Chapter 3

Biosecurity issues

3.1 This chapter discusses the adequacy of the current biosecurity arrangements for imported and exported honey, apiary products, package bees and queen bees. It covers issues such as threats to biosecurity that Australia faces in relation to the beekeeping industry and its related products and services, discusses current biosecurity arrangements, and options for advancing the current arrangements that apply to the beekeeping, honey and related industries.

Australian biosecurity arrangements

3.2 Under the Australian Constitution, the Commonwealth does not have exclusive power to make laws in relation to biosecurity and quarantine arrangements. The administration of Australia's biosecurity and quarantine is therefore governed by both Commonwealth and state and territory laws.

3.3 The Commonwealth's quarantine laws are contained in the *Quarantine Act 1908* (Quarantine Act) and associated subordinate legislation, the *Environment Protection and Biodiversity Conservation Amendment (Wildlife Protection) Act 1999*, the *Quarantine Regulations 2000* and the *Quarantine Proclamation 1998*.[1]

3.4 Responsibility for the movement of goods of quarantine concern within Australia's border is assumed by state and territory authorities, which undertake both intra and interstate quarantine operations that reflect regional differences in pest and disease status, as part of their wider plant and animal health obligations.[2]

3.5 The Department of Agriculture manages quarantine controls at Australia's borders to minimise the risk of exotic pests and diseases entering the country and provides import and export inspection and certification services. The Department is also responsible for the development of Commonwealth biosecurity policy, for undertaking risk analyses in relation to the importation of new products to Australia and the establishment of appropriate risk management measures. It also undertakes offshore activities to minimise the risk of unwanted pests and diseases arriving in Australia.[3]

3.6 The Department of Agriculture is responsible for making quarantine decisions under the Quarantine Act and for the development of operational procedures at Australia's borders. Border activities include the interception of biosecurity risks that present at airports, seaports, mail centres and along Australia's coastline. Activities are

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1 Department of Agriculture, *Import risk analysis handbook*, 2011, p. 8.

2 Department of Agriculture, *Import risk analysis handbook*, 2011, p. 6.

3 Department of Agriculture, *About our biosecurity system*, http://www.daff.gov.au/bsg/system, (accessed 3 June 2014).

therefore centred around the screening of mail, vessels (including aircraft), people and goods entering the country.

Pest and disease incursions

3.7 The committee received significant evidence expressing a high degree of concern about the threat to the beekeeping and pollination industries by the presence of the Asian honey bee in Australia and the possibility of varroa mite entering the country.

The Asian honey bee

3.8 Asian honey bees, *Apis cerana* (AHB), are honey bees native to southeast and mainland Asia.[4] The AHB is considered an invasive species in Australia which adversely impacts populations of European honey bees (EHB) by competing for natural resources, robbing managed hives,[5] transmitting disease or parasites and inhabiting nesting spaces which would otherwise be available for native bees, small marsupials and birds.[6] The AHB also presents an environmental threat through the pollination of unwanted weed species and is difficult to eradicate due to its adaptability to varying climates and rapid breeding patterns.[7]

3.9 The National Sentinel Hive Program was initiated in 2000 to enhance surveillance for honeybee parasites and exotic bees in the vicinity of seaports.[8] The program works to detect incursions by conducting surveillance at likely entry points throughout Australia.[9] In May 2007, a nest of Asian honey bees was detected within Australia's quarantine barrier in the mast of a fishing boat in dry dock in Cairns.

3.10 Since that first detection, more than 561 colonies of the bee have been detected and destroyed in the Cairns region.[10] The AHB was initially classed as an emergency pest and an eradication program commenced, however this was not successful and in 2011, activities were moved from an eradication program to a

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4 Plant Health Australia, *Asian Honey Bee Fact Sheet*, p. 1.

5 When there is limited nectar available in the environment, such as during a drought or winter months, bees will rob other beehives of their honey supplies.

6 Senate Rural Affairs and Transport References Committee, *Science underpinning to inability to eradicate the Asian honey bee*, June 2011, p. 85.

7 Senate Rural Affairs and Transport References Committee, *Science underpinning to inability to eradicate the Asian honey bee*, June 2011, pp 85–86.

8 Department of Agriculture, *Review of the National Sentinel Hive Program*, http://www.daff.gov.au/animal-plant-health/pests-diseases-weeds/animal/varroa-mite/sentinel-hive-program-review, (accessed 5 June 2014).

9 Plant Health Australia, *National Bee Pest Surveillance Program*, http://nbpsp.planthealthaustralia.com.au/public.php?page=aboutnbpsp, (accessed 16 January 2014).

10 Queensland Government Department of Employment, Economic Development and Innovation, *Asian Honey Bee Incursion 2007 – 2012*, October 2010, p. 2.

management program.[11] Following the AHB incursion, restrictions were implemented in north Queensland on the movement of managed bees and beekeeping equipment to contain the pest.[12]

3.11 Several submitters were critical of the effort undertaken to eradicate AHB[13] and others questioned the evidence used to determine the decision to discontinue eradication attempts:

> The Asian bee incursion was not taken on seriously and too much time elapsed allowing this difficult pest to escape. The situation should have been handled by entomologists instead of veterinarians. Some of the people consulted on the expert panel were inexperienced with bees. Apiary officers were excluded.[14]

3.12 Other submitters suggested that the eradication program should be reinstated, with adequate staffing and under federal control,[15] and that the Commonwealth, along with the beekeeping industry and pollination dependent industries, support continued research effort to develop effective and specific feeding and bait stations for early detection and eradication of future incursions of Asian honey bees.[16]

3.13 The committee notes that the More Than Honey report made a number of recommendations in relation to strengthening Australia's ability to appropriately manage incursions. Among these was maintaining and strengthening the National Sentinel Hive Program.[17]

3.14 The Department of Agriculture advised the committee that the CSIRO was funded to undertake a risk-based analysis of the costs and benefits of surveillance systems for honey bee pests. The report recommended that the National Sentinel Hive Program be maintained and improved; that targeted studies should be undertaken to

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11 Plant Health Australia, *National Plant Biosecurity Status Report 2012*, p. 148.

12 Queensland Government, Department of Agriculture, Fisheries and Forestry, *Asian honey bee restricted area*, *http://www.daff.qld.gov.au/animal-industries/bees/diseases-and-pests/asian-honey-bees/restricted-area-and-movement-restrictions-for-beekeepers*, May 2013, (accessed 7 April 2014).

13 Mr Moss MacGibbon and Mr Andrew McCallum, *Submission 67*, p. 5; Mr Roland S. Inman, *Submission 20*, p. 1; Mr Chris Berkeley, *Submission 25*, p. 1; Mr Gary Montgomery, *Submission 43*, p. 3.

14 Mr Peter Warhurst, *Submission 18*, pp 1–2; See also Beechworth Honey Group, *Submission 52*, pp 25–26.

15 Mr Kevin MacGibbon, *Submission 69*, p. 3;

16 Wheen Bee Foundation Ltd, *Submission 65*, p. 6; Mr Moss MacGibbon and Mr Andrew McCallum, *Submission 67*, p. 3.

17 House of Representatives Standing Committee on Primary Industries and Resources, *More than Honey: the future of the Australian honey bee and pollination industries*, May 2008, p. xviii.

obtain data on the efficiency of sentinel hives to detect exotic bee mites; and that operations in port areas should be strengthened to safeguard bee biosecurity.[18]

3.15 In 2012, administration and management of the National Sentinel Hive Program was transferred to Plant Health Australia (PHA) from Animal Health Australia in line with the honey bee industry's move to align with pollination dependent plant industries. At that time, the program was enhanced to make it consistent with recommendations from CSIRO's review. The program has now been renamed to the National Bee Pest Surveillance Program (NBPSP) to reflect its broader scope, and the Commonwealth government, Horticulture Australia Limited and the honey bee industry have committed further funding to the program until 30 June 2015, at which point a review will be undertaken.[19]

3.16 In its submission CSIRO indicated that the NBPSP could be improved, and that it is highly unlikely that all incursions could be detected:

> …methods for detecting swarms of Asian honey bee (*Apis cerana*) remain under development. In particular, Asian honey bee swarms are much less likely to be detected in swarm boxes, and sweep netting appears more promising [the Cairns Asian honey bee incursion was not detected by the log traps in operation at the time]. The NBPSP runs on a very modest budget…It needs to be complemented with activities to mitigate the impacts of any possible incursions to properly manage the risk. Our view is that deepening that defence by undertaking the research now to prevent impact should an incursion occur, will substantially reduce the overall impact on primary producers and the wider community and enable our pollination dependant industries the best chance to adapt effectively to a post-*Varroa* incursion reality.[20]

Varroa mite

3.17 Varroa mites were originally natural external parasites of the Asian honey bee. However in recent decades they have adjusted to living on the European honey bee and established themselves around the world. Varroa mites are pinhead sized mites that feed on both larvae and adult bees, causing the development of infections or deformities, such as stunted wings or missing legs, and continue to diminish the health of the bee colony until all are dead.[21]

3.18 Varroa mites have spread to all inhabited continents except Australia, as depicted in Figure 1 below.[22] In the United States of America and Europe, 95–100 per

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18 Department of Agriculture, *Submission 79*, p. 18.

19 Department of Agriculture, *Submission 79*, p. 18.

20 CSIRO, *Submission 41*, pp 6–7.

21 Department of Agriculture, *Varroa mite*, http://www.daff.gov.au/animal-plant-health/pests-diseases-weeds/animal/varroa-mite/, (accessed 8 January 2014).

22 Department of Agriculture, *Varroa mite*, http://www.daff.gov.au/animal-plant-health/pests-diseases-weeds/animal/varroa-mite/, (accessed 28 January 2014).

cent of unmanaged hives were destroyed by varroa mites within three to four years of infestation.[23] In countries where varroa mite is established, feral honey bees have been largely wiped out. In New Zealand feral bees largely vanished from the North Island within four years of the varroa mite invasion.[24]

3.19 During its public hearing in Murray Bridge, the committee heard evidence to suggest that almost all feral and wild bee populations, including the 1500 species of native bees, would be exterminated if varroa become established in Australia.[25]

Figure 1—Current *varroa* mite distribution (2010)

Red areas indicate establishment of *varroa destructor*[26]

3.20 Researchers warn that Australia is unlikely to remain free of the varroa mite or succeed in eradication as it has not been achieved elsewhere.[27] The Victorian Apiarists' Association submitted that varroa mite would most likely arrive in Australian ports via previously infected EHB from South East Asia or illegal smuggling of EHB.[28] Categorisation of Emergency Plant Pests determines what

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23 Department of Agriculture, *A honey bee industry and pollination continuity strategy should Varroa become established in Australia*, May 2011, p. iii.

24 CSIRO, *Submission 33* to the House of Representatives Standing Committee on Primary Industries and Resources Inquiry into the Future Development of the Australian Honey Bee Industry, p. 9.

25 Dr Doug Somerville, *Committee Hansard*, 15 April 2014, pp 55–56.

26 University of Florida, *Featured Creatures*, http://entnemdept.ufl.edu/creatures/misc/bees/varroa_mite.htm, (accessed 5 June 2014).

27 Department of Agriculture, Fisheries and Forestry, *A honey bee industry and pollination continuity strategy should Varroa become established in Australia*, May 2011, p. iii.

28 Victorian Apiarists' Association, *Submission 71*to the House of Representatives Standing Committee on Primary Industries and Resources Inquiry into the Future Development of the Australian Honey Bee Industry, p. 27.

structure of funding will apply in the event of an incursion.[29] Categorisation of varroa has not yet occurred so it is not known the level of resourcing a possible incursion would attract.[30]

3.21 The committee considers this to be an unacceptable risk.

Recommendation 5

3.22 The committee recommends the categorisation of *varroa destructor* be completed as a matter of urgency to provide industry with funding certainty in case of an incursion.

3.23 RIRDC has stated that if varroa mite does arrive in Australia, it is likely to have a significant impact on apicultural and agricultural industries.[31] In the RIRDC report *Valuing honeybee pollination*, honey bee crop pollination services were valued at $1.7 billion for 1999-2000, based on the direct cost of a loss of pollination services, including directly affecting 9500 jobs. In addition, RIRDC estimated an extra $2 billion loss in industry output and 11 000 jobs following the loss of all pollination services. A decade later, these figures are expected to be far higher.[32]

3.24 Figure 2 below presents the outcome of one approach to modelling the impact of varroa mite on Australia's crop industries completed in 2011. Losses to 25 pollination dependent plant industries over the next 30 years are presented, including potential yield losses and cost increases because of the need to purchase commercial pollination services. These are expected losses in the sense that they reflect that Australia is currently free of varroa mite. On average, annual losses over the 30 year period simulated by the model were around $70 million.[33]

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29 Plant Health Australia, *Pest Categorisation*, http://www.planthealthaustralia.com.au/biosecurity/emergency-plant-pests/pest-categorisation/, (accessed 5 June 2014).

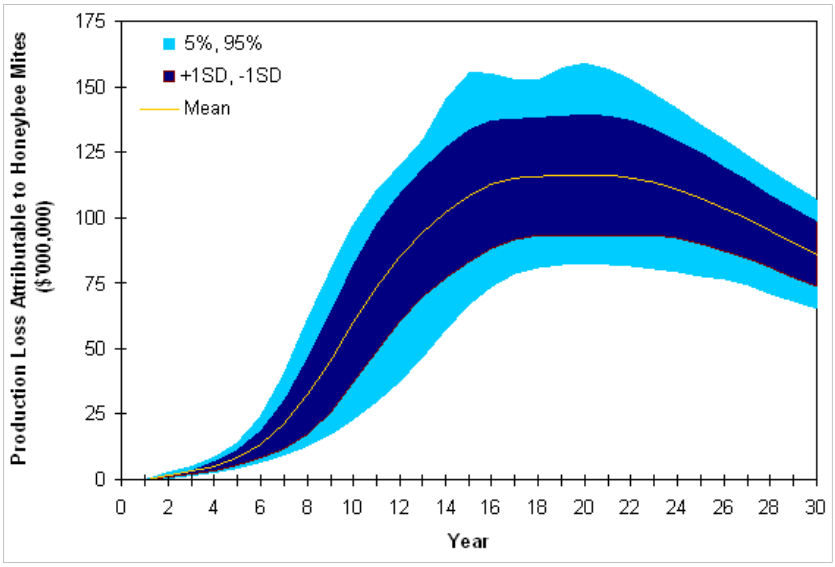
30 Department of Agriculture, *Answers to Question on Notice*, p. 5.

31 RIRDC, *Submission 54* to the House of Representatives Standing Committee on Primary Industries and Resources Inquiry into the Future Development of the Australian Honey Bee Industry, p. 16.

32 RIRDC, *Valuing honey bee pollination*, June 2003, p. iii.

33 Department of Agriculture, *A honey bee industry and pollination continuation strategy should varroa become established in Australia, May 2011, p. 8.*

Figure 2—Estimated loss of plant industry production (decrease yields and higher input costs) over time attributable to honey bee mite incursion, establishment and spread



Department of Agriculture, *A honey bee industry and pollination continuity strategy should varroa become established in Australia*, May 2011, p. 8.

3.25 The committee was presented with a number of suggestions to help to manage a varroa mite incursion should it arrive. These include:

- Importing varroa resistant strains of live bees and commencing breeding programs to create stronger colonies;[34]
- Reviewing procedures for chemical registration to avoid delays during incursion;[35]
- Implementing electronic live maps of registered static and mobile beehives to assist containment during outbreak;[36]
- Increasing numbers of state apiary officers to adequately enforce regulations;[37]
- Finalising the import risk assessment protocol to allow varroa resistant honey bee semen for research and development;[38] and

34 Dr Doug Somerville, *Committee Hansard*, 15 April 2014, p. 61.

35 Plant Health Australia, *Submission 37*, p. 11.

36 Ms Janet Sutherland, *Submission 23*, p. 1.

37 Mr Leo Kuter, *Submission 26*, p. 3.

38 Ms Corinne Jordan, *Submission* 27, p. 2.

- Introducing a funding model to assist industry participants to purchase mite strips to control varroa.[39]

3.26 Dr Doug Somerville and Dr Max Whitten submit that importing varroa tolerant breeding material to conduct research which improves current bee stocks is considered by experts around the world as the best solution to deal with varroa mite, and results in breeding resistant strains of bees.[40] However, Dr Doug Somerville suggested that Australia's bee industry is not big enough to support or sustain its own selective breeding program and that the best alternative is for resistant breeding stock to be imported before there is an incursion.[41]

3.27 Ms Serena Dorf advised the committee that varroa resistant genetic material, in the form of honeybee semen, could be imported as a further measure of prevention. However there is currently no protocol for the importation of honeybee semen despite the beginning of an import risk analysis and the recent resumption of queen bee importation.[42] Honeybee semen can survive at room temperature for 10-14 days, has advantages in ease of transport, long term viability, is low maintenance and offers a low risk as it cannot transfer parasites and mites.[43]

3.28 The committee notes that the More Than Honey report recommended that an import risk analysis be done for drone bee semen by the end of 2008.[44] The government's response to the More Than Honey report indicated that the risk analysis was a comprehensive process and would not be undertaken within the time frame recommended.[45]

3.29 The committee asked the Department of Agriculture to provide information on the status of the import risk assessment for honey bee semen:

> In response to continuing interest from the honey bee industry to import diverse new genetic material into Australia…the department completed a *Review of the importation of queen honey bees* in 2012…The department has again been requested to undertake an analysis of the biosecurity risks associated with importing bee semen. This analysis will be considered for

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39 Mr Ken Gell, *Submission 7*, p. 2.

40 Dr Doug Somerville, *Submission 28*, p. 9 and Dr Maxwell Whitten, *Committee Hansard*, 20 May 2014, p. 25.

41 Dr Doug Somerville, *Committee Hansard*, 15 April 2014, p. 61.

42 Ms Serena Dorf, *Submission 56*, p. 2.

43 Ms Corinne Jordan, *Submission* 27, p. 2.

44 House of Representatives Standing Committee on Primary Industries and Resources, *More than Honey: the future of the Australian honey bee and pollination industries*, May 2008, p. xix.

45 Government Response, House of Representatives Standing Committee on Primary Industries and Resources, *More than Honey: the future of the Australian honey bee and pollination industries*, August 2009, p. 8.

> inclusion in the department's future work program, subject to competing priorities and the availability of resources.[46]

3.30 Further biosecurity controls, such as the implementation of electronic 'live' maps, administered by government agencies and updated by individual beekeepers of all static beehive sites, was suggested as a way of providing greater containment in the event of an outbreak of varroa mite. A restriction on mobile beehives when traveling stock routes to maintain a three kilometre distance from registered static hives was suggested as a strategy to reduce the spread of disease or pests.[47] Another suggestion was to monitor ships destined for Australia before they depart overseas ports.[48]

3.31 The South Australian Apiarists' Association made suggestions for improvements to current biosecurity arrangements, recommending that state government inspectors should be in place to maintain control of endemic diseases and neglected material, that a National Incursion Training scheme for beekeepers and state apiary officers be implemented and that government fund research into appropriate chemicals that could be used should an incursion of an exotic pest occur.[49]

3.32 Several submissions supported expansion of the National Bee Pest Surveillance Program. The Department advised that during 2013, 128 sentinel hives for bee parasites were maintained at seaports and airports across Australia.[50] According to Mr Monson, of Monson's Honey and Pollination, sentinel hives should be expanded across the country:

> We have developed, through the cooperation of Horticulture Australia, Plant Health Australia, the beekeeping industry and Rural Development, a surveillance box that uses all of the latest technology. It has a solar panel, cameras, heat sensors and everything. So, if a swarm of bees were to land at a port, it would send a telephone message with a picture to someone who can look at it. We have developed that and it looks like it is going to cost around $250 a unit, but that needs to be rolled out…right around the perimeter of this country, at airports and other places.[51]

Committee view

3.33 The committee agrees with the CSIRO that undertaking research and associated activities through the National Bee Pest Surveillance Program should form part of the risk management strategy to reduce the overall impact of a varroa mite incursion on primary producers, and to enable pollination dependant industries the best chance to adapt effectively.

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46 Department of Agriculture, *Answers to Question on Notice*, p. 21.

47 Ms Janet Sutherland, *Submission 23*, p. 1.

48 Mr Robert Johnstone, *Submission 36*, pp 3-4.

49 South Australian Apiarists' Association, *Submission 4*, pp 1–2.

50 Department of Agriculture, *Answers to Question on Notice*, p. 1.

51 Mr Trevor Monson, *Committee Hansard*, 15 April 2014, p. 50.

3.34 However, the committee also considers that further steps are necessary to better prepare Australia for what appears to be an inevitable incursion of varroa in the near to medium term. Accordingly, the committee recommends that the Commonwealth government give urgent consideration to prioritising the importation of suitable varroa-resistant breeding material into Australia, subject to appropriate safeguards being put in place.

Recommendation 6

3.35 The committee recommends that the Commonwealth government confirm, and consider enlarging, its commitment to the National Bee Pest Surveillance Program.

Recommendation 7

3.36 The committee recommends that the Commonwealth government give urgent consideration to facilitating efforts by the industry to import suitable varroa-resistant breeding material into Australia, subject to stringent biosecurity safeguards being put in place.

Package bees and queen bees

3.37 Australian live honey bees are exported either as individual queen honey bees accompanied by a small number (usually less than 12) of escort worker honey bees or as package honey bees. Package honey bees are generally sold by weight and consist of a mated queen honey bee and between one and two kilograms of worker honey bees. Packages do not contain frames of honey or brood—a supply of sugar syrup or gelled sugar is the package's food source for the duration of travel and establishment. These exports allow fully functioning colonies to be established almost immediately at the destination.[52] During 2000-01 Australian beekeepers sold approximately $3.3 million worth of queen bees. The value of package bee exports has been estimated to be approximately $2 million per year.[53]

3.38 Australia restricts the importation of European queen honey bees to the approved countries of Canada, member states of the European Union, Japan and New Zealand. Each group of queen bees and escorts from a single apiary must be accompanied by a valid import permit, an original health certificate and a declaration from the owner of the exporting apiary. Imported queen and package bees must be packaged in a way that prevents biosecurity hazards as well as meets International Air Transport Association regulations. Before importation, the importer must enter into a

52 Department of Agriculture, *Submission 79*, p. 7.

53 Centre for International Economics, *Future Directions for the Australian Honeybee Industry*, September 2005, p. 3.

written agreement with the Department of Agriculture and reserve space for use of the Bee Post Entry Quarantine Facility.[54]

3.39 Queen bees which are imported into Australia and tested in quarantine for pests and diseases are not released once they are cleared. Unlike other animals, cleared imported queen bees are kept in quarantine and destroyed after an amount of time. This is because queen honey bees from these countries do not achieve Australia's level of protection with respect to a number of hazards, such as certain mites and Africanised honey bees. Queens and escorts are required to undergo post arrival quarantine where a colony is propagated, derived from the imported queen; and then only larvae grafted from this colony are released from quarantine.[55]

3.40 Mr Trevor Monson and Australian Queen Bee Exporters Pty. Ltd suggested that this system should be reviewed to allow for the release of queens as soon as they have been declared free from disease and pests rather than be destroyed.[56]

3.41 The committee asked the department to provide reasons why queens are destroyed instead of being released to the importer. The department advised that the *Review of the importation of queen honey bees (2012)* recommended that progeny of imported queen honey bees be released from quarantine but not the queen honey bee herself, which is consistent with currently available, published scientific information and international standards developed by the World Organisation for Animal Health (OIE Terrestrial Animal Health Code).

3.42 The Department advised the committee that:

- Tracheal mites are minute and reside within the respiratory system of the honey bee. The mites can only be reliably detected using laboratory methods that require maceration of (killing) the queen honey bee.
- Some queen honey bees that are infected with these disease agents may not show clinical signs of infection and/or they may carry undesirable genetics (e.g. Africanisation) that may not be immediately evident. Therefore detection of disease through diagnostic tests, visual observation and examination of the live queen honey bee is unreliable. The larval stages are much more susceptible to disease and clinical signs are more reliably observed, and diagnostic tests are considered to be more sensitive.
- Treatments for some of these diseases are not always effective in preventing or stopping shedding of disease agents. Other options such as heat treatments

54 Department of Agriculture, *Import case details*, http://apps.daff.gov.au/icon32/asp/ex_casecontent.asp?intNodeId=9036453&intCommodityId=6079&Types=none&WhichQuery=Go+to+full+text&intSearch=1&LogSessionID=0, (accessed 3 April 2014).

55 Department of Agriculture, *Submission 79*, p. 10.

56 Mr Trevor Monson, *Submission 48*, p. 4; Australian Queen Bee Exporters Pty. Ltd, *Submission 49*, p. 2.

> are also fatal to queen honey bees. The review determined that releasing live imported queen honey bees with the limitations described above would not be a reliable means of preventing the introduction of exotic honey bee diseases and pests.[57]

3.43 On this basis, the committee understands that there are no plans to allow for the queen bees to be released from quarantine.

Queen bee levy

3.44 A levy is payable on queen bees produced in Australia and exported by the producer. Export charges are also payable on queen bees produced in and exported from Australia.[58] This levy funds the Rural Industries Research and Development Corporation's queen bee breeding research and development program. The More Than Honey inquiry found that the queen bee and packaged bee export sector is an important part of the Australian honey bee industry and recommended that inspection charges for queen and packaged bees be reduced to make the export of this product more cost effective for producers.[59]

3.45 The government response to this recommendation stated that it agreed to this recommendation subject to the bee industry consulting with states and territories on alternative inspection arrangements to be used to confirm the health status of bee colonies, and consultation by the government with trading partners.[60] However the Victorian Apiarists Association advised the committee that this recommendation had not been implemented.[61]

3.46 During the committee's public hearing in Brisbane, the committee heard that the cost of administering the queen bee levy may be more than it collects:

> We have made representation to the minister to have the queen bee levy set at zero because that one was costing us more than we were actually collecting. I have been informed that that is now to go to the Treasurer and the Prime Minister.[62]

3.47 The committee looks forward to being advised of progress made in relation to the current queen bee levy being made more effective.

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57 Department of Agriculture, *Answers to Questions on Notice*, pp 22–23.

58 Department of Agriculture, Queen Bee Levy Information Sheet, http://www.daff.gov.au/agriculture-food/levies/categories/other_levies/queen_bee/information_sheet, (accessed 23 May 2014).

59 House of Representatives Standing Committee on Primary Industries and Resources, *More than Honey: the future of the Australian honey bee and pollination industries*, May 2008, p. 161.

60 Government Response, House of Representatives Standing Committee on Primary Industries and Resources, *More than Honey: the future of the Australian honey bee and pollination industries*, August 2009, pp 12–13.

61 Victorian Apiarists' Association Inc, *Submission 40*, p. 9.

62 Mr Trevor Weatherhead, *Committee Hansard*, 20 May 2014, p. 31.

Quarantine arrangements

3.48 The Department of Agriculture currently leases and operates five post-entry quarantine facilities in four states for imported live animals and plants. Leases for the five facilities are due to expire between 2015 and 2018 and will not be renewed.[63] The Commonwealth government has committed to replace the existing facilities with a new, single consolidated facility on one site at Mickleham, Victoria.[64]

3.49 Several submitters raised concerns that the proposed Victorian site is not appropriate for the bee industry. The committee heard that Victoria's highly variable climate and long winters would reduce optimal breeding conditions and as a majority of queen breeders operate out of NSW and Queensland, the site will add to the costs of importers.[65]

3.50 A number of submitters suggested the Elizabeth Macarthur Agricultural Institute (EMAI), which is the is the NSW Department of Primary Industries' Centre of Excellence for Animal and Plant Health in Camden, would be a better location for a bee quarantine facility as it offers a temperate climate and a more centralised location.[66] During the public hearing in Brisbane, the committee inquired if the Department had considered the possibility of using the EMAI for bee quarantine services:

> The answer is no. We had long discussions with the Wheen Bee Foundation and with the Australian Honey Bee Industry Council some years ago…we had discussions with the industry as to whether the industry was interested in setting up what is called a quarantine-approved premises. The Wheen foundation indicated its interest in possibly undertaking that on its property in Western Sydney. In the end, correspondence from AHBIC and the Wheen foundation to the government said that they were not going to follow through with that interest, and so no further action has been taken.[67]

3.51 The committee notes that recommendation 10 of the More Than Honey report considered the issue of a bee-specific quarantine facility and recommended that consideration be given to establishing it at the EMAI or some other suitable location.[68]

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63 House of Representatives Standing Committee on Public Works, *Construction of a new post-entry quarantine facility at Mickleham, Victoria,* May 2013, p. 11.

64 House of Representatives Standing Committee on Public Works, *Construction of a new post-entry quarantine facility at Mickleham, Victoria,* May 2013, pp 11–12.

65 Ms Corinne Jordan, *Submission 27,* pp 1–2.

66 Ms Serena Dorf, *Submission 56*, p. 2; Beechworth Honey Group, *Submission 52*, p. 13.; Wheen Bee Foundation Ltd, *Submission 65*, p. 5; Dr Doug Somerville, *Submission 28*, p.2; Ms Corinne Jordan, *Submission 27,* p. 1; Dr Doug Somerville, *Submission 28*, p. 9; Ms Serena Dorf, *Submission 56*, p. 2; NSW Apiarists' Association, *Submission 58*, p. 17.

67 Dr Colin Grant, *Committee Hansard*, 20 May 2014, pp 66– 67.

68 House of Representatives Standing Committee on Primary Industries and Resources, *More than Honey: the future of the Australian honey bee and pollination industries*, May 2008, p. xix.

3.52 In addition to the new quarantine facility being located at a site not supported by some industry participants, concerns were also raised at the lack of staff with relevant expertise in existing facilities. The committee heard that managing a colony in an artificial environment requires a high level of expertise to maintain the good health and strength necessary for successful breeding. As Dr Doug Somerville told the committee:

> You can certainly artificially look after a colony in a cage, although it takes very, very high level expertise and AQIS does not have it presently, believe me…The other issue I have right now with that particular facility is that they do not have a protocol or a set of procedures on how to manage those bees.[69]

3.53 During the public hearing in Brisbane, the committee heard that some Australian importers were so doubtful of the quarantine facility's ability to appropriately manage their bees that they had recommended a specialist be present in addition to those staff employed at the quarantine station.[70]

3.54 The Department responded by advising the committee that:

> …there are no specific qualifications that will give an officer all the skills and experience to be able to successfully maintain bee colonies in an artificial environment like a flight room…officers are required to be skilled in basic bee husbandry and colony management and all have a background in beekeeping, including commercial beekeeping businesses and managing/studying bee colonies at university. They have also all received training from the NSW Department of Primary Industries in beekeeping and on-the-job training from the department prior to working with imported bees in quarantine. Additionally, when required, the department calls on the skills of industry specialists and the importer to undertake certain tasks such as grafting.[71]

Committee view

3.55 The committee considers that an effective consultation and communication strategy, to assist the bee industry build readiness for the quarantine station to be relocated, should be developed by the Department of Agriculture in consultation with the AHBIC and other stakeholders.

Recommendation 8

3.56 The committee recommends the Department of Agriculture consult with relevant industry groups to ensure quarantine concerns are addressed, either as part of the proposed facility relocation or through the establishment of a specific bee-centric facility.

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69 Dr Doug Somerville, *Committee Hansard*, 15 April 2014, p. 59.

70 Mr Warren Taylor, *Committee Hansard*, 20 May 2014, p. 50.

71 Department of Agriculture, *Answers to Question on Notice*, p. 20.

Imported and exported honey

3.57 This section discusses the biosecurity arrangements for imported and exported honey.

Biosecurity arrangements for exported honey

3.58 Honey is considered a non-prescribed good; therefore, the Department of Agriculture only becomes involved when export certification by the competent authority of the exporting country is required. In these circumstances, the department ensures compliance with food safety and quarantine requirements of the importing country. There is no legislated biosecurity requirements mandated for export purposes. However to demonstrate compliance with importing country requirements, the industry utilises a range of industry standards including B-QUAL, BSafe and the International Standard for Food Safety Management Systems (ISO22000).[72]

3.59 Under Commonwealth, state and territory regulations, all food businesses have a legal obligation to produce food that is safe for human consumption. The B-QUAL quality assurance program was established for the Australian honey bee industry by the Australian Honey Bee Industry Council.[73] B-QUAL aims to develop accreditation and train industry participants in quality assurance standards, organic standards and biosecurity as well as provide an ongoing third party audit system.[74]

3.60 B-QUAL approved honey suppliers are required to complete biosecurity training and bring operations into line with the program's biosecurity standards. Each enterprise is audited biennially or annually to monitor compliance to their approved Quality Assurance system.[75] In addition to B-QUAL, the honey industry must comply with the Food Standards Australia New Zealand Food Standards Code (FSANZ) which requires businesses to develop a Hazard Analysis and Critical Control Point (HACCP) food safety program. The HACCP program identifies and controls food safety hazards of microbiological, chemical and physical properties.[76] Further to meeting domestic compliance requirements, various international conditions are imposed on Australian honey exporters.

Biosecurity arrangements for imported honey bee products

3.61 Chapter 4 of this report discusses issues raised in relation to the honey food standard and concerns that Australian honey producers are disadvantaged as imported

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72 Department of Agriculture, *Submission* 79, p. 7.

73 AUS-QUAL Pty Ltd, *B-Qual*, http://www.ausqual.com.au/certification-services/b-qual.aspx, (accessed 31March 2014).

74 Australian Honey Bee Industry Council, *B-Qual*, http://honeybee.org.au/programs/b-qual/, (accessed 31 March 2014).

75 B-QUAL, *Getting Started*, http://www.bqual.com.au/how.aspx, (accessed 31 March 2014).

76 AUS-QUAL Pty Ltd, *HACCP Certification*, http://www.ausqual.com.au/certification-services/haccp.aspx, (accessed 31 March 2014).

honey products are not subject to the same quality and biosecurity standards as domestic producers.[77]

3.62 The Department of Agriculture manages an import risk analysis (IRA) process to identify and appropriately manage the risks posed by the importation of honey bee commodities. The intention is to minimise the likelihood of disease incursions and their consequences, whilst continuing to fulfil obligations under international trade agreements.[78]

3.63 Usually, the exporter provides a written import proposal to the department requesting market access and may include information on incidence of diseases or treatments used on the goods.[79] An 'import proposal' is a generic term used to describe a proposal to bring into Australia plants, animals or other goods not imported previously, or not imported previously from the country or region concerned. After receiving the proposal, the department considers whether a risk analysis is required, and if there is sufficient information to proceed. A risk analysis may also be undertaken if the risk profile of an existing trade in a good, or pests or diseases have changed.[80]

3.64 Currently, the department imposes conditions on commodities intended for Australia to determine if products require quarantine permits or treatments, or are subject to other quarantine conditions.[81] For a commercial quantity of honey product the following conditions apply:

(a) a quarantine entry must be lodged for each consignment;

(b) the product must be commercially processed and packaged;

(c) contaminants must have been removed from containers; and

(d) an accompanying declaration states the honey has been processed to remove contaminants, or the honey is a sample.[82]

3.65 In the event a product does not meet these conditions, an import permit is required.[83]

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77 Mr Rod Yates, *Submission 12*, pp 10–11; Mr Dave Elson, *Submission 76*, p. 5.

78 Department of Agriculture, *Import Risk Analysis*, 2011, p. 9.

79 Department of Agriculture, *Import Risk Analysis*, 2011, p. 10.

80 Department of Agriculture, *Import Risk Analysis*, 2011, pp 10–11.

81 Department of Agriculture, *Information for Food Importers*, http://www.daff.gov.au/biosecurity/import/food/info-for-food-importers, (accessed 5 April 2014).

82 Department of Agriculture, *Import case details*, http://apps.daff.gov.au/icon32/asp/ex_casecontent.asp?intNodeId=9051649&intCommodityId=934&Types=none&WhichQuery=Go+to+full+text&intSearch=1&LogSessionID=0, (accessed 5 April 2014).

3.66 Samples of imported food consignments are inspected by the department to ensure contents meet the Australian requirements for public health and safety and comply with Australian food standards as detailed in the Australia New Zealand Food Standards Code (the Code).[84] Food safety inspection of imported food is managed under the *Imported Food Control Act 1992*.

3.67 Under the scheme, foods are referred for inspection by the Australian Customs and Border Protection Service (Customs). Each consignment has a five per cent chance of being referred for inspection but this may vary according to its risk level. The selection of food consignments for inspection is random and samples may be analysed for pesticides and antibiotics above accepted levels, microbiological contaminants, natural toxicants, metal contaminants and food additives.[85] The Imported Food Program (IFP) Testing Guidelines provide information for appointed analyst laboratories on requirements for analysis of food sampled under the Imported Food Inspection Scheme.[86]

3.68 According to some submitters, there should be a more rigorous inspection of honey that is imported to Australia, so it can be subject to the same quality assurance prescriptions as Australian honey is subjected to when it is exported to other countries.[87] WA Farmers submitted that imported honey should have the same or higher quality assurance standards applied to it.[88]

3.69 During the public hearing in Murray Bridge, the committee heard that there may also be cause to increase the percentage of sample testing:

> It should be increased to 100 per cent…the problem is that a lot of the honey that is floating around the world is potentially coming out of countries with suspect bee practices. Chinese honey has actually been banned in some of the European countries, and it is tested beyond belief in the US, but it comes in here easily.[89]

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83 Department of Agriculture, *Import case details*, http://apps.daff.gov.au/icon32/asp/ex_casecontent.asp?intNodeId=9051649&intCommodityId=934&Types=none&WhichQuery=Go+to+full+text&intSearch=1&LogSessionID=0, (accessed 5 April 2014).

84 Department of Agriculture, Fisheries and Forestry, *Imported Food Inspection Scheme* http://www.daff.gov.au/biosecurity/import/food/inspection-scheme, (accessed 31 March 2014).

85 Department of Agriculture, Fisheries and Forestry, *Imported Food Inspection Scheme* http://www.daff.gov.au/biosecurity/import/food/inspection-scheme, (accessed 31 March 2014).

86 Department of Agriculture, Fisheries and Forestry, *Importing Food Program: Testing Guidelines*, http://www.daff.gov.au/biosecurity/import/food/testing-labs/ifp-testing-guidelines, (accessed 31 March 2014).

87 Wheen Bee Foundation Ltd, *Submission* 65, p. 4.

88 WA Farmers, *Submission* 72, p. 3.

89 Dr Doug Somerville, *Committee Hansard*, 15 April 2014, p. 60.

3.70 The department advised that testing under the current inspection scheme is offered to importers by six appointed laboratories. Three of these laboratories conduct the testing at their facility with the remainder sub-contracting the work to those three laboratories.[90]

Recommendation 9

3.71 The committee recommends the Department of Agriculture, in consultation with industry groups, review the Import Risk Analysis for honey bee commodities, with a view to protecting the Australian industry and its 'clean, green' reputation.

Domestic biosecurity improvement

3.72 During the inquiry the committee also heard a range of suggestions for improving existing biosecurity measures to help protect the Australian honey bee industry. These include:

- Mandatory national registration of all beehives;[91]
- An annual 'State of the Industry' report to be conducted on the Australian beekeeping industry to provide ready access to key industry data such as the number of hives, location of hives and beekeepers, quantity and value of hive products being produced, value of paid pollination services undertaken, value of capital investment and return on investment and level of beekeeper training.[92]
- Introduce the mandatory labelling of hives to include brand registration and mobile phone numbers to ensure that beekeepers receive urgent notifications via SMS.[93]
- Local councils to advertise the necessity of beekeeper and hive registration in similar way that is done for registration requirements related to domestic pets.[94]
- Implement a National Standard or Code of Practice for beekeeping, as proposed by AHBIC, promoting beekeeping best management practices that include commercial and hobby beekeepers to promote optimal biosecurity.[95]

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90 Department of Agriculture, *Answers to Question on Notice*, p. 17.

91 Capilano Honey Ltd, *Submission 39*, p. 6; Ipswich and West Moreton Beekeepers Association, *Submission 60*, p. 2.

92 Beechworth Honey Group, *Submission 52*, p. 8.

93 Ms Serena Dorf, *Submission 56*, p. 3.

94 Victorian Apiarists' Association Inc Melbourne Section, *Submission 61*, p. 7.

95 VFF State Beekeeping Branch, *Submission 75*, p. 3.

Committee view

3.73 The committee supports the concept of producing a publication which monitors beekeeping trends across the country. An annual industry report could be used to provide a financial and physical forecast reflecting industry trends and issues, and production levels. It could also be used to identify options to market honey and hive products and pollination services. In chapter 2 the committee discussed the possibility of establishing a national honey bee colony survey scheme with a view to collecting reliable data that monitors the long term health of the industry, and considers that information collected as part of such a scheme could feed into an annual industry publication.

Recommendation 10

3.74 The committee recommends that the Commonwealth government, in consultation with the AHBIC and other relevant stakeholders, investigate the viability and benefits of producing an annual industry report in the terms outlined in paragraph 3.73.

Bumblebees in Tasmania

3.75 European bumblebees were accidently introduced into Tasmania in 1992, most likely from New Zealand. Since this time feral populations have been distributed across the state. Bumblebees cannot be imported to Australia and are prohibited by state legislation from being moved from Tasmania to other states or territories as they can spread weeds.[96]

3.76 According to the Costa horticultural company, the effective pollination of glasshouse tomato plants is accomplished by a few species of bees, and while the use of native bees has been researched, the bumblebee remains the most efficient.[97] Costa claims that the use of bumblebees is prohibited in Australia because of a bureaucratic misunderstanding of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and consequently, tomato glasshouse producers substitute pollination by tapping each plant with a vibrating wand which adds considerably to production costs.[98]

3.77 As bumblebees are used in commercial glasshouses in New Zealand, South Korea, Japan, Chile and Peru, Costa argues that Australia is placed at a competitive disadvantage domestically and internationally.[99] The Tasmanian Farmers and Graziers

96 Aussie Bee, *What Harm Could Exotic Bumblebees Do in Australia?,* http://www.aussiebee.com.au/bumblebeeharm.html, (accessed 26 May 2014).

97 Costa, *Submission 22*, p. 3.

98 Costa, *Submission 22*, p. 4.

99 Costa, *Submission 22*, p. 7.

Association and Costa suggest that bumblebees should be permitted for use in glasshouse pollination in Tasmania[100].

3.78 In 2008, the Minister for Environment rejected an application by the Australian Hydroponic and Greenhouse Association requesting approval for the importation and use of bumblebees for pollination in glasshouses.[101]

3.79 The More Than Honey inquiry recommended that research into alternative pollinators such as bumbles should be undertaken, and submitters and witnesses to this inquiry agreed that more research into the matter would need to be completed before changes in legislation were made to allow the use of bumblebees for intensive pollination in glasshouses.[102] Beechworth Honey Group cautioned against the use of bumblebees and said their use was 'not supported widely by the industry.'[103]

Committee view

3.80 Although the committee notes that bumblebees already exist in Tasmania, governments would need to be assured that there was sufficient evidence to warrant a trial of bumblebees for use in commercial pollination, and that very strict biosecurity controls were in place. The committee was not in a position to further investigate their potential use in Australia.

100 Tasmanian Farmers & Graziers Association, *Submission 7*0, pp 6–8; Costa, *Submission 22*, p. 8.

101 Costa, *Submission 22*, pp 4–5.

102 Tasmanian Beekeepers' Association lnc, *Submission 47*, p. 1; Mr Trevor Monson, *Committee Hansard*, 15 April 2014, pp 49–50.

103 Beechworth Honey Group, *Submission 52*, pp 15–16.