. The NT Government is currently in the process of eradicating this pest under the National Citrus Canker Eradication Program. It is anticipated that the NT will declare freedom from citrus canker in 2020.

In 2019, the NT declared freedom from banana freckle (see page 189).

Plant biosecurity programs in the NT are underpinned by the *Plant Health Act 2008* and *Plant Health Regulations 2011*. In addition, the *Agricultural and Veterinary Chemicals (Control of Use) Act* and the *Biological Control Act* support NT work.

Queensland

Lead agency: Department of Agriculture and Fisheries (DAF)
daf.qld.gov.au

Biosecurity Queensland is the lead agency within the DAF, responsible for managing biosecurity risks within the state. The Plant Biosecurity and Product Integrity program within Biosecurity Queensland is responsible for: developing policies, standards, delivery systems and services to reduce the risk of introducing exotic plant pests; minimising the impacts of new plant pest incursions on Queensland's plant industries, environment and communities; facilitating market access for Queensland's plant-based industries; and managing risks associated with the use of agriculture and veterinary chemicals.

The Plant Biosecurity and Product Integrity program is responsible for the implementation of programs for the prevention and preparedness, detection, diagnosis, response, control, containment and eradication of high priority plant pests.

Other DAF business groups also contribute to managing the risk of plant pest threats. Links with other Queensland Government departments provide access to a range of relevant expertise across all plant production sectors, including native and plantation forestry. Key links include:

- **DAF Agri-Science Queensland**, which provides science, research, innovation and associated services, including additional diagnostic capability, surveillance and integrated management packages to limit the impacts of pests within farming systems
- **Department of Environment and Science**, which plays a role in managing the natural environment and environmental plant pests
- **Queensland Museum**, which specialises in the identification of molluscs, mites and spiders.

The *Biosecurity Act 2014* and *Biosecurity Regulation 2016* provide the framework for plant biosecurity management in Queensland. The act is underpinned by the concept of shared responsibility, where everyone has a general biosecurity obligation to take all reasonable and practical steps to manage biosecurity risks that are within their control.

This legislation is complemented by a number of other acts, including the *Chemical Usage (Agricultural and Veterinary) Control Act 1988* and the *Agricultural and Veterinary Chemicals (Queensland) Act 1994*.

South Australia

Lead agency: Department of Primary Industries and Regions SA (PIRSA)

pir.sa.gov.au

Biosecurity SA, a division within PIRSA, develops and implements plant biosecurity policies, programs and procedures aimed at maintaining SA's freedom from pests that could adversely impact trade, market access, public health, food safety, the rural economy and the environment.

PIRSA prepares for and responds to a range of plant pests but, given SA's freedom from fruit flies of economic significance, PIRSA has a major focus on operations to prevent their entry and establishment. Activities include a dedicated state-wide fruit fly trapping grid, static quarantine stations and random roadblocks, targeted awareness and education campaigns, regulatory arrangements for importers, and specific measures to effectively respond to and eradicate any fruit flies that are detected.

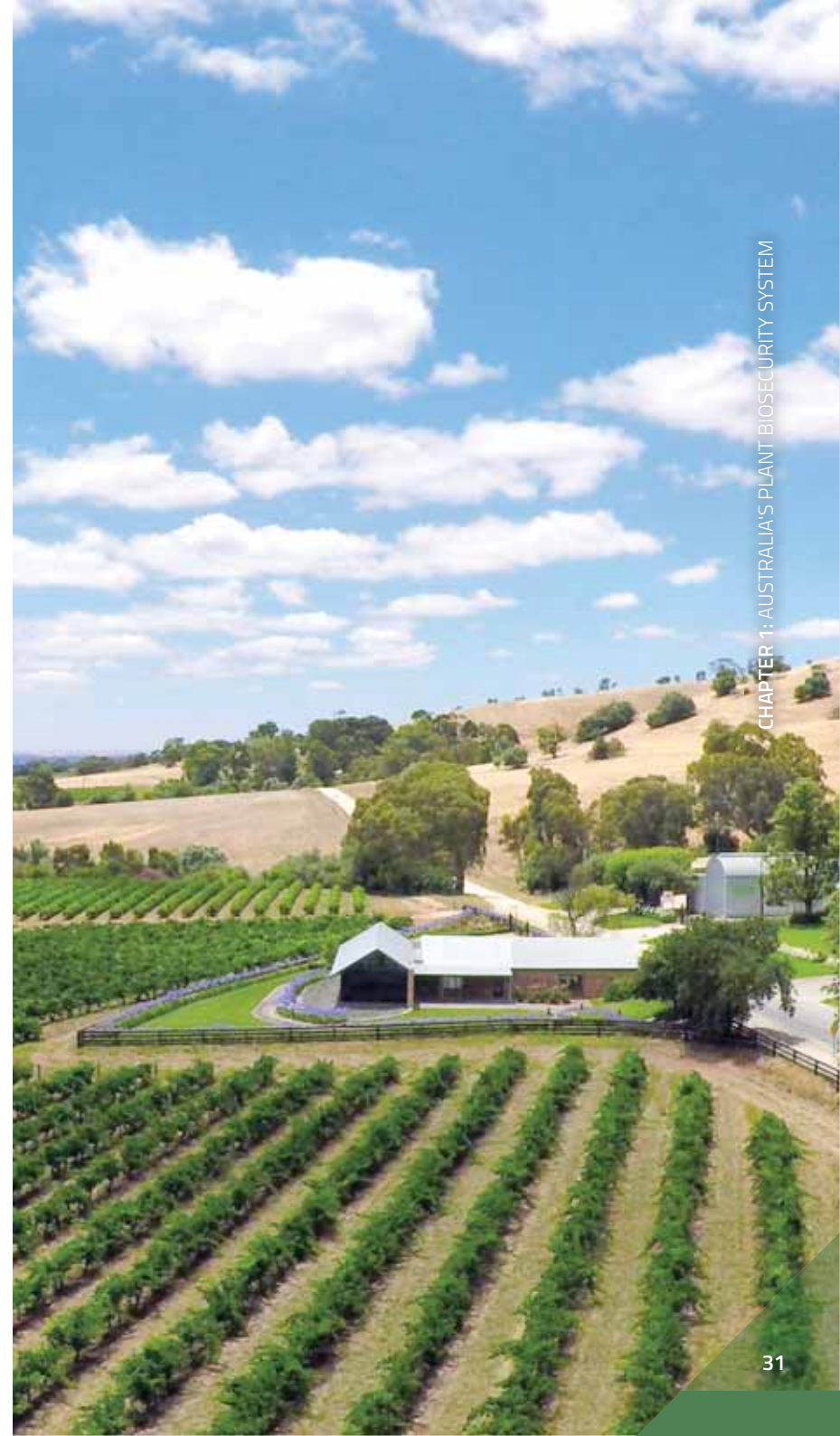
The South Australian Government has, in partnership with Hort Innovation and the SITplus consortium, constructed and commissioned the National Sterile Insect Technology Facility in Port Augusta, capable of producing 50 million sterile Queensland fruit flies per week.

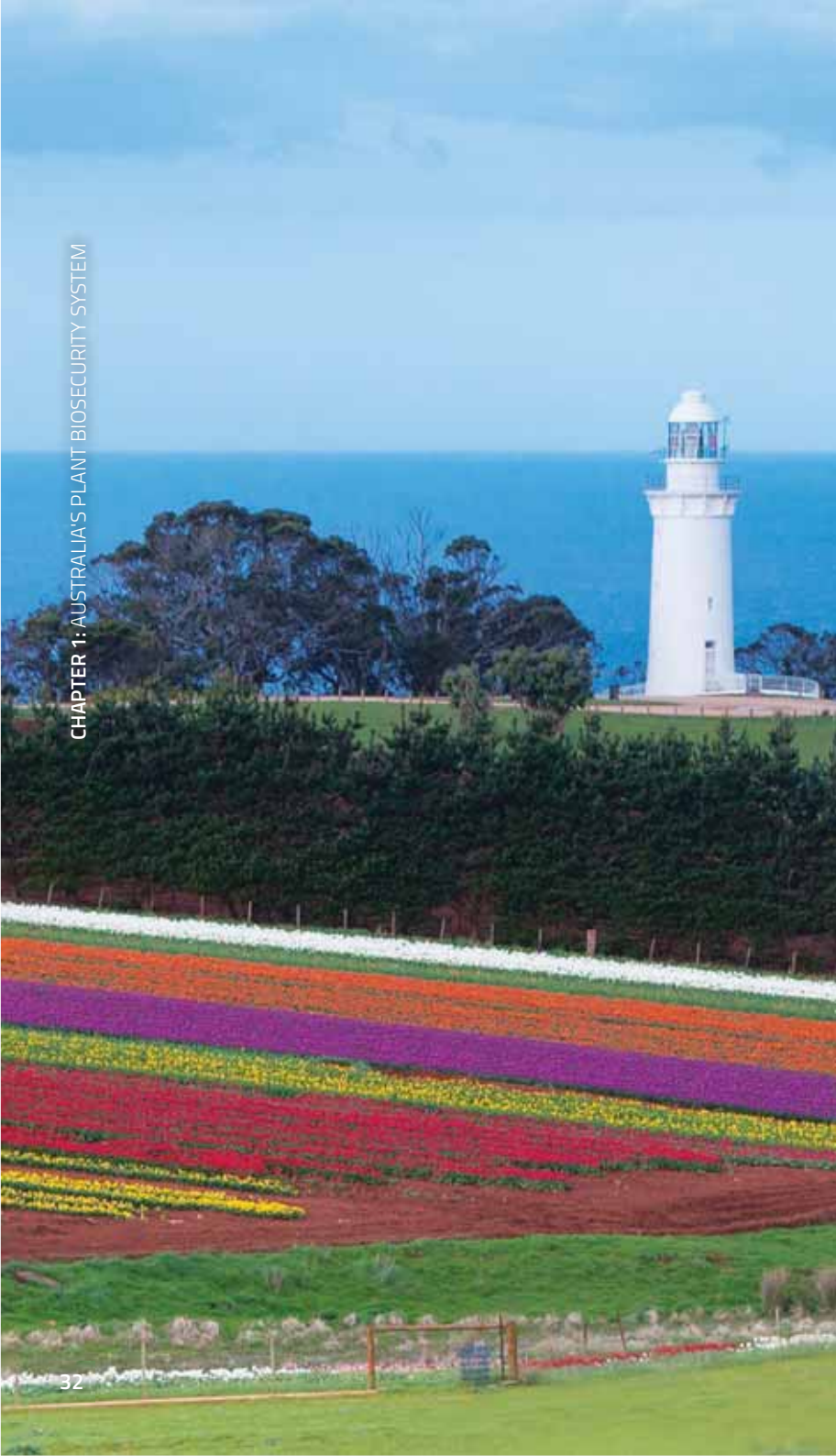
The South Australian Research and Development Institute (SARDI) is the principal research institute and provides Biosecurity SA with plant diagnostic, pathology and entomology advice.

SARDI also undertakes targeted research and development to reduce losses from plant diseases in the cereal, pulse, pasture, viticulture and horticulture industries. This includes delivery of plant health diagnostic services to state and national plant biosecurity authorities, growers and consultants.

The group collaborates closely with breeding companies, pre-breeding programs and the private sector to develop disease resistant plant varieties.

Plant biosecurity programs in SA are underpinned by the *Plant Health Act 2009* and *Plant Health Regulations 2009*. In addition, the Plant Quarantine Standard SA has been established under the act to identify the relevant conditions of entry for fruit, vegetables, plants, plant products, machinery and equipment of biosecurity concern.





Tasmania

Lead agency: Department of Primary Industries, Parks, Water and Environment (DPIPWE)
dPIPWE.tas.gov.au

DPIPWE's Biosecurity Tasmania Division manages biosecurity policy and programs for plant pests. The Plant Biosecurity and Diagnostics Branch of the division supports and maintains Tasmania's biosecurity system in the development of plant biosecurity policy and the delivery of plant health diagnostic and associated service areas. It does this via programs across three areas: plant biosecurity policy and administration; plant health diagnostics (entomology); and plant health diagnostics (plant pathology). The branch also contains a market access unit in relation to plants and plant products, a plant biosecurity surveillance unit that manages the policy and smaller operational aspects of surveillance, and delivers on communication services specific to plant biosecurity.

The branch also provides diagnostic and control advice for plant pests and diseases in primary industry, horticulture and biosecurity situations. Plant Diagnostic Services, administered by the branch, provides state-wide laboratory services that supply a range of tests for plant pests and pathogens, using microbiological, molecular, ELISA and electron microscopy techniques on a wide range of plants and seeds for private industry, government research bodies and certification schemes.

The branch maintains and develops Tasmania's capability to effectively respond to and recover from plant biosecurity emergencies, compiles and maintains official pest records to assist market access and trade, and leads the implementation of plant biosecurity risk analysis activities consistent with the Import Risk Analysis Framework.

The Biosecurity Operations Branch implements regulatory requirements with respect to the import of plants and plant products into Tasmania, and also does a range of surveys for plant pests, including Queensland and Mediterranean fruit fly.

Tasmania's new biosecurity legislation, the *Biosecurity Act 2019*, received Royal Assent on 26 August 2019. Work is underway to implement the changes, which will be rolled out in a way that minimises the impact on businesses and the community.

Until those changes are made, the regulations made under the many separate pieces of legislation (including the *Plant Quarantine Act 1997*) that were previously used to manage biosecurity will remain in place as the main compliance tools. This is until the provisions of the new act are proclaimed.

Full implementation will take three to four years and will involve consultation and ongoing participation between government, industry and community.

Victoria

Lead agency: Victorian Department of Jobs, Precincts and Regions (DJPR)
agriculture.vic.gov.au

Within DJPR, Agriculture Victoria provides a clear identity to the agricultural services and initiatives delivered. There are five branches within Agriculture Victoria, including the Biosecurity and Agriculture Services (BAS) Branch, which has the responsibility for delivering biosecurity and product integrity programs across the agriculture, horticulture, forest and amenity plant sectors. Activities are guided by the BAS Strategy which aims to minimise the impact of emergency plant and apiary pest incidents on production systems and the environment, and maintain access to local and overseas markets.

The Chief Plant Health Officer Unit, within BAS, is responsible for the development, review and monitoring of policies, protocols and procedures in accordance with national and international obligations. They are also the lead for preparedness and response activities and policy relating to plant and apiary pests.

The Plants, Chemicals and Invasives Unit within BAS operates from metropolitan and regional centres according to technical standards and protocols that are underpinned by the *Plant Biosecurity Act 2010* and *Livestock Disease Control Act 1994* and implemented by the *Plant Biosecurity Regulations 2016* and *Livestock Disease Control Regulations 2017*. Opportunities are provided under the legislation for producers and marketers to adopt quality assurance arrangements which are subject to regular audits and improvement.

Scientific and diagnostic support is provided by the staff of Agriculture Victoria Research, including expert technical advice on suspect and exotic plant and apiary pests, and assistance with incursion responses, market access programs and other biosecurity initiatives. The research team, and its associated Crop Health Services diagnostic business, supports biosecurity by conducting research and providing diagnostic services in the areas of entomology, mycology, nematology, virology and bacteriology. Staff also help develop and review biosecurity plans for industries, conduct pest risk analyses and import risk analyses and serve on national committees and working groups.

Agriculture Victoria invests extensive resources into emergency preparedness planning, surveillance and training to prevent the entry and establishment of exotic plant and apiary pests and diseases that threaten agricultural industries.

Western Australia

Lead agency: Department of Primary Industries and Regional Development (DPIRD)
dpird.wa.gov.au

DPIRD is the lead agency responsible for plant biosecurity in Western Australia (WA), with development and implementation of plant biosecurity policies, programs and procedures delivered under the Sustainability and Biosecurity organisational pillar. This includes biosecurity, resource management, operations and compliance functions. It is largely regulatory and market access focused, helping WA to maintain its reputation as a producer of safe, sustainable and biosecure agricultural and aquatic products.

Plant biosecurity in WA is mainly managed under the *Biosecurity and Agriculture Management Act 2007*, designed to prevent declared pests and diseases from entering the state and manage those that are already present. The act provides for a modern biosecurity system to control the entry, establishment, spread and impact of harmful organisms (pests and diseases), control the use of agricultural and veterinary chemicals, establish standards to ensure the safety and quality of agricultural products and raise funds for biosecurity related purposes.

Throughout 2019, WA responded to several biosecurity incidents and increased surveillance and preparedness activities to strengthen readiness for future incursions.

- An increase in the detection of European wasp nests resulted in the declaration of an incident response on 25 March 2019: 3,769 traps were deployed and 166 nests were destroyed in a surveillance area spanning over 1,300 km². The incident closed on 5 July 2019 with plans to target high-risk areas as a priority in the 2020 season.
- Ongoing concern about brown marmorated stink bug saw additional surveillance for the pest carried out with 44 traps placed strategically across the metropolitan area, concentrating on high-risk locations. This will continue to be a high priority for WA.
- The response to citrus canker closed in 2019, with the state being officially declared free of citrus canker in November 2019 (see page 193).
- To improve WA's preparedness for myrtle rust, a workshop was held in late 2019. The workshop included guest speakers from New Zealand and Queensland. Using their experience and lessons learnt, the workshop focused on the development of an agreed incident response framework, and draft surveillance and mitigation plans.
- The *Biosecurity and Agriculture Management Regulations Amendment Regulations (No 2) 2019* were published in 27 June 2019.

Non-government roles

PLANT HEALTH AUSTRALIA

www.planthealthaustralia.com.au

PHA is the national coordinator of the government–industry partnership for plant biosecurity in Australia. The not-for-profit company facilitates this partnership and drives action to improve policy, practice and performance of Australia's plant biosecurity system and to build capability to respond to plant pest emergencies. PHA independently advocates on behalf of the national biosecurity system to benefit plant industries and the environment.

PHA's efforts help to:

- minimise plant pest impacts
- enhance Australia's plant health status
- assist trade domestically and internationally
- safeguard the livelihood of producers
- support the sustainability and profitability of plant industries and the communities that rely on them
- preserve environmental health and amenity.

Plant Health Australia members

PHA members comprise all major plant industry peak bodies that represent Australia's growers and beekeepers, the Australian Government and all state and territory governments, a total of 59 as at 31 December 2019. Table 2 gives a full list of industry, government and associate members. The honey bee industry is a member of PHA because of the benefits that pollination brings to crop yield.

Being a PHA member enables parties to stay up to date on plant biosecurity issues and to work together on strengthening all aspects of the system. Membership also gives members the option of being a signatory to the Emergency Plant Pest Response Deed (EPPRD, see Chapter 6).

Through PHA, current and future needs of the plant biosecurity system can be mutually agreed upon, issues identified and solutions to problems found.

PHA's autonomy fosters an impartial approach to servicing member needs, allowing the company to put the interests of the plant biosecurity system first, as well as supporting a long-term view.

PHA's main activities are funded from annual subscriptions paid by members. The number of plant biosecurity partnerships are increasing over time, and the model is proving highly successful.

In close consultation with stakeholders, PHA formulates the strategies, plans and reports that contribute to government and industry policy development, facilitate improved national coordination and collaboration, and target member efforts and investment to best effect. The National Plant Biosecurity Strategy, biosecurity plans for industries and the series of annual plant biosecurity status reports are examples of this work.

PHA facilitates and manages emergency responses to exotic plant pests

Another central role for PHA is the establishment of funding and management arrangements for effective responses to incursions. PHA undertakes this role through its custodianship and administration of the EPPRD, and its operational guide PLANTPLAN, which sets out the agreed approach that government and industry stakeholders will take whenever an Emergency Plant Pest (a new exotic pest of significance) is found (see Chapter 6).

PHA works with members to mitigate risks posed by pests

Beyond its contribution to response arrangements, PHA supports the national plant biosecurity system by coordinating and assisting efforts to reduce the risks posed by pests. This is achieved in large part by supporting industries and governments to develop strategies and plans that improve biosecurity standards and by providing assistance to implement agreed risk mitigation measures.

Biosecurity plans, manuals for producers and awareness raising extension services are examples of activities that PHA undertakes with and on behalf of members. See more in Chapter 7.

PHA also works to ensure that the system is supported with assets such as information systems, diagnostic expertise, targeted research, development and extension activities, and surveillance protocols and provides information on exotic pests on the Pest Information Document Database. This online information resource holds publicly available fact sheets and other kinds of information on serious exotic pests, which is frequently used by PHA members.

PHA is also commissioned to undertake many risk-mitigation projects by individual members, groups of members in partnership, and non-members. Often these non-subscription funded projects boost biosecurity preparedness for particular industries. Examples of such projects include industry funded biosecurity outreach officers, response simulations, and biosecurity manuals to inform growers.

Table 2. Plant Health Australia members

Industry members		
Almond Board of Australia	Australian Processing Tomato Research Council	Cotton Australia
Apple and Pear Australia	Australian Sweetpotato Growers	Dried Fruits Australia
Australian Banana Growers' Council	Australian Table Grape Association	Grain Producers Australia
Australian Blueberry Growers' Association	Australian Tea Tree Industry Association	Greenlife Industry Australia**
Australian Forest Products Association	Australian Truffle Growers' Association	GROWCOM
Australian Ginger Industry Association	Australian Walnut Industry Association	Hazelnut Growers of Australia
Australian Grape and Wine Inc*	AUSVEG Limited	Onions Australia
Australian Honey Bee Industry Council	Avocados Australia	Passionfruit Australia
Australian Lychee Growers' Association	CANEGROWERS	Pistachio Growers' Association
Australian Macadamia Society	Canned Fruit Industry Council of Australia	Raspberries and Blackberries Australia
Australian Mango Industry Association	Cherry Growers Australia	Ricegrowers' Association of Australia
Australian Melon Association	Chestnuts Australia	Strawberries Australia
Australian Olive Association	Citrus Australia	Summerfruit Australia
Government members		
Australian Capital Territory Government	Northern Territory Government	Tasmanian Government
Commonwealth of Australia	Queensland Government	Victorian Government
New South Wales Government	South Australian Government	Western Australian Government
Associate members		
AgNova Technologies	Grains Research and Development Corporation	Victorian Farmers Federation
Bendigo Kangan Institute of TAFE	Horticulture Innovation Australia	Vinehealth Australia
Cotton Research and Development Corporation	Northern Territory Farmers Association	Wine Australia
CSIRO	Sugar Research Australia	

*Winemakers' Federation of Australia and Australian Vignerons amalgamated into Australian Grape and Wine Inc in February 2019

**Formerly Nursery and Garden Industry Australia



PEAK PLANT INDUSTRY BODIES

Australia's farmers have peak representative bodies that act on their behalf on a range of activities of collective importance, including biosecurity.

Most plant industry peak bodies represent producers of one crop, such as avocados, or a group of similar crops such as vegetables. In addition to broadacre farmers and horticulture producers, industry peak bodies represent truffle growers, foresters and beekeepers (due to the importance of honey bees as pollinators for many crops), and most of these peak bodies are members of PHA (see Table 2).

Industry bodies consider biosecurity to be a matter of importance, since it underpins the sustainability of their industry. New plant pests can make production more expensive due to increased use of pesticides, greater labour costs or additional procedures. Pests can lower yields, reduce quality or cause damage to stored produce. In some cases, these factors mean it is no longer viable to grow a particular crop in a region. Pests can also cause loss of access to markets so that some growers have fewer market options to sell their crops.

As a result of these potential biosecurity threats to sustainability, Australia's peak industry bodies are proactive about biosecurity risk mitigation. Most have joined PHA to be a part of the plant biosecurity partnership, which ensures that they are kept up to date on biosecurity and can contribute to strengthening the plant biosecurity system. The majority (37 of 39 industry members) of PHA's plant industry members are also signatories to the EPPRD. Importantly, plant industry bodies represent growers in an incursion, which can be a significant commitment. They also contribute to scientific advisory panels when information is needed to make decisions in emergency responses. More information about the role of industries during incursions is in Chapter 6.

Plant industry peak bodies also:

- work with government departments to negotiate international market access
- take part in government consultation events such as Biosecurity Roundtables
- communicate with growers about the need for on-farm biosecurity and other biosecurity risk mitigation activities
- work with government departments on pest surveillance activities
- develop information on exotic pests, often in collaboration with the relevant state or territory department of agriculture or PHA.

Levies or funding mechanisms at regional, state or national levels are increasingly being used to fund specific plant biosecurity preparedness activities that benefit the industry, such as research and development projects or industry outreach programs. Other initiatives may include the funding of surveillance activities for early detection of high-risk pests or the development of contingency plans to facilitate the preparation of a response plan in the event of an incursion.

Peak industry bodies have contributed to industry profiles in Chapter 3 of this report.

PRIVATE SECTOR

The private sector makes a large contribution to the plant biosecurity system.

Plant producers and beekeepers have a responsibility to protect their enterprises and those of others in their region and industry from new pests and weeds by using on-farm biosecurity measures and resources (see Chapter 7).

Trade, transport and logistics companies include importers (commercial and non-commercial), customs brokers, freight forwarders and agents, integrated logistic suppliers, vessel and port operators. They are required to follow strict guidelines to ensure exotic pests do not enter Australia on plant products or on cargo, and do not move around Australia.

Private consultants and advisers provide extensive plant biosecurity advice across a range of crop types, and in most key production areas. Commercial agronomists also provide local services through the major distribution chains. They are backed by national technical networks which provide a comprehensive suite of services to agricultural industries.

Australian societies and associations have members that include scientific professionals who are linked with plant biosecurity. These organisations contribute to the development of Australia's plant biosecurity system through a range of activities including:

- peer reviews and publication of research findings
- provision of pest, disease and weed notes
- scientific reviews
- convening forums to share plant biosecurity research
- independent comment and input into the development and implementation of plant biosecurity policy and the development of international phytosanitary standards
- encouraging professionalism amongst plant scientists and technicians.

Key associations include the Australasian Plant Pathology Society, the Australian Society for Microbiology, the Australian Entomological Society, the Australian Society of Agronomy, the Ag Institute of Australia and the Council of Australian Weed Societies.

RESEARCH FUNDERS AND PROVIDERS

Research funders and scientists ensure that scientific research, development and extension (RD&E) activities provide answers to pest problems faced by Australian producers.

Researchers have a responsibility to protect Australia from biosecurity risks and are required to report any findings of biosecurity concern, such as finding new variants or species of pests in the course of their work.

They also have a responsibility to protect Australia's plant resources through safe biosecurity practices when conducting research, particularly when doing field work.

Research activities are carried out by university, government and industry researchers, and are often funded through cooperative funding organisations like research and development corporations (RDCs) and the Plant Biosecurity Research Initiative (PBRI), a joint initiative of the seven plant-based RDCs, PHA and the Department of Agriculture. Research includes methods to identify pests (diagnostics), effective management techniques and work to breed resistant crop varieties. More on plant biosecurity RD&E is in Chapter 8.

THE COMMUNITY

The community includes the general Australian public and others such as local governments, landholders, travellers returning from overseas, tourists, home gardeners and anyone moving goods into or around the country or visiting rural areas.

Primarily, community members have post-border biosecurity responsibilities, although people returning from overseas and those importing goods from overseas must abide by international border restrictions to prevent incursions of exotic pests. The roles of community in preserving the integrity of Australia's plant biosecurity status are explained in Chapter 7.

