

**AUSTRALIAN HONEYBEE INDUSTRY COUNCIL**

**SUBMISSION**

**To the**

**QUARANTINE and BIOSECURITY REVIEW**

**April 2008**

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## **1. Recommendations**

### **Recommendation 1:**

- **The Boland review of the National Sentinel Hive Program should be updated to take account of current risks and should include a recommendation on the case for including “baited” hives at some or all locations.**
- **On the basis of this review the National Sentinel Hive Program should be revised to reflect the recommendations of the updated Boland review**
- **Coordination of the Program should be transferred to Animal Health Australia which should within three months provide a three-year Business Plan and budget for the Program**
- **Animal Health Australia’s cash costs for coordinating the Program should be shared equally between AQIS; the Honeybee Industry and the Pollination Industries (through Plant Health Australia)**
- **The State and Territory Governments; CSIRO and the Honeybee Industries should continue to provide “in-kind” support to the Program.**
- **Working with AHBIC AQIS should develop a new communications program to improve honeybee biosecurity awareness on ships, at ports and at associated locations.**

### **Recommendation 2;**

- **The Commonwealth, through DAFF should proceed without delay to invite the NSW DPI to establish a queen bee quarantine facility at EMAI.**
- **AQIS should provide financial support of the order of \$25,000 per annum to maintain such a facility.**

### **Recommendation 3**

- **AQIS should move to risk based quarantine inspections for passengers and cargoes**
- **AQIS should review and revise quarantine awareness activities to improve their effectiveness and allow human resources to be directed to higher risk inspection activities.**

### **Recommendation 4**

- **The Quarantine and Biosecurity Review Panel should note the development of Industry and Enterprise Biosecurity Planning in many agricultural industries and encourage the incorporation of biosecurity into Industry and Enterprise Quality assurance Programs**

### **Recommendation 5:**

- **All Industry and Government Parties to the EADRA and PPDRD and in particular Commonwealth agencies including DAFF and AQIS review their compliance with the full range of obligations under these contracts especially those relating to minimising the risks of incursions of plant and animal pests and diseases**

**Recommendation 6:**

- **The Quarantine and Biosecurity Review Panel should give close consideration to the strategies proposed in Pollination Industry biosecurity risk management project commissioned by RIRDC**

**Recommendation 7:**

- **Animal Health Australia and Plant Health Australia should be encouraged to jointly develop as quickly as possible arrangements that:**
  - **Ensure that the interests of industries that are not signatories to one or other of the EADRA or PPDRD are appropriately represented in the deliberations of the technical or policy forums associated with these Deeds where the interests of these non-signatory industries are likely to be affected**
  - **Ensure that where under one or other of the Deeds it is determined that a pest or disease incursion cannot be contained and eradicated, protocols are in place to facilitate the expeditious establishment of national pest or disease control and management plans.**

**Recommendation 8:**

- **Animal Health Australia and Plant Health Australia should be funded by DAFF to coordinate the development of a prioritised national plant and animal biosecurity expertise development plan to ensure that Australia has adequate capability to detect, identify and research the key biosecurity threats facing the country.**

**Recommendation 9:**

- **Animal Health Australia and Plant Health Australia should be funded by DAFF to coordinate the conduct of formal reviews and debriefings following significant incursions of plant or animal pests or diseases to identify opportunities for improving the effectiveness and efficiency of future responses.**

**Recommendation 10:**

- **AQIS should commission an expert review of AUSVETPLAN and PLANTPLAN to ensure that AQIS is appropriately represented in these emergency response plans**

**Recommendation 11:**

- **DAFF should commission an expert review of AUSVETPLAN and PLANTPLAN to ensure that these emergency response plans adequately address the environmental and public amenity impacts of an incursion of animal and plant pests and diseases**

**Recommendation 12:**

**State, Territory and Commonwealth regulatory agencies should give consideration to varying the registration fees and other fees imposed on apiarists and other agricultural producers who develop and implement formal biosecurity plans for their particular operations.**

**Recommendation 13:**

- **The position regarding the application of *ad valorem* levies to revenues derived from the provision of paid pollination services should be reviewed to ensure equitable funding of research and development and biosecurity initiatives within the honeybee industry**

## **2. Background**

### **1.1 The honeybee industry in Australia**

The commercial beekeeping industry in Australia comprises a relatively small number of professional beekeepers (approximately 2,000) deriving most of their livelihood from beekeeping and a larger number of people (7,600) who keep bees for profit but who do not depend solely on beekeeping for their livelihood.

There are about 600,000 managed hives in Australia which produce around 30,000 tonnes of honey each year. Usually 40% of annual production is exported. Approximately \$75 million worth of honey is produced each year.

The principal honey producing area of Australia is the huge swath of temperate land stretching from southern Queensland to central Victoria. The area includes the Australian Capital Territory.

South Australia and Western Australia are both significant honey states, whilst Tasmania is the smallest producer. Regardless of location, beekeeping, like agriculture generally, is dependent on the weather.

Lesser products include beeswax and Royal Jelly and a strong queen breeding industry exists to supply local and export markets whilst packaged bee exports are expanding.

The provision of paid pollination services is becoming relatively more important to the industry and is a valuable source of income to some sectors. The growth in this business is being driven primarily by a rapid expansion in the area planted to almonds in south-eastern Australia.

### **1.2 The Australian Honeybee Industry Council (AHBIC)**

AHBIC is the peak body representing the apiary industry in Australia. Its membership includes:-

- Federal Council of Australian Apiarists' Associations
- Honey Packers' and Marketers' Association of Australia
- Australian Queen Bee Breeders' Association
- National Council of Pollination Associations

AHBIC is a Member of both Animal Health Australia and Plant Health Australia and a signatory to both the Emergency Animal Disease Response Agreement (EADRA) and the Plant Pest and Disease Response Agreement (PPDRD).

### 1.3 Biosecurity threats to the Australian Honeybee Industry

#### Exotic Pests and Diseases

The “Biosecurity or Disease Risk Mitigation Strategy for the Australian Honeybee Industry”, produced by AHBIC lists Exotic Diseases or Pests of concern to the Australian beekeeping industry and these are:

- **Tropilaelaps Mite** (*Tropilaelaps clareae*)
- **Varroa Mite** (*Varroa destructor*)
- **Varroa Mite** (*Varroa jacobsoni*)
- **Braula Fly** (*Braula coeca*)
- **Tracheal Mite** (*Acarapis woodi*)
- **Asian Bees** (Asian honeybee (*Apis cerana*), giant honeybee (*A. dorsata*), dwarf honeybee (*A. florea*) and *Apis andreniformis*, *Apis koschevnikovi*, *Apis nigrocinta*, and *Apis nuluensis*.)
- **Africanised and Cape Honeybees** (*Apis mellifera scutellata* and its hybrids, *Apis mellifera capensis*)
- **Nosema ceranae**

#### Endemic Pests and Diseases

The RIRDC publication “Commercial Beekeeping in Australia” distinguishes between endemic diseases of the brood and other endemic pests and diseases and these are listed below:

- **Brood diseases**
  - **American foulbrood** (*Paenibacillus larvae* subsp *larvae*)
  - **European foulbrood** (*Melissococcus pluton*)
  - **Chalkbrood** (*ascosphaera apis*)
  - **Sacbrood** (Sacbrood virus, black queen-cell virus, chronic bee-paralysis virus, Kashmir bee virus and cloudy wing virus)
- **Other pests and diseases**
  - **Small Hive Beetle** (*Aethina tumida*)
  - **Nosema** (*Nosema apis*)
  - **Wax moth** (*Galleria mellonella* and *Achroia grisella*)

AHBIC regards the Varroa mite (*Varroa destructor*), referred to hereafter as Varroa, as the greatest threat to beekeeping in Australia and the \$1.7 billion in the plant industries dependent upon pollination.

Australia is one of the few countries free from Varroa. It was found in the north island of New Zealand in early 2000 and has since spread to the south island, so it is close. Although the Varroa is a native parasite of the Asian honeybee *Apis cerana*, it can infest the European honeybee. While the Asian honeybee can tolerate the mite, the European honeybee cannot.

Overseas experience suggests that should Varroa become established in Australia it would spread rapidly and would, within two or three years, kill most colonies not being treated with an appropriate acaricide. Treatment is expensive both for the purchase of the acaricide and for the additional labour involved.

Exports of queen bees and packaged bees could be affected if Varroa became established in Australia.

## 1.4 Recent biosecurity incidents of relevance to the honeybee Industry

In their report, “Future directions for the Australian honeybee industry” prepared for the Department of Agriculture, Fisheries and Forestry in September 2005 the Centre for International Economics (CIE) included a table of recent quarantine and biosecurity incidents of relevance to the honeybee industry in Australia with information sourced from ‘A Review of the National Sentinel Hive Program: In Queensland, New South Wales, Victoria, Western Australia and the Northern Territory’ undertaken by Pat Boland of Biosecurity Australia and reported in June 2005. The table is reproduced below:

### List of incursions and potential incursions involving honeybee pests

Date	Agent	Place	Comments
Early 1970s	<i>Apis dorsata</i>	Fremantle	From Java, Indonesia. No further details.
February 1994	<i>Apis scutellata</i>	Fremantle	A nest of live bees was found on a container. Destroyed.
April 1995	<i>Apis cerana</i>	Near Brisbane	No further details.
June 1996	<i>Apis cerana</i>	South Australia	No further details.
February 1997	<i>Apis scutellata</i>	Fremantle	Abandoned nest only. Originated from Durban in South Africa.
December 1997	Bumble bee ( <i>Bombus vosnesenskii</i> ). Not the same as that in Tasmania	Buderim, Qld	Not diagnosed till May 1999. Mites were found <i>Kunzenia</i> sp. which are basically scavengers in bumble bee nests - not significant for <i>Apis cerana</i> .
June 1998	<i>Apis cerana</i>	Darwin	Nest discovered by a local beekeeper. Eradication program instituted and intensive surveillance.
July 1999	<i>Apis dorsata</i>	Sydney	Air freight from Penang Malaysia – computer motherboards. Examination showed no mites.
September 1999	<i>Apis cerana</i>	Brisbane	Asian honeybees were detected on a ship (ex Singapore, Lae and Port Moresby) berthed in Brisbane. Swarm of approximately 50-100 absconded but follow up monitoring revealed nothing.
December 1999	<i>Apis cerana</i>	Brisbane	Introduced with heavy earth moving equipment from Lae, PNG. Hive of 5,000 bees destroyed. DNA test showed the bees were Java Flores type. <i>Varroa jacobsoni</i> found.
March 2000	<i>Apis dorsata</i>	Brisbane	A swarm was found under a container at the Brisbane wharves. Destroyed.
January 2002	<i>Apis cerana</i>	Melbourne	Swarm on a container ship from Lae, New Guinea. Destroyed. Inspection revealed <i>Varroa jacobsoni</i> .
January 2002 (or earlier)	<i>Aethina tumida</i>	Richmond, NSW	Discovered October 2002 but probably already present for at least a year. Means of arrival unknown
December 2002	<i>Apis cerana</i>	Brisbane	One bee found on ship from PNG. Follow up surveillance in Hamilton area revealed nothing.
February 2003	<i>Apis dorsata</i>	Vessel off north Australia	Oil tanker from Singapore. A ‘quite large swarm’ found by crew and (inexpertly) destroyed before arrival. Only dead bees found. No mites seen on inspection.
February 2003	<i>Apis dorsata</i>	Vessel off north Australia	Vessel from Indonesia. Seven dead and one dying bee found. No evidence of swarm found despite repeated checks. No mites found on inspection.
May 2003	<i>Bombus terrestris</i>	Fisherman Island, Brisbane	A single bee was found by AQIS.
May 2004	<i>Apis cerana</i>	Cairns Vessel from PNG	Swarm of <i>Apis cerana</i> found in hold on arrival in port. Bees destroyed. Spread considered unlikely. No mites found on inspection.
Nov 2004	<i>Apis cerana</i>	Brisbane Vessel from PNG	Nest of <i>Apis cerana</i> found under a container in port. Bees destroyed. Spread considered unlikely. <i>Varroa jacobsoni</i> found on inspection. Surveillance for <i>Apis cerana</i> put in place within 6 km radius for 12 months.

## **1.5 Biosecurity management in the Australian Honeybee industry**

Under the leadership of AHBIC the Australian honeybee industry has established a number of programs and activities that have biosecurity planning and management elements these include:

- B-Qual, the industry quality assurance program,
- An industry Biosecurity plan
- Various industry training schemes
- Membership of AHA and PHA
- Participation in biosecurity programs including, the National Sentinel Hive Program and Small Hive Beetle Management Program
- Participation in EADRA and PPDRD
- Pollination Australia – this initiative is in development and is considered in greater detail later in this submission

## 2 Key quarantine and biosecurity issues of concern to the Honeybee Industry

AHBIC considers that there are three principal quarantine and biosecurity matters of great importance to the Australian honeybee industry as well as number of other important but lesser matters that will be addressed later in this submission.

The three key issues are:

- The future of the National Sentinel Hive Program;
- The requirement for a suitable honeybee quarantine facility; and
- The prioritisation of border inspections

All three are related to each other; to border quarantine and biosecurity and to the item “*Intervention targets*” under Part C4, “**Culture, efficiency and resourcing**”, of the Quarantine and Biosecurity Review Issues Paper.

These matters are dealt with in detail below.

### 2.1 Sentinel Hive Programme

The description of the National Sentinel Hive Program that follows has been compiled largely from “A Review of the National Sentinel Hive Program: In Queensland, New South Wales, Victoria, Western Australia and the Northern Territory” undertaken by Pat Boland of Biosecurity Australia and reported in June 2005:

“The National Sentinel Hive Program was established in 2000 to enhance surveillance for honeybee parasites (most notably Varroa) and exotic bees in the vicinity of seaports. The purpose of the program is to assist the early detection of these parasites and bees. This will provide a better chance that an incursion will be eradicated or that an eradication program is smaller and less costly.

A strong feature of the program is the close collaboration and cooperation between the honeybee industry, State departments of agriculture and Biosecurity Australia. While the program is currently part-funded by Biosecurity Australia, there are significant 'in kind' costs which are met by the respective State departments of agriculture and by participating beekeepers. (AHBIC notes that the CSIRO has also assisted by making Dr Denis Anderson available, as required, to perform laboratory examinations on samples submitted from the program.)

In addition to providing an enhanced early detection capacity, a spin-off benefit of the National Sentinel Hive Program is the collection of data which demonstrates Australia's continued freedom from honeybee parasites and supports official health certification for live honeybee exports.

The program is currently funded and coordinated by Biosecurity Australia. There are significant 'in kind' costs which are met by the respective State departments of agriculture and participating beekeepers. A Biosecurity Australia staff member works part-time coordinating, monitoring and reporting on the program. The costs of materials met by Biosecurity Australia are about \$6,000 per year.

Alongside the National Sentinel Hive Program, there is a program of awareness for vessel masters and port personnel of the presence of honeybees on incoming vessels. There is also a program of pratique and inspection of vessels on arrival. These programs have an important function in preventing incursions but they are not the subject of this paper.

The National Sentinel Hive Program operates at 27 ports that receive a significant volume of cargo (see Annex B). In most cases, the sentinel hives are cared for, and provided by, cooperating beekeepers under the auspices of the Australian Honeybee Industry Council. In some cases, the hives are provided by the respective State department of agriculture. The sentinel hives are located within reasonable proximity of port areas.”

The Boland review covered 20 ports including 18 of the 27 ports at which the National Sentinel Hive Program then operated. The participating ports at the time of Boland’s review included:

<b>New South Wales</b>	Iluka*, Newcastle, Richmond*, Sydney
<b>Victoria</b>	Geelong, Melbourne, Portland
<b>Queensland</b>	Brisbane, Cairns, Gladstone*, Townsville, Weipa*
<b>South Australia</b>	Adelaide*
<b>Northern Territory</b>	Darwin, Gove
<b>Western Australia</b>	Albany*, Broome, Bunbury, Dampier, Esperance*, Fremantle, Geraldton, Kwinana, Port Hedland, Wyndham
<b>Tasmania</b>	Bell Bay*, Burnie*, Devonport*, Hobart*

\* Ports not covered by the review

It should be said that while this program was nationally coordinated, in practice the quality of its application varied between sites and depended on the commitment and interest of the host jurisdiction, the local AQIS personnel; the host port management; the participating beekeepers as well as the availability of a suitable site.

Boland concluded his review with a number of general recommendations as well as detailed recommendations for the ports visited. The general recommendations are copied below:

1. *“The program’s operation in South Australia and Tasmania should be reviewed along similar lines to that which has already been done in other States.*
2. *A detailed analysis of the benefits of the National Sentinel Hive Program should be undertaken by the honeybee industries and involve those horticultural and seed crop and pastoral industries that are significant beneficiaries of pollination.*

3. *Options for the long-term funding and coordination of the program should be reviewed. This should involve both government and industry and it should take into account the above analysis.*
4. *The review of funding should consider what costs should be covered, including whether these should include a payment towards the costs of participating beekeepers. In any case, it is recommended that an expression of appreciation to participating beekeepers be given.*
5. *A study should be made of the likely inter-colony spread of Varroa in Australian environments. This information would assist in making reasonable predictions and decisions on responses if Varroa were detected in one sentinel hive or a small number of colonies. The potential use of a model to assist in decision making in the face of an incursion should be explored.*
6. *Technical experts should consider the potential advantages of alternative chemicals for surveillance for external mites and make appropriate recommendations for future surveillance.*
7. *Bayvarol strips should not be reused.*
8. *Surveillance for Apis cerana using traps should be extended to all ports on the eastern seaboard as far south as Brisbane.*
9. *Traps used specifically for Apis cerana should use the palm log design in conjunction with the CSIRO synthetic lure unless alternatives are shown to be superior.”*

Boland also recommended that the feasibility of establishing sentinel hives at the following new locations where the port statistics indicate that the risk of honeybee pests is relatively high be investigated:

- Port Kembla, NSW
- Hay Point, Queensland
- Western Port, Victoria
- Weipa, Queensland (re-establishment)
- Klein Point, South Australia
- Port Walcott, Western Australia
- Mackay, Queensland

Of the recommendations made by Boland, only those relating to the funding and coordination of the program have been progressed, along with work by AHBIC and RIRDC to fund the development of a Varroa simulation model.

Separately some within the Honeybee Industry have suggested that the current sentinel hives should be complemented with “baited” hives in key locations. In the absence of information of the efficacy and or cost benefits of “baited” hives there is no consolidated industry position on this matter.

AHBIC has agreed that Animal Health Australia should manage/coordinate the program and Animal Health Australia has accepted this task in principle and subject to adequate resourcing.

The future resourcing of the program and in particular its funding, however, is yet to be resolved with DAFF which has advised that it is not prepared to continue providing financial support. DAFF has proposed that funding be sourced from the beneficiary industries, including beekeepers and pollination dependent industries.

AHBIC is concerned that no mechanism for achieving the funding stream is available and that whilst a business plan for the continuation of the program has been submitted to the Animal Health Committee for final approval, to date this has not been signed off by the States or the Commonwealth.

It is AHBIC's view, given the potential economic effects should Varroa mite be introduced into Australia, that this matter should be resolved as quickly as possible and that the Commonwealth through AQIS, DAFF and the CSIRO should continue to provide support in terms of both funds and kind to this program.

AHBIC is also concerned to ensure that activities to maintain and increase biosecurity awareness and engagement amongst personnel involved in international trade, including ships crews, port and airport staff and management and land transport contractors, are preserved and enhanced.

#### **Recommendation 1:**

- **The Boland review of the National Sentinel Hive Program should be updated to take account of current risks and should include a recommendation on the case for including “baited” hives at some or all locations.**
- **On the basis of this review the National Sentinel Hive Program should be revised to reflect the recommendations of the updated Boland review**
- **Coordination of the Program should be transferred to Animal Health Australia which should within three months provide a three-year Business Plan and budget for the Program**
- **Animal Health Australia's cash costs for coordinating the Program should be shared equally between AQIS; the Honeybee Industry and the Pollination Industries (through Plant Health Australia)**
- **The State and Territory Governments; CSIRO and the Honeybee Industries should continue to provide “in-kind” support to the Program.**
- **Working with AHBIC AQIS should develop a new communications program to improve honeybee biosecurity awareness on ships, at ports and at associated locations.**

#### **2.2 Honeybee quarantine facility**

Currently all imports of live bees to Australia are required to be subject to an extensive quarantine procedure described on the AQIS website as below:

- 1. Entry of the bees into Australia cannot occur until an import permit has been issued by the Australian Quarantine and Inspection Service (AQIS).*
- 2. The original permit is to accompany the bees together with the required health certification from the country of origin.*
- 3. The Quarantine Officer will deliver the imported bees to the Eastern Creek Animal Quarantine Station bee facility. The consignment(s) and the attached certification will be checked to ensure compliance with the import conditions.*
- 4. If the documentation is in order and corresponds to the bees imported, an Australian Quarantine Apiary Officer will open the consignment(s) and visually inspect the queen(s) and her escorts for external parasites. If no visible evidence of parasites is detected, the imported queen will be placed in a new cage and undergo an isolation period with Australian escorts (not older than 4 days) for not less than fourteen (14) days.*

5. All imported escort bees will remain in the original cage, be killed and then examined internally and externally by an entomologist for the presence of:  
*Tracheal mite (Acarapis woodi)*  
*Varroa mite (Varroa spp.)*  
*Tropilaelaps mite (Tropilaelaps spp.)*  
 The imported cage and escort material will be destroyed by incineration.
6. At the end of the isolation period, the Australian escort bees will be killed and examined internally and externally by an entomologist for the presence of:  
*Tracheal mite (Acarapis woodi)*  
*Varroa mite (Varroa spp.)*  
*Tropilaelaps mite (Tropilaelaps spp.)*  
 The cage and escort material will be destroyed by incineration.
7. Provided that all tests have been completed to the satisfaction of the Principal Quarantine Officer, AQIS, (NSW), the imported queen will be introduced into a nucleus colony in a quarantine flight cage.  
 Bees in the nucleus colony are to be sourced from a resident hive at the Eastern Creek quarantine facility which has been inspected by an Australian Quarantine Apiary Officer and is free of visible evidence of the diseases listed in Appendix 2 (for which quarantine inspection and/or testing is required).
8. The introduction and preparation of the nucleus colony will be done by an Australian Quarantine Apiary Officer. An acceptance period of up to ten (10) days will be allowed following the introduction of each imported queen into a nucleus colony.
9. Following acceptance of an imported queen by the nucleus bee colony, all bees in the quarantine flight cage are to be continuously exposed (in accordance with the product manufacturers recommendations) to acaricidal treatment with a product of proven efficacy for the control of parasitic bee mites for the remaining duration of the quarantine period. If possible, treatment is to be applied through exposure of a different chemical agent to that employed in the country of origin prior to export.
10. All routine maintenance procedures will be carried out by AQIS officers (or nominees) familiar with beekeeping management. For all bee management procedures, personnel will be supplied with clean, protective clothing which will remain on the quarantine station. Personnel will shower before entering and leaving the facility.
11. The nucleus bee colony will include a frame of comb (removed from a resident hive at the Eastern Creek quarantine facility) containing young larvae. At an interval of not less than 10 days following introduction of the imported queen, that frame will be removed and all larvae/pupae (from that frame - i.e. 100% sampling) will be examined at a government approved laboratory for the presence of the following mites:  
*Tracheal mite (Acarapis woodi)*  
*Varroa mite (Varroa spp.)*  
*Tropilaelaps mite (Tropilaelaps spp.)*
12. When appropriately aged brood of an imported queen first become available in the quarantine flight cage following introduction of the queen into a nucleus colony, a representative sample (as specified below) will be tested at a government approved laboratory for traits associated with the Africanised strain of honey-bee:  
 . not less than ten (10) pupae
13. For all bee imports, the Principal Quarantine Officer, AQIS, (NSW) will allow grafting to commence only after all required testing and inspection of brood for undesirable genetic traits, infectious diseases and/or parasites has been completed with negative results.
14. If either a queen or her attendants or brood are found to be infected with organisms associated with the diseases listed in Appendix 2 of the import conditions, the Principal Quarantine Officer, AQIS, (NSW) may order destruction of the cage, affected bees and all other components comprising the colony to which affected bees belonged. Compensation will not be paid for bees destroyed.
15. If a queen bee or her progeny are found to exhibit traits associated with Africanised strain of honeybee, the affected queen bee and her brood will be destroyed.

*16. The nominated grafter, who must be approved by AQIS, will then be allowed to commence grafting.*

*17. The grafter must advise the Principal Quarantine Officer, AQIS (or nominee), in advance, the days on which grafting is to take place and the number of cells required for grafting.*

*18. The grafter will be supplied with clean, protective clothing which will remain on the station. He/she will only be allowed into the grafting room and will shower before entering and prior to leaving the facility.*

*19. A frame of larvae of a suitable age for grafting will be removed from the nucleus in the flight cage by an Australian Quarantine Apiary Officer and given to the grafter (in the grafting room) for grafting into new pre-polished plastic queen cells supplied by the Quarantine Station.*

*20. All grafting will be supervised by an Australian Quarantine Apiary Officer or a nominated Quarantine Station staff member.*

*21. Only grafted queen cells may be removed from the Quarantine Station.*

*The importer must inform the Principal Quarantine Officer, AQIS (NSW), in writing, of the name and address of the owner and the location of the apiaries in which the grafted queen cells are inserted in case follow-up action is required.*

*22. The importer is to notify the Principal Quarantine Officer, AQIS (NSW), in writing, when grafting has been completed. The imported queen(s) will be destroyed and examined for the parasitic diseases listed in Appendix 2.*

*All remaining adult bees, brood and all other components comprising the nucleus colony will be destroyed by incineration.*

*Quarantine fees for an imported queen bee will cease on the death of that bee.*

*23. Post-quarantine release of the grafted queen cells derived from any importation under these conditions is only permitted into Queensland, New South Wales, South Australia and Victoria.*

Two points are clear from this description. Firstly, important targets of the procedure are the mite pests, Tracheal mite, Varroa mite and Tropilaelaps mite and Africanised bee genes. Secondly, the only facility currently available to support this process is that at Eastern Creek in NSW.

The facility at Eastern Creek is valued by the honeybee industry and is used regularly by a number of bee breeders. Usage is seasonal with the peak demand for the facility occurring over the summer months when from time to time the usage meets or exceeds the capacity of the facility.

Completion of the process described above takes at least two months and typically costs between \$2,500 and \$3,000 for a group of four queens. After this time, however, the importer will have access to only the very first progeny of the imported queens. To harvest more progeny and to allow time for them to be tested and assessed, an importer will commonly pay for the quarantined stock to be maintained at the facility for an additional three to six months or even up to twelve months before it is destroyed.

The Federal Government determined some time ago to sell the Eastern Creek property and is scheduled to vacate the facility either by 2010 or with an extension of the existing lease by 2015.

Quarantine services for honeybees are the only activities, apart from those for racing pigeons, currently undertaken at Eastern Creek that cannot be privatised.

AHBIC is of the view that the maintenance of a suitable quarantine facility for the importation of queen bees is essential, firstly, as means of introducing improved genetics to maintain the competitiveness of the Australian apiary industry, including the introduction of genes for tolerance/resistance to Varroa as they are identified and isolated and to provide bees to service the demand for pollination services, secondly, as a barrier to the incursion of pests and diseases and thirdly as a demonstration of the national commitment to the biosecurity of an important industry.

AHBIC has been notified that the NSW Department of Primary Industries (DPI) is prepared to consider undertaking the quarantine function should they be invited to do so by the Federal Government. It is the NSW Government's position that they would consider making a site available at the Elizabeth Macarthur Agricultural Institute (EMAI) to enable the relocation of the Eastern Creek queen bee quarantine facility.

AHBIC has approached NSW DPI separately and has been advised the following:-

- NSW DPI considers that EMAI would be a good place to relocate the bee quarantine facility to, because:
  - of its location, as it is an easy run from the airport,
  - it is an institute which already has a number of biosecure facilities (at PC2, PC3 levels) and has good general site security,
  - of a strong QA system operating throughout,
  - of its specialist microbiological and parasitological diagnostic facilities and expert staff.
- NSW DPI has made no specific provision for a new bee quarantine facility in the current EMAI upgrade proposal as its construction would be a Commonwealth Government cost. However, the major upgrade proposed to be undertaken would support any co-located bee quarantine facility through the enhanced biosecurity of many parts of the institute. Some "co-investment" could be arranged by negotiation.
- AQIS has yet not set up any formal process by which NSW DPI could express interest or tender for the relocation of the bee quarantine facility to EMAI. (AHBIC understands that Senior NSW DPI executives have already advised AQIS of NSW DPI's willingness to host the facility.)
- If an approach from AQIS is received by NSW DPI, the EMAI upgrade proposal could very easily be modified by the addition of a bee quarantine facility at a suitable location within or near the proposed laboratory complex.
- The willingness of the Commonwealth government to invest in such a facility at EMAI would also strengthen NSW Treasury's support for an overall upgrade.

#### **Recommendation 2;**

- **The Commonwealth, through DAFF should proceed without delay to invite the NSW DPI to establish a queen bee quarantine facility at EMAI.**
- **AQIS should provide financial support of the order of \$25,000 per annum to maintain such a facility.**

### 2.3 Risk based prioritisation and targeting of at-the-border inspections

Under the heading “**Intervention targets**” of the Issues Paper, Items 73 and 74 read as follows:

73. *“In the May 2001 Budget, primarily in response to a foot and mouth disease outbreak in the United Kingdom, the Australian Government announced Increased Quarantine Intervention – a funding package to strengthen border agencies, with the following policy aims:*
- *international airports – at least 81 per cent of arriving international passengers to have baggage inspected or x-rayed, with a number of new detector dog teams in support;*
  - *international air cargo – all aircraft containers to be externally inspected;*
  - *seaports – all ships, passengers and baggage of arriving from overseas to be inspected;*
  - *sea cargo containers – all containers (external surfaces) to be inspected; and*
  - *international mail exchanges – all articles arriving by post to be inspected by x-ray or detector dog.*
74. *The Government introduced intervention and effectiveness targets to measure the success of the Increased Quarantine Initiative funding. **Intervention** refers to the application of a specified set of quarantine activities to determine the status of goods of quarantine interest. **Effectiveness** refers to the success rate of the intervention procedure.”*

AHBIC is concerned that this strategy is based solely on the number or percentage of passengers or items inspected and may not be either effective or efficient.

AHBIC understands that high frequencies of inspections may serve to satisfy public expectations but it is its view that both efficiency, in terms of the deployment of available resources and effectiveness in terms of detections and deterrence could be improved by a combination of risk-based inspections and better “passive” awareness campaigns.

AHBIC is interested to note that, as it understands, in contrast to the strategy outlined above, the strategy employed to allocate effort and resources for the purposes of detecting contraband and narcotics and for countering terrorism at the border are based on risk assessment processes.

Certainly, if decisions by the Commonwealth to reduce support for programs such as the National Sentinel Hive Program have been forced by the need to direct limited resources to achieve the intervention targets detailed above, AHBIC would strongly recommend that the strategy be revised to allocate resources to address assessed risks rather than public perceptions.

AHBIC believes that there are much more cost-effective means available to raise awareness of the importance of Australia’s quarantine measures amongst the travelling public than applying the limited resources to swamping what are likely to be lower risk but conspicuous exposures.

### **Recommendation 3**

- **AQIS should move to risk based quarantine inspections for passengers and cargoes**
- **AQIS should review and revise quarantine awareness activities to improve their effectiveness and allow human resources to be directed to higher risk inspection activities.**

### **3 Other Quarantine and Biosecurity matters of interest to the Honeybee Industry:**

In addition to the key issues identified above AHBIC wishes to bring to the attention of the Review a number of matters of more general interest arising from its consideration of the Issues Paper. AHBIC believes that as well as being of concern to the Honeybee Industry some of these matters may also be relevant to other agricultural, livestock and horticultural industries. These matters include:

#### **3.1 The Quarantine and Biosecurity Continuum:**

AHBIC applauds the recognition of the involvement of industry in the continuum in item #32 of the Issues Paper but believes that the reference to “emergency responses” alone under this item and the specification of Animal Health Australia and Plant Health Australia but not “Industry” in the table that follows, significantly understates the contribution of Industry in general and the Honeybee Industry in particular, to the Australian Biosecurity Continuum.

The contribution of the Honeybee Industry and individual apiarists includes:

- At the **Border**; provision, maintenance and monitoring of Sentinel Hives.
- **Post-Border**:
  - Development, implementation and maintenance of an Industry Biosecurity Plan titled “Biosecurity or Disease Risk Mitigation Strategy for the Australian Honeybee Industry”
  - Training of Honeybee industry personnel to discharge responsibilities under the EADRA and PPDRD and to fill designated AUSVETPLAN roles
  - Provision of specialist bee handling support to State and Territory authorities in the event of emergencies including pest and disease emergencies involving honeybees
  - Compliance with Animal Health Australia National Animal Health Performance Standards.

AHBIC believes that Industry contributions of the nature outlined above are an important element of the national biosecurity effort and that their importance will increase with time, particularly as biosecurity planning and awareness is devolved from Industry to the level of the individual enterprise.

#### **Recommendation 4**

- **The Quarantine and Biosecurity Review Panel should note the development of Industry and Enterprise Biosecurity Planning in many agricultural industries and encourage the incorporation of biosecurity into Industry and Enterprise Quality assurance Programs**

#### **3.2 Shared responsibility**

The Issues Paper at Item #37 refers to the “cost sharing deeds”, this is assumed to be a reference to the EADRA and the PPDRD. AHBIC is concerned that the use of “cost sharing” as the short-hand for these agreements over emphasises cost sharing which is but one element of the Deeds and overlooks other and arguably more important obligations that the Deeds impose upon Industry and Government signatories.

AHBIC's reading of the EADRA, in particular, is that it is a contract between the Industry and Government Parties which has as its prime focus a reduction in the risk of incidents involving emergency pests and diseases, including exotic pests and diseases. Cost sharing is only relevant when these efforts have failed and an incursion that requires an emergency response occurs.

Consistent with this view, the EADRA requires that parties undertake activities to reduce the risk of incursions, maintain an appropriate capability to detect identify and respond to an incursion, participate in decision making in the event of an incident and lastly share the costs of an agreed response.

AHBIC is concerned that whilst it is actively seeking to fulfil the full range of its undertakings by progressing the development and implementation of an Industry Biosecurity plan, training members to participate as Industry representatives on decision making bodies and emergency response teams and by establishing arrangements to meet any cost sharing obligations that may arise under the Deeds some government signatories have focussed exclusively on cost sharing and neglected the other elements of the Deed.

AHBIC believes that the proposal by the Commonwealth to discontinue support for the Sentinel Hive program is inconsistent with the obligation to reduce the risk of incursions. It also believes that the recent clear confusion in reporting processes relating to the detection of *Apis cerana* in the port of Cairns and the earlier delay in identifying samples of small hive beetle submitted to the NSW DPI, along with the general decline in the number of specialist apiary officers, all indicate a failure on the part of State and Territory Governments to meet their obligations under the Deeds to maintain an appropriate capability to detect, identify and respond to pest and disease incursions.

AHBIC is concerned that the singularity of focus by Government Parties on the cost sharing "benefits" of the Deeds while neglecting their attendant obligations could ultimately threaten the viability of these important and innovative agreements.

#### **Recommendation 5:**

- **All Industry and Government Parties to the EADRA and PPDRD and in particular Commonwealth agencies including DAFF and AQIS review their compliance with the full range of obligations under these contracts especially those relating to minimising the risks of incursions of plant and animal pests and diseases**

#### **3.3 Changing operating environment:**

As far as the honeybee industry is concerned AHBIC perceives that in recent years both the risk of an incursion and the consequences of an incursion have increased significantly.

On the risk side, the spread of the Varroa has in the past few years seen this potentially devastating pest become established in and extend throughout, New Zealand. This leaves Australia as the only significant beekeeping country in the

world that is free of Varroa. It also leaves Australia under increased threat of an incursion by this pest.

The impacts of Varroa becoming established in Australia would be a decimation of the feral bee population and a significant increase in the cost and effort required to maintain managed honeybee colonies.

At the same time, the industry continues to be threatened by the encroachment of the bee pests *Apis cerana*, *Apis dorsata* and may also be at risk from Colony Collapse Disorder that appears to be impacting the honeybee industry in North America.

On the consequence side of the ledger, the growth in plant industries that are dependant on honeybees to pollinate crops and orchards is increasing very rapidly.

The most spectacular growth in pollination dependant industries relates to the recent and continuing plantings of almonds currently in the Riverland/Sunraysia regions of south-eastern Australia and projected for the Midlands of Western Australia.

Current plantings could, within five-years, require more than 25% of all managed bee colonies in Australia to meet the demand for pollination services to assure the production of almonds worth \$300 - \$500 million per year.

Projected plantings would see the demand for pollination services for almonds alone grow to exceed the equivalent of 60% of all available colonies in Australia and the value of almond production dependant on timely and effective pollination exceed \$1 billion per year in 10 to 15 years.

With no practical alternative to honeybees for the provision of pollination services on such a scale, the potential impact of an incursion of a significant bee pest or disease on almond production and the many other agricultural and horticultural crops that rely to a greater or lesser extent on honeybees for pollination is obvious and serious.

The situation outlined above is further complicated by uncertainty about the economics of honey production and continued access for beekeepers to important native floral resources residing within publicly owned lands and reserves.


In recognition of, first, the growth in the demand for and importance of pollination services in Australia and, second, the impact of biosecurity failures on the provision and cost of pollination services in other countries, notably New Zealand and the USA, AHBIC has been actively involved in efforts to establish **Pollination Australia**, a proposed alliance between the apiary industry and organisations representing the interests of pollination dependent agricultural and horticultural crops.

A key objective of the proposed alliance is an improvement in awareness and management of the significant biosecurity threats shared by the suppliers and consumers of pollination services in Australia.

Efforts to establish Pollination Australia have included the conduct of workshops attended by the various pollination service consumer and supplier interests to develop a shared understanding of the matters of common concern and the development of a Pollination Australia Business Plan, funded by DAFF and RIRDC.

Preparation of the business plan has involved the conduct of studies into the biosecurity risks facing the pollination industry and strategies for the management; the research and development and education and training needed to support these strategies.

While the reports from these studies are yet to be published, AHBIC is aware of their contents and conclusions. In regards the biosecurity threats facing the pollination industry; five types of threats have been identified and these are:

Likely Impact	Biosecurity Threat
Greater  Lesser	Pest or disease of bees that impacts cost and availability of the supply of pollination services (e.g. Varroa)
	Pest or disease of a major pollination crop that affects demand for pollination services (e.g. Fire blight of apples)
	Pest or disease of a key floral resource that impacts the non-pollination elements of beekeeping (e.g. Blackleg in Canola or Guava rust in Eucalypts)
	Pest or disease of plants that is vectored by bees and results in restrictions on movement of bees (e.g. Fire blight or Guava rust)
	Pest or disease of other plants or animals, the management of which restricts the movement of bees (e.g. Citrus canker or Foot and mouth disease)

The management strategies that have been proposed to address these risks are as below:

### **Strategy 1: Minimise the risk of incursion of exotic pests and diseases**

#### **Strategic Objective**

*Cost effective minimisation of the risk of incursion of exotic pests and diseases that would jeopardise the viability of the pollination industry.*

#### **Strategic Actions**

##### **Surveillance**

- *Finalise arrangements for future funding and coordination of the national Sentinel Hive program.*
- *Update the Boland risk-based technical review of the Sentinel Hive program to determine whether recommendations have been addressed and to ensure that the intensity of surveillance reflects the current risk.*
- *Evaluate the case for establishing and monitoring Baited Hives at higher risk locations as part of the revised Sentinel Hive Program*

- *Introduce a hive monitoring and sampling and reporting element to B-Qual and consider differential registration fees as an incentive for participation in B-Qual and the proposed sampling element*

#### **Quarantine**

- *Identify and evaluate options for the establishment of a live bee quarantine facility to replace the Eastern Creek facility and complete the evaluation and select the preferred option by 31 July 2009*
- *Progress the establishment of a replacement facility to ensure that it is in operation before the closure of the Eastern Creek site*
- *Maintain current levels of inspections of international cargoes and travellers;*
- *Undertake a national honeybee biosecurity skills audit to identify current capabilities in relevant areas of*
  - *higher level expertise,*
  - *pest and disease identification management and research, and*
  - *bee breeding and selection skills, and*
  - *determine future requirements and develop and implement a National Skills Development and Maintenance Plan*

#### **Biosecurity Planning**

- *Review the Biosecurity Plans of the honeybee industry and all pollination dependant plant industries to ensure that all specifically recognise the particular biosecurity issues associated with the provision and use of pollination services and that all are updated no less frequently than every two years*

#### **Research and development**

- *Progress research and development into the biology and epidemiology of Varroa to identify particular risks and control methods*
- *Maintain links with international researchers to monitor developments in the management of Varroa and other diseases*
- *Undertake a study to determine the feasibility and cost of developing a bio-economic simulation model (similar to the AHA Screw worm fly model) for Varroa incursions in Australia*
- *Continue research to develop Varroa tolerance, avoidance, resistance or immunity in honeybees*
- *Progress research to understand the potential impacts of Guava Rust on native floral resources and the potential role of honeybees in the transmission and establishment of the disease*

### **Strategy 2: Management of incursions of pests and diseases**

#### **Strategic Objective**

*Cost effective emergency response to exotic pest and disease incursions and nationally coordinated management of established pests and diseases that recognises the particular requirements of the pollination industry.*

#### **Strategic Actions**

##### **Emergency Response Planning**

- *Formalise arrangements to ensure effective representation and timely coordination of the activities of AHA and PHA and their relevant members in the event of a disease of significance to the pollination industry*

- *Review the relevant elements of AUSVETPLAN and PLANTPLAN to ensure consistent and comprehensive coverage of matters pertaining to the pollination industry*

***National disease containment and management protocol***

- *Initiate consultative processes involving pollination user and provider interests and relevant jurisdictional authorities and agencies, to develop and agree on arrangements that ensure the development and implementation of nationally coordinated management plans in the event that a current exotic disease of significance to the pollination industry becomes established in Australia*
- *Develop and implement a national awareness plan that ensures that all parties with an interest and involvement in the conduct of a disease management plan understand the interests and requirements of the other parties*

***Bee hive identification and tracing***

- *Propose and introduce a real-time hive identification and tracing scheme based on the model of the National Livestock Identification Scheme (NLIS)*

***Disease response and management training and simulations***

- *Revise role descriptions and training courses to reflect any changes made to AUSVETPLAN and PLANTPLAN as a result of the review of those plans as recommended above*
- *Develop the role descriptions, competency requirements and training courses arising from the negotiation and establishment of the National Disease Containment and Management Protocol proposed above*
- *Undertake a pest and disease response and management skills audit of parties to the pollination industry, including relevant government authorities, to identify current capacities to fill the emergency response and disease management roles required to sustain the emergency response and pest and disease management plans referred to above*
- *Develop and implement within the honeybee and pollination dependent industries, recruitment and training plans to address any deficiencies in pest and disease response and management capabilities identified by the skills audit;*
- *Develop disease incursion and management scenarios and undertake a simulation exercise to test the effectiveness of response and management plans and arrangements for the coordination and representation of the range of interested parties and to develop the skills of key industry and government personnel*

**Strategy 3: Enhance the capability and performance of the pollination industry.**

**Strategic Objective**

*To improve the understanding of and expertise in the management of pollination processes in Australia and to establish best practice pollination management standards for both service providers and users with an emphasis on the biosecurity implications of best practice pollination management.*

**Strategic Actions**

***Optimise efficiency of pollination management in Australia***

- *Develop and implement a national pollination industry research and development plan to establish benchmarks for the efficient application of current pollination agents, technologies and processes*

- *Develop and maintain best practice pollination manuals for service providers and users*
- *Identify and research priority opportunities to improve pollination efficiency*

#### ***Pollination awareness training and education plan***

- *Develop awareness, training and education courses and resources relevant to the requirements and responsibilities of the various users and providers of pollination services*
- *Ensure that all training and education courses include an appropriate pollination biosecurity element*

#### ***Coordination and articulation of pollination industry biosecurity and Quality Assurance plans***

- *Review the biosecurity and quality assurance plans of pollination user and provider industries to ensure that biosecurity plans provide adequate coverage of the issues associated with the pollination process*
- *Ensure that QA plans include provisions that address biosecurity issues and, in particular, those relating to the pollination process*
- *Ensure consistency and adequate articulation between the QA plans for pollination service providers and user industries, especially with regard to biosecurity management*
  - *compliance with B-Qual should require that hives are only placed on properties that are certified under that industry's QA scheme and that compliance with the pollination service user's QA scheme should require that only colonies from a B-Qual certified beekeeper are used for the provision of pollination services;*

### **Strategy 4: Secure necessary floral resources**

#### **Strategic Objectives**

- *To ensure that beekeepers have secure access to sufficient floral resources to enable them to meet the pollination service requirements of Australia's horticultural industries;*
- *To ensure the efficient utilisation of available floral resources; and*
- *To minimise the biosecurity risks associated with the use of floral resources.*

#### **Strategic Actions**

##### ***Supply and demand for floral resources***

- *Develop a national inventory of floral resources, with the inventory published by the NSW DPI<sup>1</sup> being the model and standard applied*
- *Investigate the opportunities for floral resource species to be included in forestation programs arising from climate change, carbon-trading and land and water conservation initiatives and, where appropriate, seek to have such species included in plantings and ensure access for beekeepers*

##### ***Access to and allocation of floral resources.***

- *Establish a pollination industry taskforce to investigate and address the issues behind the decisions of the Victorian and Queensland Governments to exclude beekeepers from native forests on public lands and to develop strategies to assure continued access in other jurisdictions*

- *Review arrangements for the allocation of rights to use floral resources to identify and remove (in)efficiencies that might compromise the ability of the apiary industry to meet the service requirements arising from continued strong growth of pollination dependent industries*

***Biosecurity of floral resources***

- *Investigate and prioritise the biosecurity risks to trees and bees, arising from the use of floral resources by beekeepers*
- *Develop biosecurity management plans for the use of floral resources by beekeepers and assess the case for making an enhanced B-Qual certification a pre-requisite for using apiary sites on public lands.*

**Strategy 5: Additional pollination options**

**Strategic Objective**

*To identify, evaluate and develop pollination agents and methods to supplement the activities of managed honeybees especially in the event of an incursion of a debilitating disease of honeybees into Australia.*

**Strategic Action**

***Native insect pollinators***

- *Progress research into the biology and management of native Australian insect species that may have a role in servicing pollination requirements and niche applications in particular*

AHBIC broadly supports the conclusions of this study and the risk management strategies proposed.

**Recommendation 6:**

- **The Quarantine and Biosecurity Review Panel should give close consideration to the strategies proposed in Pollination Industry biosecurity risk management project commissioned by RIRDC**

**3.4 Risks across the quarantine and biosecurity continuum; The legislative framework and Jurisdictional and institutional arrangements:**

ABHIC is strongly of the view that a significant risk to Australia’s quarantine and biosecurity arises where there is not close alignment and coordination between the variety of entities involved in servicing the continuum.

In our view this risk has at least three dimensions one of which is a product of Australia’s system of government and another of which is of particular importance to the honeybee industry.

The first dimension might be described as the “vertical” and involves the need for alignment, articulation and coordination of priorities and activities down the chain comprising Biosecurity Australia, AQIS, DAFF, States and Territories and Industry. Unless this is achieved it is inevitable that not only will significant inefficiencies and wasted effort result but important “gaps” in the quarantine and biosecurity continuum will also arise.

This matter is increasingly important for industry including AHBIC because of its growing investment, directly and through AHA and PHA, in developing and implementing Industry and enterprise Biosecurity and Emergency Response plans.

Of interest to AHBIC are firstly, whether priority risks as identified and defined by Biosecurity Australia are understood to be such by AQIS and reflected in the plans and priorities pursued by AQIS. Secondly, AHBIC regards it as important that both Biosecurity Australia and AQIS are cognisant of the priority pests and diseases identified by plant and animal Industries in their Biosecurity Plans and that AQIS in particular reflects these priorities in its plans and activities.

AHBIC does not believe that to do so would compromise the independence of Biosecurity Australia, in particular but is sure that a failure to do so would render the resources applied by Industry to the development of these plans wasted and make a mockery of the obligations imposed by the EADRA and the PPDRD on Industry to develop and deploy such plans.

AHBIC has no direct evidence as to whether or not these alignments are in place but regard the lack of such evidence as cause for concern.

The second, “horizontal”, dimension is the need for alignment, consistency and coordination of priorities between the seven State and Territory Governments of Australia. This matter is of particular concern to AHBIC, for many commercial apiarists’ pursuit of their profession requires the frequent if not entirely regular movement of bee colonies across State and Territory borders.

AHBIC acknowledges firstly, that natural and historical factors will result in differences between jurisdictions in regards the ranking of biosecurity priorities and secondly, that national alignment and coordination has been progressed in a number of key respects. Such progress is manifest in AUSVETPLAN and PLANTPLAN, the EADRA and the PPDRD and in their membership of Animal Health Australia and Plant Health Australia, as well as other initiatives.

The matter of reasonable access across borders is of such importance to the honeybee Industry that AHBIC remains concerned particularly as to how jurisdictions will behave in the event of an emergency.

The third dimension is one that is effectively an issue of unique importance to the honeybee industry and relates to the division of responsibilities in most organisations and arrangements between plants and animals.

On one hand, bees are clearly “animals” although they have very little in common with those species more commonly regarded as “livestock”. In all jurisdictions bee pests and diseases are covered under animal health legislation and regulations and it is the Chief Veterinary Officer in each jurisdiction that has responsibility for the implementation of these acts and regulations as they apply to the apiary industry, even though it is rare for such officers to have any particular expertise of direct relevance to the apiary industry.

On the other hand, the interests of the honeybee industry are much more closely related to those of the plant industries, whether it is in plants as a source of nectar for bees or in beekeepers providing pollination services to almond growers.

Whilst apiarists will be more interested in and affected by a disease of apples than of cattle and a disease of bees will be of greater import to almond growers than wool producers, as things currently stand whether it is within a state department of agriculture or between AHA and PHA, it is the lot of bees to be grouped with sheep and cattle rather than with apples and almonds.

Where this misalignment impacts the honeybee industry is in matters such as the currently proposed future funding and management of the Sentinel Hive program. AHBIC has no doubt about the capability of AHA to manage/coordinate the program. However, if funding is to come from beneficiary Industries, only AHBIC amongst those beneficiaries is a Member of AHA other key beneficiaries such as the Almond industry have no relationship with AHA.

Similarly, AHBIC is concerned that in the event of an incursion of a pest or disease of bees the EADRA makes no provision for interests such as the pollination dependant plant industries to be represented on the national animal health decision making councils. It is these industries that could be significantly affected by the decisions made by those councils.

In contrast while a disease of almonds could severely impact upon the honeybee industry, as AHBIC alone is a member of both AHA and PHA, it would be able to represent the interests of its members on the PHA councils.

AHBIC does not advocate that pollination industries become Members of AHA and it has participated in discussions between AHA and PHA to ensure appropriate representation of plant industries where the response to an animal pest or disease, such as Varroa, might affect them. AHBIC is of the view that this initiative needs to be advanced with some urgency and parallel arrangements should be implemented within state management bodies.

#### **Recommendation 7:**

- **Animal Health Australia and Plant Health Australia should be encouraged to jointly develop as quickly as possible arrangements that:**
  - **Ensure that the interests of industries that are not signatories to one or other of the EADRA or PPDRD are appropriately represented in the deliberations of the technical or policy forums associated with these Deeds where the interests of these non-signatory industries are likely to be affected**
  - **Ensure that where under one or other of the Deeds it is determined that a pest or disease incursion cannot be contained and eradicated, protocols are in place to facilitate the expeditious establishment of national pest or disease control and management plans.**

### **3.5 Culture, efficiency and resourcing:**

The decline in the number of biosecurity related specialists including pest and disease diagnosticians, response planning and management personnel and R&D scientists is a matter of concern to the honeybee industry and should be of interest to this enquiry.

From the perspective of the honeybee industry, as well as a reduction in the number of general apiary officers in almost all State and Territory agricultural agencies, AHBIC has noted with concern a decline and aging of the corps of specialist apiary scientists and researchers.

Of particular concern is the national exposure as far as specialists who could authoritatively identify the key pests and diseases of concern to the industry. Increasingly the industry relies on a single specialist, Dr Denis Anderson from the CSIRO, to provide a full range of specialist services in regards to Varroa in particular.

The reliance on Dr Anderson currently extends from maintaining contact with researchers in other parts of the world to monitoring the spread of pests and diseases of importance, the emergence of new or new strains of pests and diseases and developments in technologies to manage, control or eradicate pests and diseases, including the emergence of chemical tolerances and resistances, to undertaking original research on established pests and diseases in Australia and on how exotic pests and disease might behave in this country. Dr Anderson is also a key resource in regards to the provision of expert advice to all levels of interest within the industry

In the event of a biosecurity incident involving a bee pest or disease, Dr Anderson's availability, as and when needed, would currently be critical to early positive identification of the pest and to efforts to delineate the extent of its spread.

AHBIC is concerned that under the current circumstances most State and Territory governments and possibly the Commonwealth could not fulfil their obligations under the EADRA regarding the maintenance of a capability to detect, identify and manage an incursion of a pest or disease of honeybees.

AHBIC does not propose that each jurisdiction must maintain an expertise in every aspect of honeybee biosecurity, as this would clearly involve unnecessary duplication. We are of the view that it is essential that nationally there is adequate coverage of all the fields of expertise and that there are clearly defined arrangements between the jurisdictions to maintain the necessary expertise in the long term and to share the expertise as necessary.

In recent years AHBIC has contributed significant funding to allow jurisdictional personnel who have some expertise in apiary matters, to upgrade their skills and achieve higher formal qualifications. AHBIC would welcome the development of a prioritised nationally agreed expertise development plan as this would assist in targeting support for training and development.

#### **Recommendation 8:**

- **Animal Health Australia and Plant Health Australia should be funded by DAFF to coordinate the development of a prioritised national plant and animal biosecurity expertise development plan to ensure that Australia has**

**adequate capability to detect, identify and research the key biosecurity threats facing the country.**

### **3.6 Specific questions raised by the Review Panel:**

AHBIC has considered all of the specific questions raised in the Issues Paper and has chosen to respond to a number of these as below:

- **Are the arrangements for sharing pest and disease information between the Commonwealth, the states and territories and industries working adequately?**

The honeybee industry would contend that they are not.

In the case of the small hive beetle incursion, beekeepers alerted the NSW DPI to the potential existence of the pest twelve to eighteen months before it was officially recognised. It appears that NSW DPI did not have adequate diagnostic capability to make the determination in a timely fashion and seems not to have sought assistance until the beetle was well established.

It is normal and strongly recommended to undertake a review and debriefing following an incident to determine weaknesses in the processes that applied and identify opportunities for improvement. If this occurred in the case of the small hive beetle incident, AHBIC is not aware of a review and certainly has not been advised of any outcome.

#### **Recommendation 9:**

- **Animal Health Australia and Plant Health Australia should be funded by DAFF to coordinate the conduct of formal reviews and debriefings following significant incursions of plant or animal pests or diseases to identify opportunities for improving the effectiveness and efficiency of future responses.**

- **Are Australia's emergency response plans for exotic pest and disease outbreaks adequate?**

By and large, the national emergency response plans are adequate. As has been referred to earlier, there are some special circumstances that apply to the honeybee industry. These include the importance of cross jurisdictional transport of bees to apiarists and the potential impact on other industries including in particular, plant industries relying on pollination services.

AHBIC is concerned that some of the response arrangements are not sensitive to these peculiarities.

AHBIC is also concerned, given the frequency of potential biosecurity breaches occurring at ports, as indicated by the Boland report, to ensure that AQIS is adequately aware of and represented in emergency response plans. AHBIC is not satisfied that AUSVETPLAN currently makes adequate provision for this.

#### **Recommendation 10:**

- **AQIS should commission an expert review of AUSVETPLAN and PLANTPLAN to ensure that AQIS is appropriately represented in these emergency response plans**
- **Are the arrangements for incursions with a principally environmental impact appropriate?**

AHBIC does not believe that current arrangements adequately provide for incursions with principally environmental impacts and offers the example of the incursion of bumble bees in Tasmania as a case in point. In this instance the bumble bee was considered to have only environmental impacts and eradication was not vigorously pursued, but subsequent experience has revealed that the insect has broader impacts, including upon the honeybee industry.

Based on this experience AHBIC is concerned as to how an incursion of Bumble Bees on the Australian would be treated. Arrangements to manage an incursion of *Apis cerana* or *Apis dorsata* are being progressed through Animal Health Australia to AHBIC's satisfaction, but a resolution of arrangements in the event of a Bumble Bee incursion is outstanding.

AHBIC would not wish the interests of the environment or public amenity to be neglected and recognises that an incursion of *Apis cerana* could have a devastating impact on pollination and native bee species and that the infiltration of Africanised bee genes could negatively impact public amenity.

#### **Recommendation 11:**

- **DAFF should commission an expert review of AUSVETPLAN and PLANTPLAN to ensure that these emergency response plans adequately address the environmental and public amenity impacts of an incursion of animal and plant pests and diseases**
- **Are the current roles and responsibilities of the Commonwealth and the states and territories well understood and operating efficiently?**

At various points in this submission AHBIC has noted the problems that could arise in the event of a bee pest or disease because of the separation of plant and animal interests common to response organisations and arrangements.

AHBIC advocates that initiatives to ensure that such separation does not compromise the effectiveness of responses to incursions or jeopardise the interests of peripheral parties, be progressed to conclusion as a matter of priority.

#### **Recommendation**

AHBIC is of the view that this matter is adequately addressed by recommendation 7 above.

- **Are current quarantine and biosecurity education and awareness programmes effective?**
- **What methods can be used to assess the effectiveness of quarantine and biosecurity communication?**

Both of its own initiative and as member of Plant Health Australia and Animal Health Australia, AHBIC has a significant history of efforts to raise and improve biosecurity education, awareness, management and communication.

The most recent of these initiatives has been a brochure distributed to all registered apiarists highlighting the importance of biosecurity and on-farm biosecurity plans.

As a complement to AHBIC's efforts and as an encouragement to apply biosecurity planning at the level of the individual enterprise, AHBIC recommends that jurisdictions give consideration to varying the registration fees imposed on apiarists who develop and implement formal biosecurity plans for their particular operations.

Not only would this initiative provide an incentive for individual producers to take greater responsibility for biosecurity, but it would also allow the effectiveness of the approach to be measured.

#### **Recommendation 12:**

- **State, Territory and Commonwealth regulatory agencies should give consideration to varying the registration fees and other fees imposed on apiarists and other agricultural producers who develop and implement formal biosecurity plans for their particular operations.**

- **Is research appropriately funded, coordinated and prioritised?**

As with other organisations and arrangements referred to elsewhere in this submission, the honeybee industry and its interests tend to fall through the gaps between the many Cooperative Research Centres and in particular, those specifically covering biosecurity issues, the Australian Biosecurity CRC for Emerging Infectious Diseases and the CRC for National Plant Biosecurity.

The honeybee and related industries have interests in both CRCs, but individually lack the “critical mass” to attract meaningful attention and activity from either.

It is in part to overcome this diffusion of focus and achieve a “critical mass” that AHBIC is currently applying its efforts to the establishment of Pollination Australia. AHBIC believes that by combining the resources and effort of pollination service providers and consumers, greater attention will be warranted by, and paid to, the biosecurity concerns which the parties share.

### **3.6 Funding**

Currently AHBIC relies on funding derived from levies on revenues derived from the direct products of the honeybee industry alone, to support its contribution to research, training and all matters relating to quarantine and biosecurity. The current significant and potentially larger, revenues earned by apiarists from the provision of pollination services are not subject to levies, nor does the honeybee industry derive any revenue from the benefits gained by the producers of pollination crops from the improvements in yields and quality attributable to those pollination services.

As a result the funds available to AHBIC are relatively small and totally inconsistent with the scale of direct and indirect revenues attributable to the honeybee industry, when compared with other agricultural industries in Australia.

These resources are also inconsistent with the impacts of an incursion that severely constrained the activities and viability of the honeybee industry.

The application of a levy to revenues from pollination services would serve to rectify this imbalance somewhat and would enable AHBIC to direct funds to matters of particular relevance to this important, growing and, in a biosecurity sense, exposed sector of the industry.

AHBIC's advice is that current regulations preclude the imposition of a levy to such a service and AHBIC believes that this position should be reviewed. As it stands, there is no mechanism by which the beneficiaries of the services contribute to the cost of the research and other activities which are also to their benefit. Further, the current arrangements mean that those beekeepers who rely for their income on honey and other direct products are subsidising activities that benefit beekeepers who have the provision of paid pollination services as a source of income and the producers of pollination dependent crops.

**Recommendation 13:**

- **The position regarding the application of *ad valorem* levies to revenues derived from the provision of paid pollination services should be reviewed to ensure equitable funding of research and development and biosecurity initiatives within the honeybee industry**