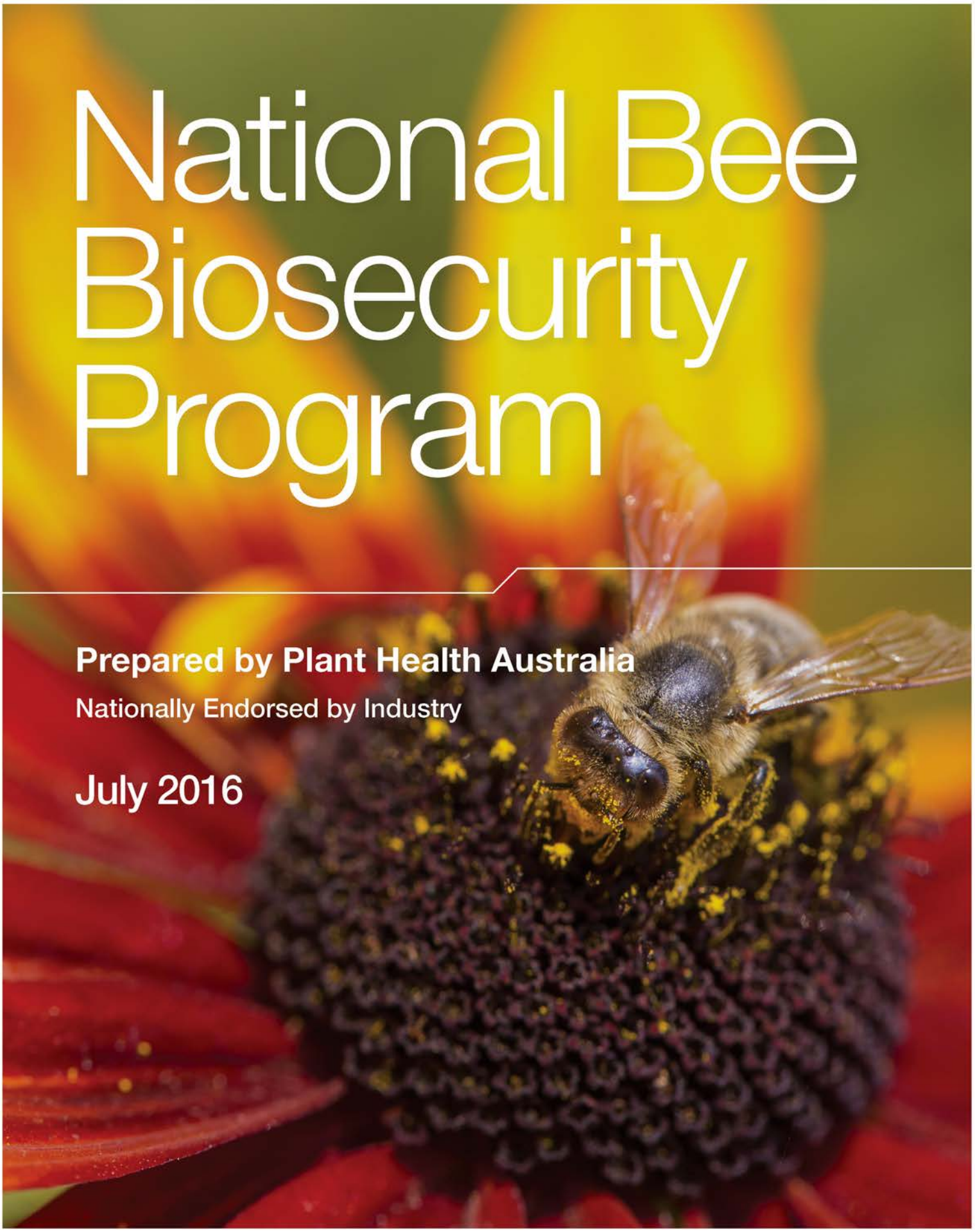
National Bee Biosecurity Program



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NATIONAL BEE BIOSECURITY PROGRAM

Plant Health AUSTRALIA

Contents

Introduction

As an island continent, Australia's geographic isolation and lack of shared borders have, in the past, provided a degree of national protection from exotic pest threats. Australia's national quarantine system also helps to prevent the introduction of harmful exotic threats to the honey bee industry.

Biosecurity planning provides a mechanism for the honey bee industry, government and other relevant stakeholders to actively determine pests of highest priority (exotic and established), analyse the risks they pose and put in place practices and procedures that would reduce the chance of an exotic pest becoming established, and would minimise the impacts of a pest already established.

Ensuring the honey bee industry has the capacity to minimise the risks posed by established pests, and to survey and respond effectively to exotic pests if and when they enter Australia, is a vital step for the future sustainability and viability of the industry.

The significant direct economic impact of bee pests on production occurs through reduced yields, reduced health of the honey bee colony and greatly increased management costs. Australia is currently free from some of the most significant pests of honey bees, namely the Varroa mites (*Varroa destructor, V. jacobsoni*), Tropilaelaps mites (*Tropilaelaps clareae, T. mercedesae*) and Tracheal mite (*Acarapis woodi*). The establishment of these pests in Australia would be very damaging for the honey bee industry causing losses of production in both honey bee products and pollination services as well as the virtual elimination of feral honey bee colonies, which currently provide a free pollination service for a wide variety of agricultural and horticultural crops.

Established pests also cause significant economic and social harm and need strategic management to limit the impact to individual beekeepers and the broader industry and economy. In particular, American foulbrood (AFB) (*Paenibacillus larvae*) is present in all Australian states and territories and is the most fatal and costly established pest. Evidence shows that problems caused by pests, such as AFB, are getting worse and the current state-based policies and systems are not being appropriately resourced. Other established pests, such as Small hive beetle (*Aethina tumida*) and Nosemosis (*Nosema sp.*) cause ongoing hardship for beekeepers.

Overseas experience suggests that if major established pests are not properly controlled when a pest such as Varroa mite arrives, the dual effect is worse than expected. For these reasons, greater national coordination and industry leadership is urgently needed to better manage established bee pests, as well as prepare for the possible establishment of exotic pests, such as Varroa mite.

This proposal sets out the case for the establishment of a National Bee Biosecurity Program, underpinned by a Biosecurity Code of Practice, and outlines how this program could be implemented, funded and administered. The establishment of this Program would help ensure the future sustainability and viability of the Australia honey bee industry.

BACKGROUND

Several industry and government workshops in the past have identified the inconsistencies and inadequacies in responding to biosecurity risks on a case by case basis. More recently, these workshops have clearly identified the need to bring together current and future management programs under a single national biosecurity approach and program.

In response, the honey bee industry, through the Australian Honey Bee Industry Council (AHBIC) proposed to develop a national industry biosecurity management strategy. The strategy presented a blueprint for strengthening the national honey bee biosecurity system and for managing risks associated with bee biosecurity (exotic and established) and other threats that have the potential to adversely affect the honey bee industry.

It was proposed that the national approach would build on lessons learnt from existing biosecurity programs and would bring together common response activities in a way that would leverage industry and government effort and resources. AHBIC submitted this proposed strategy in May 2013 to the Commonwealth Department of Agriculture to implement the strategy and received a grant ($73,000) to oversee its implementation.

The proposal submitted to the Commonwealth Department of Agriculture was focused on an industry biosecurity vision '*To maintain a profitable and sustainable honey bee and pollination industry in Australia, supported by an effective biosecurity system to help prevent exotic pest incursions, as well as improving the management of established pests'*. The following four priority actions were identified to achieve this biosecurity vision:

- establish an equitable funding mechanism to boost industry capacity
- develop an industry code of practice for bee health management
- develop an overarching national bee biosecurity program, and
- implement a nationally consistent beekeeper registration system

This proposal was submitted to the August 2013 meeting of the National Biosecurity Committee (NBC) for consideration. NBC noted the proposal and agreed that Plant Health Committee (PHC) be asked to consider and make any recommendations to the NBC on any important proposals for government support under the proposed honey bee management strategy.

The proposal to develop a Code of Practice, and a request for the establishment of a PHC Working Group to assist in the development of a Biosecurity Code of Practice and National Bee Biosecurity Program was tabled at the PHC November 2013 meeting. PHC noted the proposal and nominated a policy officer from each state and the commonwealth to assist in the development of this Program and Code of Practice.

DRIVERS OF CHANGE

Pest and disease threats

There are approximately 12,500 registered beekeepers that make up Australia's honey bee industry– owning around 550,000 hives and producing between 20,000 and 30,000 tonnes of honey annually. In total, the industry has an overall estimated Gross Value of Production (GVP) of $90 million a year. The relatively small honey bee GVP compared to other primary industries understates the industry's value to agriculture, horticulture and the economy in general.

It is estimated that 65 per cent (or $4-$6 billion annually) of agricultural production in Australia relies on pollination by European honey bees (*Apis mellifera*). Production of commodities such as apples, pears, cherries and almonds are almost completely dependent on pollination by honey bees for fruit and nut production. In a wide range of other agricultural and horticultural crops, honey bee pollination significantly increases product yield and quality.

There are many pest threats that could negatively impact pollination and honey production in Australia. While Australia remains free from many significant pest threats, other threats have recently been realised, such as the establishment of Asian honey bee (*Apis cerana* Java genotype) in Northern Queensland and Small hive beetle (*Aethina tumida*) on the eastern states of Australia. Other established pest threats, such as American foulbrood (*Paenibacillus larvae*), cause ongoing hardship for beekeepers.

Despite the growing list of established pests of honey bees in Australia, all levels of government have indicated there is a need to prioritise biosecurity investment and the greatest return on investment is in the prevention and detection of exotic pests. This will likely see funding continue to be focused on pre-border, surveillance and emergency incursion activities, rather than established pest management programs. In this context, the honey bee industry now more than ever understands the need to take greater ownership of the biosecurity challenge, including in the coordination and co-funding of future biosecurity challenges that deal with management of established pests and diseases.

Conclusion of significant bee management programs

Two significant honey bee programs, the Asian Honey Bee Transition to Management Program (AHB T2M) and the Varroa Continuity Strategy came to an end in June 2013. There is a need to continue the momentum, finish outstanding work and ensure that Australia is prepared for, and can respond quickly to the establishment of Varroa and other bee pests and pest bees in Australia, including the recent establishment of Asian honey bee in North-Queensland. It is envisaged that the work in these programs could be integrated into industry biosecurity practices through the National Bee Biosecurity Program.

Industry leadership and reduced reliance on government funding

All levels of government have indicated that funding will continue to be focused on pre-border, surveillance and emergency incursion activities, rather than established pest management programs. In this context, the honey bee industry now more than ever understands the need to take greater ownership of the biosecurity challenge, including in the coordination and co-funding of future biosecurity challenges that focus on both established and exotic pests.

For these reasons, the honey bee industry undertook an extensive honey levy reform and increase process throughout 2013/14. The proposal to double the honey levy and to significantly increase

industry's biosecurity investment was supported by over 85% of industry respondents. The new honey levy arrangements will begin on 1 July 2015.

From 1 July 2015 the honey bee industry has committed $400,000 per annum to the National Bee Biosecurity Program. This funding is also being topped up in specific states by industry associations to contribute to the National Bee Biosecurity Program. In addition, the honey bee industry also commits $75,000 per annum to the National Bee Pest Surveillance Program.

The honey bee industry is a proactive example of an agricultural industry looking to work with governments to create an effective industry/government biosecurity partnership.

Aligning with broader government biosecurity objectives

The Intergovernmental Agreement on Biosecurity (IGAB) was officially endorsed by the Australian, state and territory governments (except Tasmania) in January 2012 and aims to strengthen Australia's biosecurity system. It states the national goal for biosecurity is:

'To minimise the impact of pests and diseases on Australia's economy, environment and the community, with resources targeted to manage risk effectively across the continuum, while facilitating trade and the movement of animals, plants, people, goods, vectors and vessels to, from and within Australia'

The honey bee national biosecurity vision clearly aligns with this statement. The honey bee intermediate objectives and priority actions also directly correlate with the priority action areas described in schedules 2 to 8 of the IGAB, specifically Schedule 5 *'National Management Framework for Established Pests and Diseases'* and Schedule 4 *'National Surveillance and Diagnostic System'.*

The development of this Code and Program is widely recognised by industry and governments as an example of the kind of outcomes that are being sought from the IGAB processes. For this reason it is important to support this initiative as well as be directly involved in its development to maintain consistent outcomes in an effort to ensure that industry is moving in the same direction as broader national biosecurity policy.

Furthermore, it is intended that once the national biosecurity management strategy is developed, and these national biosecurity programs are implemented, there will be 'line of sight' between the various inputs to the programs—for example, training, communication, awareness, on-ground surveillance, reporting, and regulation systems, etc.

Ensuring regulation is contemporary and adds value

Although the Code and Program proposal adds mandatory requirements for additional aspects (such as record keeping, exotic surveillance, training etc.), it is hoped that this will lay the foundation for reducing unnecessary regulation and red-tape in the longer-term and replace it with a package of measures designed by industry to improve exotic pest preparedness and established disease management. This will ultimately simplify the regulations and provide national consistency for both governments and industry.

Areas that have been identified by the honey bee industry to review in the future once the Code is established include:

- harmonising the registration system for beekeepers to make it nationally consistent (i.e. every 2-years, online, 0-5 hives for free)
- allow a beekeepers registration in their home state to be recognised in another state (i.e. important for migratory beekeeping)
- removal of interstate health certificates (i.e. if everyone is working towards the same Code, there is no need for these to be maintained)
- consistent notifiable pests and diseases list (i.e. there is currently a lot of variation between states, which makes a complex system and prevents reporting by beekeepers)

Legislators may baulk at the need to impose new regulatory measures in the short-term when the Australian government and most state and territory jurisdictions are cutting red tape. However, it needs to be remembered that these measures have been requested, designed and largely funded by industry and simply require government regulation to ensure their success.

NATIONAL BEE BIOSECURITY PROGRAM

The proposed National Bee Biosecurity Program is an initiative managed and administered by Plant Health Australia (PHA) on behalf of the Australian Honey Bee Industry Council (AHBIC). The purpose of the Program is to improve the management of established pests and diseases, as well as increase the preparedness and surveillance of exotic pest threats in the honey bee industry. This would be achieved through the establishment of a mandatory Code of Practice for all beekeepers. Specific elements of the Code of Practice will only apply to commercial beekeepers (≥ 50 hives).

It is envisaged that this program could be launched throughout 2015/16 and consist of a partnership between PHA, AHBIC and state governments. PHA would provide national management and governance support, the honey bee industry would provide significant funding resources on an annual basis and AHBIC would be the key drivers of the program as well as provide advocacy and communication about the Program to the honey bee industry and other stakeholders. State governments would provide regulatory support for the Program as well as a financial contribution and/or in-kind support to the Program.

While the National Bee Biosecurity Program and Code places heavy emphasis on awareness, education and training through the ‘new’ Bee Biosecurity Officer position in each of the state departments, it will not be possible to improve industry-wide pest and disease management standards unless there is also a mechanism to achieve compliance.

Compliance with the Code would be actively monitored through a combined system of self-certification and random or targeted inspection of beekeepers’ records and assessment of biosecurity practices by the Bee Biosecurity Officer. The Bee Biosecurity Officer would focus on larger beekeepers (50 or more hives) but may look at smaller beekeepers if a problem is reported.

Commercial beekeepers will be required to self-certify annually, through the prescribed format that they are in compliance with the Code and they have maintained the appropriate biosecurity records as outlined in the Code.

Each year, the records of a sample (i.e. 5-10%) of commercial beekeepers in each state will be inspected and their biosecurity practices will be assessed to provide an independent appraisal of their compliance. Using the principle that "if it's not written down, it wasn't done", this inspection of records and assessment of biosecurity practices will give a high level of assurance that a beekeeper is complying with this Code. If there are any concerns with the beekeeper's records, the assessment may also include physical examination of hives.

In the case of beekeepers that do not comply, the proposed Bee Biosecurity Officers will work with the beekeeper to develop a biosecurity action plan that they could implement in their apiary to achieve compliance with the Code. If non-compliance continues to occur, enforceable penalties such as on the spot fines may apply in the event of industry threatening, persistent, non-compliance. All compliance activities will be dealt with according to the current systems in place for each state.

The Code will be incorporated into existing industry Quality Assurance (QA) programs, so a beekeepers assessment with the QA program will also include assessment in accordance with the Biosecurity Code of Practice.

Compliance activities for the Code and Program will differ between states; in some states these activities will be handled separately by the compliance and regulatory section of the department, while in others, it may be dealt with by the Bee Biosecurity Officer.

The main role of the Bee Biosecurity Officers would not only work towards assessing industry's compliance with the Code which would ultimately raise the competency standards amongst beekeepers. They would also be a valuable source of support to beekeepers looking for information and assistance in improving biosecurity on-farm.

The Bee Biosecurity Officer would promote the importance of biosecurity across the honey bee industry for maintaining productivity, profitability, sustainably, market access and trade, and ultimately, beekeeper livelihoods. In the event of a serious pest threat to the honey bee industry the Bee Biosecurity Officer would be on hand to provide expert support to industry and help with the design and implementation of response measures under Emergency Plant Pest Response Deed that operates between governments and Australia's plant industries.

It is expected that from July 1 2015, there will be a two-year phase in period for the Code of Practice. This is to allow time for each state government to make the appropriate regulatory changes in accordance with the Code. During the Phase in period, the Bee Biosecurity Officer will work under existing state legislation and will work with industry in promoting the Code, as well as work with beekeepers in helping them prepare for when regulatory changes are made.

Aim

To improve the management of established pests and diseases, as well as increase the preparedness and surveillance of exotic pest threats in the honey bee industry.

Objectives

There are six objectives required to achieve the honey bee industry's purpose and aim of the National Bee Biosecurity Program, as well as fulfil industry's biosecurity vision. This includes:

1. Ensure the future sustainability and viability of the Australia honey bee industry
2. Implementation of the Code of Practice, which will ultimately improve the biosecurity practices of all beekeepers.
3. Raise awareness of the importance of biosecurity and key established and exotic pest threats to beekeepers and other industry participants.
4. Involve industry leaders and advocates in promoting bee biosecurity.
5. Enhance industry's biosecurity planning and preparedness through increased surveillance and awareness of exotic pests and industry's response to the detection of exotic pests.
6. Provide beekeepers with practical and expert assistance through training and awareness material for the improvement of bee biosecurity practices.

Code of Practice

The Australian Honey bee Industry Biosecurity Code of Practice (the Code) has been developed in consultation with beekeepers and governments to provide a clear framework for Australian beekeepers to engage in best-practice biosecurity. The objectives of the Code are to:

- Increase productivity in the Australian honey bee industry by improving the general level of disease and pest control by Australian beekeepers.
- Assist beekeepers in recognising exotic pests and diseases of bees and preparation for an exotic or emerging disease response.
- Ensure beekeepers conduct regular surveillance for the presence of exotic pests and diseases.
- Assist in the management of significant endemic diseases of bees, particularly American foulbrood (AFB).
- Facilitate the cross-border movement of bees through adoption of a single national code for biosecurity practices.
- To ensure the future viability and sustainability of the Australian honey bee industry.

The Code underpins the National Bee Biosecurity Program and is based on the principles of good biosecurity. It describes the outcomes a beekeeper needs to achieve for good pest and disease

prevention and control. It is not a manual on how to keep bees; it tells beekeepers what they must achieve but how they achieve it will be up to the individual and will be influenced by their situation. The standards set in the Code are only those things that all beekeepers should be doing to minimise the impact of pests and diseases on their hives.

The Code has been developed to incorporate fundamental biosecurity principles into the practices of all Australian beekeepers. Although outlined in further detail in the Code, the overarching principles of good beekeeping biosecurity are training and planning, reducing exposure to pests and diseases, controlling the potential spread of undetected disease, training and education, observing for signs of pests and diseases, controlling pests and diseases, keeping accurate records and hive and equipment maintenance.

To achieve a truly national approach to pest and disease prevention and control all beekeepers need to be proactive in the management of their apiaries. For this reason, the honey bee industry agrees that compliance with this Biosecurity Code of Practice should be mandatory for all beekeepers. However, it is acknowledged that commercial beekeepers (≥ 50 hives) are more likely to move hives around the country and move into areas of high bee density. They therefore pose a greater risk of disease spread to other beekeepers and it is appropriate that they should have a higher level of biosecurity. Consequently, some parts of the Code (Section C) only apply to commercial beekeepers.

Where possible, the Code will be compliant with existing state and territory legislation but the objective is to achieve "best practice" by taking the best elements of existing legislation, both in Australia and overseas.

It is possible for States to either regulate the Code of Practice in its current form, or to build each section of the Code into the regulations of the existing legislation. It is acknowledged that this can time quite a length of time, therefore, a two-year phase in period from 1 July 2015 is proposed for the Code of Practice. This two-year phase in period will allow the Bee Biosecurity Officer to work under existing state legislation and will work with industry in promoting the Code, as well as work with beekeepers in helping them prepare for when regulatory changes are made.

EXPECTED OUTCOMES AND BENEFITS

It is anticipated that through developing the National Bee Biosecurity Program industry can improve the efficiency of its management operations and make it simpler and more cost effective to develop and implement pest and disease management programs in the future.

This Program would establish an effective management and coordination structure between industry and government, which would not only reduce the impact of established pests and diseases on a beekeeping business, but would also be invaluable in the event of an exotic pest incursion of a high priority bee pest, such as Varroa mite.

Overseas experience suggests that if established pests and diseases are under control and beekeepers are well educated, then the impact of an exotic pest, such as Varroa mite, is reduced.

It is envisaged that National Bee Biosecurity Program will:

- Improve the overall level of biosecurity within the honey bee industry through greater industry communication, training and educational material for beekeepers which focuses on surveillance, identification, prevention and control of established and exotic honey bee pests and diseases;
- Reduce the incidence and effect of established pests and diseases, such as American foulbrood, as beekeepers will be educated and trained to better detect and manage these pests, which will lower the economic losses presently experienced by beekeepers;
- Improve surveillance for exotic pests and diseases as beekeepers will be required to specifically inspect hives for exotic pests and will have better knowledge of identification of exotic pests and diseases;
- Facilitate a greater government and industry partnership, which will ultimately help both parties when responding to an incursion of an exotic pest, or an emerging biosecurity issue;
- Reduce the cost of established pest and disease compliance activities for government. Compliance with the Code will be a cost-shared partnership between industry and government;
- Assist farmers to source healthy honey bee colonies for sustainable growth of the honey bee crop pollination service industry which in turn supports the development and growth of horticultural and seed crop industries;
- Facilitate interstate movement of hives by developing a national Code of Practice that all commercial beekeepers (major component of industry that moves hives) have to comply with. If industry has confidence that all commercial beekeepers are maintaining an appropriate level of pest and disease prevention and management, then the need for government certification for interstate movements of hives will diminish, or even be removed; and,
- Provide governments with a unique opportunity to assist an industry prepared to stand up and take responsibility for its own biosecurity management.

SCOPE

Although the main scope of this Program would be the enforcement of the Code of Practice, and providing communication, training and awareness to beekeepers on honey bee biosecurity, it is envisaged that the scope of the Program could incorporate state specific issues to further increase the relevance to beekeepers in a specific state.

For instance, Small hive beetle is not yet present in Tasmania and is a major concern for the honey bee industry in Tasmania. Therefore, in addition to the Code of Practice, a SHB surveillance focus could be implemented in Tasmania. This could also integrate into the existing National Bee Pest Surveillance Program which is in place in that state.

STAKEHOLDERS

The following organisations are considered to be the major stakeholders in this program and involved in its development and implementation. These stakeholders would also be required to have involvement with the operational aspects of the National Bee Biosecurity Program.

Stakeholders include:

- Australian Honey Bee Industry Council (AHBIC), including its member bodies
- Plant Health Australia (PHA)
- Commonwealth Department of Agriculture
- Rural Industries and Research Development Corporation (RIRDC)
- Horticulture Innovation Australia (HIA)
- New South Wales Department of Primary Industries (NSW DPI)
- Queensland Department of Agriculture, Fisheries and Forestry (QLD DAFF)
- Victoria Department of Environment and Primary Industries (VIC DEPI)
- Primary Industries and Regions South Australia (PIRSA)
- Department of Agriculture and Food Western Australia (DAFWA)
- Tasmania Department of Primary Industries, Parks, Water and Environment (DPIPWE)
- Northern Territory Department of Primary Industry and Fisheries (NT DPIF)
- ACT Government Territory and Municipal Services (ACT TAMS)

NATIONAL MANAGEMENT AND GOVERNANCE

Since 2011, Plant Health Australia has taken over the administration and management of numerous national honey bee biosecurity projects, including the Asian Honey Bee Transition to Management Program (AHB T2M), the Varroa Continuity Strategy and the National Bee Pest Surveillance Program.

It is envisaged that Plant Health Australia would manage this national program, in much the same way that it manages and administers the National Bee Pest Surveillance Program.

Plant Health Australia's role would include the appointment of an existing Program Manager within the Company to manage the program, as well as manage the National Bee Pest Surveillance Program.

Each state agency would work with PHA and AHBIC in appointing a Bee Biosecurity Officer for each state, which would be responsible for the implementation and operation of the Program within their jurisdiction.

Program Oversight

The management of the Program would be conducted as per **Figure 1**.

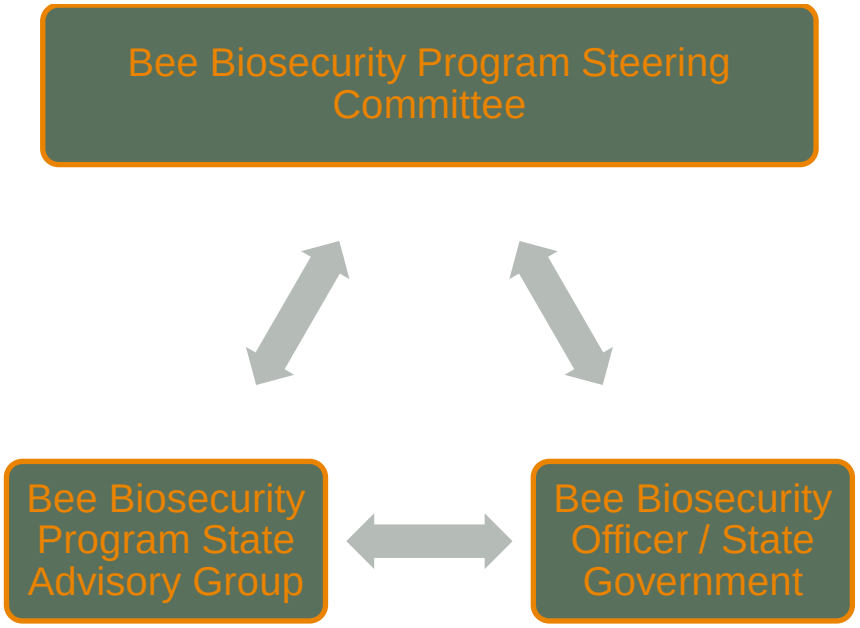


Figure 1. Program oversight of the National Bee Biosecurity Program

BEE BIOSECURITY PROGRAM STEERING COMMITTEE

To ensure the consistency of approach and provide a framework for collective action, it is envisaged that the oversight of the program would be managed by the establishment of a Bee Biosecurity Program Steering Committee. The role of the Steering Committee would be to oversee the implementation and operation of the Program at the national level, and to ensure that the aims and objectives of the Program are being met.

Membership of the Bee Biosecurity Program Steering Committee would be comprised of:

- Two representatives from Plant Health Australia
- The relevant Plant Health Manager overseeing the Program in NSW, VIC, QLD, SA, WA and TAS
- Two representatives from AHBIC

It is envisaged that the Steering Committee would have two meetings throughout the year, which would involve a teleconference and a possible face-to-face meeting. The face-to-face meeting could possibly be linked to the AHBIC conference which is held in July of each year and held in a different state each year. The Chair of the Steering Committee would be a nominated representative of AHBIC and the Deputy Chair will be the responsible manager within PHA. The secretariat will also be provided by PHA.

The teleconferences/meetings would provide the opportunity to resolve any issues arising from each state's Program, report on milestones as per the state contract, improvements able to be made as well as provide a forum to ensure that the Program is running smoothly with an appropriate level of

communication between PHA, AHBIC and state governments. These meetings will be critical during the initial phases of the Program.

BEE BIOSECURITY PROGRAM STEERING COMMITTEE TERMS OF REFERENCE

The National Bee Biosecurity Program and underpinning Code of Practice is an industry-driven and funded initiative. It will be key that the National Bee Biosecurity Program Steering Committee support and facilitate the objectives and aims of industry in delivering this program.

The National Bee Biosecurity Program Steering Committee Terms of Reference follow:

- To oversee the implementation and operation of the National Bee Biosecurity Program at the national level and to ensure that the program aims, milestones and objectives are being met to a satisfactory standard.
- To ensure consistency of approach and provide a framework for collective action to implement the Biosecurity Code of Practice and National Bee Biosecurity Program at a national level.
- To assess advice from stakeholders on improvements to make to the Biosecurity Code of Practice, the National Bee Biosecurity Program and the role of the Bee Biosecurity Officer.
- To act as the responsible group in the event that a review of the Biosecurity Code of Practice and National Bee Biosecurity Program is requested amongst stakeholders.
- To work towards achieving majority involvement and compliance with the Biosecurity Code of Practice and National Bee Biosecurity Program amongst all beekeepers.
- To consider the following issues identified by the Australian Honey Bee Industry and raised through the National Bee Biosecurity Program.
    - Harmonising the registration system for beekeepers to make it nationally consistent (i.e. Every 2-years, online, 0-5 hives for free)
    - Allow a beekeepers registration in their home state to be recognised in another state (i.e. Important for migratory beekeeping)
    - Removal of interstate health certificates (i.e. If everyone is working towards the same code, there is no need for these to be maintained)
    - Consistent notifiable pests and diseases list (i.e. There is currently a lot of variation between states, which makes a complex system and prevents reporting by beekeepers)
- Membership of the National Bee Biosecurity Steering Committee is comprised of:
    - Two representatives from Plant Health Australia
    - The relevant Plant Health Manager overseeing the Program in NSW, VIC, QLD, SA, WA, TAS, NT and ACT
    - Two representatives from the Australian Honeybee Industry Council
- The Steering Committee will be chaired by a nominated representative of AHBIC.
- The Steering Committee will meet twice per year, once by teleconference and once face-to-face to resolve any issues arising from each state's Program, report on milestones as per the State contract, improvements able to be made and to provide a forum to ensure that the program is running smoothly.

BEE BIOSECURITY PROGRAM STATE ADVISORY GROUP

For the Program to work effectively, it needs active industry involvement and consultation at the beekeeper level. To make this happen at the State level, an Advisory Group (AG) would be established.

Each State AG would include the Bee Biosecurity Officer as well as representatives from the peak state industry association. Some states already have existing structures which could perform this role.

This State AG would meet formally once a year to discuss state specific issues that would be relevant for the Bee Biosecurity Officer. This could include focusing activities around major pollination events, major production areas or to target specific pests and diseases in certain areas. These suggestions would be recommended to the Bee Biosecurity Program Steering Committee for inclusion in the Bee Biosecurity Officer's work plans for the upcoming year.

Although only one formal meeting would be held each year, it is expected that there would be regular consultation between the Bee Biosecurity Officer and local honey bee industry representatives.

BEE BIOSECURITY PROGRAM STATE ADVISORY GROUP TERMS OF REFERENCE

- To provide jurisdiction specific advice to ensure successful adoption of the Biosecurity Code of Practice and National Bee Biosecurity Program in each state or territory.
- Assist in developing techniques or strategies that will ensure the compliance of beekeepers with the Biosecurity Code of Practice and National Bee Biosecurity Program.
- Assist the relevant government in contributing to possible work specific milestones for the Bee Biosecurity Officer to ensure a high level of adoption by all beekeepers.
- To provide advice, as required, on technical aspects, timeframes and practicality of the Biosecurity Code of Practice and National Bee Biosecurity Program in an effort to ensure a high level of adoption by all beekeepers.
- When requested by the Steering Committee, to assist in the development of, or provide comment on the review of the Biosecurity Code of Practice and National Bee Biosecurity.

What is not covered:

- Program financial matters
- Broader policy issues surrounding bee biosecurity

PROPOSED ACTIONS AND TIMELINES

Initial actions and associated timelines for the implementation of the National Bee Biosecurity Program are necessary to meet a variety of objectives. A list of preliminary actions and timelines to implement this National Program are identified in ***Table 1***.

Table 1. Proposed actions and timelines to implement the National Bee Biosecurity Program

Action	**Due Date**
Plant Health Committee (PHC) Working Group nominated to work with PHA and AHBIC on developing the Australian Beekeeping Code of Practice	29th November 2013
A Draft Australian Beekeeping Code of Practice and Draft National Bee Biosecurity Program outline is developed and distributed for comment to the PHC Working Group and Industry leaders	10th February 2014
The first face-to-face meeting of the PHC Working Group held in Melbourne	27th February 2014
The first face-to-face meeting of the honey bee industry and the honey packing industry (Industry leaders) held in Melbourne	28th February 2014
The honey levy is voted on at industry state conferences	May – July 2014
The results of the honey levy reform and increase process are finalised and made public	9th July 2014
The second Draft Australian Beekeeping Code of Practice and Draft National Bee Biosecurity Program outline is developed and distributed for comment to the PHC Working Group and Industry leaders	August 2014
The honey levy business case is submitted to the Minister for Agriculture for consideration	August 2014
Continued consultation via emails and teleconferences with the PHC Working Group and Industry leaders to refine the Australian Beekeeping Code of Practice and the National Bee Biosecurity Program	August 2014 – October 2014
The second face-to-face meeting of the PHC Working Group held in Melbourne	27th November 2014
The second face-to-face meeting of the Industry leaders held in Melbourne	28th November 2014
The second version of the Biosecurity Code of Practice and the National Bee Biosecurity Program is distributed to Industry and governments for comment	December 2014
Consultation with the honey bee industry is undertaken. The draft Code and Program are placed on the AHBIC website for industry to	December 2014 – 31 March 2015

download and send their comments in. State departments of agriculture conduct mail outs to all registered beekeepers to inform them of this consultation phase. Articles are also included in industry journals and newsletters to promote industry having a say on the Code and Program	
Comments are received from all state governments on the Code and Program	December 2014 – 31st March 2015
Industry leaders meet to discuss industry's comments on the Program and Code as well as comments from the governments	April 2015
The third version of the Code and Program is distributed to Industry and Governments	May 2015
Industry endorsement of Code of Practice and National Bee Biosecurity Program sought at the 2015 round of industry conferences	May – July 2015
The new honey levy (4.6c/kg) comes into effect	1st July 2015
Ongoing consultation between AHBIC, PHA and State Governments is undertaken to ensure government endorsement of the Code of Practice and National Bee Biosecurity Program. This will include an agreed timeframe for legislation/regulation of the Code of Practice in all states, along with the hiring and placement of the Bee Biosecurity Officer position.	July – December 2015

FUNDING

The honey bee industry, through AHBIC, has indicated a strong commitment to take on greater funding responsibility and leadership in managing on-going preventative biosecurity actions and responses. AHBIC recognise that biosecurity is a shared responsibility between governments, industry, producers and the general public and that in a constrained fiscal environment, the honey bee industry must first create a secure funding mechanism to support a national biosecurity program.

The acceptance of greater industry ownership of biosecurity issues, particularly in the area of established pest and disease management, has meant that there is currently a strong level of support within the honey bee industry to establish a continuous funding mechanism.

For this reason, AHBIC has recently undertaken a major project[1] to reform and increase the overall honey levy to pay for improved biosecurity through established pest and disease management and surveillance for exotic bee pests and pest bees.

[1] This project is outlined as Priority Action 1 in the *'Proposal for a National Honey Bee and Pollination Industry Biosecurity Management Strategy'* which was submitted by AHBIC to the Commonwealth Department of Agriculture in May 2013.

Australian honey producer levies are currently set at 2.3c/kg for annual honey sales greater than 600kg. These levies fund:

- **Research and Development (R&D)** – a levy of 1.5c/kg is matched by the Australian Government and managed by the Rural Industries Research and Development Corporation (RIRDC). Honey bee R&D targets pest and disease research, productivity, profitability, the role of flora in honey bee management, extension, communication and capacity building.
- **EADRA Biosecurity** – a levy of 0.7c/kg provides resources for the Emergency Animal Disease Response Agreement (EADRA). This levy contributes to the industry contingency fund and is also used to meet industry's contribution to the National Bee Pest Surveillance Program.
- **National Residue Survey (NRS**) – a levy of 0.1c/kg manages the risk of chemical residues and environmental contaminants in Australian food products including honey. This is a requirement for Australian honey to be exported to the European Union.

AHBIC proposed the following increases and reforms of the honey levy to pay for improved industry biosecurity – endemic pest and disease management and surveillance of exotic bee pests and pest bees.

- Changing the Emergency Animal Disease Response Agreement (EADRA) for honey bees managed by Animal Health Australia into an Emergency Plant Pest Response Deed (EPPRD) managed by Plant Health Australia (PHA), in recognition of AHBIC's membership and signatory status to PHA and the EPPRD.
- An increase in the newly established EPPRD Biosecurity levy component of **2.3c/kg** is proposed (i.e. a doubling of the total levy) to fund the National Bee Biosecurity Program and provide a source of additional revenue to meet the industry's commitment to exotic pest surveillance through the National Bee Pest Surveillance Program.
- Establish a PHA Levy – this involves the transfer of **0.1c/kg** from the newly established EPPRD Biosecurity component. The establishment of this levy will provide AHBIC with the ability to pay for annual PHA membership subscription fees, which are currently paid out of the EADRA Contingency fund.
- Increase the honey levy threshold from 600kg to 1500kg – by raising the threshold from which the honey levy applies to, beekeepers whose collection costs greatly exceed the revenue raised will be dropped from the honey levy, thus making the honey levy overall more cost efficient.
- Change the management of the industry contingency fund from AHA to PHA – this change is in recognition that AHBIC is a member of PHA and a signatory to the EPPRD and that PHA are considered the national coordinators for honey bee biosecurity.

These changes are summarised in the table below.

Table 2. Current and proposed honey producer levies

1) Current Levy (≥600kg)	2) Current Rate	3) Proposed Levy (≥1500kg)	4) Proposed Rate
Research and Development	1.5	Research and Development	1.5
EADRA Biosecurity*	0.7	EPPRD Biosecurity	2.9
National Residue Survey	0.1	National Residue Survey	0.1
		PHA levy	0.1
Total	**2.3c/kg**		**4.6c/kg**

*The EADRA Biosecurity component is currently paying for PHA membership annually, however, to solely be a member of PHA, a new PHA levy that is designed specifically for paying membership fees needs to be established.

After comprehensive consultation throughout 2013/14, the AHBIC proposal was supported by 86% of industry respondents. Strong support was recorded by all beekeepers across all Australian states. Large commercial beekeepers which are most affected by the levy increase and pay by far the most in levies also voted strongly in favour of the proposed reforms and increases.

The AHBIC Business Case to Reform and Increase the Honey Levy was formally submitted to the Minister for Agriculture (Hon. Barnaby Joyce) for consideration on the 20th of August 2014. The Australian Government formally approved the new levy on the 30th April 2015, with a start date of the 1st of July 2015.

Once the new honey levy begins, with an average annual leviable production of 20,000 tonnes per year, the new EPPRD biosecurity levy component of 2.9c/kg will raise approximately ~$580,000 per annum. Part of the money raised for this levy will be allocated to:

- $400,000 for the National Bee Biosecurity Program
- $75,000 for the National Bee Pest Surveillance Program

The establishment of the PHA levy of 0.1c/kg will raise approximately:

- $20,000 for payment to PHA for annual membership subscription fees. AHBIC's membership fees are generally <$5000 per year. Spill over funds (~$15,000) after payment of the PHA membership subscription fees will be redistributed to the AHBIC Contingency Fund for use in other biosecurity initiatives (i.e. training).

BUDGET

The budget for the National Bee Biosecurity Program is proposed to be broken down on a production basis for all states, specifically relating to the number of commercial beekeepers in each state who are

managing ≥50 hives. This is in recognition that there is a large variation between the states in the number of commercial beekeepers and hives registered, which would therefore create differing workload levels between states.

It also takes into consideration that the majority of the increase in the honey levy will be paid by commercial beekeepers, and therefore, commercial beekeepers (i.e. levy payers) should be the ones to receive the direct benefits of the National Bee Biosecurity Program.

Table 3 summarises up-to-date information provided to PHA[2] on the number of beekeepers, number of hives, as well as the number and percentage of beekeepers operating ≥50 hives in each state.

Table 3. Number of beekeepers and hives, by state, 2013/14

State or Territory	Number of Beekeepers	% of Beekeepers	Number of Hives	% of Hives	Number of beekeepers operating ≥50 hives (%)
New South Wales	3, 461	28%	214, 296	41%	489 (34.5 %)
Queensland	3, 098	25%	103, 539	20%	305 (21.5 %)
Western Australia	999	8%	28, 204	5%	106 (7.5 %)
South Australia	1, 030	9%	61, 322	12%	171 (12 %)
Tasmania	174	2%	16, 212	3%	42 (3 %)
Victoria	3, 458	28%	97, 870	19%	310 (21.5 %)
TOTAL	12, 220	100%	521, 443	100%	1423 (100 %)

As outlined in ***Table 3,*** there are an estimated 1423 commercial beekeepers in Australia operating ≥50 hives and this has subsequently been broken down on a percentage basis for each jurisdiction. Based on the numbers outlined in ***Table 3***, an estimated financial contribution from the honey bee industry has been prepared (***Table 4***) for the National Bee Biosecurity Program, in anticipation of industry's successful levy process raising additional funds.

[2] This information was received from state apiary officers throughout January 2014.

Table 4. Estimated Financial Contribution by the Honey Bee Industry

Jurisdiction	Field resource requirements (FTE) and expected $ (GST exclusive)
New South Wales	1.0 ($115,575)
Queensland	0.7 ($72,025)
South Australia	0.6 ($40,200) $40,000*
Tasmania	0.1 ($10,050)
Victoria	0.7($72,025) $35,000**
Western Australia	0.2 ($25,125)
Total FTE	3.3
Cost for field resources	**$410,000**
PHA National Management and Governance	**$65,000**
Estimated Annual Contribution to the National Bee Biosecurity Program by the Honey Bee Industry	**$475,000**

*From South Australia Apiary Fund
**From Victoria Apiary Fund

CONTRIBUTIONS FROM PHA, AHBIC AND STATE AGENCIES

Plant Health Australia

PHA is the lead national coordinating body for plant biosecurity in Australia. PHA works in partnership with industry, governments, researchers and others, providing national coordination to improve biosecurity policy and practice across Australia's plant industries and to build capacity to respond to plant pest emergencies. PHA's efforts enhance Australia's plant health status, assist trade, and safeguard the sustainability and profitability of our plant industries.

In addition to their existing duties, PHA would appoint an existing Program Manager to coordinate the National Bee Biosecurity Program, as well as an existing Project Officer to provide day-to-day support for the Program and Steering Committee.

PHA's role as administrator and coordinator of the National Bee Biosecurity Program would include the following roles and responsibilities:

- Management of the appointed Bee Biosecurity Officers;

- Communication by phone, email, or in person to discuss work schedules, milestones, program implementation and other issues that arise;
- Liaison on key and/or emerging issues;
- Assistance with the preparation of training materials;
- On-going training where appropriate.

- Management of payments and accounting;
- Management of contracts with state agencies and involvement in the advertising, reviewing and hiring of Bee Biosecurity Officer's;
- 6 media releases per year (one focused on each state per year); and,
- Reporting (internal and external).

PHA would provide the following in-kind support:

- Training (for a new incumbent) or refresher training (for an ongoing) Bee Biosecurity Officer on:
  - PLANTPLAN
  - Emergency Plant Pest Response Deed
  - National Bee Pest Surveillance Program
  - National Biosecurity Plan for the Honey Bee Industry
  - Role of the Industry Liaison Officer and Industry Liaison Coordinator
  - On-farm biosecurity general practices and awareness

AHBIC

The Australian honey bee industry would be contributing an extensive financial contribution per year to the National Bee Biosecurity Program.

AHBIC representatives would be the key drivers of the program and would play a key role in the implementation and management of the National Bee Biosecurity Program in the following ways:

- Provide advocacy and communication about the Program and Code of Practice
- Provide leadership within industry and state beekeeping associations on their involvement in the Program and what is required of commercial beekeepers
- Assist in the advertising, reviewing and hiring of Bee Biosecurity Officer's in each state

Proposed support from State agencies[3]

The proposed position of Bee Biosecurity Officer would be in addition to existing resources in each state. The purpose of this role is for specific activities outlined in the Code and Program. The honey bee industry is not proposing to cost-shift current funding arrangements with state governments, but is instead looking to contribute a joint industry/government funding partnership for a specific role that provides benefits for the management of established and exotic pests and diseases.

It is envisaged that the Bee Biosecurity Officer would be employed by each state agency, with a financial contribution from industry for that position. The position would be advertised internally and externally considering the very specific nature of this position.

It is proposed that in addition to financial support each state agency would provide the following in-kind support:

- Desk/office space including access to:
    - Desk space
    - Laptop computer
    - Phone (landline and mobile)
    - Fax
    - Photocopier/scanner
    - Stationery
- Access to a car (standard government contract vehicle)
- Training as required
- Supervisor of an appropriate level to act as support officer and direct supervisor to the Bee Biosecurity Officer

Since the main purpose of the Bee Biosecurity Officer would be to oversee the mandatory Code of Practice for beekeepers, it would be expected that once finalised, this Code of Practice could be included in each state's appropriate biosecurity legislation to allow for effective enforcement.

LINKAGES WITH OTHER PROGRAMS

If established, the National Bee Biosecurity Program would link together with the National Bee Pest Surveillance Program, which is also administered by PHA and is national surveillance program for exotic bee pests and pest bees. This would effectively deliver two national bee programs, each inextricably

[3] Each state government currently manages honey bees in a different manner, with a differing level of existing resources. This Code and Program cannot specify as of yet, each of these specific circumstances. It is expected that AHBIC and PHA will hold discussions about how this position could be incorporated into the existing structure with individual state governments throughout 2014/15.

linked, but with a separate focus on exotic pest surveillance and established pest and disease management.

The National Bee Pest Surveillance Program

The National Bee Pest Surveillance Program (NBPSP) is an early warning system to detect new incursions of exotic bee pests and pest bees. The Program involves a range of surveillance methods conducted at locations considered to be of most likely entry of bee pests and pest bees throughout Australia.

The NBPSP supports two objectives:

1. **Exotic bee pest and pest bee early warning:** to act as an early warning system to detect new incursions of exotic bee pests and pest bees. This greatly increases the possibility of eradicating an incursion, and limits the scale and cost of an eradication program.

2. **Trade support:** to facilitate the export of queen bees and packaged bees to countries sensitive to a range of bee pests and pest bees. This Program provides technical, evidence based, information to support Australia's pest free status claims during export negotiations and will assist exporters in meeting export certification requirements.

The National Bee Pest Surveillance Program is comprised of a range of surveillance techniques to allow for the early detection of exotic bee pests and pest bees.

The Program is currently primarily based on sentinel hives, which are hives of European honey bees (*Apis mellifera*) of a known health status, that are maintained at locations believed to be of high risk throughout Australia. These hives are tested every two months using an acaricide (miticide) to provide a means of early detection of Varroa mites and Tropilaelaps mites, which could have potentially entered via exotic bees on a vessel or transported cargo. Samples of bees are also taken from these sentinel hives every two months and submitted for dissection and examination for Tracheal mite, which also could have entered via exotic bees.

Additional surveillance techniques such as sugar shaking and alcohol washing by beekeepers at additional high risk locations are also conducted for the detection of exotic bee pests.

To detect the possible incursion of pest bees, surveillance techniques such as catch boxes (empty hives), swarm capture, as well as remote sensing of beehives (catchboxes with cameras) are also conducted for the detection of exotic pest bees.

Reporting and data from the National Bee Pest Surveillance Program is managed by PHA, and is included in the Animal Health in Australia report which is presented at the world OIE meeting, as well as the National Plant Biosecurity Status Report.

The Program is jointly funded by the Australian Honey Bee Industry Council (AHBIC), Horticulture Australia Ltd (HAL) who each contribute $75,000 per annum and the Australian Government through the Department of Agriculture who contribute $60,000 per annum. In-kind contributions for the implementation of the program are provided through the Commonwealth Department of Agriculture, as

well as through each State and Territory Department of Agriculture. At a national level, PHA coordinates and administers the Program.

PHA are current leading discussions with all stakeholders to increase the funding for the NBPSP from the current level of $210,000 per year to between $400,000 - $500,000 per year. It is hoped that this new funding agreement could commence on 1 July 2015 and will operate for a period of four years. This funding will provide further support to state governments to focus on bee surveillance activities for exotic pests.

APPENDIX A: THE ROLE AND POSITION OF A BEE BIOSECURITY OFFICER

It is proposed that the Bee Biosecurity Officer would be within the Department of Primary Industries of each state government, and would be funded through a combination of beekeeper levies and in-kind state primary industry agency contributions. The Bee Biosecurity Officer would have 4 key responsibilities:

1) Implementation of the Biosecurity Code of Practice

2) Extension Officer for bee biosecurity

3) Assist in the management of the National Bee Pest Surveillance Program

4) Emergency Response assistance for bee biosecurity threats and incidents

The following detail has been developed to provide a starting point for the advertising and hiring process for the Bee Biosecurity Officer position. This will obviously vary between States. The level of the position within each state will be determined based on the appropriate level of qualifications required. This salary of the position will be determined in accordance with the funding provided for the position from the honey levy.

Position Description

To deliver the National Bee Biosecurity Program. This involves implementing and maintaining the Biosecurity Code of Practice, increasing the awareness and knowledge of exotic and established bee biosecurity threats and promoting and facilitating biosecurity best practice.

Experience, Skills and Knowledge Required

- Knowledge and understanding of the honey bee and pollination industry with a strong practical beekeeping ability.
- Desirable: An appropriate degree or tertiary qualification in Agricultural Science, Science or an equivalent qualification.
- Scientific and practical knowledge of both exotic and established bee pests and pest bees
- Experience in developing and delivering training and awareness programs aimed at achieving practice and behavioural change within the rural sector, including a knowledge and understanding of adult learning principles.

- An understanding of the government regulatory environment.
- Willingness to participate in responses to emergency plant pest incursions (for bee pests and pest bees) and participate in emergency management training.
- Demonstrated experience in project management, including the planning, delivery, evaluation and reporting of complex projects.
- Developed communication skills, including well developed writing skills, and the ability to carry out effective networking, negotiation, consultation and liaison with key clients and stakeholders.
- Demonstrated capacity to work effectively within a team and independently, with an ability to respond to a diverse and rapidly changing workload to achieve role requirements and unit work outputs.
- Willingness to travel and current driver's licence.

Key Activities and Accountabilities

The following components are examples of the type of activities that could be undertaken within the National Bee Biosecurity Program by a Bee Biosecurity Officer. These key activities and accountabilities would be reflected in the work-plan of each Bee Biosecurity Officer, but would be jurisdiction specific depending on the funding and workload.

1) Implementation of the Biosecurity Code of Practice

- Involve and liaise with industry leaders and advocates in promoting biosecurity best management practices through adopting and complying with the Beekeeping Code of Practice
- Implement and assess industry's compliance with the Biosecurity Code of Practice amongst beekeepers
- Promote the voluntary adoption of non-mandatory elements of the Code of Practice amongst hobby and amateur beekeeping associations
- Respond effectively to breaches of the Code of Practice (i.e. not being a registered beekeeper, neglected hives, AFB hot spots etc.)
- Report on program outputs and measure the progress in implementation and adoption of the Code of Practice amongst beekeepers.

2) Bee Biosecurity communication, promotion and awareness

- Attend key industry events and field days to promote bee biosecurity, demonstrate biosecurity best practice and distribute awareness information
- Develop and present training activities to different target audiences, providing biosecurity information and specific advice to improve beekeeping biosecurity and promote best practice

- Involve industry leaders and advocates (state and federal) in promoting best management and biosecurity practices to beekeepers.
- Produce a regular schedule of biosecurity related media to coincide with different seasonal activities that are associated with the honey bee industry (pollination, registration renewal, wintering hives etc.).
- Provide advice to government staff, industry and members of the public in an effective and timely manner that maintains and enhances the reputation of the National Bee Biosecurity Program.
- Work with PHA in developing 6 press releases per year, each focusing on a single state and focusing on a state specific issue.

3) Surveillance for exotic and notifiable established bee pests

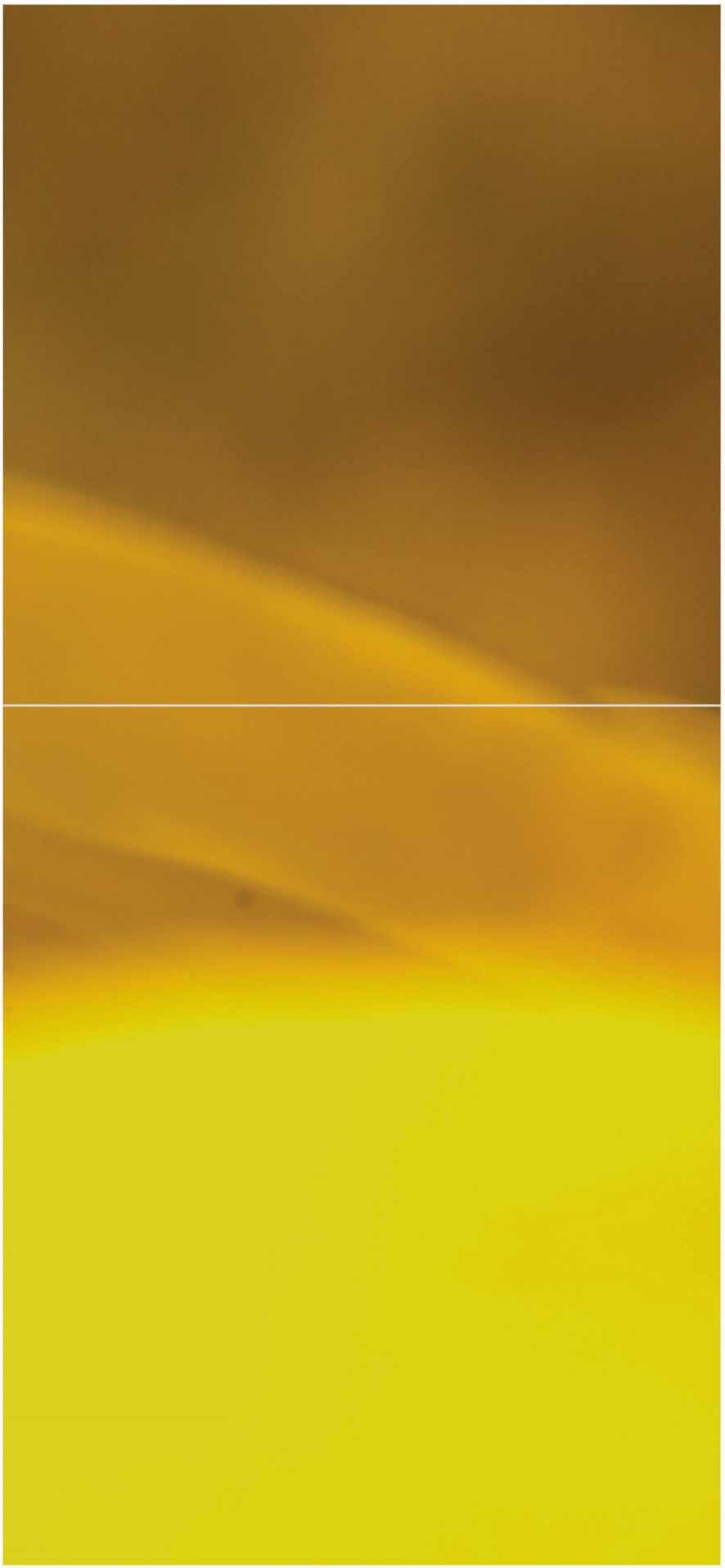
- Liaise with the manager of the state component, as well as PHA, in assisting with the National Bee Pest Surveillance Program.
- Work with appropriate State and Commonwealth representatives to implement and coordinate surveillance activities as part of the National Bee Pest Surveillance Program.
- Identify opportunities, develop and provide technical advice and support for the collection and recording of surveillance data for high priority exotic pests of the honey bee industry

4) Communication within the National Bee Biosecurity Program

- Actively contribute to internal communication within the National Bee Biosecurity Program.
- Provide assistance with preparation of extension material prepared by the National Bee Biosecurity Program for distribution by Bee Biosecurity Officers in all states.
- Report on speciality tasks as determined by consultation with Plant Health Australia.
- Ensure PHA and contractual milestones and reporting obligations are met on time and to a satisfactory standard

5) Emergency Response to bee biosecurity threats and incidents

- Undergo appropriate training to acquire competencies in Emergency Management to enable incident response requirements and obligations to be met.
- Actively participate in plant pest emergency responses (bee pest and pest bee incursions), to assist the response to achieve agreed targets.
- Act as Industry Liaison Coordinator/Officer in the event of a bee pest or pest bee incursion managed under an agreed national Response Plan.



Improving national biosecurity outcomes through partnerships

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