Final Report
Annual Surveillance Workshop 2017

Establishing a National Plant Biosecurity Surveillance Network and scoping a network website

Location:	**Level 1**
	1 Phipps Close
	DEAKIN ACT 2600
Phone:	**+61 2 6215 7700**
Fax:	**+61 2 6260 4321**
E-mail:	**biosecurity@phau.com.au**
Visit our web site:	**www.planthealthaustralia.com.au**

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.

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Summary – Establishment of a plant biosecurity surveillance network

The purpose of this Grant was to investigate challenges, opportunities and requirements for the establishment of a national plant biosecurity surveillance network through delivery of the Annual Surveillance Workshop, held at the EcoSciences Precinct in Brisbane on the 24-25 May 2017.

This workshop was used as a forum to gather information from a range of surveillance practitioners and decision makers in government and industry, including representatives from New Zealand, on the purpose and requirements of a network including:

- Establishing the requirements for a national plant biosecurity surveillance network (NPBSN) that assists practitioners, decision makers and individuals interested in surveillance to strengthen their capacity and capability and better coordinate surveillance efforts.

- Determining the requirements for developing communication and awareness to promote and improve the plant biosecurity surveillance system

- Determining stakeholders who would benefit from being part of a surveillance network.

To achieve this, presentations and discussion sessions within the workshop were used to assess how a surveillance network could support and improve plant biosecurity surveillance outcomes and identify key priorities for development of a network.

This work builds on activities of the Surveillance Network Implementation Working Group (SNIWG), a working group under the Sub-Committee for National Plant Health Surveillance (SNPHS).

Key workshop outcomes

- Plant pest surveillance is complex, with the potential to affect or involve stakeholders from all levels of government, all aspects of plant industries, importers, retailers, natural resource management and the broader community.

- At the start of the workshop, attendees gave a range of responses when asked what they saw as the value of a surveillance network, with 58% indicating it would be of significant value and 25% indicating good value. 3% saw little value and 14% were unsure of the value. At the end of the workshop, all respondents indicated it would be of significant value (86%) or good value (14%).

- Key deliverables of a surveillance network are to:

  1) Improve skills - build capacity and capability

  2) Facilitate connections – create linkages between surveillance practitioners and those requiring surveillance outcomes

  3) Provide tools and resources to improve surveillance – repository for protocols, apps, data, methodology etc.

- The following areas were identified priorities to progress a surveillance network:

  o Development and roll out of capability and capacity in surveillance. In particular a need for survey design/surveillance planning workshops was identified to improve skill sets in this area nationally.

  o Development of a website/portal to provide a repository of information and facilitate linkages between people and groups through enhanced communication.

  o A program of placements (residentials) for improving individual's skills and facilitating connections.

  o Simulation exercises (for training purposes).

- o Creation of a database of experts and expertise.
- o Stakeholder network mapping to identify experts and groups undertaking surveillance/crop monitoring.
- o Development of a capability framework for improving skills and providing guidelines for skills delivery
- o Surveillance week/annual surveillance workshop to bring together international, national and industry experts.
- Challenges of establishing a surveillance network were discussed, with the main impediments identified as those of clearly defining the value of a network for members. Many of these challenges could be resolved with developing a business case that clearly outlines the vision, scope, aims roles and responsibilities and value proposition for stakeholders and this activity is currently being addressed through work being undertaken by SNIWG.
- To commence the establishment of a plant biosecurity surveillance network, several activities were felt to be critical immediate requirements. These included (in no specific order):
  - o A funding source identified and secured
  - o Sponsors to create and drive the network
  - o Champions to support and promote the network for different stakeholder groups
  - o The vision, purpose and intent of the network defined and promoted
  - o Personnel nominated to drive implementation
  - o Launch of the network
  - o Membership initiated
  - o A website developed to act as central point for dissemination of network activities
  - o A name and logo for the network
  - o The scope of the network to be defined and a business case for its development prepared
  - o A communication plan and communication tools (e.g. website, social media, engagement plan) developed
  - o Mechanisms to measure the uptake and success of the network
  - o Summary of this workshop circulated to workshop attendees

Background to the national plant biosecurity surveillance network

In 2016, the Surveillance Network Implementation Working Group (SNWIG), formed under the Subcommittee on National Plant Health Surveillance (SNPHS), commenced planning for the establishment of a national plant biosecurity surveillance network (NPBSN). This activity was identified within the SNPHS work plan as a key deliverable to support Recommendation S1 of the National Plant Biosecurity Surveillance Strategy to 'Provide mechanisms for coordinating and establishing a nationally integrated and consistent plant biosecurity surveillance system and network that underpins Australia's biosecurity system'.

The NPBSN will provide a platform for communication about plant pest surveillance and act as a virtual coordination point for surveillance professionals and practitioners to strengthen surveillance capacity and capability across Australia. The concept of the NPBSN follows the successful establishment and maintenance of the National Plant Biosecurity Diagnostic Network, however it was recognised that surveillance is more complex than the diagnostic

model as it comprises many purposes with many different stakeholders across all levels of government, industry and the community.

To progress planning for the NPBSN, the Annual Surveillance Workshop was used as an opportunity to engage with potential stakeholders to identify the purpose, benefits and requirements to assist and provide direction for further development of the network. The intent of the workshop was to gather information from a range of people involved in crop or plant health monitoring, or those with an interest in improving access to plant health surveillance information. By doing this, stakeholders were provided the opportunity to take ownership of the network.

The workshop was held on the 24-25 May 2017 in the Conference Room of the EcoSciences Precinct, 41 Boggo Rd, Brisbane. A networking dinner was held on the 24 May 2017.

The workshop was coordinated by PHA and the Chair of the SNIWG. To ensure broader engagement across government and state jurisdictions, this grant provided support to assist travel costs for non-Australian government attendees through payment for flights and one night's accommodation.

Workshop preparation

Planning for this Workshop was undertaken by a Steering Group comprised of members of PHA and DAWR (Sharyn Taylor, Stephen Dibley, David Gale, Darren Peck [SNIWG Chair], Sophie Peterson and Madeleine Peachey). Steering Group members met by teleconference on the 8 December 2016, and 25 January 2017 and face to face on 3 March 2017. Planning support has also been provided by members of the Surveillance Network Implementation Working Group (Linda Baker, Laura Fagan, Rosalie McCauley, Francisco Tovar, Jutta Tuerck and Catherine Mathenge). An additional face to face meeting was held between Sharyn Taylor, Stephen Dibley, David Gale and Darren Peck on the 21 April to confirm details for facilitation and activities in each session.

Development of the attendee list and planning for the sessions within the workshop was undertaken and an invitation was circulated to over 60 attendees on the 10 February 2017, to notify potential attendees of the date, purpose and venue.

Detailed session plans were developed by the Steering Group to outline activities within each session.

The workshop was broken into four main themes:

- Introduction and Background

    o Information on the background to the work undertaken by the SNIWG, the proposed National Plant Biosecurity Surveillance Network and the complexity of the surveillance system. A presentation was also given on the National Plant Biosecurity Diagnostic Network as a working example of a practitioner's network.

    o Attendees were asked to consider where they fit within the surveillance system.

- Identifying and prioritizing elements of a surveillance network

    o Presentations were given on different aspects of surveillance including incursion response, early detection and accessing general surveillance through an existing crop monitoring network (CropSafe).

    o Attendees workshopped the potential benefits of a surveillance network and determined what they saw as the key components of a network to facilitate connections, improve skills and provide resources and tools to support surveillance.

    o These components were prioritised and requirements for key priorities were defined.

- Identifying and prioritizing stakeholders

    o Attendees were asked to consider the types of stakeholders the network should focus on and determine which of the key components of a network will be needed for different stakeholders.

- Establishing and maintaining a surveillance network

    o Attendees identified challenges for establishing a surveillance network and proposed solutions to meet these challenges.

    o The workshop determined the critical activities and enablers that would need to be put in place to establish a network.

The following sections describe the outcomes of these workshop sessions in terms of identifying the value of a surveillance network, potential stakeholders in a network and key components required for a surveillance network.

The value of a plant biosecurity surveillance network

Attendees at the workshop were comprised of a mix of government (13 Commonwealth, 14 state government, 2 New Zealand government), researcher (5), industry (3), research funding body (2), and natural resource management (1) (Figure 1, Appendix 1). At the commencement of the workshop, attendees were asked to describe the value of a plant biosecurity surveillance network. While most indicated they saw either significant value (58%) or good value (25%) in a surveillance network, 3% indicated it would be of little value and 14% were unsure of the value it could provide.

Following presentations and discussions of the potential components of a network and how different stakeholders could use these components, all attendees saw either significant value (86%) or good value of a network (14%).

**Figure 1**   **Attendees at the Annual Surveillance Workshop, 2017**

The bigger surveillance picture and stakeholder mapping

Surveillance for plant pests is complex, with stakeholders involved in Policy, Operations, Analytics, reporting and data capture. Surveillance has the potential to affect or involve stakeholders from government (Commonwealth, state and territory and local), industry (peak representative bodies, growers and industry personnel), natural resource management, environment and community both in potentially undertaking surveillance activities and as beneficiaries of surveillance outcomes.

To open discussions on the complexity of the surveillance system, attendees were asked to determine where they placed themselves in the areas within Figure 2. As part of these discussions, attendees indicated that extension, engagement and communication were an integral part of surveillance, and this area has been included in Figure 2.

Most attendees placed themselves in Policy/Operations, with gaps in analytics and reporting. This was felt to be partially a result of gaps in the composition of the attendee list but also a real reflection of issues with resourcing and accessing skilled personnel in this area and was identified throughout the workshop discussions as a key area requiring capacity and capability improvement.

Figure 2   Diagrammatic representation of the national surveillance system in Australia.
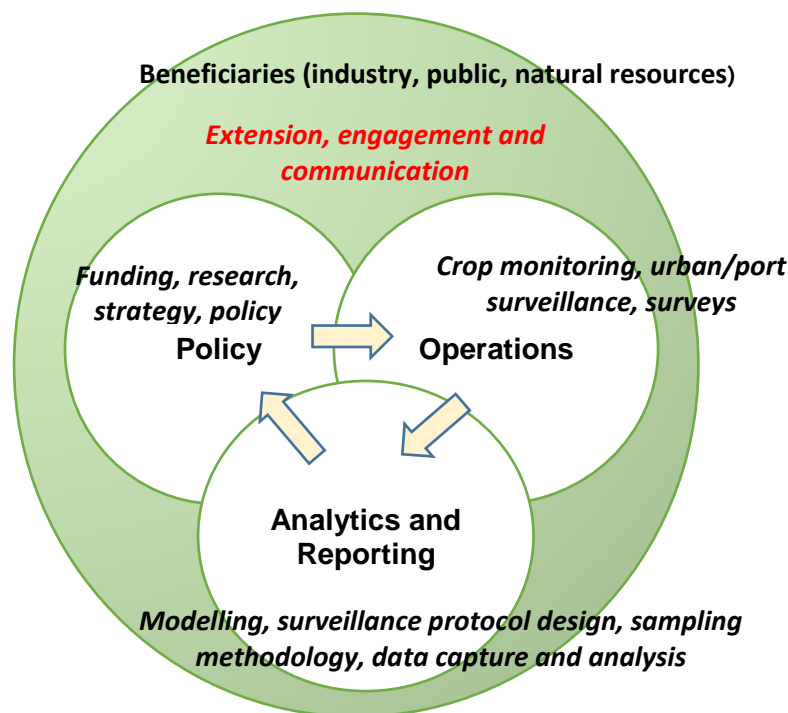
Stakeholder identification and mapping was continued on Day 2 of the workshop, with attendees providing input on the broad stakeholder groups that benefit from a surveillance network. The following groups were identified as being potential stakeholders, however it was recognised that many more could be added to this initial list.

- Growers
- Agronomists/crop scouts
- Biosecurity Officers
- Importers/retailers
- NRM groups
- Post-harvest (bulk handling companies, packing sheds etc.)
- Extension Officers
- Issues-based biosecurity groups
- Researchers – government, private sector, universities
- Surveillance professionals/practitioners

- Conservation volunteers
- Rangers
- QA companies
- Diagnosticians – entomologists, pathologists
- Special interest groups
- Local councils
- Botanic Gardens
- Bee Keepers
- Ethnic communities
- Utility companies
- Schools and education
- Pest controllers

Components of a plant biosecurity surveillance network

Three components had been identified by the SNIWG prior to the workshop as important requirements for a successful plant biosecurity surveillance network. These components included:

1) Improving skills

This component reflected the need to build capacity and capability in all aspects of the human resources required for surveillance including development of survey designs, data analysis and methods for undertaking surveillance.

Workshop attendees identified that a key feature of a program to improve skills would be its scalability to consider different options for training across many stakeholders. Examples of these options were simulation exercises, workshops, webinars, train-the-trainer programs and placements (residentials) between surveillance groups. A resource library was felt to be a key enabling tool for maintaining surveillance skills. Attendees identified that the main skills that were currently required were field sample triage to improve the quality of material being sent to diagnostic laboratories, biometrics capability and survey design and improved surveillance methods however further work with a wider range of stakeholders is likely to characterise more areas where skills could be improved.   Development of a 'capability framework' was highlighted as a potential mechanism for identifying available skill sets (and gaps in skill sets across the network) as well as maintaining nationally consistent skills delivery.

2) Facilitating connections

This component described the need to create opportunities for linkages between those personnel requiring surveillance to be undertaken and surveillance practitioners, biometricians, industry or natural resource management experts. Facilitating connections will improve the opportunities for people to meet or identify those with differing skills sets and is seen as a critical outcome of the surveillance network.

Workshop attendees identified that development of a surveillance network 'map' of experts and specialists would improve access to people and resources. A mechanism to commence building connections would be the establishment of a user-friendly website/portal to document network members, skills and available tools as this would create the ability to links between government and industry surveillance/crop monitoring experts.

Annual workshops and the concept of a "Surveillance week" to promote and link international, national and regional surveillance initiatives were also identified as mechanisms to facilitate connections. Residentials and developing 'Communities of Practice' were seen as methods for not only developing skills, but creating linkages to support knowledge sharing.

3) Providing tools and resources

Surveillance requires access to information in the form of protocols, types of surveillance tools and techniques suitable for different pest types and different locations. This component included information and knowledge sharing to inform surveillance efforts such as surveillance data, pathway analyses, risk assessments etc.

A resource library for surveillance was seen as a key requirement of the network (e.g. a library of protocols, survey design tools, pest information, apps, surveillance models etc.). Data repositories such as AusPestCheck, GERDA, Atlas of Living Australia were felt to be essential elements in this area to demonstrate surveillance efforts, increase engagement across the network and identify gaps. The ability to provide pest alerts and announcements and provision of a calendar of surveillance events would assist in coordinating a nationally consistent surveillance system.

Prioritising implementation of components of the surveillance network

Following the identification of the key areas and types of activities required for development of a surveillance network, workshop attendees were asked to consider the potential impact and ease of implementation of each activity. While a useful exercise in determining areas and activities that were of higher importance or potentially easier to undertake, it should not be considered a final outcome. Further discussion amongst attendees (Figure 3) indicated that while some of the larger activities were complex and difficult to implement in their entirety, if broken into smaller components, activities become easier to initiate and implement. An example given was the development of a triage framework that would improve the quality, and reduce the number of samples, delivered to diagnostic laboratories for verification. While a complete set of guidelines for triaging all types of samples was a very large and difficult exercise, if implemented in stages, development of guidelines becomes more achievable and the impact will increase as each guideline is added. The 'implementation matrix' of network components is provided in Figure 4.

Figure 3 **Workshopping session to prioritise components of a surveillance network**

Figure 4   Implementation matrix for activities identified as required for a surveillance network (Green = Tools and resources; Pink = Improving skills; Yellow = Facilitating connections)

Not surprisingly, none of the components of a surveillance network were identified as being of Low impact, and the scale shown in Figure 4 reflects the bulk of activities on the High Impact axis. From this list, attendees further prioritised the following activities as being of highest importance:

- Development and roll out of survey design/surveillance planning workshops to improve skill sets nationally.
- Development of a website/portal to provide a repository of information and facilitate linkages between people and groups.
- A program of placements (residentials) for improving skills and facilitating connections.
- Simulation exercises as a way of improving skills.
- Creation of a database of experts and expertise.
- Stakeholder network mapping to identify experts and groups undertaking surveillance/crop monitoring.
- Development of a capability framework for improving skills and providing skills delivery guidelines.
- Surveillance week/annual surveillance workshop to bring together international, national and industry experts.

Challenges in establishing a surveillance network

In order to establish and maintain a functional, effective plant biosecurity surveillance network, the following key challenges were identified:

- Attracting and retaining members
- Sharing information and data
- Securing resourcing
- Clarifying and maintaining the purpose of the network
- Defining the owner of the network

Workshop attendees were asked to consider potential impediments and solutions to each of these challenges (Table 1). Many of the impediments were associated with defining the value of a network for members and could be resolved with developing a business case that clearly outlines the vision, scope, aims roles and responsibilities and value proposition for stakeholders.

Table 1 Impediments and solutions associated with establishment of a network

Attracting and retaining members	
Impediments	**Solutions**
Lack of awareness of the network	Advertise and promote the network including its purpose and benefits
Network doesn't meet the needs of its members	Conduct a user needs analysis and ensure there is ongoing review and feedback from members – surveys; targeted discussions; listen to members
Not enough time for members to be involved	Commitment from agencies and dedicated FTEs to support the network activities; deliver training and information through more effective methods such as webinars and on-line activities
Not enough support from members' organisations	For government members, needs to be driven through PHC. Demonstrate the value proposition and deliver activities, tools, outcomes that provide support for involvement
No dedicated resources to drive the network	Demonstrate the value proposition of the network through development of a business case
Poor clarity on who should be involved	Develop a strategy and governance to define who should be involved in the network
Lack of consistency in IT, data management systems etc.	
Diminishing number of experts	
Difficulty of demonstrating the value of the network in the early stages of its development Lack of influence of the network	Make sure it is relevant and provides value to members Demonstrate the value proposition and deliver activities, tools, outcomes that provide support for involvement
No funding for capacity building and networking	Demonstrate the value proposition and deliver activities, tools, outcomes that provide support for involvement Ensure there are dedicated resources for surveillance

Lack of skills in using new surveillance technologies	Provide training through workshops, webinars, online support etc.

Sharing information and data	
Impediments	**Solutions**
Privacy, trust, security issues surrounding sharing data Commercial in confidence Payment for data	Identify and provide transparent benefits for data sharing (e.g. market access, improved management)
Trade impacts and sensitivities; permissions for data sharing	Share knowledge not data; Provide variable access to data i.e. determine permissions for access
QA/ accuracy/ currency of data	Clarify purpose of data capture; establish protocols and a forum for discussing protocols
Data in many formats	Standardise to NMDS (data standards and fields of data collection)
Defining what to share, who with, how, when	Define data publication process; use creative commons, define metadata

Securing resourcing	
Impediments	**Solutions**
Define who provides resources - Convincing funders of the value of the network - Ensuring valuable outcomes are delivered - Benefits are not always obvious and can take time to develop	Define the budget and the network participants Provide a cost benefit analysis Actively endorse outcomes of a network Evaluate effectiveness over time
Lack of continuity of funding - Seed funds required to establish the network - In-kind required to build and maintain the network	Clearly identify outcomes that address gaps in the system Seek industry and government engagement Consider membership fees? Develop a long term strategy for implementation
Ongoing ownership	Resources and a sponsor required for long term stability
Ongoing expertise	Links to industry and academia Ongoing effort put in to securing and maintaining membership

Clarifying and maintaining the purpose of the network	
Impediments	**Solutions**
Differing agendas and needs of members and stakeholders	Consultation and negotiation to balance differing agendas and needs; Define the vision, mission and scope of the network
Availability of people	Ensuring ongoing resourcing will provide $$ and people PHC to drive within their own organisations
No vision, mission, objectives – lack of clearly defined scope and aim	Define the vision, mission and scope of the network (time bound and ensure review points); Demonstrate the value proposition of the network through development of a business case

Network lacks agility and adaptability	Ongoing consultation and resources to manage changes required. Identify the person/group accountable for updating
Defining the owner of the network	
Impediments	**Solutions**
Independence; is the owner/leader of the network independent and able to represent all members and stakeholders?	Define roles and responsibilities within a Business Plan and define Terms of Reference for the governance model
Effective governance; effective delegation to spread the load	Governance model developed which includes clearly defined roles and responsibilities
Finding an individual or group with appropriate skills who has the time	Allocate appropriate resources; define the role; define the ToR
Restrictions on we portal for users due to requirements of the owner/leader	Find solutions outside of firewalls to ensure all members have access to the network

The path forward – immediate requirements for establishment of a plant biosecurity surveillance network

To commence the establishment of a national plant biosecurity surveillance network, several activities were felt to be critical immediate requirements. These included (in no specific order):

- A funding source identified and secured

- Sponsors to create and drive the network

- Champions to support and promote the network for different stakeholder groups

- The vision, purpose and intent of the network defined and promoted

- Personnel nominated to drive implementation

- Launch of the network

- Membership initiated

- A website developed to act as central point for dissemination of network activities

- A name and logo for the network

- The scope of the network to be defined and a business case for its development prepared

- A communication plan and communication tools (e.g. website, social media, engagement plan) developed

- Mechanisms to measure the uptake and success of the network

- Summary of this workshop circulated to workshop attendees

Several of these critical elements have been commenced through work undertaken by the SNIWG, including development of a business case and governance documents articulating the purpose and vision for the network. Outcomes from this workshop will be used to provide supporting information for these documents. SNIWG has been nominated as the group to drive implementation, with other nominees putting their names forward to assist as a result of the workshop. The network membership was initiated from workshop attendees agreeing to be provide contact details. Development of a website was seen as a critical enabler to support the initiation and ongoing activities of the network, and the following section provides potential options for website development.

Scoping for development of a plant biosecurity surveillance network website

Within the workshop, a website that provides a portal for communication between network members and a mechanism to provide information on activities within the plant biosecurity surveillance system was identified as a critical enabler to initiate and maintain the network. While work has been undertaken by the SNIWG to assess requirements for a website, full scoping to provide a user-needs analysis will be required if a portal is to be developed for all stakeholders for Community, Industry and Government.

It is suggested that three potential options could be pursued for the development of a Plant Biosecurity Surveillance Network portal, depending of the scope and scale of activities required. These options are outlined below.

1) Basic surveillance network site

Development and maintenance of a landing page containing a Member registry, announcements and basic information on plant biosecurity surveillance could be undertaken for approximately $10,000 for development and $3,000 ongoing costs per annum. This basic site will be largely static and only for direct members of the plant surveillance network. SNIWG would conduct a basic user-needs analysis to tailor the site for the requirements of potential stakeholders in government. This approach would provide an inexpensive starting point for a surveillance network website. This site would be housed at Plant Health Australia with administrative support provided by the SNPHS secretariat to update the membership registry and announcements for the surveillance network.

2) Surveillance network portal for government and key industry stakeholders within a plant biosecurity surveillance network

This option would provide a more detailed user-needs analysis to identify requirements for government and key industry stakeholders in a user-friendly, interactive site. To explore efficiencies, it is suggested that this is connected to work occurring in the redevelopment of the National Plant Biosecurity Diagnosticians Network website. This option would involve the following:

   a. Two joint meetings of the SNIWG and the Network Implementation Working Group of SPHD at a cost of $14,000. This would be comprised of an initial meeting (costing $4,000) to scope requirements and synergies between surveillance and diagnostic needs) and a second meeting (costing $10,000) with both working groups and the website developer to assess the website to ensure it meets the needs of both surveillance practitioners and diagnosticians.
   b. Development of a wireframe that displays the proposed structure and functional elements of the website. Providing linkages could be identified to existing work being undertaken for the National Plant Biosecurity Diagnosticians Network website, estimated costs for this development are $8,000.
   c. Testing, evaluation for stakeholders and potential modification of the website are estimated to be $15,000.
   d. Project management will be required and this is estimated to be a further $20,000 per annum.

Total costs for this option are $57,000 for development and $5,000 per annum for ongoing maintenance. If synergies can be identified, the surveillance web portal would be linked to the National Plant Biosecurity Diagnosticians Network website and would be housed at Plant Health Australia with administrative support provided by the SNPHS secretariat. Should no benefit be identified in linking the Surveillance website with the Diagnosticians website, it is anticipated costs for development will largely remain the same as complexity of the site will be reduced. Benefits of this option are the assessment of potential synergies between surveillance and diagnostics needs and the overall development of a tailored website for surveillance for government and key industry stakeholders.

3) Surveillance network portal for a full range of stakeholders

Given the complexity of plant biosecurity surveillance systems in Australia, it is anticipated that the ability to connect with government (policy and surveillance practitioners at all levels of government), research institutions (e.g. experts in survey design as well as surveillance practitioners), industry (surveillance crop scouts, industry leaders and growers), environment (personal working in national parks, reserves, landscape management, conservation groups etc) and community (special interest groups, urban and peri-urban communities etc) will be required to broaden the surveillance network to anyone with an interest in plant health. The portal would comprise member-only areas for specific resource libraries and support tools for surveillance. It is proposed that this option would also create Communities of Practice for specific surveillance needs and links to social media to broaden community engagement in plant biosecurity surveillance. This option would also use synergies with the redevelopment of the National Plant Biosecurity Diagnosticians Network website and also consider the opportunity provided by linkages to an existing initiative called eXtensionAus being driven through a partnership between RIRDC, GRDC and Agriculture Victoria. Requirements for this option would be:

a. Two joint meetings of the SNIWG and the Network Implementation Working Group of SPHD at a cost of $14,000. This would be comprised of an initial meeting (costing $4,000) to scope requirements and synergies between surveillance and diagnostic needs) and a second meeting (costing $10,000) with both working groups and the website developer to assess the website to ensure it meets the needs of both surveillance practitioners and diagnosticians.

b. In this option, a third meeting to conduct a broader user-needs analysis for a wide range of industry and community stakeholders would be recommended to inform the development of the wireframe, proposed structure and functional elements at a cost of $15,000.

c. Development of a wireframe that displays the proposed structure and functional elements of the website. Providing linkages could be identified to existing work being undertaken for the National Plant Biosecurity Diagnosticians Network website, estimated costs for this development are $10,000.

d. Linkages to eXtensionAus to develop sites for Communities of Practice and social media (including the use of social media monitoring tools to broadly monitor crop monitoring activities). This is expected to cost a minimum of $35,000 plus an additional $8,000 per annum for each Community of Practice (it is estimated 3 Community of Practice sites will be needed however savings would be possible if fewer groups were needed). If full partnership to eXtensionAus is deemed necessary, this will cost a further $40,000.

e. Testing and evaluation with stakeholders is estimated to be $15,000.

f. Given the scale of this project, project management will be required and this is estimated to be a further $30,000 per annum.

Total costs for this option are estimated to be $183,000 if full membership to eXtensionAus is necessary. Given Agriculture Victoria is a member of eXtensionAus, full membership may not be required, and total costs would therefore be reduced to $143,000. The main surveillance network webpage would by hosted at Plant Health Australia to maintain consistency with the Diagnostic Network model, with links to hosting of Communities of Practice within eXtensionAus as required. Benefits of this approach would be a tailored portal with full functionality to support different Communities of Practice for surveillance, a resource library for surveillance tools as well as improved monitoring of potential biosecurity surveillance through social media.

Appendix 1   Workshop attendees

Name	Organisation
Mike Ashton	Queensland Department of Agriculture and Fisheries
Linda Baker	Department of Agriculture and Water Resources
Simon Barry	CSIRO
Dale Boyd	Agriculture Victoria
Mark Bulliens	MPI, New Zealand
Greg Chandler	Department of Agriculture and Water Resources
Bill Crowe	Department of Agriculture and Water Resources
Stephen Dibley	Plant Health Australia
Andrew Drysdale	Natural Resource Management Regions Australia
Callum Fletcher	AusVeg
Dave Gale	Plant Health Australia
Grant Hamilton	Queensland University of Technology
Darryl Hardie	Department of Agriculture and Food, WA
Kellyanne Harris	Agriculture Victoria
Veronica Hayes	Department of Primary Industries, Parks, Water and Environment
David Hubbard	South Australian Research and Development Institute
Rohan Kimber	South Australian Research and Development Institute
Satendra Kumar	NSW Department of Primary Industries
Rory MacLellan	Ministry for Primary Industries, NZ
Caroline Martin	Department of Agriculture and Water Resources
Catherine Mathenge	Department of Agriculture and Water Resources
Rosalie McCauley	Department of Agriculture and Food, WA
John McDonald	Nursery and Garden Industry Association
Martin Mebalds	Agriculture Victoria
Gertraud Norton	Department of Agriculture and Water Resources
Friday Obanor	Grains Research and Development Corporation
Justyna Papinski	Department of Agriculture and Water Resources
Madeleine Peachey	Department of Agriculture and Water Resources
Darren Peck	Department of Agriculture and Water Resources
Geoff Pegg	Queensland Department of Agriculture and Fisheries
Stuart Pettigrew	Citrus Consultant
James Planck	Queensland Department of Agriculture and Fisheries
Louise Rossiter	NSW Department of Primary Industries

Mark Stanaway	Department of Agriculture and Water Resources
Sharyn Taylor	Plant Health Australia
Francisco (Paco) Tovar	Forestry/SNPHS
Jutta Tuerck	Plant Biosecurity CRC
Gabrielle Vivian-Smith	Agriculture Victoria
Bonny Vogelzang	Primary Industries and Resources
James Walker	Department of Agriculture and Water Resources
Peter Whittle	Horticulture Innovation Australia
Alys Wall	Department of Agriculture and Water Resources