Australian Government
Department of Agriculture

National Biosecurity Forum 2018 Report

The 2018 National Biosecurity Forum was held in Canberra on Thursday 29 November at the National Museum of Australia.

The event was hosted by the National Biosecurity Committee (NBC) and the Department of Agriculture.

The Forum brings together key conversations and discussions that have taken place at the state and territory biosecurity roundtables throughout 2018. It also presented the National Biosecurity Statement, together with findings from the 2018 biosecurity information and advice survey, preparedness workshops and major biosecurity partnerships. Industry, environment and government speakers presented current and future work across the biosecurity spectrum.

It opened with an official welcome and outline of the program by Lyn O'Connell, Deputy Secretary from the Department of Agriculture.

Agenda Item 2: 2018 Snapshot

Josephine Laduzko, Assistant Secretary, Biosecurity Policy and Response Branch, Department of Agriculture, introduced the 2018 Snapshot session, with industry, Indigenous and environmental representatives focusing on the six areas of the biosecurity spectrum – anticipate, prevent, prepare, detect, respond and recover or adapt.

Anticipate

Jo Quigley, Chief Operating Officer from Integrity Systems Company discussed traceability and emerging technologies, providing an overview of the Integrity Systems Company as part of Australia's red meat production sector. Driven by industry, the red meat integrity system has three elements: the National Livestock Identification System; the Livestock Production Assurance Program (LPA); and the LPA National Vendor Declaration. The system is a key underpinning of the $23 billion red meat industry.

Ms Quigley outlined some of the key megatrends to which the red meat industry will need to respond in the future, including:

- the rise of big data analytics
- increasingly connected global value chains
- environmental and social credentials
- provenance information and accurate vendor claims
- the rising importance of food safety
- greater international competition.

Success in 2025 and beyond requires a user-friendly integrity system, industry participants recognising the value of integrity and consumers actively seeking out Australian red meat in an increasingly competitive market.

Access and use of the latest technology and data systems will also be key. Current work is developing implantable identification devices with inherent redundancy, location aware scanning devices and lifelong sensors providing trusted biosecurity and provenance data. This will be supported by research and development into real time DNA verification and satellite tracking of livestock.

For further information, please contact Jo Quigley at jquigley@integritysystems.com.au.

Prevent

Mick Blake, Director from Biosecurity Centre of Excellence, Boxhill TAFE, focused on training and knowledge gain. The Centre aims to fill recognised skill gaps, providing a flagship Bachelor of Biosecurity Science, certificate and tailored courses together with community and industry engagement and research programs.

Biosecurity education in Australia is currently included at all levels of the education system from primary curriculums to PhD research work, providing a reasonable spread. However there are gaps; for example, a bachelor level degree in animal, plant or agricultural science does not prepare students adequately for biosecurity roles. Mr Blake also questioned whether these programs met the demands of industry, as current biosecurity training is also largely emergency response and government focused.

At the vocational level, response programs are adequate but there isn't sufficient coverage in the prevention space and further biosecurity training programs are needed. The Industry Reference Forecast team has designed a new program covering three new qualification sets and are hoping to consult with industry in the near future. Industry demand for employees with certification is critical to ensure there is adequate demand for courses.

The Industry Reference Committee for Skills Impact 2018-21 forecasts five new skills sets and up to 25 new units will need to be developed in the agriculture and production horticultural sectors. Other preventative training includes masterclasses, workshops, and community and industry engagement.

For further information, please contact Mick Blake at m.blake@boxhill.edu.au.

Prepare

Robbie Davis, Chief Executive Officer from Potatoes South Australia presented on the importance of working together to maintain business continuity to protect the agricultural sector and support industry readiness. It is critical for industry to ensure government understands the issues and needs that impact upon production and distribution, so market access can be maintained.

Ms Davis used the potato industry and the Tomato Potato Psyllid (TPP) incursion in Western Australia in 2017 as an example of both lack of preparedness (the insect has been present in New Zealand and the United States of America for some time) and the benefits of industry and government working together.

A recent agreement to maintain open trade of fresh and processing potatoes if TPP was found in eastern or southern Australia is in place, and a preparedness plan is currently being developed. This follows the South Australian and Victorian Governments and industries developing the 'Block of Four' plan.

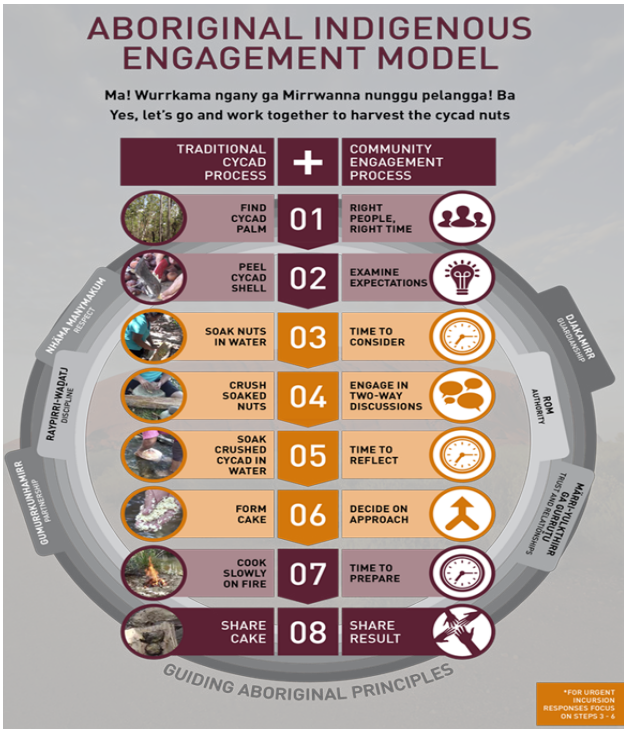
Ms Davis emphasised the importance of private and public co-engagement, as industry needs to provide economic relevance around biosecurity incursions, which helps regulators to develop appropriate policy for businesses to survive and thrive. This helps ensure business continuity, crop production and in the Australian potato industry, secures the jobs of over 10,000 employees in the value chain.

For further information, please contact Robbie Davis at robbiedavis@potatoessa.com.au.

Detect

Dr Payi Linda Ford, Principal Research Fellow from Charles Darwin University introduced recent research work focusing on Indigenous communities and biosecurity. There are one hundred and fifty Indigenous Ranger programs undertaking significant work across Australia. These programs are important for Indigenous communities, improving capability to respond to biosecurity issues and providing programs such as Certificate IV training with pathways to higher education.

The Indigenous Engagement Model that has been developed is the merging of traditional Indigenous and western knowledge, designed to protect Country and manage biosecurity threats. It encourages ongoing collaboration and communication between key stakeholders.



Six guiding principles are central for successful community engagement:

- guardianship
- trust and relationships
- respect
- partnership
- discipline
- authority.

This must be supported by the appropriate Aboriginal or Torres Strait Islander person(s), such as Elders, in each community. It must also be based on acknowledgement of connection to country, ceremony, genealogy and future opportunities for biosecurity management and training.

Dr Ford covered her work over the past few months visiting Indigenous rangers in Queensland, Western Australia and the Tiwi Islands. In Queensland, rangers have been working on the Panama disease tropical race 4. In the Broome area, communities are keen to be involved in plant biosecurity plus protection of cattle stations from biosecurity risks by using the National Livestock Identification System (NLIS). In the Tiwi Islands, the community is interested in biosecurity and forestry. All communities are very keen for their children to have better access to educational pathways which the biosecurity education program can offer.

Dr Ford also highlighted that biosecurity risks lead to cultural consequences for Indigenous peoples. For example, the Northern Territory has been working with primary school children on Myrtle rust impacts and responses such as seed harvesting using this program. With three incursions of Myrtle rust in the Northern Territory and the Tiwi Islands, it can impact paperbark trees (Melaleuca sp.) which, as the communities' grandmothers, are highly culturally significant to Aboriginal peoples. Myrtle rust can also impact Aboriginal cattle businesses on flood plains where paperbark trees are the dominant species.

For further information, please contact Dr Payi Linda Ford at linda.ford@cdu.edu.au.

Respond

Nathan Hancock, Chief Executive Officer from Citrus Australia addressed the recent citrus canker response in the Northern Territory. Australia has 25,000 hectares of citrus, producing 750,000 tonnes per annum of which approximately one third is exported. Citrus is an important industry to regional Australia worth $460 million in exports, experiencing around 20 per cent growth in tonnage production in the last year.

Citrus canker has been eradicated from Australia a number of times, with the last outbreak in 2004. In April 2018 an infected plant in the Northern Territory was identified in a commercial nursery.

Mr Hancock outlined the lessons learnt, including the importance of growers and industry bodies understanding the risks and planning appropriately; industry being involved in the conversation from the beginning; and industry and government working together. The outbreak highlighted poor readiness, issues with cross jurisdictional responses and guidelines, and the need for more information for producers. A key lesson learnt was that response is an evolving story with lessons for all producers and levels of government, not just the affected industry and jurisdiction.

For further information, please contact Nathan Hancock at Nathan.hancock@citrusaustralia.com.au.

Recover or adapt

Damien Wrigley, National Coordinator from Australian Seed Bank Partnership presented on the organisation's work restoring diversity through community engagement and research. A not-for-profit organisation overseen by a national committee, the Australian Seed Bank Partnership has nine seed banks across Australia, utilising a risk management and cost-benefit approach to the protection of biodiversity.

The organisation also engages with significant risks Australia faces, such as climate change, which also have a biosecurity element. Threat and recovery plans are essential to achieving outcomes and responses to risks need to include greater emphasis on genetic variety in native species. Significantly, 48 per cent of legislative threatened species are endangered and in the seedbank, which has serious implications for Australia's environment and economy.

Partnerships are the key to recovery and adaption including participation in the world's largest conservation effort: the Millennium Seed Bank Partnership based at Kew Gardens in the United Kingdom, which holds over 2.2 billion seeds in storage. Each of the nine seedbanks in Australia has varying aims and approaches including their responses to emerging technologies.

Seed science is fundamental to agriculture, horticulture, forestry, plant health, managing invasive species and disease recovery. This work is dynamic and evolving, with volunteer and community engagement vital to the success of this project and future work.

For further information, please contact Damien Wrigley at coordinator@seedpartnership.org.au.

Agenda Item 3: Question and answer session – 2018 Snapshot

Following the 2018 Snapshot session, all of the presenters took questions and comments from the audience. **Trudy McGowan from South Australian Oyster Growers Association** commented on Mr Hancock's presentation on the citrus canker response. Ms McGowan agreed that many other industries had had similar experiences developing response plans, which, though potentially shared within a specific industry (as the oyster industry has between states), are not shared more widely. She also raised concerns about industry bodies not being allowed into the emergency response room, and felt that industry and government need to improve communications.

Ms Davis responded that an adaptable response preparedness blueprint needs to be developed by industries generally.

Trevor Ranford from Pistachio Growers Association Incorporated asked Mr Blake how to deal with current practices in biosecurity training, which tend to focus in silos rather than across the whole biosecurity spectrum. Mr Blake agreed that biosecurity isn't a well-known term, a circumstance that needs to be understood in and of itself. The biosecurity continuum and general principles of biosecurity need to be embedded in all training.

Ms Quigley commented that biosecurity is not well understood as a career option, suffering, as agriculture does, from poor image and lack of knowledge. Mr Blake is seeing a broad age range of students, often with interests in the outdoors and science which biosecurity brings together, who are keen to work as biosecurity officers. Ms Quigley raised that there are also issues around the technical staff needed to work in and manage the traceability system. Ms Laduzko acknowledged that it is a challenge as government works to stimulate interest in agriculture and livestock solutions.

Salvatore Russo from Flower Growers Group New South Wales directed a question to Ms Davis and Mr Hancock on how to respond to risk pathways, particularly around imported cut flowers which Mr Russo considers pose unacceptable biosecurity risks that he stated are not being picked up at the border. Mr Hancock responded, saying he supports the Biosecurity Import Levy which he hopes will fund the work that needs to be done around imports and the increasing number of high risk tourists entering Australia. Dr Marion Healy from the Department of Agriculture explained that the biosecurity risk profile in the cut flower area has changed enormously as the diversity of countries of origin and the flowers has increased. The current focus is to move the risk off-shore but issues about industry being underprepared if they have not responded to an incursion is a concern.

Matt Kealley from Canegrowers Australia asked Mr Hancock and Ms Davis, given their experience with outbreaks, what is the one thing we could do today to improve the system? Mr Hancock indicated it is hard to identify just one as the system doesn't work in isolation. One suggestion is to make it easier to find the necessary resources, in particular, biosecurity staff. Ms Davis believes Australian agriculture is not looking at international experiences to the degree we should, with learning and application not occurring fast enough. Working with the Australian and state governments is also critical.

Mr Hancock agreed, remarking after visiting the US 10 years ago, we are still working to implement the lessons learnt there.
Diane Fullelove from Australian Melon Association raised her industry's experiences with both infected illegal seed imports and seed stock provided by major corporations which were non-compliant. Ms Fullelove noted they are calling for quality assurance programs to be established in the countries of origin. Currently they see industry left to fund and respond to incursions while risk generators such as seed importers are not held responsible.

Jeff Milne from Citrus Australia raised that Certificates II-IV covering implementing biosecurity plans are needed but his organisation is struggling to find relevant training. He asked Mr Blake why the message about the Boxhill TAFE programs is not getting out to industry. Mr Blake explained the course has only been running for three years but they are working on promotion. Demand is increasing as new areas requiring biosecurity training are emerging such as agricultural tourism but it is also important that industries require units of competency in their training packages and as part of their recruitment requirements.

Ashleigh Cooper from Wool Producers Australia asked Ms Davis about the preparedness blueprint mentioned earlier. Ms Davis explained that it is currently with AUSVEG in draft.

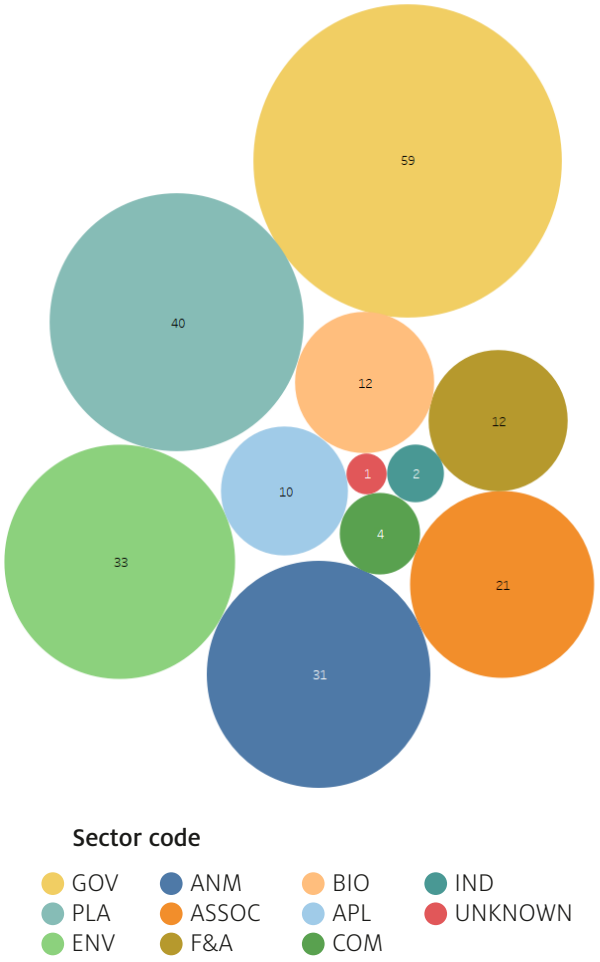
Gabrielle Vivian-Smith from Department of Agriculture asked Dr Ford what she would like to see as the next steps with her work. Dr Ford replied that she is talking to a number of agencies, including CSIRO, New Zealand partners, Asia-Pacific neighbours and veterinary programs provided to Indigenous Ranger programs and their communities. There has also been work with AUSVEG. Dr Ford is happy to engage with any other industries or sectors.

Agenda Item 5: Biosecurity information and advice survey findings

Ms Laduzko provided an overview of the results from the biosecurity information and advice survey, which was run at all state and territory NBC Biosecurity Roundtables and the May Environmental Biosecurity Roundtable in 2018. The survey aimed to explore the platforms people use and sources of information and advice, based on varying factors.

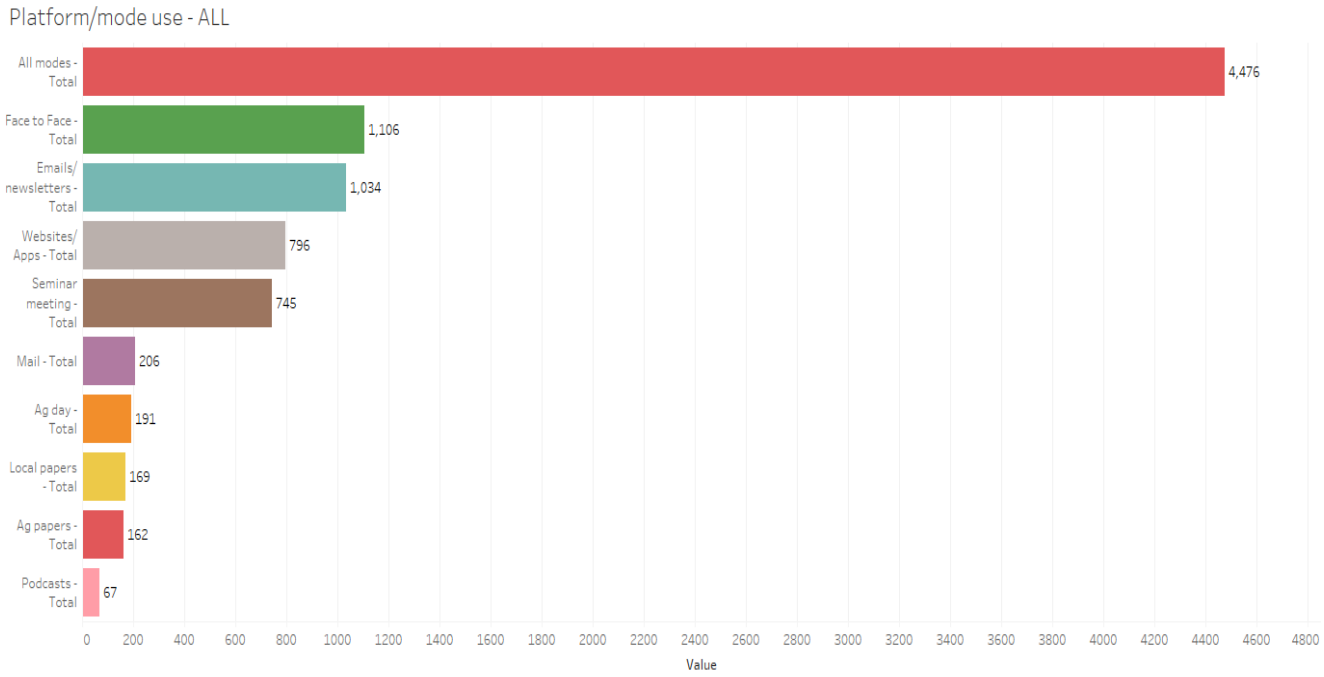
These results are to direct our biosecurity messages using appropriate platforms to the different sectors across the biosecurity spectrum.

A total of 225 or 43.6 per cent of attendees at all of the roundtables completed surveys, with 86 per cent of surveys completed by representatives from organisations.



Respondents were identified by sector in which they worked. The bubble diagram above shows the survey result split between these sectors. The graph below shows the platform or mode people use to access biosecurity information or advice. Face to face (including phone calls and podcasts included TV and radio content) is the most commonly used mode at 24.7 per cent, followed by emails/newsletters at 23.1 per cent. The top four modes, two of which are electronic and two 'in person' engagement, account for 81.3 per cent of all results. The remaining five modes account for just 17.7 per cent of all results.

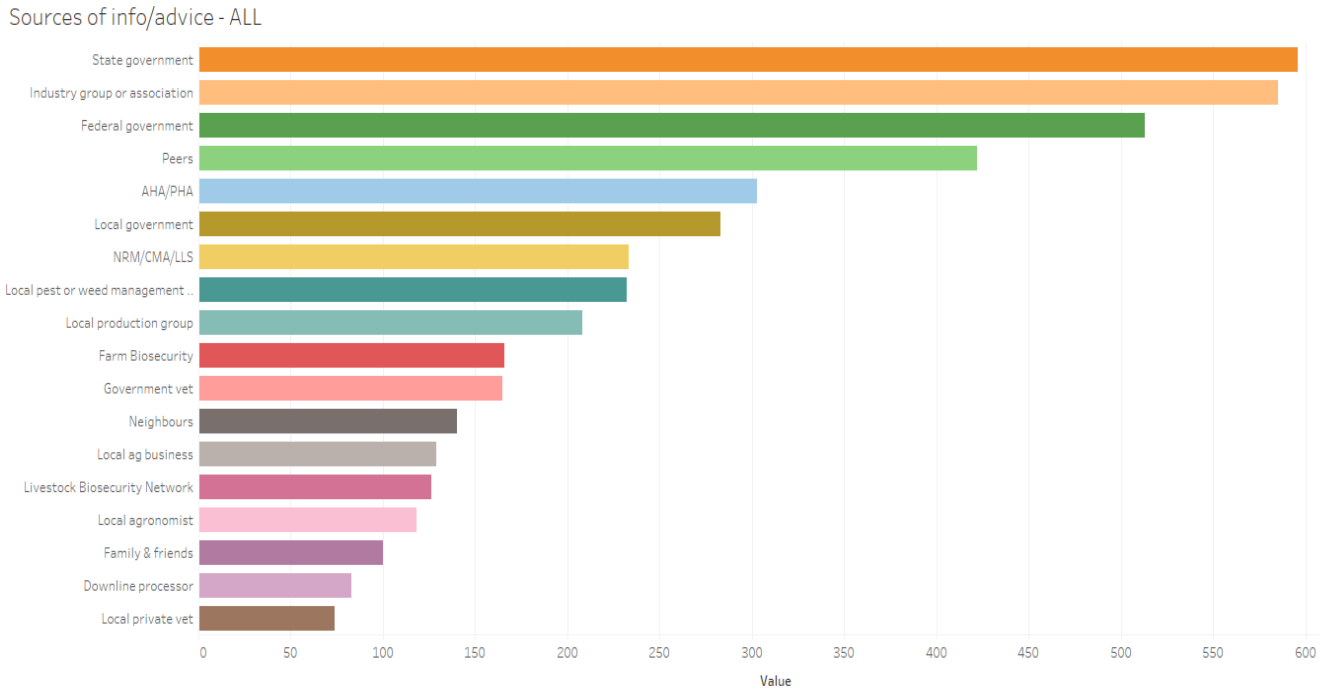
Eighteen potential sources of information were listed on the survey, focusing on the current main providers of biosecurity information in Australia, either through the development and delivery of specific content or engagement with regional and local biosecurity issues.



The survey also revealed differences between sectors in terms of preferred platforms. For example, animal sector results show a lower degree of engagement with email/newsletters but a higher use of agricultural papers. This is also the case for plant sector respondents.

Environment sector is the only sector where face to face is not the most significant mode of communication, instead preferring emails/newsletters.

There are also differences between sources of information and advice between sectors. Commercial sector respondents mainly look to state and Federal governments for information, while animal and plant producer sector utilise Natural Resource Management (NRM) Systems. Environmental sector respondents have the strongest relationship with local pest or weed management groups as well as high use of state government as sources of information or advice.



Ms Laduzko asked for comment or questions. **Katherine Clift from Department of Primary Industries and Regional Development (WA)** noted that in emergency response situations, affected producers were not reading emails or hard copy flyers, but expected to be visited individually. Categorising information so that critical emails are not ignored proved useful.

Scott Charlton from Department of Primary Industries NSW explained that the department had a good strike rate on their campaign on tropical soda apple, using posters designed from the viewpoint of growers telling their own stories, highlighting the gains or losses to producers.

Trudy McGowan from South Australian Oyster Growers Association (SAOGA) agreed targeted communication is important, including information from government being funnelled through the industry channels. As members always carry mobile phones, SAOGA will text urgent information. **Kevin Shiell from Australian Diary Farmers (ADF)** remarked that ADF includes information for producers with their payments.

A recent study conducted by ABARES on information and communication technology used in Australian agriculture found that 96 per cent of Australian farmers owned and used ICT assets with 95 per cent connected to the internet. Whilst availability and quality of internet services does impact on access and use, this is a very significant space for the delivery of biosecurity information – the results of this survey should inform all biosecurity players' decisions about what is being provided and how.

To view all of the graphs presented at the Forum, the data from the survey is available as a Tableau packaged workbook (.twbx). To read the .twbx file, you will need to use Tableau Reader – please make sure you are using a current version. This is available as a free download from www.tableau.com/products/reader.

Contact biosecurityroundtable@agriculture.com.au to request a copy of the file.

Agenda Item 6: Preparedness and response workshop – roundtable responses

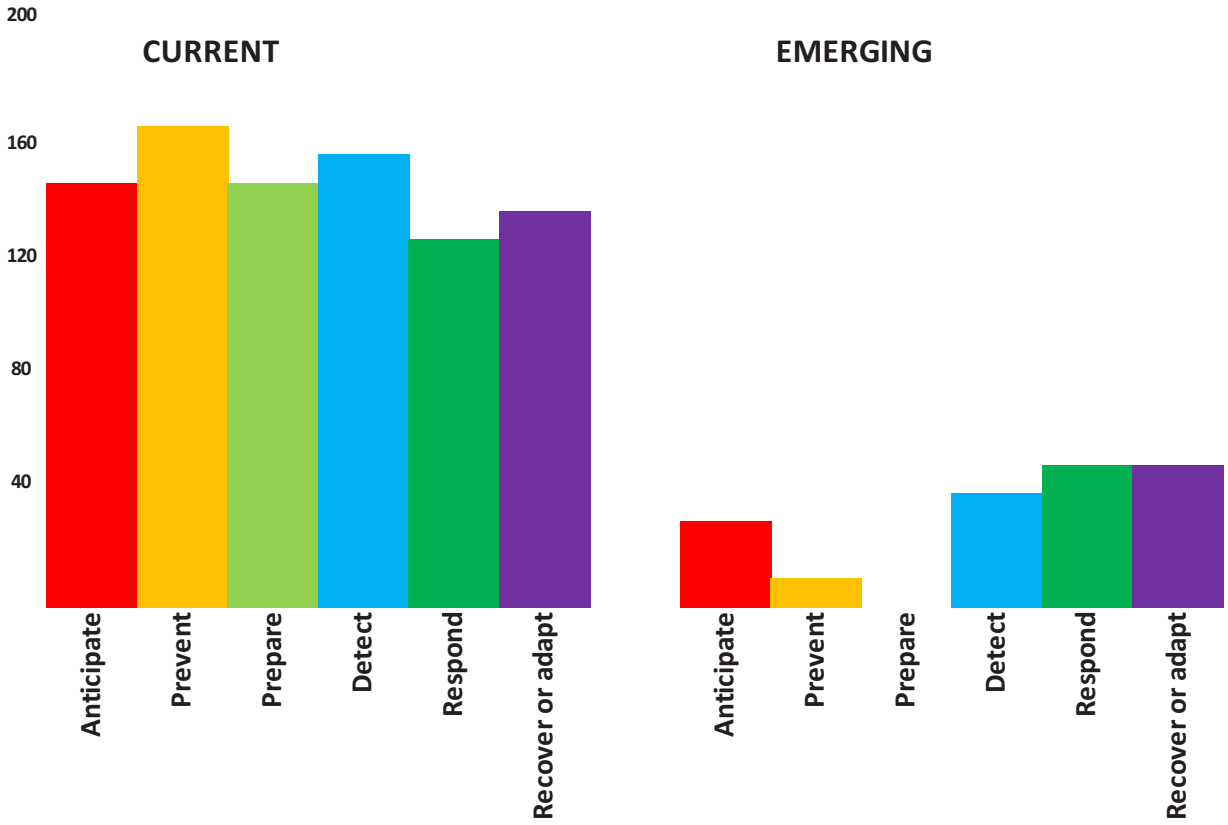
Ms Laduzko introduced the outcomes from a workshop run at all state and territory biosecurity roundtables except Victoria. Table-based exercises were focussed around the six key terms describing the biosecurity spectrum – anticipate, prevent, prepare, detect, respond and recover or adapt.

During the exercise, participants were asked to list what they currently did, what other people or organisations do, what might be missing or under developed and what emerging issues they consider important. Each response was described as an action point. Overall 1,040 action points or responsibilities were listed – 845 actions or responsibilities were described as being undertaken and 195 were described as emerging.

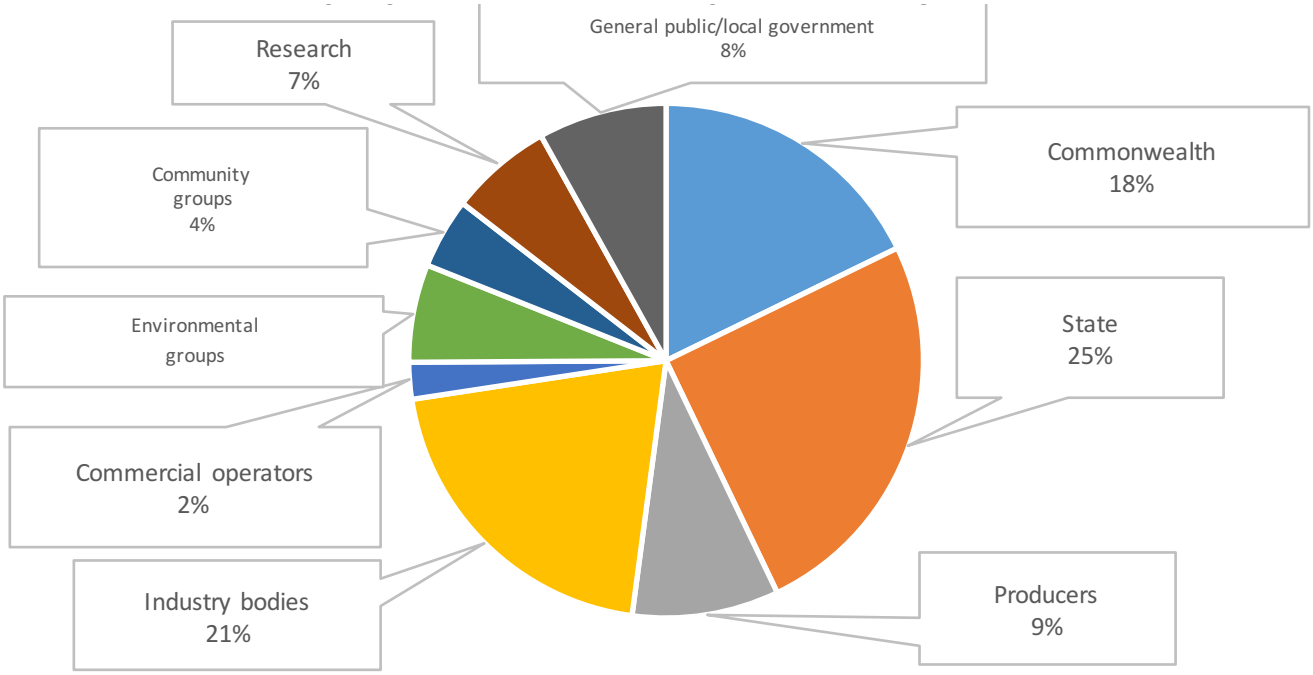
The action points have been transcribed and are available on the department's website as a table as part of each summary report for the state and territory roundtables. They provide an invaluable snapshot of current thinking and understanding around our biosecurity preparedness, roles and responsibilities, highlighting our strengths as well as revealing gaps. The qualitative data in the reports is a unique verbatim account of Australia's biosecurity space in 2018.

State governments were assigned 25 per cent of action points, the sector with the largest set of responsibilities. As state agencies deliver most of the on the ground services and engagements around incursions or biosecurity preparedness work, this is a realistic representation of their role.

They were followed by industry bodies at 21 per cent and the Commonwealth at 18 per cent.

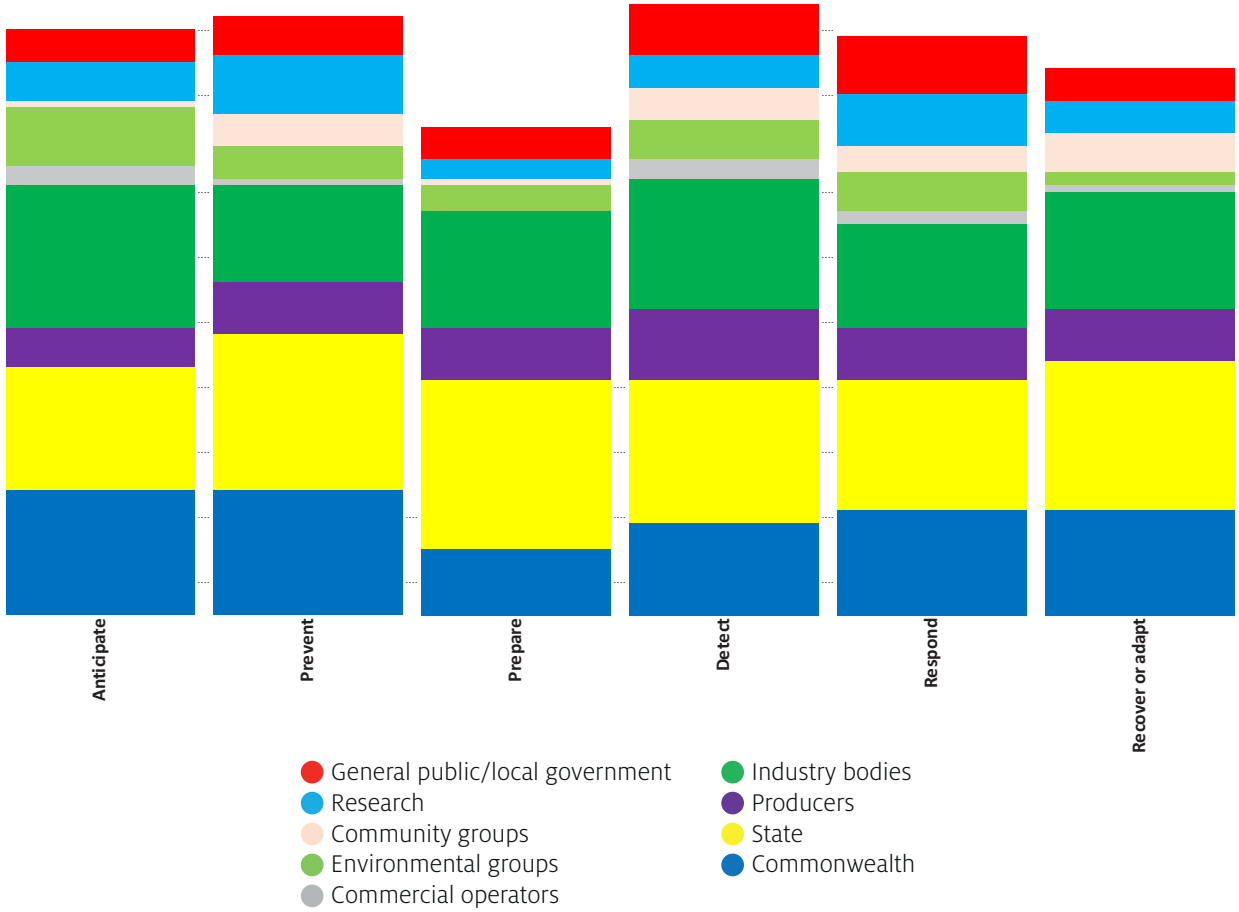


Where preparedness and response lies by sector



Individual producers were under represented both as attendees at the roundtables and for the number of action points assigned during the table-based exercises. They represented only 9.2 per cent of roles or responsibilities, mostly in the recover and adapt phase, and were assigned only 9 per cent of action points.

Commercial operators (covering livestock transport, saleyards and carriers) were assigned only 2.3 per cent of action points. Although they were also under represented at the roundtables, this does suggest a lack of awareness and appreciation of their role as supply chain participants.

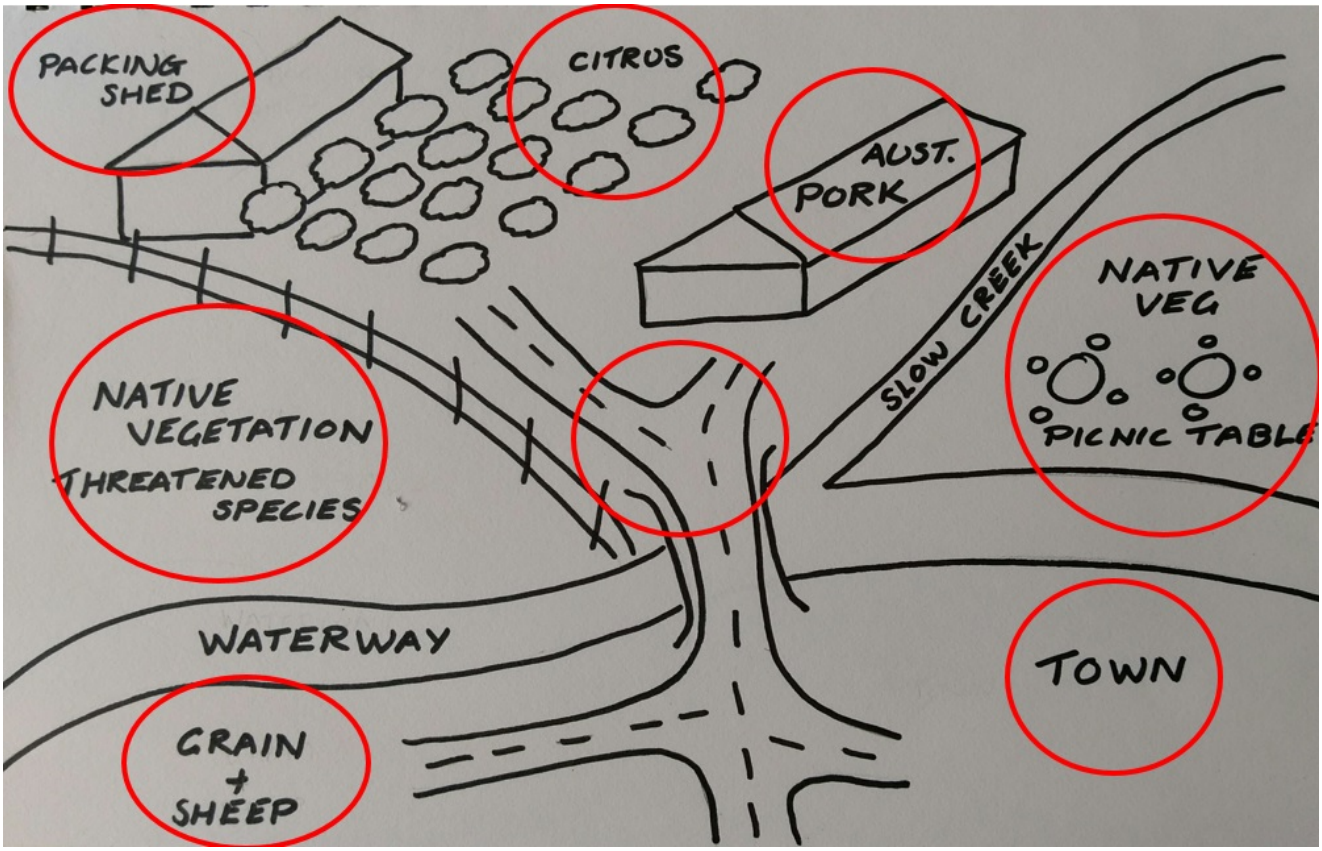


Emerging themes of concern at the roundtables included the development and delivery of processes and standards to match national and international market requirements, adequate funding for adoption of new technologies, maintenance of adequate expertise and staff, development and expansion of traceability across all sectors, maturing communication capacities including maintaining social licence for essential activities and clarity and integration of roles and responsibilities.

Rachel Melland from Council of Australasian Weed Societies and Alister Oulton from Australian Pork Limited presented on how different sectors can face similar biosecurity threats, and identified opportunities for a collaborative approach. The Council of Australasian Weed Societies is a voluntary umbrella organisation, with seven member societies, which provides awareness, information and support advancing weed management.

Dr Melland described the biosecurity spectrum as maturing as sectors no longer operate in silos, with increasing understanding of impacts elsewhere in the system. Mr Oulton outlined the achievements of Australian Pork Limited in 2018, including the rollout of mandatory PigPass NVD reporting and exercises directed at responses to potential disease incursions.

Dr Melland and Mr Oulton together worked through activities across the six areas of the biosecurity spectrum leading to a diagram outlining a variety of potential biosecurity issues that could affect intensive animal production, transport systems, remnant vegetation, horticulture and domestic gardens. The ability to work together, and share information, is vital in a system where we are all interconnected. The development of the National Biosecurity Statement is critical in furthering these aims.



Agenda Item 7: The National Biosecurity Statement

Mark Harvey-Sutton, General Manager for Rural Affairs National Farmers' Federation introduced the National Biosecurity Statement (NBS). A recommendation in the report of the independent review of the national biosecurity system, led to a working party formed following a workshop in March 2018. The working group focused on producing a statement aspirational in tone, incorporating lifestyle, the environment, industry and community. Public consultation was open between June and October 2018, with presentations on the NBS at all state and territory biosecurity roundtables and the Canberra environmental biosecurity roundtable, leading to a statement that is collaborative, inclusive and aimed at all Australians.

The statement incorporates a diagram showing roles and responsibilities across the biosecurity spectrum for each group in a cohesive system where everyone is part of the same process.

Mr Harvey-Sutton then discussed what happens next, as the success of the NBS lies in its adoption and use by industry, government, community and environmental sectors industry bodies need to engage with and use the NBS in policy development and biosecurity materials for their members and cohorts.

A number of points and questions were raised. **Kevin Shiell from Australian Dairy Farmers** remarked that the NBS reads like an introduction to a national biosecurity strategy. Mr Harvey-Sutton agreed that the NBS be taken to the National Biosecurity Committee (NBC) for discussion around measuring the effectiveness of the statement. This would potentially lead to the development of a strategy. Ms Laduzko noted that the agriculture ministers' response to the review has been released and is now publicly available.

Mr Justin Toohey from the Cattle Council of Australia suggested the Australian animal welfare strategy was an excellent model led by the Commonwealth. Mr Toohey also suggested that part of the biosecurity imports levy could be directed to development of a national biosecurity strategy.

The NBS will be presented to agriculture ministers and then be available for distribution publicly, with a view to government, with industry, and environmental and community partners working together to promote and distribute the statement.

The Department of Agriculture would like to acknowledge and thank the members of the NBS working group, which included Prue Oxford from Agriculture Victoria, Alister Oulton from Australian Pork Ltd, Callum Fletcher from AUSVEG, Rachel Melland from Council of Australasian Weed Societies, Andrew Weidemann from Grain Producers Australia, Andrew Cox and Alison Swain from Invasive Species Council, Mark Harvey-Sutton from National Farmers' Federation, Alexandra Bunton from New South Wales Farmers' Federation, Jo Luck from Plant Biosecurity Research Initiative, John McDonald from Nursery and Garden Industry Australia and Ashley Cooper from Wool Producers Australia.

Agenda Item 9: National priorities in biosecurity – looking to 2025

Daryl Quinlivan, Secretary, Department of Agriculture began by emphasising the importance of biosecurity as an economic asset supporting Australia's international market access, particularly as agriculture evolves from broadacre production to exporting to increasingly sophisticated premium markets. Whilst Australia has done well in international open trade, a willingness by the Australian, state and territory governments to invest in and refurbish the biosecurity system is vital.

External risks are increasing with the growth of the in-bound low-cost tourism sector and increasingly complex supply chains, setting up more pathways for transmission of pests and diseases. However, Australia has maintained its reputation as a reliable trading partner with strict adherence to incident notification with trading partners and safe food production.

Risk profiles are also changing. In 2017, the department targeted imports from one country for brown marmorated stink bug; in 2018 this expanded to half a dozen countries, next year it may be global.

Two of the confirmed khapra beetle incursions in the last eighteen months were from a low risk source not identified in current risk analysis. There are many factors that affect Australia's risk profile, including climate change; if we continue business as usual, Australia would face a 70 per cent increase in biosecurity risk by 2025.

The calculations from the risk return allocation resource model shows, even if the department triples its investment in border security by 2030, risk levels cannot be kept at 2015 levels. Maturing systems are needed with better co-ordination, improved communications and development and investment in new technologies to help protect Australia's brand and reputation.

The department has recently installed a 3D X-ray machine, the Rapiscan RTT 110, at Tullamarine Airport, Melbourne, which (when fully operational) will free up resources and improve detection. A second machine has been imported for use in the red meat industry's Dual Energy X-Ray Absorptiometry (DEXA) carcass scanning program. Australia is expanding collaboration with New Zealand, including the inaugural Biosecurity Innovation Exchange and a recently signed protocol which will share insights on detection technologies and trials between the two countries.
A national biosecurity innovation program will explore emerging technologies, robotics, next generation sequencing and improving preparedness and response capabilities.

Improvements to priority planning for pests and diseases is underway, supporting local and international response capacities. The surveillance system in the Northern Territory is also expanding with the growing Indigenous rangers programs currently engaging with sixty nine ranger groups.

Australia has increased its commitment to environmental biosecurity with the appointment of the new Chief Environmental Biosecurity Officer, Ian Thompson. Mr Thompson will spend the next twelve months scoping gaps and capacity, with government to make a decision on how to respond.

A review of Australia's food safety regulations will start late 2018, with the aim to address the evolving needs of export markets and consumers. A current traceability review has identified some concerns with parts of the traceability system. As trade arrangements shift from multilateral to bilateral, there will be increasing pressure on Australia's biosecurity framework to follow the World Trade Organization Sanitary and Phytosanitary Agreement. Appropriate internationally accepted standards are critical.

Australia's relationship with the People's Republic of China has experienced some difficulties in the last eighteen months. However, food trade has increased 25 per cent and beef 50 per cent as our level of reliance on the People's Republic of China grows. This leaves the agricultural sector vulnerable should access change.

Luke Mathews from Grain Growers asked how Australia can manage its own biosecurity objectives when engaging with other markets without violating World Trade Organization rules. Mr Quinlivan acknowledged that there is no easy answer. Australia does not use biosecurity measures as trade protection; unreasonable rules leads to other countries imposing unreasonable rules on Australia. The necessity of allowing imports supported by appropriate biosecurity protocols to provide access for Australian produce is accepted by industry. For example, beef imports from Japan, the Netherlands and the United States of America, which are supported by Australia's beef industry, will allow for export opportunities.

John Virtue from Primary Industries and Regions South Australia raised that risk profiles are rising with Australian and state governments needing to share knowledge. Mr Quinlivan replied that all relationships need to improve. For example, money and effort will need to go into rebuilding management programs for Queensland fruit fly, which will aim to deliver a tight model for cooperation between two levels of government and industry. Cooperation will contribute to better returns where there are constrained resources.

Salvatore Rosso from Flower Growers Group of NSW asked if the Secretary was suggesting "doom and gloom" with biosecurity protection at the border faltering by 2025. Mr Quinlivan said that Australia's system is robust with constant improvements but we are under pressure from external risks. A steady stream of outbreaks has developed good systems for responding to and preparing for incursions with improved applied biosecurity intelligence.

Mr Russo then asked what a sustainable biosecurity system looks like. Mr Quinlivan replied that we need to increase capacity through people, systems and improved response times. The department has been focusing on prompt responses to incidents as well as responding to increased risk profiles such as new measures for imported cut flowers and current planning and responses to the risk around African swine fever. We have internal, domestic problems and we need better co-ordination and cooperation between the states and Commonwealth. However, the system is not designed to be 100 per cent risk free.

Justin Toohey from Cattle Council of Australia asked if the proposed Biosecurity Imports Levy would be additional to current funding around biosecurity and what transparency around expenditure would be in place. Mr Quinlivan replied that there can be no guarantees, however, the 2017 *Priorities for Australia's Biosecurity system* report's recommendation on the process for reporting on biosecurity expenditure has been accepted.

Agenda Item 10: Introduction to the Chief Environmental Biosecurity Officer

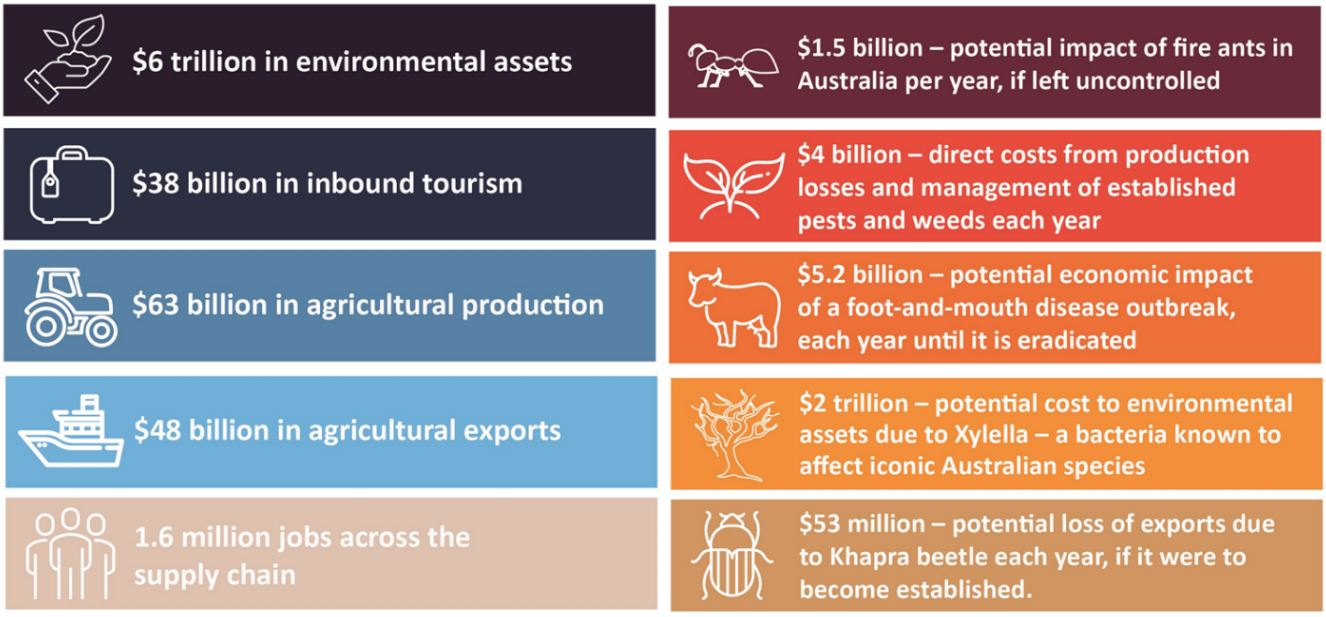
Ian Thompson, inaugural Chief Environmental Biosecurity Officer (CEBO), from Department of Agriculture began his presentation by outlining his career which started in the environment department with many years in program and policy areas including Landcare, water, forests, fisheries and weed pest management working closely with the environment department and stakeholders.

The role of CEBO came from Recommendation 9 in the *2017 Priorities for Australia's Biosecurity System* report which identified deficiencies in current planning and systems around environmental biosecurity.

With environmental assets valued at $6 trillion dollars, environmental biosecurity is critical in preserving our natural environment as well as flow on economic and social impacts to the agricultural sector and Australia more broadly.

Invasive species already in Australia are ideally managed through coordinated investment and action at all levels of government. Invasive species threaten agriculture and forestry, native species, natural regeneration and ecosystem resilience and have a direct negative impact on nationally threatened species through predation, displacement and competition. Work is underway to identify priority exotic environmental pests and diseases, due to be completed mid-2019.

The Australian Weeds Strategy and the Australian Pest Animals Strategy, both of which were updated last year, also provide national guidance to all levels of governments, industry and community on best practice for weed and vertebrate pest animal management.



Mr Thompson outlined his key initial priorities as inaugural CEBO being to:

- build on and improve relationships with the environmental sector.
- finalise the national priority list of exotic environmental pests and diseases.
- be the national point of notification for environmental pest and disease detections and responses under the National Environmental Biosecurity Response Agreement.
- develop a formal arrangement with the Department of the Environment and Energy to build collaboration with Threatened Species Officer, threatened species strategies and partnership projects, national parks recovery projects, national research development & extension (RD&E) priorities and relevant international agreements such as the Convention on Biological Diversity.
- design and deliver expenditure of annual project fund to drive investment in building environmental biosecurity capability and capacity, and leverage investment from other government and non-government funding sources to improve our ability to detect and eradicate environmental pests and diseases.

Active and transparent engagement with all stakeholders including Aboriginal and Torres Strait Islander communities, academia, NGOs and industry will be vital to the success of this office.

Opportunities exist for work in the animal and plant biosecurity spaces to be extended to include the environment. Citizen science also offers possibilities. Mr Thompson's initial engagements with stakeholders has showed enormous goodwill, but without limitless resources priorities will need to be established. Mr Thompson looks forward to working with all sectors and the community more broadly.

Rupert Woods, Chief Executive Officer from Wildlife Health Australia responded to the CEBO, acknowledging that there is enormous opportunity for Australia's biosecurity system which will need to be balanced against stakeholder expectations. Mr Woods sees tactical opportunities for CEBO to build strong links between biosecurity and the environment by assisting stakeholders to identify risks and solutions using formal risk assessment, planning, preparedness and an environmental RD&E strategy focused on the left hand side of the invasive curve.

Mr Woods identified a risk that the CEBO role will be seen as the place where 'wicked problems' and issues can be dumped. It needs to be acknowledged the CEBO can only deliver in relation to funding and resources. Mr Woods is enormously excited though tempered by the size of the task; he looks forward to working with Ian and congratulates the NBC on achieving the establishment of the office.

Agenda Item 11: National Biosecurity Committee and 2018 outcomes

Ms Lyn O'Connell, Deputy Secretary from the Department of Agriculture was joined on the stage by attending members of the National Biosecurity Committee (NBC) including: Sarah Corcoran, Department of Primary Industries & Resources, Northern Territory; Katherine Clift, Department of Primary Industries and Regional Development, Western Australia; Will Zacharin, Primary Industries and Regions South Australia; Lloyd Klumpp, Department of Primary Industries and Parks, Water and Environment, Tasmania; Richard Kingswood, Office of Environment & Heritage, New South Wales, and; Malcolm Letts, Department of Agriculture and Fisheries, Queensland.

Ms O'Connell provided an overview of the NBC in Australia's biosecurity governance structure in relation to the Agriculture Ministers Forum (AGMIN) and Agriculture Senior Officials Committee. New Zealand is now a member of the NBC.

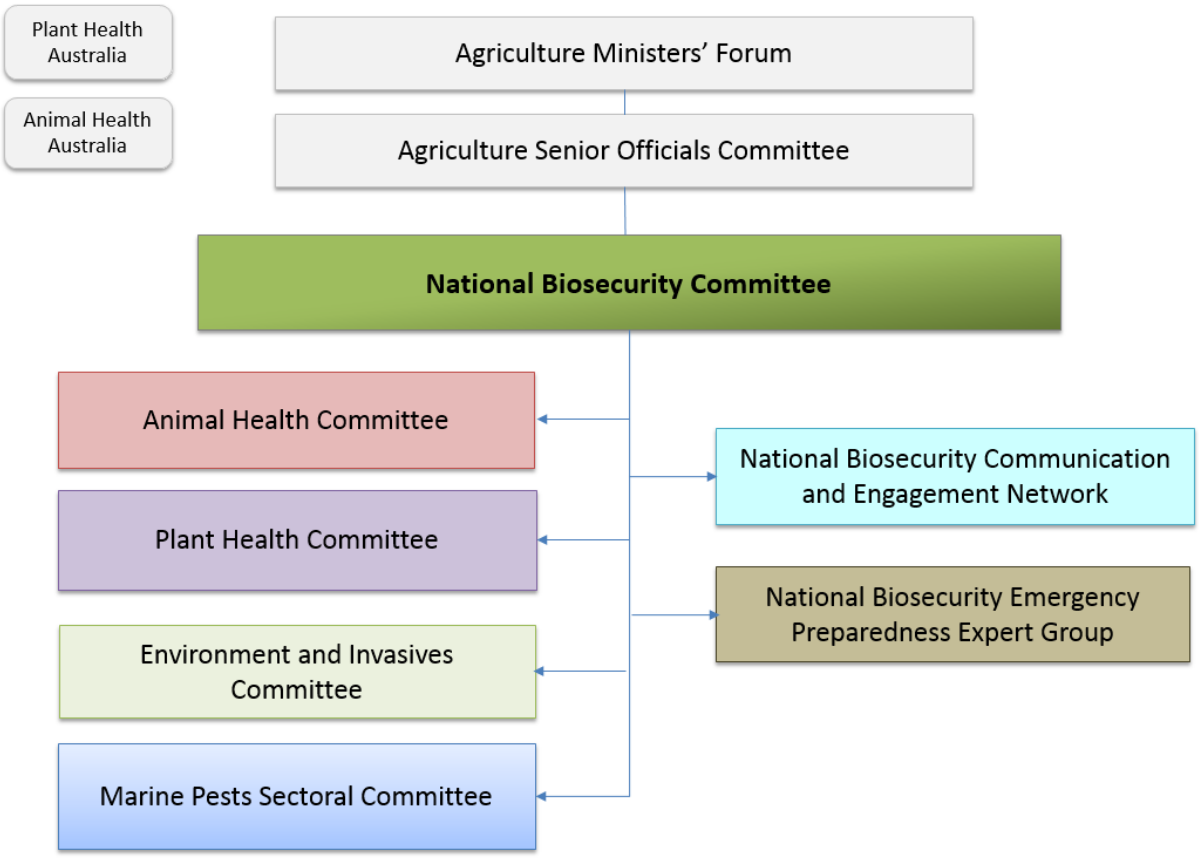
The NBC is supported by four subcommittees: the Animal Health Committee, Plant Health Committee, Environmental Invasives Committee and the Marine Pest Committee. The National Biosecurity Communication and Engagement Network, Biosecurity Incident National Communication Network and National Biosecurity Emergency Preparedness Expert Group are also critical to the work of the NBC.

Ms O'Connell outlined the activities of the NBC over the last twelve months. Advancing formal responses from Australian and state governments to the review's forty two recommendations has been key. The NBC has also been working on and implementing several of the recommendations. This includes early work on the establishment of the CEBO, development of the NBS, development of information sharing platforms and protocols, and improving national response and preparedness capacities through activities such as Exercise Border Bridge.

The NBC has also had oversight of the review of the tomato potato psyllid eradication response and will be sharing lessons learned with all jurisdictions, improving responses to incursions nationally. An aquatic deed is under development and it's hoped the deed will be signed off in 2019.

The work of the NBC will be guided by implementing the recommendations of the review. Reviewing preparedness and response capacities, including current and emerging traceability systems such the National Livestock Identification System, will also be major work for the NBC.

Improved communications will also be a focus in 2019 as the NBC aims to build on the successes such as the NBS. Agreement is now in place to develop a national biosecurity website. The NBC will continue to work collaboratively to provide opportunities to share information, focus on innovation and gain insight into local and regional views and perspectives which may be missing from current conversations.



Salvatore Rosso from Flower Growers Group of NSW asked how the NBC sees its role within the scenario of increasing risk as outlined by Mr Quinlivan. Ms O'Connell agreed supply chain complexities and the rapid spread of pests and diseases require an evolution of the biosecurity system by utilising science, technology, resilience and sustainability. The newly installed 3-D X-ray machine at Tullamarine is technology used before to detect drugs and guns. It will be the first adaption in the world to look for biosecurity hazards. This machine is one of the first steps in helping to mitigate against the risk profile. Mr Zacharin also noted that South Australia has a much tighter system for pre and post border detections, including many joint programs that provide access to airports and ports to check sentinel traps and more.

Mr Klumpp highlighted the importance of managing the whole system. The term 'shared responsibility' needs to be used better. Effective systems share the biosecurity responsibility and help those in biosecurity management agencies to divert resources to the highest priority. It also lessens the burden on agencies and goes across whole biosecurity system.

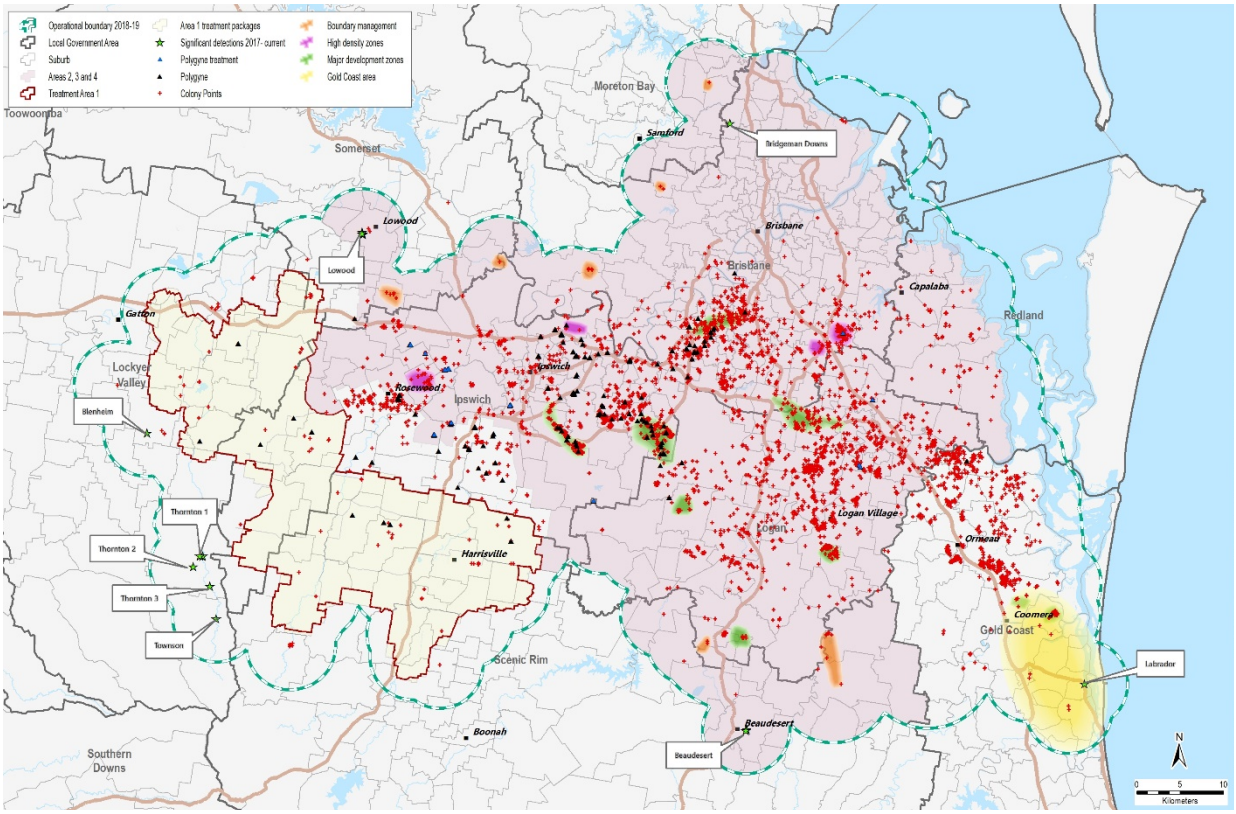
Agenda Item 12: 2018 Partnerships

Red Imported Fire Ants response

Mr Malcolm Letts from Biosecurity Queensland, Department of Agriculture and Fisheries Queensland presented an overview and update of the National Red Imported Fire Ant (RIFA) eradication program in South East Queensland.

The largest eradication effort ever undertaken in Australia, with a budget of $411 million over the ten year program, it is aiming to eradicate the worst biosecurity threat currently in Australia. RIFA severely impacts agriculture, the environment and social amenities. For the program to succeed, all of government, industry and community need to be engaged.

The program is looking to contain and eradicate. This long running program has prevented RIFA spread nationally and is now preparing for eradication (two incursions at Gladstone and Sydney Airport have been successfully eradicated). The program's operations are working from the west of the South-East Queensland infestation zone to the east.



★ Nine significant detections outside operational area

■ Major development which creates prime habitat for RIFA

● High density infestation

Significant scaling up has achieved good results but the program continues to learn and adapt. Combined aerial baiting and direct nest injection is impacting RIFA. A total of 190,000 hectares has been treated as a part of planned baiting in 2017-18. Nine significant detections were identified outside the program operational areas with a 27 per cent increase in public referrals in the 2017-18 period. The program has seen a decrease in genetic viability, meaning a weakening of the overall viability of the species.

RIFA are found in agricultural areas, urban areas and move best in areas of disturbed earth. Human assisted movement, such as in nursery or landscaping supplies, or effort around development sites, is the biggest risk factor in the spread of RIFA. The program has prioritised the edges of the operational zone, which can mean delays responding to RIFA reports by people inside these zones. There is a recognised risk in losing public support and social licence, which are critical to the program's success.

In 2019, the program will look at opportunities for local government and other key stakeholders to treat RIFA, including use of licenced pest management technicians. The program is also looking at new technology and approaches such as using infrared detection, drone baiting and surveillance, new baiting technologies, use of sniffer dogs, and innovative community engagement and compliance approaches. There is also an identified need to engage with property developers, given the high risk posed by disturbed earth.

Analysis of outcomes through machine learning, such as in remote sensing, also offers significant refinement to processes and techniques. Work to build national capacities in responding to RIFA, as techniques are developed that can applied across other jurisdictions and biosecurity issues, is ongoing. The Steering Committee for the National RIFA Eradication Program has representatives from all states and territories and the Commonwealth and is independently chaired by Dr Wendy Craik.

Animal Health Australia

Kathleen Plowman, Chief Executive Officer from Animal Health Australia (AHA) introduced AHA as an embodiment of shared responsibility through partnership and collaboration. It is a not for-profit organisation, working with government, producers, researchers and industry on over sixty projects to deliver a resilient animal health system through effective partnerships.

The Foot and Mouth Disease Ready project has 13 partners, a budget of over $11.4 million and will be finished by 2020. It has focused on rapid diagnostic and vaccination strategy preparedness, farmer led surveillance systems, decision support tools for decision-making during outbreaks and disease transmission pathway analytical tools.

AHA is also working on the Sheep Health Monitoring Project, with partners Wool Producers Australia and Sheep Producers Australia, to provide real-time data to farmers from abattoirs covering 19 disease and conditions through MLA's Livestock data link. Lost production costs sheep producers $140 million annually. This project has generated data demonstrating the high quality of Australian sheep meat, supporting international market access. The data is also used by individual sheep producers to improve flock productivity and fine tune their animal health programs.

AHA has also delivered a program of Industry Liaison Officers who have created trusted relationships, generating practice change as part of their collaborative capacity building with key industry sectors. In northern Australia, officers have had face-to-face contact with over 17,000 people since 2016. This work has significant potential in the aquatic space where shared responsibility is a new concept along with the writing and implementation of biosecurity plans.

AHA is also redirecting its funding models toward commercial partners in looking to how best drive biosecurity extension programs. Ms Plowman referred to Mr Quinlivan's question about what needs to be done to bridge the gaps in the biosecurity system and between players. She believes it is not just a matter of people and resourcing but that better co-ordination is vital. AHA will be co-delivering the 2019 Australian Biosecurity Symposium 12-13 June 2019 focusing on biosecurity prevention practices, outside the box thinking and new innovations as a platform for system and function exchange and development. Ms Plowman invited abstracts for presentations at the symposium.

Agenda Item 13: Summary

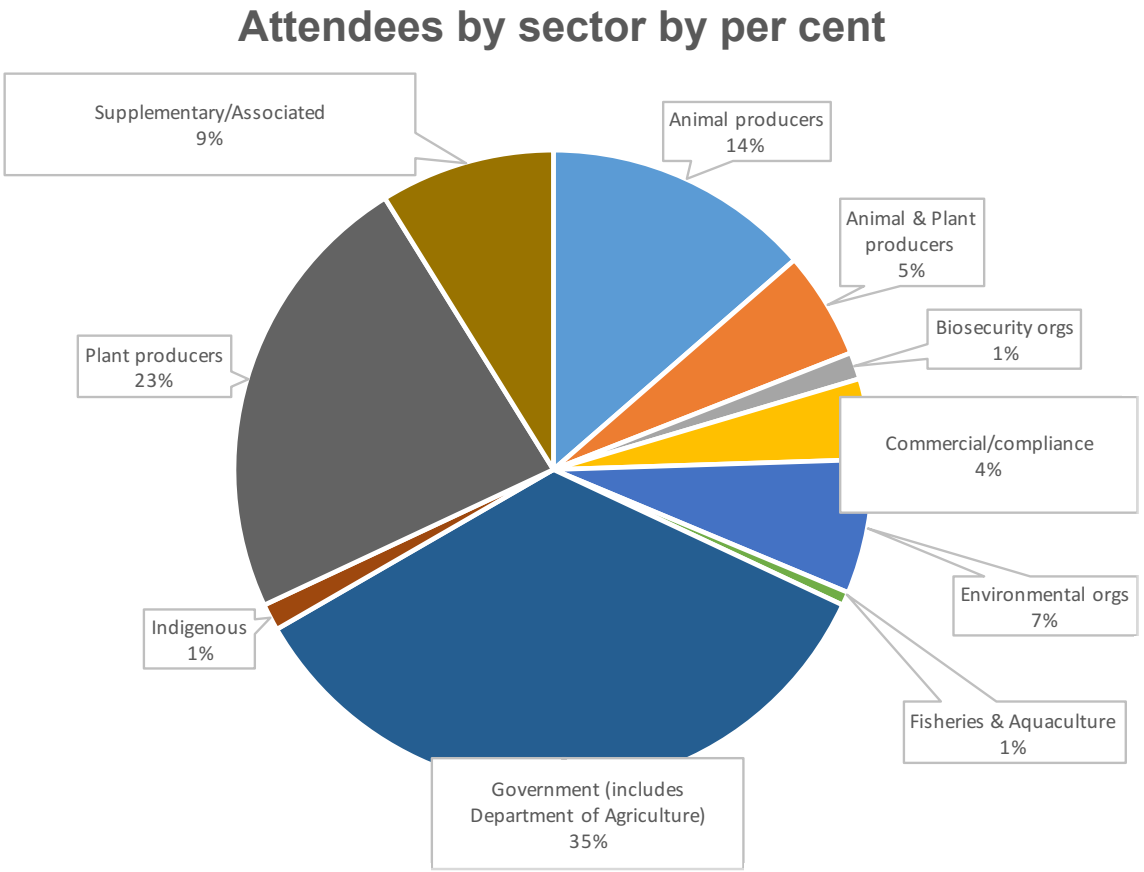
Ms O'Connell thanked the presenters for their insightful contributions. The National Biosecurity Forum is a key opportunity for attendees to discuss the challenges of working together effectively.

The National Biosecurity Statement (NBS) is a great example of industry and government working together to deliver a keystone of Australia's biosecurity system and the department looks forward to working to promote and distribute the NBS in conjunction with all sectors in the biosecurity spectrum.

Representation

Over 1320 invitations to the Forum were sent out to organisations, groups or individuals, including invitees to the 2018 state and territory biosecurity roundtables and environmental biosecurity roundtables. Peak bodies, organisations and stakeholders were also part of the invitation list. Federal, state and local government, industry groups and bodies, producers, research and environmental groups, commercial providers, NGOs and community groups were included in a comprehensive list.

This is the largest Forum held to date, with over 184 RSVPs and 147 people attending. Thirteen observers from the Department of Agriculture attended during the day. Sixty five per cent of attendees were non-governmental.



National Biosecurity Forum, 29 November 2018 agenda

Schedule	Topic	Presenter/Facilitator
9:00–9:15	Welcome and introduction	Lyn O'Connell, Deputy Secretary, Department of Agriculture
9:15–10:15	2018 Snapshot • Anticipate: Traceability & emerging technologies • Prevent: Training and knowledge gain • Prepare: Business continuity & producer readiness • Detect: Socialisation of Indigenous ranger programs • Respond: Citrus canker • Recover or adapt: Restoring diversity through community engagement & research	Facilitator: Josephine Laduzko, Assistant Secretary, Department of Agriculture • Jo Quigley, Integrity Systems • Mick Blake, Biosecurity Centre of Excellence, Boxhill TAFE • Robbie Davis, Potatoes South Australia • Dr Linda Ford, Charles Darwin University • Nathan Hancock, Citrus Australia • Damien Wrigley, Australian Seed Bank Partnership
10:15–10:50	Q&A – 2018 Snapshot	Facilitator: Josephine Laduzko, Assistant Secretary, Department of Agriculture
10:50–11:05	**Morning tea**	
11:05–11:25	Biosecurity information and advice survey findings	Department of Agriculture
11:25–12:10	Preparedness & response workshop: roundtable responses	Department of Agriculture and NBS working group members Alistair Oulton, Aust Pork and Rachel Melland, Council of Australasian Weed Societies
12:10–12:40	The National Biosecurity Statement	Mark Harvey-Sutton, National Farmers' Federation and NBS working group members
12:40–1:25	**Lunch**	
1:25–2:10	National priorities in biosecurity – looking to 2025	Daryl Quinlivan, Secretary, Department of Agriculture
2:10–2:25	Introduction to Chief Environmental Biosecurity Officer (CEBO)	Ian Thompson, Chief Environmental Biosecurity Officer, Department of Agriculture
2:25–3:10	National Biosecurity Committee & 2018 outcomes	Lyn O'Connell, Deputy Secretary, Department of Agriculture and members of the National Biosecurity Committee
3:10–3:45	2018 Biosecurity Partnerships Red Imported Fire Ants response, AHA and PHA	Malcolm Letts, Department of Agriculture and Fisheries, Queensland Kathleen Plowman, Chief Executive Officer, AHA
3:45–4:00	Summary	Department of Agriculture
4:00–4:30	**Afternoon tea**	

Future engagement

The NBC has agreed each state and territory will be responsible for delivering the biosecurity roundtable within its jurisdiction in 2019.

The Department of Agriculture will deliver the National Biosecurity Forum at the end of 2019. To be added to the contact list, please email as below.

Once again, we encourage your feedback and thank you for your engagement and interest in biosecurity issues – please don't hesitate to email us at biosecurityroundtable@agriculture.gov.au.

Phone 1800 068 468

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