

National Plant Biosecurity Surveillance Strategy

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Australian Government
Department of Agriculture, Fisheries and Forestry

SNPHS
Subcommittee on National
Plant Health Surveillance



Plant Health
AUSTRALIA

Plant Health Australia (PHA) is the national coordinator of the government-industry partnership for plant biosecurity in Australia. As a not-for-profit company, PHA services the needs of Members and independently advocates on behalf of the national plant biosecurity system. PHA's efforts help minimise plant pest impacts, enhance Australia's plant health status, assist trade, safeguard the livelihood of producers, support the sustainability and profitability of plant industries and the communities that rely upon them, and preserve environmental health and amenity.

PHA would like to acknowledge the significant contribution from the Subcommittee on National Plant Health Surveillance (SNPHS) and the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF). The principle focus of SNPHS and DAFF is to maintain and improve plant health status in support of Australia's economy, environment and community. A considerable input was also received from state and territory governments and industry groups.

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Executive summary



The National Plant Biosecurity Surveillance Strategy (NPBSS) is a sub-strategy of the National Plant Biosecurity Strategy (NPBS) aiming to improve the management and coordination of plant pest surveillance activities in Australia. The development and implementation of this strategy is a significant step towards meeting the expectations of the plant pest surveillance aspects of the NPBS and overarching principles of the Intergovernmental Agreement on Biosecurity (IGAB).

The NPBSS considers the plant pest surveillance requirements for Australia's biosecurity system as a whole, and covers all sectors and participants involved in plant biosecurity surveillance along the biosecurity continuum. The NPBS provides clear guidance to decision makers, policy creators and funding agencies as to the direction that must be taken to secure Australia's plant biosecurity status.

The strategy outlines all existing national surveillance programs including the reasoning and significance behind surveillance activities in Australia. It also explains how it is aligned with other national strategies and standards, key concepts and the expected outcomes. The strategy recognises that the key to achieving national surveillance outcomes is through maximising cooperation and engagement between Australian governments, industry and the community.

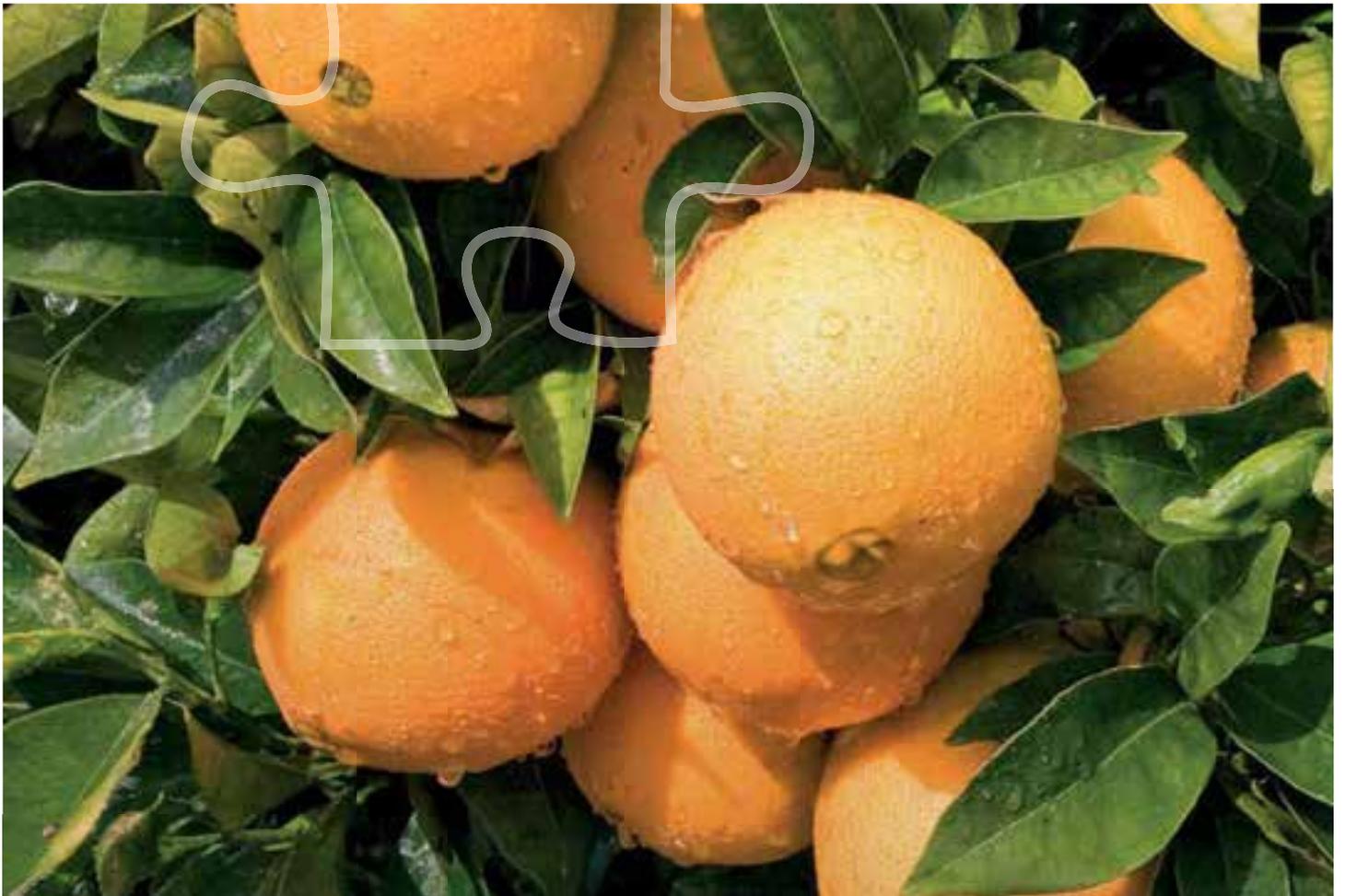
Five key concepts were identified as essential elements underlying the strategy:

- Recognising work across the biosecurity continuum.
- Strengthening surveillance partnerships with stakeholders.
- Conducting risk and science based surveillance.
- Ensuring the system is well regulated.
- Having surveillance based on measurable performance indicators and economic principles.

Based on the expected surveillance outcomes, the strategy proposes five recommendations which aim to deliver on a number of priority reform areas of the NPBS and the IGAB. The recommendations have associated actions which are intended to guide efforts to enhance the collaboration, coordination, efficiency and effectiveness of surveillance efforts nationally.

Recommendation 1	Provide mechanisms for coordinating and establishing a nationally integrated and consistent plant biosecurity surveillance system and network that underpins Australia's biosecurity system.
Recommendation 2	Establish a national surveillance information framework including the development of nationally agreed surveillance standards and protocols in order to optimise the collection, analysis and reporting of surveillance data.
Recommendation 3	Establish mechanisms to engage industry and communities to ensure broader recognition of the importance of surveillance and collection of surveillance information.
Recommendation 4	Enhance the national capacity and capability to undertake plant pest surveillance underpinned by targeted research, development and extension.
Recommendation 5	Enhance the national surveillance system by adopting consistent legislation and regulatory approaches.

The NPBSS considers a range of activities that promote greater participation of stakeholders in plant pest surveillance including the development and establishment of national standards for risk based surveillance. Implementation of this strategy will result in achieving national consistency and generate useful dialogue among governments, industry and the broader community.



Plant biosecurity in Australia



Plant biosecurity is a set of measures which safeguard the economy, environment and community from the negative impacts associated with plant pests. A fully functional and efficient biosecurity system is a vital part of the future profitability, productivity and sustainability of Australia's plant production industries and is necessary to preserve the Australian environment and way of life. Plant biosecurity activities are fundamental to safeguard Australia's plant health status to maintain access to overseas markets.

Australia relies on agricultural production more than any other developed country. Australia's agriculture, fisheries and forestry industries make an important contribution to Australia's economic and social prosperity. In 2010-11 they contributed \$52.1 billion to Australia's gross value of production and provided employment for 351,000 people in rural and regional areas. Around 60 per cent of our agricultural production is exported, generating \$32.4 billion in 2010-11¹.

Australia has a comprehensive plant biosecurity system in place which supports plant production industries and has performed extremely well over decades. As a result of this plant biosecurity system, as well as its geographic isolation, Australia remains free from many pests that affect agriculture, the environment, and people in other parts of the world. This favourable biosecurity status results in significant economic, environmental and community benefits and provides Australia's plant production industries with a clear advantage in both domestic and global markets. The ability to demonstrate the absence of significant pests through evidence based surveillance systems allows Australia to maintain existing trade opportunities, negotiate access to new overseas markets and ensure the profitability and viability of plant industries.

In addition, Australia's plant biosecurity system contributes to maintaining the unique status of Australia's natural environment and biodiversity. The national plant biosecurity system encompasses the full range of activities undertaken by governments, industry, natural resource managers, custodians, and the community across the biosecurity continuum. Activities such as risk analyses, surveillance, incursion preparedness, response strategies, recovery and on-going management of plant pests all contribute to minimising the impact of Emergency Plant Pests (EPP).



Biosecurity management continues to increase in complexity due to a number of factors. These include increasing levels of trade and tourism, the emergence of new pests offshore, the shifting geographic spread of existing plant pests, increasing competition for resources, shifting demographics, changing land uses and climate variability.

Maintaining and improving the current plant biosecurity system to contend with such dynamic factors will help keep Australia free from many plant pests and reduce the economic, social and environmental impact resulting from pest incursions. This will ensure that Australia can maintain its unique natural environment, a healthy, high quality food and fibre supply and continue to have a competitive advantage of producing and exporting plants and plant products.

¹Australia's Agriculture, Fisheries and Forestry at a Glance 2012, Department of Agriculture, Fisheries and Forestry, Canberra, 2012.

Plant biosecurity in Australia (cont.)



Australia's plant biosecurity surveillance system

Plant biosecurity surveillance is an essential component of the Australian biosecurity system. Plant biosecurity surveillance involves activities designed to:

- Reveal the presence of pests (for early detection).
- Demonstrate the absence from pests (for market access).
- Determine the distribution of pests (in response to an incursion or for ongoing management).
- Identify high risk pathways and areas for pests (to focus surveillance efforts).

It also includes collection, collation, analysis, interpretation and timely dissemination of information on plant pests and the hosts that they affect.

Plant biosecurity surveillance supports a wide range of biosecurity activities and can be used to monitor the effectiveness of the plant biosecurity system. Significant trade and environmental decisions are based on the information supplied by national surveillance programmes.

Monitoring and surveillance enables Australia to direct and scale its response to incursions or manage the further spread of plant pests. The objective of Australia's plant biosecurity surveillance system is to ensure there is an ongoing process to detect incursions of new plant pests before they spread and become widely established. It also allows the effectiveness of border and pre-border biosecurity arrangements to be assessed. Evidence based pest surveillance information allows Australia to support its claims regarding pest status—providing robust data to demonstrate that pests important to plant health or international trade are “known not to occur” rather than only “not known to occur”. Plant biosecurity surveillance also helps to determine any changes to the possible ecological distribution of plant pests that may have resulted from adaptations to ongoing environmental changes.

Overall, the Australian plant biosecurity surveillance system aims to:

- Assist with the detection and monitoring of new and emerging plant biosecurity threats to Australia.
- Detect plant pests early enough to allow for optimal management to occur and to inform decisions about appropriate management strategies.
- Provide evidence to support the demonstration of freedom from plant pests to facilitate interstate and international trade.
- Describe the distribution and prevalence of plant pests already present within Australia, and the plant species they affect, to inform decisions about appropriate actions.
- Report, analyse and disseminate information and provide evidence to inform decision making across the plant biosecurity system.
- Identify high risk pest pathways to focus surveillance efforts.
- Measure the success of the plant biosecurity system.



Image courtesy of Jo Slattery, Plant Health Australia



Current status of plant biosecurity surveillance in Australia

Biosecurity threats such as plant pests are not constrained by state and territory boundaries, hence there is a need to facilitate cross jurisdictional communication and knowledge sharing to achieve some degree of national consistency or compatibility between the approaches used for surveillance.

Current issues facing the Australian plant biosecurity surveillance system include:

- An increased threat of plant pests because of the growth in passenger and cargo movements.
- An increased need for “evidence of absence data” for high priority pests to satisfy requests from trading partners.
- A declining capacity and expertise in government agencies with responsibility for primary industries to undertake and provide advice on plant pest issues.
- Inconsistent levels of investment towards plant biosecurity surveillance.
- Need for consistent methodologies to underpin surveillance activities across all jurisdictions and industry groups and provide greater scientific evidence to support claims of area freedom.
- Limited capacity of existing regulation to enforce surveillance and compliance activities and meet the World Trade Organization (WTO) Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) requirements and agreements.
- Need to develop tools for economic judgements that ensure the cost of performing risk mitigation activities including surveillance does not outweigh the economic benefits of performing those activities.
- Lack of knowledge transfer, information sharing and key skill shortages.

International programs

The Australian Government Department of Agriculture, Fisheries and Forestry (DAFF) International Plant Health Program (IPHP) coordinates overseas plant health surveys in Australia’s nearest neighbouring countries (Indonesia, Timor-Leste, Papua New Guinea and the Solomon Islands). The program provides for increased surveillance and diagnostic capacity in these countries and the broader region, thus strengthening biosecurity efforts in these countries and the broader region. It also provides for a close working relationship with Australia’s counterpart agencies to manage plant biosecurity risks offshore and early warning of exotic pests that might enter this region. The Program identifies and assesses the potential (natural) risk pathways associated with exotic pests detected overseas to better allocate resources and inform biosecurity decision makers.

Combining offshore and onshore plant pest surveillance data collected through national and international surveillance programs provides risk intelligence and identifies further surveillance priorities. Using this information, the program also facilitates market access opportunities by demonstrating pest absence and assists incursion management by providing high resolution host maps.

National programs

DAFF leads and coordinates the National Plant Health Surveillance Program (NPHSP). The NPHSP plays a central role in enabling state and territory governments to deliver post-border monitoring and surveillance programs targeting high priority plant pests (exotic and established). The objective of the NPHSP is to develop and implement a nationally consistent, multi-jurisdictional approach to plant pest surveillance that incorporates pest surveillance activities in the vicinity of ports as well as in urban areas that have a relatively high risk of pest presence based on pathway and host considerations.

The NPHSP program is primarily designed and implemented to enable the early detection of exotic pest species that may enter and establish in Australia. Early detection will allow for the effective containment, control and eradication of these species should such an event occur.

The program includes three main components:

- Ports of entry trapping
- Multiple pest surveillance
- Surveillance information management.

Plant biosecurity in Australia (cont.)



The national program has been used, in combination with other local pest management programs, to provide additional confidence to trading partners of Australia's pest status to gain market access. It has also been helpful in delimitation surveillance of known infested areas and assisted state and territory governments in carrying out public awareness programs on plant pests of national importance.

The NPHSP has a major impact in securing engagement with state/territory government departments and agencies in the area of plant pest surveillance as well as in building engagement with community and industry. It provides a national forum for developing and delivering a nationally consistent approach to plant pest surveillance, enhances state resources and capability, as well as assisting state primary industries agencies to secure additional funding from their own state budgets. The program has provided resources and the foundation to develop national policy leadership in relation to plant pest surveillance as well as developing a role as an international focal point.

Border surveillance

Border surveillance programs provide robust biosecurity surveillance that extend beyond the border and involves inspections of imported air and sea cargo while conducting site surveillance of areas surrounding the import operations. Border surveillance includes:

- Consistent monitoring and risk management activities in and around first ports of entry as well as post entry quarantine locations.
- Well planned and systematic investigations to confirm the presence, absence and prevalence of exotic pests and weeds in these areas.
- A mechanism to capture meaningful data for analysis and to disseminate defensible intelligence to the program/region allowing current and future business needs to be determined.
- Strong stakeholder and public engagement to raise awareness of exotic plant pests and their potential impacts.

Northern Australia Quarantine Strategy (NAQS)

The Northern Australia Quarantine Strategy was established to help address the unique quarantine risks in the northern regions of Australia. The programs focus is on exotic organisms posing a threat to agriculture and the environment that have established through potential pest pathways. Such pathways include wind, water currents, animal movements, illegal arrivals and movement of people and goods into Australia's northern regions. In addition, NAQS staff members contribute to surveillance and monitoring activities in neighbouring countries for early signs of targeted pests and weeds.

Local programs

State and territory governments run a number of surveillance programs targeting a range of exotic and established plant pests. General surveillance is a common approach in states and territories that involves the development and dissemination of awareness information relating to pest threats as well as maintaining systems for public reporting. State and territory governments also run targeted surveys to establish and maintain pest free area status to meet specific trade requirements. The requirement for state and territory agencies to provide early detection and pest free area surveillance services is increasing.

Industry involvement

Producers, directly or through the purchase of services from private or government service providers, invest in surveillance primarily to manage established pests on an ongoing basis. Industries have substantially contributed to the cost of delimiting surveillance as part of eradication campaigns.

Industry groups will need to coordinate their existing and future surveillance activities to ensure all general and targeted surveillance activities are consistent with the national approach. Plant Health Australia (PHA), as the national coordinator of the government-industry partnership for plant biosecurity, is working with its members to identify the surveillance and monitoring activities that are currently taking place and to determine more nationally consistent and cost effective approaches.



Funding

All Governments contribute to the cost of domestic (post border) activities that deal with new and emerging pest threats, most notably in national eradication campaigns. The Australian Government funds a range of domestic early warning surveillance activities including NPHSP and the NAQS. Contributions from state and territory government towards Australian plant pest surveillance activities are considerable and are undertaken for the purposes of early detection, or provision of data to support claims of area freedom. In the event of an incursion, the affected state or territory (lead agency) has the primary responsibility for response activities, including delimiting surveillance. Cost sharing arrangements involving the Australian Government and all potentially affected jurisdictions and industries may occur under the Emergency Plant Pest Response Deed (EPPRD) which covers the management and funding of responses to Emergency Plant Pests.

Research and development

Utilising the latest technology and methods are fundamental to achieve effective surveillance. The research required to develop these tools and practices are delivered predominantly by research organisations, universities, and state and territory agencies. A number of research providers contribute to facilitate collaborative research between these organisations. However, funding for research has a broader base, with significant investment from the Australian Government and industries, through research and development corporations.

Current issues with regards to surveillance research and development include:

- Increasing phytosanitary awareness and emphasis on rigour in the interpretation of supporting data.
- Effects of climate change, including the impact of extreme weather events on pest biology, ecology, distribution and abundance.
- Increasing cost of surveillance research.
- Justification of funding for surveillance research due to perceived low cost-benefit ratio.
- Lack of research coordination and collaboration.
- Declining capacity within research institutions and government agencies to train and mentor the next generation of surveillance specialists.



Plant biosecurity in Australia (cont.)

Biosecurity legislation, regulation and standards

International

The International Plant Protection Convention (IPPC) provides a standardised framework for biosecurity including International Standards for Phytosanitary Measures (ISPMs). As Australia implements relevant ISPMs, this allows Australia to provide assurances that its surveillance operations are aligned with international standards and the phytosanitary status of exports can therefore be certified. Australian legislation, including the *Quarantine Act 1908*, *Biosecurity Act 2012*, the *Environment Protection and Biodiversity Conservation Act 1999* and the *Export Control Act 1982*, provides a basis and focus for surveillance activities.

National

Legislation and regulations for surveillance within Australia vary between states and territories but in general, plant health and protection legislation contains regulations that help to underpin national surveillance. Such legislation also enables jurisdictions to impose restrictions on inter- and intra-state movement of people and goods that may provide a pathway for the spread of a pest.

The Australian Constitution determines the baseline roles of Australian and State Governments in biosecurity arrangements:

- The Australian Government is responsible for managing risks at the international border including pre-border biosecurity arrangements.
- State and territory governments have primary jurisdiction over domestic events, for example once a pest has crossed the border and become established.

The Australian Government is responsible for ensuring any surveillance requirements an importing country may impose as a prerequisite to trade is based on science and to negotiate and, if necessary, challenge the legitimacy of such requirements. State and Territory jurisdictions are responsible for advising DAFF on the health status of plant products for export and must ensure the advice meets the specific evidence based requirements of the importing country.

Local Council Acts and provisions under State legislation underpin notification requirements for surveillance and delimiting activities. Local councils, particularly in urban/peri-urban situations, have technical staff members who provide monitoring in their jurisdiction, and have certain regulatory powers to facilitate managing plant biosecurity risks.



Image courtesy of Rohan Burgess, Plant Health Australia



Market access

The term market access relates to new, improved or restored entry for commodities into markets where terms and conditions of access need to be negotiated on a government-government basis. With an ever increasing focus of the application of the science-based quarantine conditions consistent with the principles of the IPPC, foreign governments are looking to introduce or upgrade their quarantine requirements. Whilst Australia has an enviable reputation for being free of many of the world's worst pests, this reputation needs to be based on nationally consistent, evidence based, approaches to plant biosecurity surveillance. Australia's trading partners require evidence from formal surveillance programs to support claims of area freedom from a range of quarantine pests and to ensure importing countries' quarantine requirements are met. Australia also has obligations under the WTO SPS Agreement to report new pest detections. The coordination of plant pest surveillance activities is essential for Australia in order to meet these obligations.

There are several aspects of plant biosecurity surveillance that require on-going attention to maintain and enhance the market access, including:

- Coordination of national surveillance to provide leadership, develop and endorse national surveillance plans, protocols and standards, review the status of national surveillance systems and promote shared responsibility.
- National surveillance standards and protocols to meet IPPC guidelines.
- Aggregation and sharing of surveillance information in a nationally agreed data structure that can be integrated into a national database.
- Collation of plant pest surveillance data in a nationally consistent approach through well planned and coordinated surveys.
- Promotion of the economic benefits of plant pest surveillance.



Plant biosecurity in Australia (cont.)



National biosecurity frameworks

Biosecurity management is a complex task and Australia's biosecurity system needs to respond to increasing challenges that are constantly changing its risk profile.

As the responsibility for biosecurity management is a shared responsibility between governments, industry and the community, national agreements are required to identify opportunities for the parties and groups to work together to set out the principles that will underpin the operation of a national biosecurity system.

Several reviews of Australia's quarantine and biosecurity arrangements have identified the need for the development of a partnership approach to quarantine policies and programs (Naim, 1996²), and the need for a shared approach to biosecurity (Beale et al, 2008³). These reviews have recommended the development of a national agreement on biosecurity to underpin the partnership approach between the Commonwealth, the states and territories, as well as industry. This has resulted in the development of national biosecurity agreements and operational arrangements.

Intergovernmental Agreement on Biosecurity

The Intergovernmental Agreement on Biosecurity (IGAB), which came into effect in January 2012, is an agreement between the Commonwealth, State and Territory governments, with the exception of Tasmania. The IGAB will enhance Australia's biosecurity system and strengthen the working partnership between the Australian and state and territory governments to address Australia's biosecurity issues.

The agreement will improve the national biosecurity system by identifying the roles and responsibilities of governments and outlining the priority areas for collaboration. These include:

- surveillance and diagnostics
- emergency planning
- response and preparedness
- research and development
- information sharing across jurisdictions.

Implementation of the agreement requires development of strategies and action plans to meet identified priority reform areas detailed in the schedules to the Agreement.

National Plant Biosecurity Strategy

The National Plant Biosecurity Strategy (NPBS) was developed by PHA on behalf of its members and in close consultation with stakeholders across Australia's plant biosecurity system. The strategy provides overarching framework for implementing IGAB in the Australia's plant biosecurity system.

The NPBS draws together the views of the stakeholders to provide ten strategies to address present and future challenges facing the plant biosecurity system. Each strategy is underpinned by a number of recommendations and actions.

The NPBS points the way for governments, plant industries and the community to work even more closely together to strengthen Australia's plant biosecurity system over the next decade. It calls for Australia to move toward a more efficient and effective nationally coordinated approach that is characterised by transparency, cooperation and sharing.

²Naim, ME, Allen, PG, Inglis, AR and Tanner, C 1996, *Australian quarantine: a Shared Responsibility*, Department of Primary Industries and Energy, Canberra.

³Beale, R, Fairbrother, J, Inglis, AR and Trebeck, D 2008, *One Biosecurity: a Working Partnership*. Commonwealth of Australia.



Subcommittee on National Plant Health Surveillance (SNPHS)

Australia's Plant Health Committee (PHC) provides strategic policy, technical and regulatory advice on plant biosecurity matters in Australia. PHC has commissioned a Subcommittee on National Plant Health Surveillance (SNPHS) to progress the establishment of the National Plant Health Surveillance framework including the development of a nationally coordinated plant pest surveillance system in collaboration with jurisdictions and industry. SNPHS' membership is comprised of representatives from the Australian Government, state and territory governments, PHA, the Plant Biosecurity Cooperative Research Centre and many other organisations including the Ministry for Primary Industries New Zealand.

The principal focus of the subcommittee's activity is to maintain and improve plant health surveillance capacity and capability in Australia in support of its economy, environment and community. The subcommittee coordinates national surveillance programs through the implementation of national surveillance strategies including IGAB and NPBS, improving surveillance record management, capability and methods of detection, as well as securing ongoing resource commitment and monitoring the cost effectiveness of programs.





**National Plant
Biosecurity
Surveillance
Strategy**



The National Plant Biosecurity Surveillance Strategy (NPBSS) is a national initiative aimed at improving the management and coordination of all activities relating to plant pest surveillance in Australia with clear visions and goals.

The NPBSS forms a sub-strategy under the NPBS and aims to develop a sustainable national approach to plant pest surveillance with all stakeholders providing input and endorsement to the national policy that underpins this approach. It will capture surveillance activities across the contemporary biosecurity continuum from pre-border to farm level. This strategy is a major step forward in meeting the expectations of the plant pest surveillance aspects of the NPBS and IGAB.

The NPBSS will provide a vision and a framework for the development of a nationally coordinated and targeted plant pest surveillance system which will help protect Australia's people, environment and economy. The strategy recognises that the key to achieve national surveillance outcomes is through maximising cooperation and engagement between governments, industry and the community. Effective implementation of this strategy will require commitment from all stakeholders to make sure all opportunities for future system improvements are taken.

The strategy has been developed by SNPBS in consultation with all state and territory governments and industry through PHA, who have identified objectives and actions, that when applied nationally, will enhance the effectiveness of existing surveillance programs.

The principles of the strategy are intended to guide efforts to enhance the collaboration, coordination, efficiency and effectiveness of surveillance efforts nationally. The strategy considers a range of activities that promote community and industry participation in plant pest surveillance including the development and establishment of national standards for risk based surveillance.

The NPBSS identifies a number of critical issues in each of the major biosecurity areas (market access, operations, legislation and regulation, and research and development) which will be addressed through the recommendations within the strategy.

Implementation of this strategy will result in achieving national consistency and generate useful dialogue among the governments, industry and the broader community. Maintaining and securing market access, and improving early detection of pests to ensure sustainable production are the key outcomes of the NPBSS.

This surveillance strategy must be underpinned by appropriate enablers such as:

- policy
- operational tools – methods, standards, protocols, systems
- information and data management
- pest risk analysis, priority setting
- funding availability
- expert knowledge
- education and training
- economic analysis
- research, development, extension and innovation
- legislation/regulation.

National Plant Biosecurity Surveillance Strategy



Scope

This strategy sets out goals for the plant biosecurity surveillance system in Australia, together with expected outcomes that can be anticipated when these goals are realised. The strategy considers the plant pest surveillance requirements for Australia's biosecurity system as a whole, and covers all sectors and participants involved in plant biosecurity surveillance along the biosecurity continuum of pre-border, border and post-border.

The NPBSS identifies core surveillance activities and requirements to demonstrate the biosecurity status of plant industries, including surveillance for exotic bees and bee pests that affect bee and plant industries and assist maintain plant health status of natural and urban environments.

The NPBSS builds on existing surveillance activities of industry and government across the continuum. The strategy does not consider individual and specific surveillance programs and surveys as they are addressed through the actions agreed in this document. Surveillance for weeds, freshwater and marine plant pests are also out of scope.

Alignment with national strategies

The content and underpinning structure of this strategy is aligned with the surveillance aspects of the NPBS and overarching principles of the IGAB. The strategy recommendations and underpinning actions were developed to reflect the surveillance outcomes identified in these national strategies and agreements.



Image courtesy of Michael Milne, Plant Health Australia



Table 1. Alignment of NPBSS recommendations with the surveillance-related aspects of the NPBS and the IGAB.

National Plant Biosecurity Surveillance Strategy	NPBS	IGAB
<p>Recommendation 1 Provide mechanisms for coordinating and establishing a nationally integrated and consistent plant biosecurity surveillance system and network that underpins Australia's biosecurity system.</p>	<p>Recommendation: 3 Action: 3.2</p> <p>Recommendation: 17 Action 17.1</p>	<p>Schedule: 2 Priority reform area: 5</p> <p>Schedule: 3 Priority reform area: 1</p> <p>Schedule: 4 Priority reform area: 1</p>
<p>Recommendation 2 Establish a national surveillance information framework including the development of nationally agreed surveillance standards and protocols in order to optimise the collection, analysis and reporting of surveillance data.</p>	<p>Recommendation: 3 Actions: 3.1, 3.4</p> <p>Recommendation: 11 Actions: 11.1, 11.3</p> <p>Recommendation: 15 Actions: 15.1, 15.4</p>	<p>Schedule: 3 Priority reform areas: 1, 2, 3, 4, 5</p> <p>Schedule: 5 Priority reform area: 3</p> <p>Schedule: 6 Priority reform areas: 2, 3</p> <p>Schedule: 7 Priority reform areas: 6, 8</p>
<p>Recommendation 3 Establish mechanisms to engage industry, regions and communities to ensure broader recognition of the importance of surveillance and collection of surveillance information.</p>	<p>Recommendation: 3 Action: 3.3</p> <p>Recommendation: 12 Actions: 12.1, 12.2</p> <p>Recommendation: 1 Action 1.6</p>	<p>Schedule: 2 Priority reform area: 5</p> <p>Schedule: 4 Priority reform areas: 3, 4</p> <p>Schedule: 5 Priority reform areas: 1, 6</p> <p>Schedule: 6 Priority reform areas: 1, 4, 5</p> <p>Schedule: 7 Priority reform areas: 6, 7</p>
<p>Recommendation 4 Enhance national capacity and capability to undertake plant pest surveillance underpinned by targeted research, development and extension.</p>	<p>Recommendation: 1 Action: 1.1</p> <p>Recommendation: 14 Action: 14.2</p>	<p>Schedule: 2 Priority reform areas: 1, 2, 3, 4</p> <p>Schedule: 4 Priority reform area: 2</p> <p>Schedule: 5 Priority reform area: 2</p> <p>Schedule: 8 Priority reform areas: 1, 2, 3, 4, 5, 6</p>
<p>Recommendation 5 Enhance the national surveillance system by adopting consistent legislation and regulatory approaches.</p>	<p>Recommendation: 1 Actions: 1.2, 1.4, 1.5</p> <p>Recommendation: 2 Action: 2.1</p>	<p>Schedule: 3 Priority reform areas: 5, 6</p>

National Plant Biosecurity Surveillance Strategy (cont.)

Key concepts underpinning the Strategy

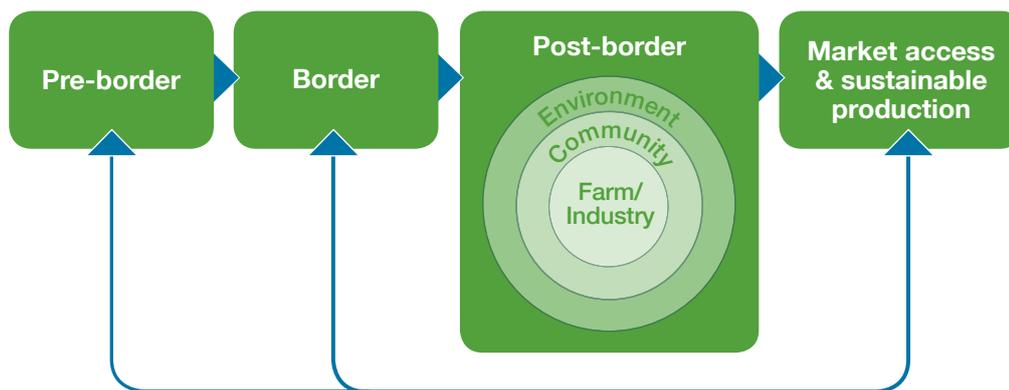
The following five key concepts form the NPBSS:

- **The biosecurity continuum** – an integrated approach involving pre-border, border and post-border activities

The integrated approach brings together all components of surveillance activities across the biosecurity continuum (Figure 1). A range of operational activities are undertaken across the continuum to meet the five key objectives namely, prevention, detection, diagnostics, management and awareness. Each element has its own function in mitigating risks to prevent the introduction, establishment and spread of EPPs.

Offshore surveillance activities reduce the risk of exotic plant pests reaching our shores, provide assurance to the community about the biosecurity status of commodities imported into Australia, improve capacity in neighbouring countries and improve access to international markets. Border and post-border surveillance programs assist in preventing exotic plant pests entering into Australia, improve detection and response to biosecurity incursions, provide assurance of evidence of absence and facilitate market access opportunities.

Figure 1: The contemporary biosecurity continuum in Australia



- **Partnerships with stakeholders** – a shared responsibility between the Australian Government, states and territories, industry and the broader community.

Surveillance stakeholders share responsibility to enhance our capacity to identify, monitor and manage plant biosecurity risks. Shared responsibility and strong community ownership of biosecurity in Australia is central to the national biosecurity surveillance system, not only in early detection, but also in incursion management. The national plant biosecurity surveillance system will need to have increased alignment with stakeholders who will require clearly defined roles, to enable effective contribution and clearer decision making.

- **Risk based surveillance** – surveillance relying on scientific evidence, rigorous analysis and intelligence to identify and prioritise risks in order to appropriately allocate resources.

The strategy facilitates a risk based plant biosecurity surveillance system that allows surveillance efforts and resources to be targeted towards priority biosecurity risk areas to maximise surveillance returns. This risk based approach will be based on current scientific and economic evidence and will be informed by operational experience.

Risk based surveillance needs to be supported by information sharing, intelligence gathering, analytical capabilities and national and international networking. Improved data capture and information management systems will facilitate review mechanisms that encourage continual improvement and enhanced responsiveness to new challenges. New information and evolving science will guide surveillance activities backed by quality management, verification and audit systems.



- **Well-regulated** – surveillance backed by legislation and regulatory framework in order to be aligned with international standards.

The strategy will ensure surveillance legislation underpins and enables all aspects of surveillance activities. Legislative frameworks addressing surveillance must align with the principles and requirements of the SPS Agreement and the IPPC, as well as ISPMs.

Surveillance at the national, state and territory levels must also be consistent with international standards to maintain and improve market access at the domestic and international level.

- **Based on performance** – surveillance guided by performance indicators and economic principles.

The success of the strategy is dependent on achieving the following key performance indicators:

- A nationally co-ordinated and collaborative approach to plant pest surveillance.
- Evidence based system for recording presence or absence of plant pests.
- Compliance with national and international standards, regulation, processes and procedures.
- A well-resourced surveillance system based on an analysis of the overall benefits and costs of surveillance.

Expected outcomes

Implementation of the NPBSS will provide:

- A nationally coordinated and risk based surveillance system that is consistent, transparent and supported by effective protocols and standards that are responsive to a dynamic biosecurity environment.
- A consistent management of surveillance data through harmonised and compatible data formats and systems using appropriate IT infrastructure to support biosecurity decision making and claims of area freedom from plant pests.
- A productive and comprehensive surveillance partnership involving government, industries and the broader community in the collection, analysis and the reporting of surveillance data.
- An integrated national surveillance research and development capability contributing to the improved design and increased uptake of surveillance methodologies.
- A legal and regulatory framework that promotes the delivery of national surveillance programs in accordance with international standards.





Recommendations



Recommendations developed in this strategy are consistent with the intent of the NPBS and the IGAB. Recommendations 1, 3, 11, 12, 14, 15 and 17 of the NPBS and Schedules 2, 3, 4, 5, 6, 7, and 8 of the IGAB are the key strategies considered here. However, it is recognised that additional Recommendations and actions from the NPBS and the IGAB also impact on the national plant biosecurity surveillance system. While they have not been specifically covered in this strategy, the linkages through the overarching NPBS will ensure their implementation will occur in the national context. Alignments with the NPBS and IGAB are shown in Table 1. Implementation of the Recommendations contained within this NPBS will complement and deliver on a number of priority reform areas of the NPBS and the IGAB.

Recommendation S1:

Provide mechanisms for coordinating and establishing a nationally integrated and consistent plant biosecurity surveillance system and network that underpins Australia's biosecurity system

The implementation of a nationally coordinated plant biosecurity surveillance system will allow government, industry, and relevant stakeholders to actively participate in all aspects of plant biosecurity surveillance. This unified approach will bring together all jurisdictions and primary plant industries to create a nationally integrated surveillance system to facilitate trade negotiations and to assist maintenance of the health of natural environments as well as sustainable plant production systems.

A nationally coordinated, consistent, and science based surveillance system will enhance early pest detection, provide information for pest risk analysis, enable the timely capture and retrieval of data, and establish the pest status of an area in accordance with international standards. It will help Australian governments fulfil national and international surveillance obligations, facilitate trade certification, and the ability to access markets.

Developing, reviewing and implementing national surveillance policies will form the basis of coordinating operational surveillance needs across the biosecurity continuum including negotiations with state and territory governments. The policies should ensure responsiveness both to changing biosecurity risks and to new opportunities to manage those risks. Policy development will require continual engagement with national and regional plant committee structures and the IPPC.

Managing plant biosecurity risks and protecting our biosecurity status is a shared responsibility between all stakeholders, including all levels of government, industry, natural resource managers, custodians and users and the wider community. There are many areas where increased collaboration between stakeholders will result in significant improvements in biosecurity surveillance. These include co-ordination of research, biosecurity surveillance delivery and the sharing of expertise and information. The risk creators, beneficiaries and their roles and responsibilities should be well understood and all relevant parties should be part of cost-sharing arrangements for plant biosecurity surveillance.

Adopting a national framework for funding and managing surveillance activities will provide opportunities to standardise the surveillance effort across Australia. New agreements will outline areas of cooperation to build on the existing partnership between stakeholders. This will set out a process for identifying and reviewing priorities and ensure that unnecessary duplication is avoided.

Appropriate quality control and audit mechanisms are required to ensure that surveillance outcomes are not compromised and that stakeholders continue to meet their biosecurity obligations. Nationally agreed auditing procedures will allow regular reviews of surveillance activities conducted by various stakeholders to ensure the conformance of participating states and territories with the agreed requirements for managing plant biosecurity surveillance within their jurisdictions.

Recommendations (cont.)



The strategy must be supported by an integrated and coordinated plant pest surveillance network that is accessible to all plant biosecurity stakeholders. A national surveillance network is an important tool to promote collaborative links between stakeholders, share surveillance information, coordinate surveillance activities, increase awareness of pests, coordinate training and prioritise surveillance and research activities. It is the mechanism that will enable engagement of wider community, industry and government in surveillance at all points in the plant production and marketing supply-chain.

The development and retention of a competent skill base is essential to ensure that surveillance efforts are well resourced and based on science. Governments and industry should ensure they have the skills and personnel to effectively carry out plant biosecurity surveillance activities.

Appropriately trained industry groups and service providers should have the opportunity to become accredited by relevant government departments allowing them to participate in pest surveillance operations. The participation from appropriately trained and accredited practitioners will maintain quality assurance and enable governments to share surveillance efforts and better utilise surveillance resources.

Actions

- Action S1.1** Develop and implement national surveillance policies including guidelines and procedures to facilitate the establishment of risk and science based surveillance systems which are consistent with international standards.
- Action S1.2** Identify and agree on the roles and responsibilities of various stakeholders and define national priorities that the relevant parties will work on collaboratively to achieve national goals.
- Action S1.3** Develop and establish national agreements for funding and managing surveillance activities including infrastructure and capacity building in a collaborative manner.
- Action S1.4** Develop and maintain a nationally integrated surveillance network that underpins the plant biosecurity surveillance system.
- Action S1.5** Define capacity requirements and facilitate training to support surveillance activities including accreditation of private surveillance practitioners.
- Action S1.6** Develop work plans defining resources, timeframes, stakeholder responsibilities and communication strategies required to implement principles of the NPBSS.





Recommendation S2:

Establish a national surveillance information framework including the development of nationally agreed surveillance standards and protocols in order to optimise the collection, analysis and reporting of surveillance data

To support the varied surveillance activities across Australia there is a basic requirement for a nationally coordinated surveillance information management system to consolidate, store, and retrieve data. Such a system facilitates the effective sharing of surveillance information between national and international agencies, guides decision making at the regional, state and national level, and contributes to the evidence required when making official claims around Australia's pest free status.

A national surveillance information management system enables critical information to be collected in accordance with clearly defined national standards and will ensure consistency and optimum utility. It enhances analytical capabilities to support risk based surveillance and decision-making. A consistent reporting structure, combined with improved data capture provides the ability to aggregate data from a range of surveillance activities. Ongoing review mechanisms that encourage continual improvement and enhanced responsiveness to the changing environment are required both in terms of resources and success.

The process of pest risk assessment to determine the significance a pest poses to the industry or environment provides guidance on how to prioritise and best utilise surveillance resources. Identification of priority pests and high risk areas through pest risk analysis is central to developing a risk-based surveillance program that is focused on early detection.

Potential impacts, plausible pathways, pest and host biology together with surveillance and diagnostic capacity and national and international obligations are the criteria to be considered when assessing the risks that individual pests pose. High priority pests identified through this process would provide a basis for the development of surveillance standards and protocols.

Surveillance programs require minimum standards and aligned objectives that are agreed upon and clearly communicated throughout the national plant biosecurity surveillance system. A priority for all contributors and users of biosecurity surveillance information is the development and refinement of set guidelines and standards to allow for the accurate and consistent collection of surveillance data.

The structure of surveillance guidelines should be aligned with national and international requirements and provide generic principles to assist surveillance efforts. ISPMs provide overarching guidelines for the development of surveillance standards and protocols. However, specific protocols and techniques applicable to individual pests or pathways need to be developed and refined to account for environmental changes, land use patterns, pest detection history, habitat suitability, research findings and international stakeholder requirements.

Development of data standards is essential for the harmonisation of surveillance activities and standardisation of surveillance data. To ensure a more consistent approach to surveillance data sharing there is a need to develop and agree on national protocols that provide a statistical basis for demonstrating pest freedom. Specific surveillance plans must be developed for pests identified to have a high economic impact with regard to market access and/or where early detection would have a significant chance of eradication or containment. Government and industry priorities related to international market access should be given precedence in the development of protocols and data standards related to reporting.

In addition to aligning with international requirements, the standards and protocols need to have a level of statistical confidence, be scientifically justified, operationally feasible, non-trade distorting, and have a high level of transparency so that results are auditable by trading partners. The sharing and analysis of relevant national and international surveillance intelligence will also create an environment of understanding and learning that enables advancement and the continuous improvement of the national plant biosecurity system.

Information collected through general surveillance is fundamental for effective plant biosecurity surveillance and collectively provides a level of confidence that the pest, if present, would have been detected and reported. General surveillance data constitutes information from a variety of sources and therefore is less structured.

Recommendations (cont.)



To better define the use of general surveillance for assessing pest absence, a list of criteria to outline potential components that comprise general surveillance is required to be defined and technology to capture general surveillance data needs to be developed to provide an acceptable level of confidence in determining pest absence. These criteria and the technologies should follow international standards specifically ISPM 8 'Determination of pest status in an area'.

The collection and analysis of relevant national and international intelligence will create an environment of understanding and learning that enables advancement and the continuous improvement of the national plant biosecurity system.

Actions

- Action S2.1** Facilitate development and maintenance of a national surveillance information management system to capture, share and analyse surveillance information across the biosecurity continuum to assist with decision making and market access issues.
- Action S2.2** Develop a framework to identify and establish priority plant pests and high risk areas based on pest risk analysis.
- Action S2.3** Establish and communicate minimum standards and protocols for plant pest surveillance to ensure monitoring is done in the right places, on a sound statistical basis, using the best methods, resources and skills.
- Action S2.4** Develop nationally agreed guidelines to support surveillance requirements during emergency responses to plant pest incursions.
- Action S2.5** Develop and establish national performance standards and protocols to review and verify the effectiveness of plant biosecurity surveillance programs in order to align these with national and international standards.
- Action S2.6** Develop criteria to better define the role of general surveillance for assessing pest absence and identify opportunities and technology to capture general surveillance data to enhance targeted surveillance activities.
- Action S2.7** Develop and maintain a national market access information package containing relevant trade requirements to assist with the coordination, alignment and planning of plant pest surveillance activities.
- Action S2.8** Facilitate the analysis of risk pathways using data collected along the continuum from pre-border intelligence, border inspections and post border surveillance to update risk management strategies and measures.

Recommendation S3:

Establish mechanisms to engage industry and communities to ensure broader recognition of the importance of surveillance and collection of surveillance information

Working in isolation limits the ability of governments to successfully manage all aspects of biosecurity across the biosecurity continuum – particularly those activities related to surveillance, reporting of incidents and implementing tools to prevent incursions at the local and community level. However, engaging these stakeholders and motivating them to contributing towards Australia's biosecurity outcomes can be a challenging task which requires a careful and well planned approach. Effective community and stakeholder engagement in biosecurity requires capacity and relationship building, mutual learning and a sense of reciprocity.

The involvement of the appropriate stakeholders at different times is critical in the design and delivery of an effective plant biosecurity surveillance program. Good knowledge of potential surveillance stakeholders is also necessary to inform appropriate timing and manner of engagement, including the design of awareness materials.



Government departments, industry groups, and the private sector all have a role to play to varying degrees in the delivery of surveillance functions with some directly contributing to the collection of surveillance data. Emphasis should be placed on engaging with industry representatives and the general public in the development and implementation of surveillance programs. It is important that stakeholders are familiar with biosecurity concepts and the importance of their role in the monitoring and surveillance of plant pests.

Stakeholders need the knowledge, skills, motivation and resources to respond to plant pest surveillance related issues and find sustainable solutions to challenges faced. This capacity is typically built through awareness raising, information and knowledge exchange, training, and other forms of facilitation and support. Stakeholders will need to ensure that the groups they represent are fully involved and have the opportunity to positively influence the way surveillance information is collected.

A nationally coordinated system is required to provide comprehensive training in biosecurity awareness, key pest threats, reporting procedures and the standardised collection of surveillance data. Awareness and training programs relating to pest and symptom recognition, host recognition, and the identification of high risk pathways will contribute to more informed surveillance activities and more competent participation in surveillance throughout all sectors and target groups. With the appropriate training packages offered to key personnel the expertise and knowledge of industry service providers could be formally recognised and contribute to ensure the robustness of phytosanitary statements.

The key to general surveillance is awareness amongst target groups. Information about the impact of plant pests and diseases should be made available through well-coordinated national awareness programs. While general surveillance by growers, consultants, agribusiness, post-harvest sectors and research staff is undertaken through day-to-day activities, currently very little of this information is formally recorded. A formal process to collate and verify the legitimacy of this surveillance information will allow its contribution to national surveillance efforts supporting both domestic and international market access.

Existing surveillance agreements between stakeholders should be reviewed and revised to include a partnership approach with the provision of resources to support the surveillance activities. This will require establishment of a much more robust mechanism than currently exists. The agreements should be formal, legally binding between all parties and cover the management and funding of surveillance of high priority plant pests.

Stronger engagement and commitment from all key surveillance stakeholders such as growers, industry groups, government bodies and the public will enhance the capability of monitoring and surveillance of priority plant pests in Australia.

Actions

- Action S3.1** Develop stakeholder agreements between parties to help establish an operating environment that ensures delivery of effective and efficient plant pest surveillance programs.
- Action S3.2** Establish communication mechanisms to increase the awareness levels of stakeholders relating to pest information, surveillance protocols and standards to encourage collaborative efforts and effective participation in surveillance programs.
- Action S3.3** Identify funding, resource, training and infrastructure requirements necessary to facilitate the participation of general public in plant pest surveillance and reporting.
- Action S3.4** Foster the industry specific biosecurity plans and on-farm biosecurity manuals as a mechanism to engage growers in surveillance activities at the producer level.
- Action S3.5** Develop a framework to clarify how a range of surveillance activities, delivered by private or public sectors, can be recognised/endorsed by state, territory and federal authorities as contributing to evidence of pest freedom.

Recommendations (cont.)



Recommendation S4:

Enhance the national capacity and capability to undertake plant pest surveillance underpinned by targeted research, development and extension

Australia requires a surveillance system that is well resourced, is based on science and supported by flexible legislative capability. Science-based research is required to underpin biosecurity surveillance and help find new ways of achieving surveillance objectives to meet the changing and complex biosecurity environment. Research plays a key role in standardising and adopting new surveillance techniques which allow more efficient delivery of surveillance programs. There is a need to identify and encourage surveillance stakeholders to invest in research to develop more effective technology for surveillance.

Research on plant biosecurity surveillance is supported by a number of institutions including CRC's, RDC's, CSIRO, universities and private sector research institutions. Collaboration with overseas research and government organisations is also important to improve surveillance outcomes. Research efforts need to be coordinated, especially in developing technologies that would better assist the surveillance effort.

To ensure effective application of research outcomes, all surveillance stakeholders need to have ongoing engagement in the research and development process so that surveillance specific requirements continue to be recognised and addressed. There is a requirement to continually integrate research findings into the design of field/statistical protocols to ensure they are as effective as possible. Government and industry groups need to promote the use of cutting edge surveillance techniques utilising the best available research and technology.

The use of biometrics and risk analysis models will drive effectiveness and credibility of surveillance when aligned with international standards. Well-designed and statistically based surveillance activities will enable the collection and analysis of high quality surveillance data. Such reliable data is fundamental for developing risk analysis models to identify and prioritise plant pest risks.

Making investment decisions based on an analysis of the overall benefits and costs of surveillance will help to justify investments and guide surveillance decisions. Continued cost benefit studies, in collaboration with industry, are required to determine the priorities and the appropriate surveillance method.

A consistent and sustainable funding structure for surveillance research will ensure the establishment of a national surveillance system which is based on science and economic principles.

Actions

- Action S4.1** Facilitate research in surveillance to develop standardised, technically sound and cost effective sampling/survey methodologies for capturing high quality and quantifiable evidence for the absence of plant pests.
- Action S4.2** Facilitate coordination between research and development providers to develop robust surveillance protocols based on science and pest risk analysis.
- Action S4.3** Develop an extension strategy to promote the use of biometrics and surveillance research outcomes in plant biosecurity surveillance activities as well as in data analysis.
- Action S4.4** Facilitate the development of risk analysis models and undertake cost benefit analysis for identified priority pests and relevant surveillance activities to prioritise the allocation of resources.
- Action S4.5** Maintain and enhance capability, capacity and resources for surveillance research by establishing a sustainable funding structure.
- Action S4.6** Develop mechanisms to communicate surveillance outcomes through recognised networks to support Australia's pest status.



Recommendation S5:

Enhance the national surveillance system by adopting consistent legislation and regulatory approaches

Existing biosecurity legislation underpins many aspects of surveillance activities through threat identification, reporting and notification requirements. However, legislation and regulations for surveillance vary between states and territories. As the variations cannot be formally justified on scientific grounds, it results in added costs to industry, reduced competitiveness and potential confusion in market access negotiations

Legislative requirements for surveillance must therefore be consistent within Australia and aligned with international standards and agreements. The legal and regulatory framework at the national, state and territory levels can provide the mechanism through which surveillance programs are delivered.

Future amendments to legislation need to take into account the importance of having nationally agreed regulations that will promote a cohesive vision towards national surveillance goals. To strengthen the cooperative surveillance approach there is a need to foster further co-regulatory arrangements under which industry and third party bodies deliver surveillance services under government supervision.

To facilitate Australia's surveillance effort, the Australian Government ensures, through national leadership, a strong partnership with the states and territories, businesses and the community in developing and implementing more comprehensive regulation and legislation.

Actions

- Action S5.1** Facilitate a legislative framework to harmonise and increase consistency of regulatory approaches for plant pest surveillance at a national level to align with the principles and requirements of the IPPC standards.
- Action S5.2** Support nationally consistent application of legislation by fostering a collaborative approach between industry and government to regulations, compliance and enforcement mechanisms.
- Action S5.3** Ensure activities relating to plant pest surveillance have the necessary legislative backing.



Recommendations (cont.)



National Plant Biosecurity Surveillance Strategy

Recommendations	Actions	Outcomes
Provide mechanisms for coordinating and establishing a nationally integrated and consistent plant biosecurity surveillance system and network that underpins Australia's biosecurity system	<ul style="list-style-type: none"> • Develop and implement national surveillance policies and guidelines • Identify and agree on the roles and responsibilities of various surveillance stakeholders • Develop and establish national agreements for funding and managing surveillance activities • Develop a nationally integrated surveillance network • Define capacity requirements and facilitate training • Develop work plans to implement principles of the strategy 	A nationally coordinated and risk based surveillance system that is consistent, transparent and supported by effective protocols and standards that are responsive to a dynamic biosecurity environment
Establish a national surveillance information framework including the development of nationally agreed surveillance standards and protocols in order to optimise the collection, analysis and reporting of surveillance data	<ul style="list-style-type: none"> • Facilitate development of a national surveillance information management system • Develop a framework to identify and establish priority plant pests and high risk areas • Establish and communicate minimum standards and protocols for surveillance • Develop guidelines to support surveillance requirements during emergency responses • Develop and establish national performance standards and protocols to review the system effectiveness • Develop general surveillance criteria and facilitate to capture general surveillance data • Develop and maintain a national market access information package containing relevant trade requirements • Facilitate risk management strategies and measures 	A consistent management of surveillance data through harmonised and compatible data formats and systems using appropriate IT infrastructure to support biosecurity decision making and claims of area freedom from plant pests
Establish mechanisms to engage industry, regions and communities to ensure broader recognition of the importance of surveillance and collection of surveillance information	<ul style="list-style-type: none"> • Develop stakeholder agreements for effective and efficient surveillance programs • Establish communication mechanisms to increase stakeholder awareness to encourage collaborative surveillance • Identify mechanisms necessary to facilitate the participation of general public in surveillance • Foster the industry biosecurity plans and on-farm biosecurity manuals as a mechanism to engage growers • Develop a framework to recognise surveillance delivered by private or public sectors as contributing to evidence of pest freedom 	A productive and comprehensive surveillance partnership involving government, industries and the broader community in the collection, analysis and the reporting of surveillance data



Recommendations	Actions	Outcomes
<p>Enhance national capacity and capability to undertake plant pest surveillance underpinned by targeted research, development and extension</p>	<ul style="list-style-type: none"> • Facilitate research to develop standardised, technically sound and cost effective surveillance methodologies • Facilitate coordination between research and development providers in surveillance research • Develop an extension strategy to promote the use of biometrics and surveillance research outcomes in surveillance • Facilitate the development of mechanisms or models to prioritise the allocation of resources • Establish a funding structure to maintain and enhance capability, capacity and resources for surveillance research • Develop mechanisms to communicate surveillance outcomes through recognised networks 	<p>An integrated national surveillance research and development capability contributing to the improved design and increased uptake of surveillance methodologies</p>
<p>Enhance the national surveillance system by adopting consistent legislation and regulatory approaches</p>	<ul style="list-style-type: none"> • Develop a legislative framework to increase consistency of regulatory approaches for surveillance • Foster a collaborative approach between industry and government to support consistent application of legislation • Ensure activities relating to surveillance have the necessary legislative backing 	<p>A legal and regulatory framework that promotes the delivery of national surveillance programs in accordance with international standards</p>



Acronyms and abbreviations



DAFF	Department of Agriculture, Fisheries and Forestry
EPP	Emergency Plant Pest
EPPRD	Emergency Plant Pest Response Deed
IGAB	Inter-governmental Agreement on Biosecurity
IPHP	International Plant Health Program
IPPC	International Plant Protection Convention
ISPMS	International Standards for Phytosanitary Measures
NAQS	Northern Australia Quarantine Strategy
NPBS	National Plant Biosecurity Strategy
NPHSP	National Plant Health Surveillance Program
NBPSS	National Plant Biosecurity Surveillance Strategy
PHA	Plant Health Australia
PHC	Plant Health Committee
SNPHS	Subcommittee on National Plant Health Surveillance
SPS	Sanitary and Phytosanitary Measures
WTO	World Trade Organisation



Glossary



Area freedom	Absence of a specific pest in a specified location (which may include pest free areas, pest free places of production or pest free production sites).
Biosecurity activities	Activities undertaken to manage biosecurity risks.
Biosecurity continuum	Describes the range of locations where biosecurity risks may arise and where biosecurity activities take place – pre-border, at the border and post-border.
Border	In relation to the biosecurity continuum: airports, seaports and land borders that represent the potential point of entry for a pest into Australia.
Commonwealth	The Commonwealth of Australia, including its external territories.
Diagnostics	Processes and standards associated with the accurate identification of a pest.
Domestic quarantine	Activities designed to prevent the movement and spread of pests within Australia.
Emergency Plant Pest	<p>A pest that is included in Schedule 13 (of the EPPRD) or which is determined by the Categorisation Group to meet one or more of the following criteria:</p> <ul style="list-style-type: none"> A. It is a known exotic Plant Pest the economic consequences of an occurrence of which would be economically or otherwise harmful for Australia, and for which it is considered to be in the regional and national interest to be free of the Plant Pest. B. It is a variant form of an established Plant Pest which can be distinguished by appropriate investigative and diagnostic methods and which, if established in Australia, would have a regional and national impact. C. It is a serious Plant Pest of unknown or uncertain origin which may, on the evidence available at the time, be an entirely new Plant Pest or one not listed in Schedule 13 and which if established in Australia is considered likely to have an adverse economic impact regionally and nationally. D. It is a Plant Pest of potential economic importance to the area endangered thereby and not yet present there or widely distributed and being officially controlled, but is occurring in such a fulminant outbreak form, that an emergency response is required to ensure that there is not either a large scale epidemic of regional and national significance or serious loss of market access.
Emergency Plant Pest Response Deed	A pre-agreed cost sharing and response framework for dealing with an incursion of an EPP
Established pest	A plant pest that is perpetuated, for the foreseeable future, within any area and where it is not feasible (whether in terms of technical feasibility or a benefit/cost analysis) to eradicate.
Exotic pest	A plant pest that do not normally occur in Australia.
High Priority Pest	A plant pest that has been identified to have one of the highest potential impacts to a particular plant industry and is listed in an IBP or in Schedule 13 of the EPPRD. An outcome of a prioritisation process.
Plant pest	This strategy covers all plant pest organisms, including insects, mites, snails, nematodes and pathogens, that are harmful, injurious or damaging to plants, plant products or bees (this strategy does not cover weeds or parasitic plants).
Pest free area	An area in which a specific pest does not occur as demonstrated by scientific evidence and in which, where appropriate, this condition is being officially maintained.

Glossary



Phytosanitary measure	Any legislation, regulation or official procedure having the purpose to prevent the introduction and/or spread of pests, or to limit the economic impact of regulated pests.
Plant biosecurity	Plant biosecurity is a set of measures which protect the economy, environment and community from the negative impacts of plant pests. A fully functional and effective biosecurity system is a vital part of the future profitability, productivity and sustainability of Australia's plant production industries and necessary to preserve the Australian environment and way of life.
Plant industries	Covers agriculture, horticulture, forestry and amenity plants and plant products.
Post-border	In relation to the biosecurity continuum: region's inside Australia's border.
Pre-border	In relation to the biosecurity continuum: region's outside Australia's border.
Quarantine	The system of measures which are used to minimise risks associated with the entry of pests.
Risk analysis	The process of evaluating scientific and economic evidence to determine the risk posed by a pest to Australia's environment, plant industries and economy.
SPS Agreement	The Agreement on the Application of Sanitary and Phytosanitary Measures of the WTO, to which all WTO member countries are bound.
State and territory governments	The state and territory governments of Australia.
Surveillance	Processes which collect and record data on pest occurrence or absence by survey, monitoring or other procedures.



Image courtesy of Jo Slattery, Plant Health Australia





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