WORKSHOP REPORT

ANNUAL SURVEILLANCE WORKSHOP 2018

The Annual Surveillance Workshop 2018 was held between the 19th and 21st of March 2018 at the Adelaide Convention Centre, Adelaide, South Australia.

The workshop was supported by funding provided by the Australian Government's *Agricultural Competitiveness White Paper*, the government's plan for stronger farmers and a stronger economy

Australian Government
Department of Agriculture and Water Resources

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.

Australian Government
Department of Agriculture and Water Resources

Funding for this project was provided through the Australian Government's *Agricultural Competitiveness White Paper*, the government's plan for stronger farmers and a stronger economy.

Table of Contents

Acronyms

ADW	Annual Diagnostic Workshop
ASW	Annual Surveillance Workshop
CEBRA	Centre of Excellence for Biosecurity Risk Analysis
ISPM	International Standards for Phytosanitary Measures
NPBDN	National Plant Biosecurity Diagnostic Network
NPPP	National Priority Plant Pests
NSP	National Surveillance Protocol
PSNAP	Plant Surveillance Network Asia Pacific
SNIWG	Surveillance Network Implementation Working Group
SNPHS	Subcommittee on National Plant Health Surveillance
SPHD	Subcommittee on Plant Health Diagnostics

Summary

The purpose of this Grant was to facilitate the Annual Surveillance Workshop 2018 (ASW2018), held at the Adelaide Convention Centre, on the 19th to 21st of March 2018. The workshop provided professional development for attending, contributing to the strengthening of the existing, nationally integrated surveillance network. ASW2018 was used as a forum to gather information on network initiatives from a range of surveillance practitioners and decision makers in government and industry, including representatives from New Zealand. The workshop provided an opportunity for input on:

- Key elements to be included in the Plant Surveillance Network Asia Pacific (PSNAP) website, to be used by surveillance practitioners.
- The template for National Surveillance Protocols (NSP). The template was tested by ASW attendees using the following species as case studies:
    - Asian Gypsy Moth
    - Brown Marmorated Stink Bug
    - Citrus Canker
    - Fire blight
    - Huanglongbing with Asian Citrus Psyllid
    - Japanese Pine Sawyer Beetle
    - Khapra Beetle
    - Pierce's Disease
    - Spotted Wing Drosophila
    - Sudden Oak Death
    - Tramp Ants
    - Vegetable Leafminer
- The direction of the network into the future

The Workshop also included a joint session with the Annual Diagnostics Workshop (ADW) to discuss how surveillance practitioners and diagnosticians can collaborate and improve surveillance and diagnostic outcomes. Of note it was highlighted that

- In-field triage is an important component of surveillance as it can be used to reduce the number and volume of samples that are sent for diagnosis. Well-conducted in-field triage will improve the quality of samples submitted to laboratories, increasing the likelihood of accurate diagnosis.
- It is important that surveillance practitioners and diagnosticians are in contact with each other before submitting samples to ensure material will arrive in a suitable condition for diagnosis.
- Surveillance needs to be underpinned by suitable diagnostic methods to detect what is being surveyed for. Therefore, both surveillance practitioners and diagnosticians need to work in close collaboration with each other.

Key outcomes

The workshop provided direction for the continued development of the PSNAP website, including suggested additions to the website and confirmation that the website would be suitable for the needs of surveillance practitioners. The workshop delivered the following key outcomes:

- Consultation on the PSNAP website requirements, proposed elements and potential content.
- Evaluation of the Reference Standard template for National Plant Pest Surveillance Protocols (NSP).
- Assessment of the use of group fora to complete NSPs.
- Work commenced on 12 draft NSPs.

The ASW also considered the future direction of the network and biosecurity surveillance activities. Discussion considered emerging technologies, ways to improve collaboration, as well as future goals of PSNAP and opportunities for further professional development.

Lastly, a joint session of the ASW and ADW attendees highlighted the importance of collaboration between surveillance practitioners and diagnosticians.

Recommendations

1. Feedback on proposed elements of the PSNAP website, be included to ensure the website meets the needs of the network.
2. Proposed changes to the National Surveillance Protocol (NSP) template be considered for adoption.
3. Further development of the 12 draft NSP commenced in the workshop is undertaken.
4. SNIWG continues to develop PSNAP to assist facilitate better collaboration between stakeholders and identify and progress opportunities for professional development
5. An ASW is scheduled for 2019 which includes a field component to evaluate and improve aspects of in-field triage.
6. Another joint session of the ASW and ADW is held in 2019 to better facilitate collaboration and continue to identify opportunities for improving linkages between surveillance and diagnostics.

Background and introduction

In 2016, the Surveillance Network Implementation Working Group (SNIWG), formed under the Subcommittee on National Plant Health Surveillance (SNPHS). A key role of SNIWG is to develop, co-ordinate and drive national plant health surveillance professional development initiatives and nationally consistent surveillance arrangements through the implementation of a national surveillance network. 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 Annual Surveillance Workshops (ASW) are an important mechanism to assist SNIWG build capacity and capability for plant biosecurity surveillance and progress implementation of its core role to coordinate a network of surveillance practitioners. At the ASW2017, held on the 24th to 25th May of 2017 in Brisbane, the Plant Surveillance Network Australasia-Pacific (PSNAP) was established. Attendees supported the work of SNIWG and identified opportunities for improving professional development through training, resulting in a survey design workshop held in December 2017. ASW2017 also supported the development of a website to underpin and facilitate activities of PSNAP.

ASW2018, held on the 19th to 21st of March 2018, in Adelaide, continued this work by providing an opportunity for consultation on elements for inclusion in the PSNAP website, as well as evaluation and training in completion of the draft National Plant Pest Surveillance Protocol template.

The workshop was coordinated by PHA, the Chair of the SNIWG, and representatives of DAWR. 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.

Funding for this project was provided through the Australian Government's *Agricultural Competitiveness White Paper*, the government's plan for stronger farmers and a stronger economy.

Workshop participation

The ASW2018 was held over 3 days, with 44 people in attendance from a range of organisations including the Australian government, state and territory departments, research organisations and New Zealand Ministry for Primary Industries (Appendix 1; Figure 1). The meeting also included a joint session with the attendees of the Annual Diagnostic Workshop 2018 (Figure 2). An agenda for the meeting is included in Appendix 2.

Figure 1 Annual Surveillance Workshop 2018 attendees

Figure 2 *Attendees of the joint session of the Annual Surveillance and Annual Diagnostic Workshops 2018*

National Surveillance Systems in Australia and New Zealand

Presentations were given that provided attendees with an overarching view of the current status of activities to improve the surveillance systems in Australia and New Zealand. Highlights of these presentations are as follows:

- **Update on the role and activities of SNIWG** (Darren Peck) – SNIWG has continued its work to identify and progress PSNAP and improve capability and capacity for surveillance. Aims of the network are to avoid duplication and encourage standardization and consistency of surveillance. The network will improve linkages between people and activities, increasing coordination and knowledge sharing.
- **Update on the Australia's surveillance systems** (Susie Collins) – the National Plant Biosecurity Framework (Figure 3) outlines the Enablers, Processes and Applications that comprise an effective surveillance system. Elements comprising a best practice surveillance system are that it:
    - Is transparent and defensible
    - Creates value
    - Enables effective resource allocation
    - Is flexible
    - Is consistent and integrated
    - Fosters shared responsibility

  The Australian Government is undertaking a number of initiatives under the Agricultural Competitiveness White Paper to support activities that will improve the surveillance in Australia. Examples of these initiatives are projects to:

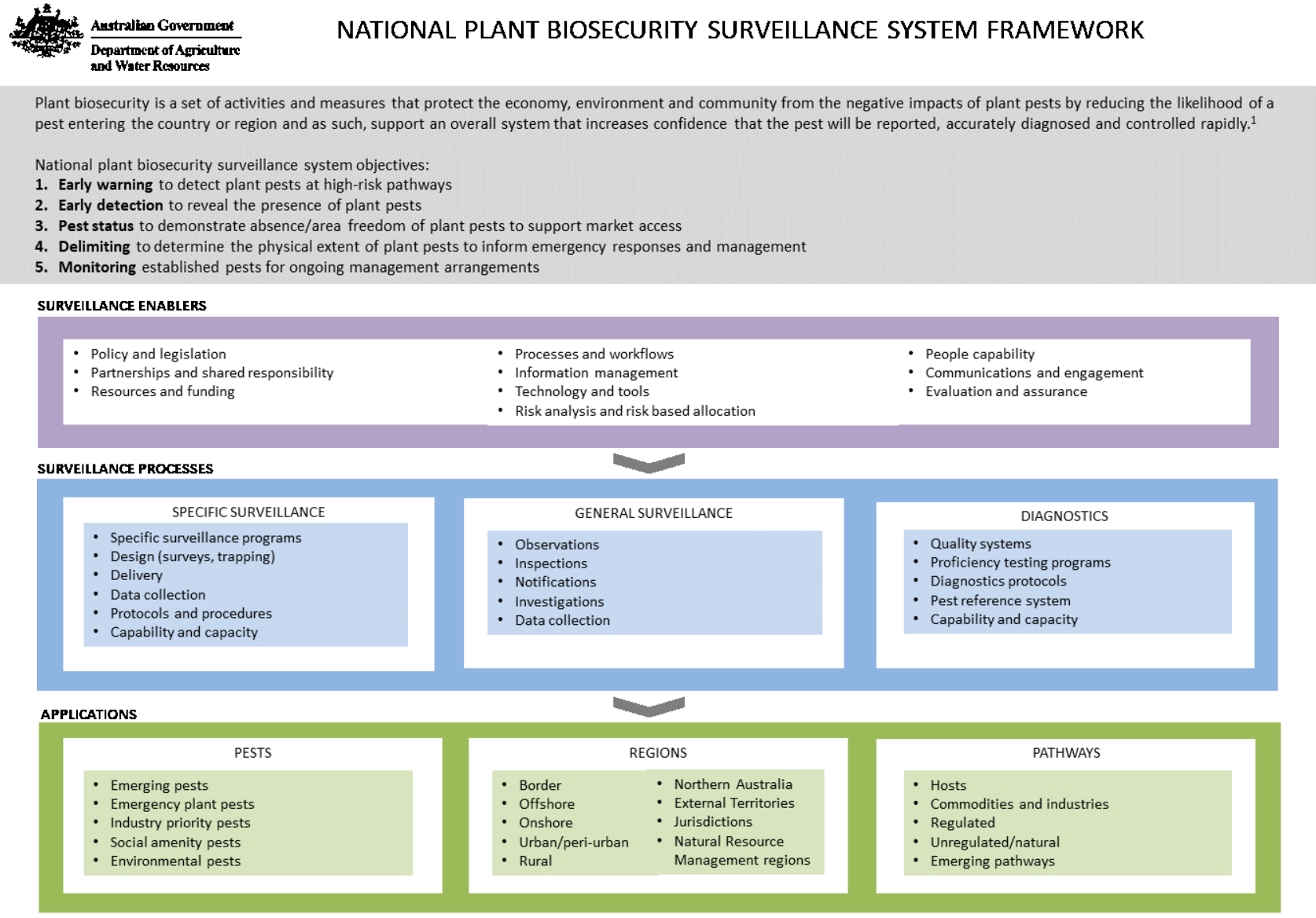
    - Determine the economic value of plant health surveillance to industry
    - Assess the national framework and future state for surveillance information management
    - Improve diagnostics for priority invertebrate pests, downy mildews and Cerambycidae as well as improving diagnostic collections and providing support to the National Plant Biosecurity Diagnostic Network (NPBDN)
    - Assess area freedom requirements and conduct area freedom and early detection programs for several priority plant pests
    - Develop and assist with implementation of national surveillance strategies for several key industries
    - Improve the general surveillance system to assist measure and enhance the value of information from general surveillance
- **Update on New Zealand's surveillance system** (Rory MacLellan) – The following five strategic directions underpin the surveillance system in New Zealand:
    - A biosecurity team of 4.7 million people
    - A toolbox for tomorrow
    - Smart free-flowing information
    - Effective leadership and governance
    - Tomorrow's skills and assets

  New Zealand operates a number of specific plant biosecurity surveillance programs (Fruit fly, Invasive ants, Forest high risk sites, Gypsy moth, and Apiaries). It also supports a third party authorisation program that comprises a Surveillance panel that has formed strategic partnerships with experts to deliver both field surveillance and diagnostic support. These partnerships have been important in

improving capability, cost-effectiveness, efficiency and innovation for surveillance. They have also allowed implementation of performance measures and shifted surveillance to an outcome-based approach.

An update was also provided on New Zealand activities to support surveillance for brown marmorated stink bug in Chile. This presentation provided a valuable opportunity to share knowledge on surveillance associated with the recent establishment of BMSB in Santiago, Chile, including insights into the surveillance tools and techniques that were tested.

Figure 3 The national plant biosecurity surveillance framework



PSNAP website development

ASW2017 identified the need for a website that would allow members of the surveillance network to more effectively communicate and share resources. During the last 12 months PHA and SNIWG have worked with stakeholders and a website developer to create draft wireframes for a future website for the PSNAP network.

At ASW2018 members feedback comment on key elements of the website. Comments were captured and will be used as guidance for the future development of the website. Additional clarity will be needed around some aspects of the site as outlined below.

Membership

A common theme discussed in relation to the website was how membership of PSNAP would be determined, whether a 'Members only' section of the site would be required. Attendees strongly supported the need for a member's only section and made a range of suggestions for inclusion on this part of the site, including a form/chat section, links to relevant events and training opportunities. This section of the website was seen as a useful space to contact colleagues and discuss surveillance issues. A Members section could also be used to flag collaboration activities, share reports and provide information on upcoming technical training opportunities and relevant conferences/workshops.

Discussion on how membership would be determined supported the need for business rules outlining membership and the possibility for requirement for nomination of new members by existing members. Information on members expertise would be required.

Discussion was held on the name of the network in reference to membership, with issues being raised about the inclusion of Asia-Pacific requiring consideration of the need for translation of pages into multiple languages. Consideration of a permissions system for members outside of Australian government was also discussed, with inclusion of business rules that accommodate Australian industry members as well as international members agreed as being required.

Public site

The workshop concluded that there is value in a public site. Such a site could potentially be used to help educate people and raise awareness of the importance of surveillance. Information on this portion of the website will need to be written in a clear and easily understood way to assist in getting messages across to the public. A public site would need links to state and territory information to assist with reporting new pests and diseases.

Links to other websites

Workshop discussions highlighted that this website will need to have links to other existing websites including:

- National Plant Biosecurity Diagnostic Network and National Diagnostic Protocols
- AUSPestCheck
- Outbreak
- National Priority Plant Pests
- State and territory web pages supporting surveillance objectives

Content

Content and structure of the website will be further refined based on the feedback from the workshop. A marked-up pdf of the wireframes including comments received during the workshop are attached as an appendix to this report.

Key content suggestions included:

- Home page needs to provide information on the importance of surveillance.
- A forum/chat area within the members only section. The concept is that this will allow general chat as well as invitation only chats to facilitate collaboration within the network.
- Changes to the "Capability and Capacity" page to "Training and Events". This page should have information on upcoming events and training opportunities.
- The Research page should have content (or links) to current and past surveillance projects, workshop proceedings and travel reports to assist with sharing information across the network. A website administrator will be needed to ensure the content remains useful to the network.
- The Resources page may need the ability to have regional sections if the network has an Asia-Pacific focus. Links to key sites such as NPBDN, Outbreak, state and territory web pages, AusPestCheck, Atlas of Living Australia will be needed. It was recommended that it would be useful to commence development of protocols and information on the NPPP pests/pest groupings for initial population of content. Other useful resources needed for surveillance included links to suppliers of traps and pheromones for priority pests. Presentations (such as those delivered at Annual Surveillance Workshops) should be uploaded to the website.

Recommendations

1. Feedback on proposed elements of the PSNAP website be included to ensure the website meets the needs of the network.
    a. Investigation will be required on the need for permission systems for different membership types (including international partners).
    b. Change in name for the Capacity and Capability section to Training and Events.
    c. A forum/chat area in the members only section to promote improved networking amongst members

National Surveillance Protocols

The second day of ASW2018 was focused on assessment and completion of the Reference Standard for National Surveillance Protocols. Presentations were provided on surveillance systems, survey components and NSPs set the scene before attendees were asked to form groups to populate NSP templates for 12 case study pests. These case studies were used to test the usefulness of the NSP template and identify any issues or gaps in the template. Comments received will be used to refine the NSP template further.

Where do National Surveillance Protocols fit into the surveillance system?

Presentation were provided on the suite of document templates being developed to support surveillance outcomes (see Figure 4). Ultimately all surveillance activities will also need to comply with relevant International Standards for Phytosanitary Measures (ISPM) requirements to ensure Australian surveillance meets or exceeds our international obligations.

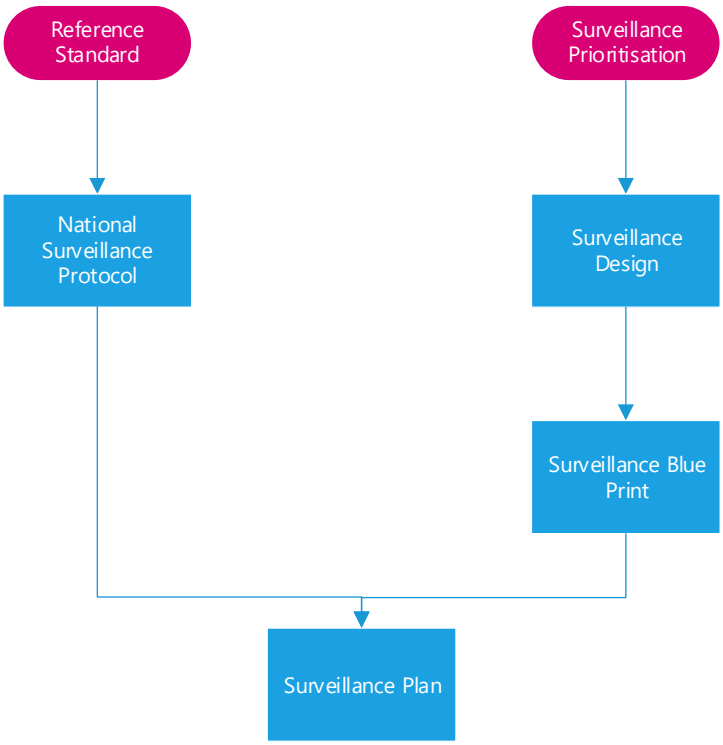


Figure 4 *How surveillance documents fit into the Australian surveillance system*

Reference Standard = guidelines for the development of a National Surveillance Protocol. The Reference Standard has been developed by the Surveillance Protocol Group within SNPHS. The Reference Standard will include information on the endorsement and review of National Plant Pest Surveillance Protocols.

National Surveillance Protocol = contains the key information that is used to develop Surveillance Plans.

Surveillance Prioritisation = has information on what we need to survey for and the benefits of doing so

Surveillance Design = contains information on where surveillance is needed, how to do it to get a benefit and who could do the surveillance

Surveillance Blueprint = sets out what surveillance will be done by who and how much surveillance is needed to be done

Surveillance Plan = describes site specific information to implement surveillance on the ground. Translates the Surveillance Blueprint into operational activity that is conducted in considering the National Surveillance Protocol for the specific pest(s) that the Surveillance Plan covers

Comments on the National Surveillance Protocol Template

Guidelines for completion of National Surveillance Protocols is under development and will include a National Surveillance Protocol Approval Process, and the National Surveillance Protocol Reference Standard template. These documents form the SNPHS Reference Standard '*Development and Approval of National Surveillance Protocols (NSP) for Plant Pests*'.

The National Surveillance Protocol present information in a consistent manner so they are easily used in a nationally consistent manner. NSPs are designed to contain all the key information required to develop Surveillance Plans, which are site specific operational documents (Figure 4).

ASW2018 participants were requested to provide feedback on the National Surveillance Protocol Template. Comments provided by attendees included:

- Attendees were generally comfortable with the NSP template. However, the Tramp ant case study highlighted that grouping multiple species must be well thought through, as the template becomes less useful if multiple species with different biological behaviours are covered by a single NSP.
- There was a general consensus across groups addressing different case studies that the table in the NSP template allowed information to be easily summarized. It was agreed that if time was short (e.g. immediately following a new pest incursion), the table alone may contain most of the information needed to develop a Surveillance Plan. For these reasons some groups suggested that the table be moved closer to the front of the document.
- Dot points are probably preferable to text for most sections as long as there are references for these dot points.
- There is a need to ensure that there is an endorsement/sign off on the NSP by SPHD to allow endorsement of any diagnostic issues.
- Inclusion of basic statistical information in the NSP to ensure confidence in the survey results. Potential information to include would be information on the sample frequencies used overseas when surveying for the specific pest, or more detailed statistical information if available.
- Guidelines could be included on how to intensify trapping grids following the pest's detection, so the template would work under different surveillance scenarios (e.g. early detection, delimiting surveillance, etc.). Similarly, it was suggested that the NSP table be modified to note any differences between early detection surveillance, compared to post detection compared to area freedom surveillance activities in the different environments.
- Section 2 (background/introduction) could include information on interception history, and information on why the specific pest was chosen for the protocol.
- Information be included on pests and diseases that cause similar symptoms/that could be confused with the target species
- Sections 4, 5 and 6 could be merged into one section but the information kept and contained under subheadings. This section should include information on transmission, host range, symptoms etc.
- Section 8 could be in two parts – early detection and delimiting surveillance

- A technical summary could be a useful addition to the front of the template
- Drop down menus could be included in the table to help ensure NSPs are consistent
- The NSP should include information on what may trigger a review (other than a set length of time), e.g. when the pest's risk profile is known to have changed
- Addition of a recommendations/notes section to capture information of importance.

Feedback on individual case studies

Groups of attendees were asked test the NSP template by populating sections for the following 12 case study pests:

- Citrus Canker
- Brown Marmorated Stink Bug (BMSB)
- Khapra Beetle
- Vegetable Leaf Miner (VLM)
- Gypsy Moth (AGM)
- Xylella (Pierce's Disease)
- Fire Blight
- Spotted Wing Drosophila (SWD)
- Japanese Sawyer Beetle
- Tramp Ants
- Asian Citrus Psyllid and Huanglongbing
- Sudden Oak Death

Draft protocols for these pests were populated by groups of ASW attendees.

Recommendations

2. Proposed changes to the Reference Standard for National Surveillance Protocol (NSP) be considered for adoption.
3. Further development of the 12 draft NSP commenced in the workshop is undertaken.

Future direction of biosecurity surveillance and the network

The final day of the workshop focused on the future direction of the network and biosecurity surveillance activities. Discussion considered emerging technologies, ways to improve collaboration, as well as future goals of PSNAP and potential opportunities for further professional development.

Technology

Apps that can capture and share data rapidly were of interest to the network. MyPestGuide Reporter, developed by DPIRD, is an example of a useful app that has been used for surveillance in WA. The app shows that the technology has significant potential as was demonstrated in the Tomato Potato Psyllid incursion. However, it was stressed that any app must be maintained and well-resourced as people won't use it if it takes too long to get answers and may resort to using social media for answers instead, which could lead to potential issues if the pest is exotic to Australia.

Collaboration

Improved collaboration within the network and with other disciplines (such as diagnosticians) was a key topic of discussion.

Collaboration opportunities include:

- Sharing specimens between jurisdictions
- Sharing outcomes from overseas study tours
- Better engagement with industry to encourage collection and sharing of data
- Collaboration between surveillance and diagnostics to ensure there is appropriate diagnostic support for surveillance activities
- Data sharing, including the need for collection of the same data fields to allow information to be widely shared – e.g. follow national minimum data specifications

Future meetings

ASW participants agreed that future meetings would be beneficial, but workshops need a clear purpose. The subject of a field trip was discussed and was considered beneficial if it was relevant to the meeting.

Broadening the group of invitees was also discussed. It was suggested that consideration be given to extending invitations to other stakeholders such as industry groups and other experts in the space such as representatives from Centre of Excellence for Biosecurity Risk Analysis (CEBRA). The development of a website with information on upcoming events such as workshops may make extension of invitations to wider audiences easier to achieve.

Holding a joint session with the ADW attendees was considered to be beneficial. A proposed schedule for the ASW 2019 is provided below.

Proposed outline for ASW2019 discussed at ASW2018:

	ASW	ADW
Day 1	Start lunch. Half day intro session	Start lunch. Half day intro session
Day 2	Field trip	Field trip
Day 3	Full day session	Full day session
Day 4	Half to full day combined session	

Goals for PSNAP

From the workshop the following goals were identified for PSNAP:

- Continue holding Annual Surveillance Workshops to build the network and provide an opportunity for collaboration and professional development
- Finalisation and endorsement of the NSP template
- Continued development of the PSNAP website
- Prioritization, in alignment with Subcommittee on Plant Health Diagnostics (SPHD), further NSPs. IT was agreed National Priority Plant Pests (NPPPs) require NSPs but prioritisation within this list is required
- Development of training packages to support surveillance
- Development of engagement and communication plans for engaging industry in surveillance outcomes and encouraging industry participation. Several projects are currently occurring in this space (e.g. citrus, forestry and honey bees)
- Improving confidence in our biosecurity system through awareness activities and development of an incentive scheme to reporting
- In medium to longer term PSNAP may need to investigate sustainable funding mechanisms for surveillance

Joint ASW-ADW session

The ASW2018 included a joint session with the attendees of the ADW to discuss how surveillance practitioners and diagnosticians can collaborate and assist each other. Of note, it was highlighted that

- In-field triage is an important component of surveillance as it can be used to reduce the number and volume of samples that are sent for diagnosis. Well-conducted in-field triage will improve the quality of samples submitted to laboratories, increasing the likelihood of accurate diagnosis.
- It is important that surveillance practitioners and diagnosticians are in contact with each other before submitting samples to ensure material will arrive in a suitable condition for diagnosis.
- Surveillance needs to be underpinned by suitable diagnostic methods to detect what is being surveyed for. Therefore, both surveillance practitioners and diagnosticians need to work in close collaboration with each other.

Recommendations

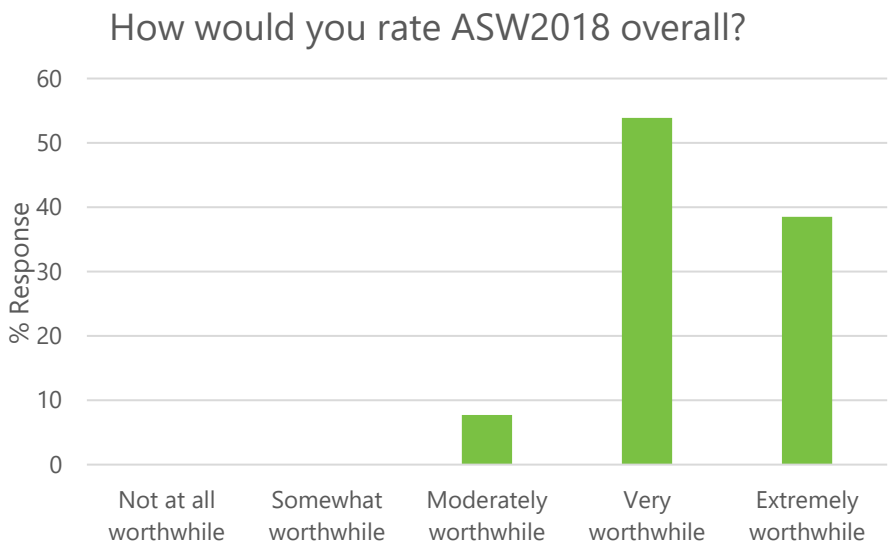
1. SNIWG continues to develop PSNAP to assist facilitate better collaboration between stakeholders and identify and progress opportunities for professional development
2. An ASW is scheduled for 2019 which includes a field component to evaluate and improve aspects of in-field triage.
3. Another joint session of the ASW and ADW is held in 2019 to better facilitate collaboration and continue to identify opportunities for improving linkages between surveillance and diagnostics.

Feedback and evaluation for the Annual Surveillance Workshop 2018

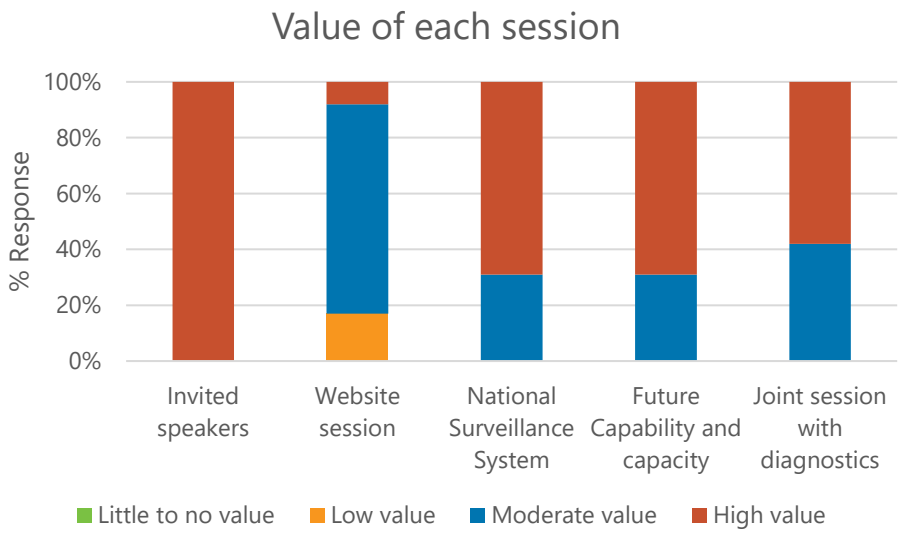
A total of 15 responses were received from a combination of a SurveyMonkey poll and direct feedback by email. From the responses received, it appeared that the overall feedback on ASW2018 was positive, with the majority of respondents feeling that it provided opportunities for professional development and networking with peers. While the website session was only considered to be of moderate overall value to attendees, it still provided an opportunity for SNIWG to assess the activities undertaken to progress website development and inform attendees that website development is underway to support PSNAP. Workshop presentations from invited speakers were extremely well received, with all respondents indicating they were of high value. In particular, the presentation by the invited New Zealand speaker (Rory MacLellan), and discussion on BMSB surveillance, was identified as very valuable.

Responses received from participants to a range of questions are outlined below:

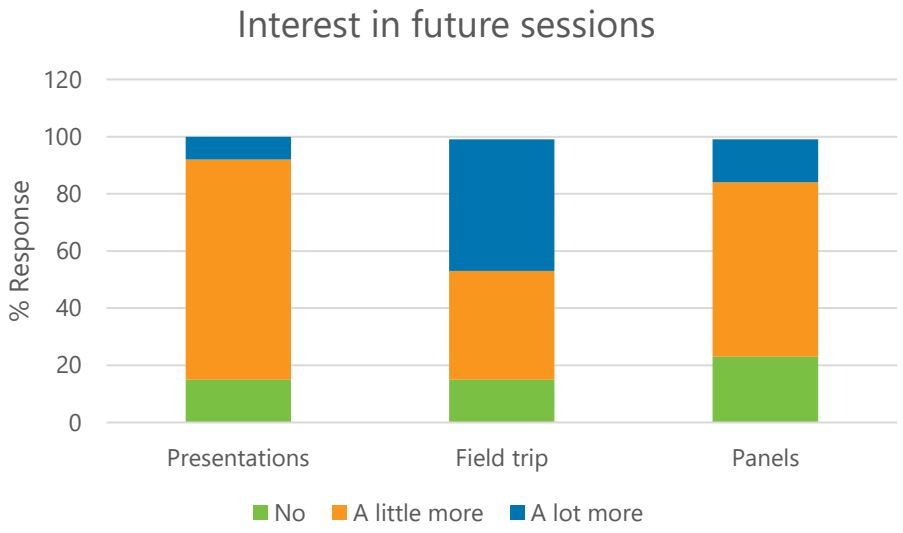
Q1 How would you rate the ASW2018 overall?



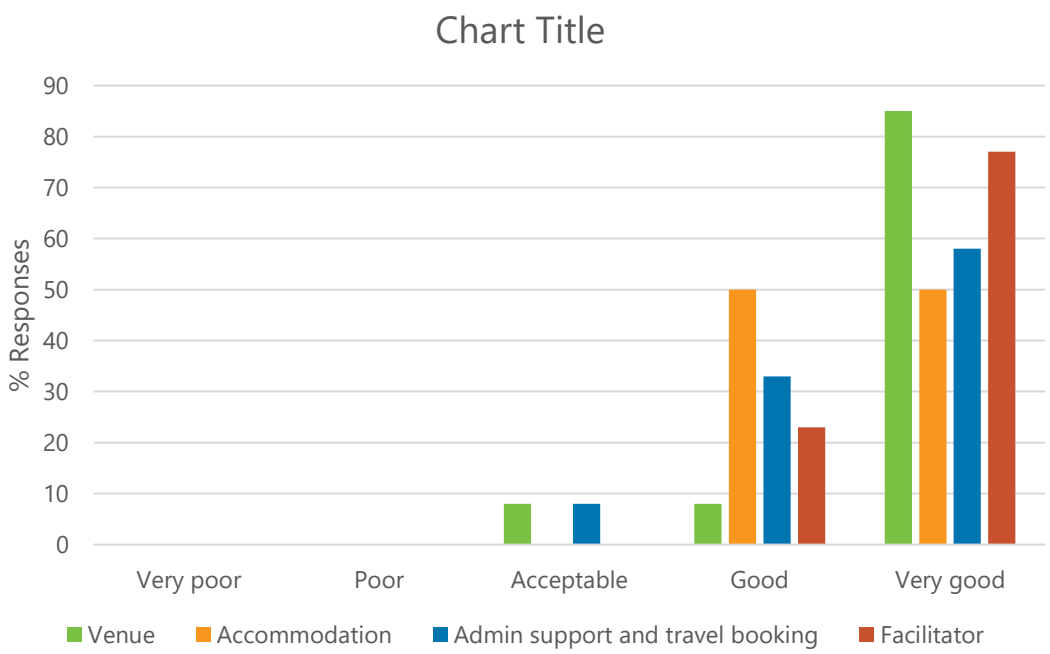
Q2 How would you rate the value of the different sessions types?



Q3 Would you be interested in more of the following session types – Presentations, Field trip, Panel sessions?



Q4 Please rate the facilities, administration and support provided for the ASW2018



Q5 Other suggestions/comments for future ASW (provided as comments)

The following comments were received:

- The dinner venue was too small
- Field trips would be useful; Time should be factored into workshops for extended conversations with peers; the dinner venue should allow conversation
- Sessions are needed on how data are collected and shared; discussion is needed on how protocols will work across a range of environments and whether this should be a focal point of protocol development
- Dedicated session needed on current incursions, current surveillance activities for early detection or high priority risks focusing on key information needed for surveillance (the BMSB information at the workshop was invaluable).
- The workshop was excellent – I was actually tired from thinking so much! Lots of food for thought; I like the idea of the surveillance blueprints and protocols feeding into a local plan as required. These allow for the operational flexibility that is required for early detection surveillance; I also liked the practical workshop components – though-provoking, and there's nothing like working through something to find the good bits, and the areas that need some work; There was a good mix of talks and topics, and not so many that it gets a tiresome. The sessions were broken up pretty well, which kept most people engaged.
- I got a number of key targets out of the workshop including:
    - Applicable knowledge on protocols and their requirements which will be applied to current work undertaken in NBS surveillance concerning protocols/work instructions; Development on knowledge concerning NZ's pest and disease surveillance especially concerning BMSB; The panel questions with active questions to the audience was a good way of active discussion; Networking and active discussion concerning surveillance; I also think it was interesting to discuss and understand the SNHPS website which I think could be an invaluable tool in opening communication among agencies.

- Things that didn't work well were:
  - The group discussion concerning development of surveillance protocols. Not that this was a bad exercise but the execution and delivery to the groups at large lead to a lot of confusion and at times frustration. There was need for clearer instructions on what was to delivered at the end of these.
- What else could be useful in future forums:
  - Discussion and decisions around how data is to be collected and shared, which is currently a key problem; it should be acknowledged in official documentation that state and federal are allowed to freely share information upon request in a timely fashion; how does each agency share such vast amounts of information? Should there be a focal point where this information is collected?
  - Discussion and understanding on how the protocols are to work across a range of environments and whether this needs to be focal point of the protocol development e.g. surveillance methods differ greatly between North Australia and South Australia due to weather and environmental conditions. Should this be outlined or acknowledged in a protocol?
- A copy of the presentations should be provided
- Overall a great workshop
- For a field based surveillance officer this was an excellent learning and networking experience
- If the number of people who can attend are limited, the type of participants should be vetted more strongly.

Q6 What was the primary benefit you gained?

- Networking, practical examples of pros/cons of surveillance activities. International expertise invaluable; Ways to progress jurisdictional surveillance in line with national priorities.
- How an official protocol is written and scope of what it must cover
- Sharing information and expertise directly related to surveillance for plant pests
- An understanding of the current activities in the surveillance system. Invaluable techniques and tips on how to identify pests and diseases (especially citrus diseases); networking with personnel from state and federal agencies.

APPENDIX 1 ASW2018 ATTENDEES

Attendee list: ASW 2018, March 19-21 2018, Adelaide SA

NAME	ORGANISATION
Rosalie Banks	QDAF
Simon Barry	CSIRO
Lynda Bauer	QDAF
Daniel Beard	DAWR
Nathaniel Bloomfield	DAWR
Adam Broadley	DAWR
Rohan Burgess	PHA
Ian Campbell	PIRSA
Gregory Chandler	DAWR
Susie Collins	DAWR
Michael (Mook) Crothers	NT DPIF
Richard Davis	DAWR
Stephen Dibley*	PHA
Nerida Donovan	NSW DPI
Trevor Dunmall	PHA
David Hamilton	NTDPIF
Darryl Hardie	DPIRD
Veronica Hayes	DPIPWE
Sarah Hickman	DAWR
Nick Housego	DAWR
Brittany Hyder	DAWR
Rory MacLellan	NZ MPI
Caroline Martin	DAWR
Martin Mebalds	DEDJTR
Ajay Niranjane*	DAWR

NAME	ORGANISATION
Gertraud Norton	DAWR
Natalie O'Donnell*	PHA
Vinni Pather	NZ MPI
Darren Peck	DAWR
Sophie Peterson	DAWR
Elia Pirtle	CESAR
Hugo Reich-Rimes	DAWR
Louise Rossiter	NSW DPI
Nick Seccomb	PIRSA
Kate Sparks	DAWR
Mark Stanaway	DAWR
Ranjith Subasinghe	DAWR
Sharyn Taylor	PHA
Rachel Taylor-Hukins	NSW DPI
Francisco Tovar	WAPRES
Andrew Weeks	CESAR
Jessica Xiao	DAWR

"" denotes only attended Monday 19 March 2018.*

APPENDIX 2 ASW2018 AGENDA

MONDAY 19TH MARCH 2018

START TIME	ELEMENT	PRESENTER
1:00	**Lunch**	
1:45	Welcome and introduction	Nick Housego
2:00	Surveillance Network	Darren Peck
2:15	National Surveillance Framework	Susie Collins
2:35	Surveillance in New Zealand	Rory MacLellan
3:30	**Afternoon tea**	
3:50	Outline of Surveillance website wireframe	Darren Peck
4:00	Evaluation of Surveillance website	Group discussion
5:25	Summary and close	Nick Housego
5:30	**Close**	

Tuesday 20th March 2018

START TIME	ELEMENT	PRESENTER
8:30	**Tea and coffee**	
8:45	Welcome and plan for the day	Nick Housego
9:00	Surveillance systems and standards	Sophie Peterson
9:30	Survey design concepts	Mark Stanaway
10:00	Surveillance protocols	Veronica Hayes
10:30	**Morning tea**	
11:00	Introduction	Nick Housego
11:20	• Development of surveillance protocols • Groups will complete template for two of the following pests - Citrus Canker - Brown Marmorated Stink Bug (BMSB) - Khapra Beetle - Vegetable Leaf Miner (VLM) - Gypsy Moth (AGM) - Xylella (Pierce's Disease) - Fireblight - Spotted Wing Drosophila (SWD) - Japanese Sawyer Beetle - Tramp Ants - Asian Citrus Psyllid and Huanglongbing - Sudden Oak Death	Group activity
12:30	**Lunch**	
1:30	Development of surveillance protocols-group activity (continued)	Group activity
3:40	**Afternoon tea**	
4:00	Development of surveillance protocols-group activity (continued)	Group activity
4:45	Group Discussion and wrap up	Nick Housego
5:00	**Close**	
6:30	**Dinner: The Archer Hotel, 60 O'Connell St, North Adelaide**	

Wednesday 21st March 2018

START TIME	ELEMENT	PRESENTER
8:30	**Tea and coffee**	
8:45	Welcome and plans for the day	Nick Housego
9:00	Future of surveillance – Commonwealth perspective	Susie Collins
9:20	Future surveillance needs – State perspective	Louise Rossiter
9:40	Current industry programs – a snapshot of activities	Sharyn Taylor
10:00	BMSB – an example of a 'residential' trip to improve capability and capacity	Adam Broadley
10:20	Group discussion	Nick Housego
10:30	**Morning tea**	
10:45	Facilitated discussion: future needs of the network	Nick Housego & Darren Peck
12:30	Wrap up and close	Nick Housego & Darren Peck
1:00	**Lunch**	

Wednesday 21st March 2018 - Joint ASW and ADW session

START TIME	ELEMENT	PRESENTER
1:00	**Lunch**	
1:45	Welcome	Nick Housego
1:50	Surveillance Protocols	Veronica Hayes
1:55	Diagnostic Protocols	Brendan Rodoni
2:00	Field triage	Richard Davis
2:20	In-field diagnostics	Brendan Rodoni
2:40	Use of images for surveillance	Darryl Hardie
3:00	Plant pest surveillance in markets	Andrew Vossen
3:20	**Break**	
3:30	Panel discussion	Nick Housego, Richard Davis, Veronica Hayes, Darryl Hardie, Brendan Rodoni, & Andrew Vossen
4:20	Wrap up	Nick Housego
4:30	**Close**	