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5 September 2022

Mr Gerry McNally
Committee Secretary
Rural and Regional Affairs and Transport Reference Committee
Department of the Senate
PO Box 6100
Parliament House
CANBERRA ACT 2600
AUSTRALIA

Dear Mr. McNally,

Plant Health Australia Submission into the inquiry into the adequacy of Australia's biosecurity measures and response preparedness

Thank you for the opportunity to contribute to the Rural and Regional Affairs and Transport Reference Committees inquiry into the adequacy of Australia's biosecurity measures and response preparedness. Plant Health Australia (PHA) is the national coordinator of the government-industry partnership for plant biosecurity in Australia. Established in the year 2000 as a not-for-profit public company limited by guarantee, PHA facilitates and drives partnerships to improve policy, practice, and performance of Australia's plant biosecurity system.

PHA is funded by our members through annual subscriptions. In addition to subscription funding, we undertake separately funded projects for individual members, groups of members and non-members. Members of PHA include the Australian Government, all state and territory governments, and 39 plant Peak Industry Bodies (PIBs) and 10 Associates.

PHA is also a Levy Recipient Body in relation to two levies; the PHA Levy and the Emergency Plant Pest Response (EPPR) Levy. Legislation in relation to both levies is contained in the *Plant Health Australia (Plant Industries) Funding Act 2002*. These voluntary levies offer industry a mechanism to invest in activities that prepare, protect and respond to biosecurity threats. Unlike industry research and development levies which are matched by the Australian Government, these biosecurity levies are a voluntary levy agreed by industry as a critical investment to enable them to build financial reserves to respond to emergency plant pests as well as invest in preparedness activities. Through PHA, current and future needs of the plant biosecurity system can be mutually agreed, issues identified and solutions to problems found.

In response to the terms of reference PHA is pleased to submit the following:

The adequacy of Australia's biosecurity measures and response preparedness, in particular with respect to foot-and-mouth disease and varroa mite.

Emergency Plant Pest Response Deed (EPPRD)

Australia's biosecurity system requires a collaborative approach to tackling the increasing threats of global pest and disease movements and establishment. Central to this approach is the Emergency Plant Pest Response Deed (EPPRD), which is the legal agreement that sets out how incursions of emergency plant pests are responded to, and cost shared, in Australia. Ratified in 2005, and the envy of many other countries due to the benefits involved,

the EPPRD supports rapid and effective responses to emergency plant pest incursions by establishing prior agreement on roles and responsibilities of government and industry signatories in respect of decision making and funding of national eradication programs. Signed by all Australian governments and a total of 38 plant Peak Industry Bodies, PHA is the custodian, working with signatories to ensure responses involve shared decision making and are conducted in accordance with the provisions of the agreement, as well as drive progressive improvements to the agreement to ensure it continues to meet their needs.

Australia's biosecurity measures with respect to varroa mite (both *V. destructor* and *V. jacobsoni* which are listed in the top ten of Australia's forty-two National Priority Plant Pests) have evolved in the past two decades. Pollination is the highest agricultural contributor to yields worldwide and variations to the EPPRD were implemented in 2010 in recognition of the significant contribution of bees to plant industries and the potential for impacts to these industries in the event of incursion of exotic bee pests and pest bees. This national alignment of bee health to plant health continued when the Australian Honey Bee Industry Council (AHBIC) transitioned their membership from Animal Health Australia (as the custodian of the Emergency Animal Disease Response Agreement) to PHA and became a signatory to the EPPRD in 2015.

These changes to national bee emergency response arrangements have meant the majority of jurisdictions have adjusted operations and updated legislation to manage bee biosecurity threats. This has occurred through individual jurisdictional legislative changes, such as development of a single Biosecurity Act or regulation changes to specific legislation for honey bees to be accommodated under animal or plant biosecurity structures. Internationally, honey bees are managed under the World Organisation for Animal Health ((WOAH), founded as OIE) arrangements which raises additional complexity nationally for consistency in reporting of honey bee health status between plant and animal resources at the state, territory and commonwealth levels and the provision of pest status surveillance data.

Preparedness

In addition to our deed custodian role, PHA also provides significant contribution to response preparedness in plant pests and diseases, including preparedness for varroa mite. A range of activities are undertaken by industry, government and PHA to maintain and improve response capability and capacity. PHA supports many of these activities including:

- maintaining the national Exotic Plant Pest Hotline for reporting new plant pests or diseases,
- supporting management of biosecurity incidents in accordance with the Biosecurity Incident Management System,
- delivering training for industry liaison officers and biosecurity emergency responses,
- delivering and supporting simulation exercises,
- developing and maintaining online training in plant biosecurity and
- supporting the recruitment and maintenance of the National Biosecurity Response Team.

Coordinated by PHA, the *Biosecurity Plan for the Honey Bee Industry (v1.1 2013)*, was developed in conjunction with the honey bee industry and all Australian governments. The development process utilised knowledge and information from overseas to identify 12 exotic pests, diseases and pest bees (collectively referred to as pests) that could pose a significant threat to the honey bee industry directly, and the delivery and/or increase the cost of pollination services. Varroa mites were assessed as an extreme overall risk for Australia due to their ability to enter as a hitchhiking pest, and potential to become established and spread, and for their impact on managed and feral European honey bees.

Documentation

The honey bee industry has a number of hazard specific planning resources that assist industries and governments to prepare for and reduce the risks posed by exotic pests. Notable resources developed for the honey bee pests include:

- Biosecurity Plan for the Honey bee Industry (version 2 currently with industry for endorsement)
- Draft National Diagnostic Protocols for exotic viruses
- Contingency Plans for exotic bee pests

- Biosecurity Manual for the honey bee industry¹
- Bee Biosecurity Videos² to inform how industry government, researchers and beekeepers are preparing for a varroa incursion
- BeeAware website³
- Surveillance resources (Standard Operating Procedures, quick reference field guides, and training videos) to support staff in delivery of activities for exotic pest detection
- Biosecurity for Beekeepers⁴ online training course

These documents and resources provide education and awareness to beekeepers and governments and outline prevention and preparedness actions or in the case of an exotic pest detection, the immediate actions required in response. Development of a biosecurity plan that identifies exotic pest threats and the activities that mitigate these threats is an important step in prioritising biosecurity measures, whilst contingency planning provides information that improves readiness for pest threats. These activities provide a foundation for biosecurity planning, however resourcing challenges have meant elements such as contingency plans have not been reviewed by technical experts, government or industry for several years, and activities such as development of the suite of diagnostic protocols required for all the highest priority exotic bee pests is yet to be undertaken.

Biosecurity Surveillance and Awareness

There are several biosecurity initiatives to protect Australia's bee health and AHBIC works in partnership with PHA, pollination-reliant industries and governments to deliver these. PHA's role is to lead and coordinate implementation of these initiatives including the National Bee Pest Surveillance Program (Surveillance Program) and National Bee Biosecurity Program (Biosecurity Program). The Surveillance Program operates at priority first points of entry across Australia carrying out surveillance for early detection of pests and diseases, increasing the chance of eradication before they spread and become established. The Biosecurity Program supports post-border awareness and preparedness for exotic pest threats to the honey bee industry and provides the foundation for beekeepers to engage in best-practice biosecurity while supporting hobby beekeepers manage hive health and look for exotic pests and diseases and report them.

The Surveillance Program protects and secures Australia's honey bee products and our pollination services. The Surveillance Program currently focuses on eight of the highest risk ports of entry, with additional in-kind activities undertaken at medium risk ports by states and territories. Since 2013, the Surveillance Program has been an industry-government partnership program, funded primarily by pollination industries represented by Hort Innovation with co-investment from AHBIC, Grain Producers Australia, and in-kind support from state and territory agencies.

Since its inception in 2013, funding for the Surveillance Program has been sourced under Research and Development arrangements as well as contributions from EPPR and PHA levies. The biosecurity partners use a variety of different funding mechanisms available (dependant on their levy parameters), all of which are time bound and do not have the capacity to successfully provide long term sustainable funding on an ongoing basis.

AHBIC have provided leadership and invested in biosecurity matters, prioritising the needs of their members. However, like many agricultural industries, competing priorities and resourcing limitations across multiple programs, projects, as well as emergency responses has challenged the delivery of biosecurity outcomes and objectives. It has highlighted the need for industry to identify alternative funding mechanisms to enable investment and support into high priority biosecurity initiatives which benefits members and pollination-industries. Ongoing investment from government is also challenging. Currently there are approximately 16 biosecurity officers across the country with specialised training to undertake bee surveillance. As such, they have limited capacity to act as subject matter experts for surge activities in response operations. Implementing the National Varroa mite (*Varroa destructor*) Response Plan is presenting challenges for government capacity

¹ planthealthaustralia.com.au/wp-content/uploads/2022/05/Honey-bee-Biosecurity-Manual

² [Bee Biosecurity Video Series](#)

³ beeaware.org.au

⁴ honeybee.canopihr.com.au

and resourcing as focus pivots to support response and delimiting activities, and this is having an impact on a range of biosecurity programs and activities that support plant industries and agriculture more broadly.

Emergency Incursions and Exercises

As part of PHA's commitment to developing and testing response arrangements, two exercises have been undertaken to improve industry and government preparedness for an incursion of *Varroa destructor*:

- *Workshop Acari* (2014) – Funded through Horticulture Innovation Australia, Workshop Acari investigated preparedness and response options for the honeybee and pollination-dependent industries, primarily almonds, for a potential *Varroa mite* (*Varroa destructor*) incursion in Australia. The focus was on investigating preparedness and response options for the honeybee and pollination-dependent industries, including business continuity⁵.
- *Exercise Bee Prepared* – Funded through the Department of Agriculture Fisheries and Forestry (DAFF) and delivered in all states/territories, this exercise focused on investigating the national capability to rapidly respond to varroa mite in a peri-urban environment, targeting initial response activities.⁶

The effectiveness of Australia's national approach to bee biosecurity has resulted in several interceptions and responses to exotic bee species and mites at and near the border. Notable interceptions include a swarm of European honey bees carrying *Varroa destructor* (in 2018 at the Port of Melbourne) and Dwarf honey bee carrying *Euvarroa sinhai* (in 2021 in Western Australia) both of which were successfully contained and destroyed. Australia has also eradicated three post border incursions in 2016, 2019 and 2020 of *Varroa jacobsoni* through partnerships under the EPPRD. All eradication activities undertaken in accordance with the EPPRD include debrief sessions with signatories and lessons identified are incorporated into the broader national preparedness activities to ensure continuous improvement.

Response to and implementation of previous reports into biosecurity

There have been three inquiries into government and industry preparedness, and the ongoing requirement for bee biosecurity and exotic pest threat. From the *More Than Honey: The future of the Australian honey bee and pollination industries* (2008), inquiry assessing challenges of resource security for the industry, 25 recommendations were developed. These recommendations included areas for improving surveillance, better preparing industry for incursion response, and establishing programs for pest management. Since 2008, industries and government have worked together to invest in and maintain a national surveillance program for exotic bee pests. This has included working with the Australian Pesticides and Veterinary Medicines Authority (APVMA) to develop permits for the controlled use of unregistered products and to support companies to apply for label registration of certain varroa treatment products. Work has also been undertaken to establish the Biosecurity Program to improve capacity and capability to manage established pests in addition to preparing for exotic pests.

The *Future of the beekeeping and pollination service industries in Australia* (2014) inquiry focused on the importance of beekeeping and pollination for food security, environmental and economic benefits. The inquiry assessed current challenges for the honey bee industry, adequacy of biosecurity arrangements, and effects of Australia's food labelling requirements on the industry. The report also addressed recommendations from the earlier *More Than Honey: The future of the Australian honey bee and pollination industries* (2008) inquiry. Of the 10 recommendations, two were successfully completed by PHA: categorisation of *Varroa destructor* under the EPPRD and piloting two annual surveys to capture beekeeper and industry data.

A report on *Biosecurity in the Australian honey bee industry* (2016), arose from a matter identified in the 2014-15 annual report of DAFF, namely the biosecurity of the Australian honey bee industry. In this report, six recommendations were tabled in *Safekeeping: Inquiry into the biosecurity of Australian honey bees 2017*, of which three were delivered by PHA. These included implementation of a five-year 'enhanced' Surveillance Program

⁵ planthealthaustralia.com.au/wp-content/uploads/2014/03/Workshop-Acari-Report.pdf

⁶ planthealthaustralia.com.au/wp-content/uploads/2019/07/Exercise-Bee-Prepared-Report.pdf

(2016-2021), part of which comprised investigation of improved methods for detection of bee pests, and delivery of improved diagnostic tools and surveillance activities.

In addition to the three specific inquiries into bee biosecurity, the Surveillance Program has had several strategic and operational reviews to ensure delivery is targeted at risk appropriate locations, with adequate resourcing.

- Review of the National Sentinel Hive Program (Boland, 2005)
- Risk assessment of ports for bee pests and pest bees (CSIRO, 2013)
- Statistical Review and Redesign of the National Bee Pest Surveillance Program (PHA, 2016) and included:
 - Varroa Incursion Model (CSIRO, 2015)
 - Strategies for surveillance design (QUT, 2016)
- Ports Risk Assessment for Bee Biosecurity (DAWE, 2020)
- Review of the National Bee Pest Surveillance Program (Glanville, 2020)

The outcomes of these reviews have assisted continuous improvement and focus on activities and resources to address the highest biosecurity risks. As a result of these reviews, and following extensive consultation with jurisdictions, a revised Surveillance Program (2021-2024) was put in place, which re-prioritised the resources available using a risk-based methodology to target the eight highest risk ports of entry. Jurisdictions also deliver additional in-kind activities at lower risk rated ports. The Australian Capital Territory is not included in this program, as less than 1% of international flights enter Australia through Canberra Airport and it was rated very low risk of entry of bees or bee pests. The most recent review by Glanville 2020, provided 13 recommendations identifying several aspects of the program that required higher levels of input. Importantly, the review found that, given the increasingly operational nature of activities, the Surveillance Program does not align with Hort Innovation's RD&E strategic investment priorities and this funding source is therefore not a sustainable mechanism for ongoing core programs beyond 2024.

Related matters

Australia holds the enviable status of being free from many significant pests and diseases of honey bees that pose major threats to bee populations, the commercial bee industry and Australia's pollination reliant industries. Urban and regional communities also include growing numbers of hobby beekeepers and the general public who rely on, and are passionate about, healthy populations of honey bees. Investment in bee biosecurity preparedness between industry partners and beneficiaries supports and protects pollination security and safeguards Australia's food security.

Nationally biosecurity funding across all preparedness programs has diminished, contributing to inefficiencies, and producing significant instability in service delivery for state and territory government core business activities. At present, the national bee Surveillance and Biosecurity programs are managed and operate independently due to differences in program objectives and funding arrangements. However, as these programs mature and knowledge increases through their implementation, discussions should commence with industry, government and Research and Development Corporations on the ability to find and implement efficiencies and synergies. This includes exploring potential investment, resourcing allocation, management efficiencies and improving animal and plant cross-branch reporting channels within all governments, as well as centralising data collation and sharing for international obligations. Enabling cross-program deliveries would aim to improve and build upon the success of national programs and projects, ensuring a cohesive and responsive system to bee biosecurity in Australia.

A key concern in establishing sustainable resourcing to support the bee industry and hobby beekeepers has been the difficulty in capturing all beneficiaries and potential risk creators. Currently, PHA and EPPR levies are collected only on honey production⁷ and exclude pollination services. In 2014/15 it was estimated 44% of beekeepers undertook paid pollination services⁸, providing commercial benefit to apiarists and plant industries as well as contributing to significant movement of bees around Australia. As evidenced in the recent incursion of Varroa mite, management of the disruption to pollination services is a significant component of the response

⁷ [Honey levy and charge - DAFF \(agriculture.gov.au\)](https://www.daff.gov.au/honey-levy)

⁸ [AgriFutures Honey Bee & Pollination Strategic RD&E Plan \(2020-2025\) | AgriFutures Australia](#)

and AHBIC has previously sought consideration of a levy mechanism on pollination to support biosecurity needs. Other potential beneficiaries and risk creators for biosecurity threats to honey bees are hobby beekeepers, and while the Biosecurity Program provides awareness material and information useful for hobbyists, funding for key communication activities that support their engagement ceased in 2019.

The Australian Government currently manages nationally agreed and tested all hazards disaster recovery arrangements during high-risk weather seasons. There is value in the biosecurity sector considering all hazards disaster emergency arrangements in relation to the relief and recovery mechanisms that could be enacted to support farmers beyond the current national arrangements in addition to the broader impacts on the economy, environment, and psychosocial effects. Undertaking contingency planning for industries that may have significant financial strain due to a pest incursion and resulting movement restrictions to assist the response activities, will assist in expectation management for both industry and government parties. Lessons identified across other responses have demonstrated the requirement for recovery services to be engaged early to assist with immediate impacts that are unrelated to pest eradication. Consideration of business continuity at the farm level, and continuity practices for key industry parties is essential for plant industries to continue to produce. This principle is accepted within other hazards as best practice but has not been adopted in the biosecurity sector.

In conclusion, a suite of important activities has been undertaken for preparedness for Varroa mite and other important exotic pest threats of the honey bee industry. PHA, the honey bee industry, plant industries and government jurisdictions have been proactive and engaged in planning, coordinating and supporting surveillance and training activities and raising awareness of pest threats. Resourcing has been limited however, and prior to the most recent incursion of *Varroa destructor*, capacity for delivering these preparedness activities was already stretched amongst all stakeholders. The response to the detection of Varroa mite, has further highlighted the need for development of rapid surge capacity to provide the specialist skill sets in managing bees and hives. Early detection of a pest such as Varroa mite has also been highlighted, with the National Bee Pest Surveillance Program playing a key role in the first detection of this mite. Without this surveillance, the outbreak may have been far more widespread when first detected, severely reducing the likelihood of successful eradication. Expanding our response preparedness as well as the network of surveillance and supporting diagnostic services for high priority pests of bee and plant industries, will provide the best opportunity to limit the impact on our industries, governments and communities.

Kind regards,

Sarah Corcoran
Chief Executive Officer