

THE NEEDS OF DEPENDANT POLLINATION INDUSTRIES

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June 2018

Improving national biosecurity outcomes through partnerships



Outline of presentation

An introduction to PHA

Emergency Response

Reporting

Industry Peak Bodies

Exotic HPP

Varroa

What is Australia doing to prepare and hence deliver to dependant Pollination industries ?

(Won't talk about the value of pollination or the number of hives required)

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Plant Health Australia

- Not for profit, **public company**, member based
- Provide **national coordination** to improve:
 - biosecurity across Australia’s plant industries
 - capacity to respond to plant pest emergencies
 - custodians of the Emergency Plant Pest Response Deed
- Work with Members to **build partnership arrangements** and **broker** and **facilitate** between government and industry in the national interest

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PHA members



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No such thing as zero risk

Incursion



Eradication

HPP risk identified



Early detection and notification



Diagnostics

National Plant Biosecurity Diagnostic Network



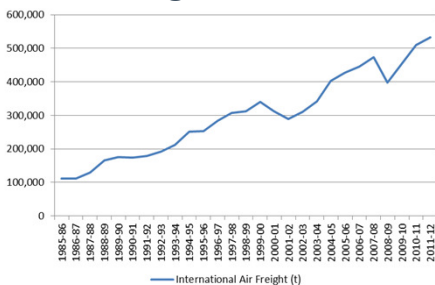
Response mechanism in place.



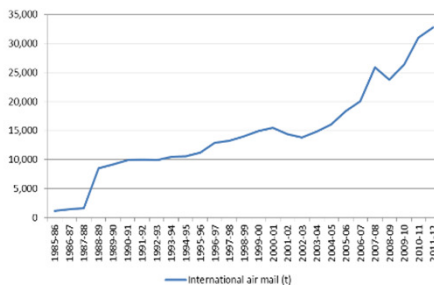
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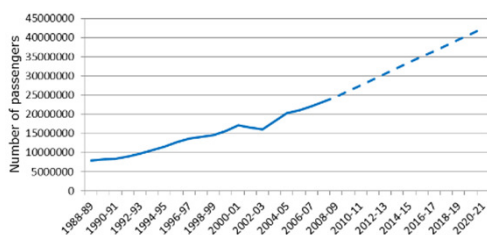
Air freight to Australia



Air mail to Australia



People movements

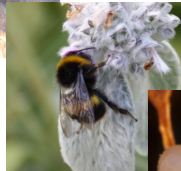


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Reporting a suspicious pest

Early reporting
of suspect
pests is key to
the **success of**
eradication



**Have you
spotted anything
unusual?**



EXOTIC PLANT PEST HOTLINE
1800 084 881

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**Australian Honey Bee
INDUSTRY COUNCIL**

- Peak honey bee industry body
- Signatories to the Emergency Plant Pest Response Deed
- Levy funds honey bee biosecurity projects

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Exotic HPP threats

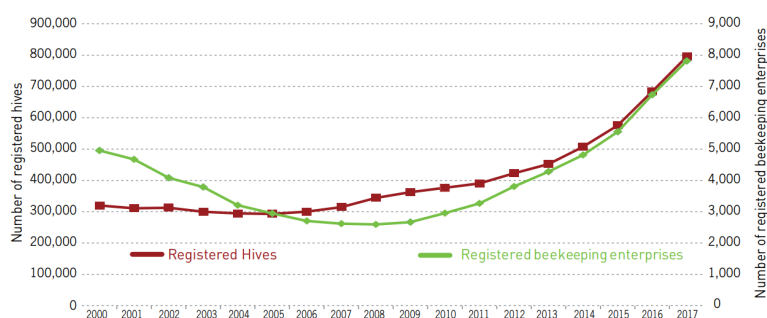
Scientific name	Common name
<i>Acarapis woodi</i>	Tracheal mite
<i>Apis cerana</i> (exotic strains, genotypes and sub-species)	Asian honey bee
<i>Apis mellifera capensis</i>	Cape honey bee
<i>Apis mellifera scutellata</i>	African honey bee
<i>Apis mellifera scutellata</i> (hybrid)	Africanized honey bee
Deformed wing virus (Iflavirus)	Deformed wing virus
<i>Hoplostoma fuligineus</i>	Large hive beetle
Slow paralysis virus (Iflavirus)	Slow paralysis virus
<i>Tropilaelaps clareae</i>	Tropilaelaps mite
<i>Tropilaelaps mercedesae</i>	Tropilaelaps mite
<i>Varroa destructor</i>	Varroa mite
<i>Varroa jacobsoni</i>	Varroa mite
<i>Vespa spp. (exotic species)</i>	Hornets

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NZ industry

FIGURE 1: REGISTERED BEEKEEPING ENTERPRISES AND HIVE NUMBERS IN NEW ZEALAND¹, AS AT 30 JUNE, 2000 TO 2017



Notes

¹ Registered beekeeping enterprises and hives under the National Pest Management Plan for American Foulbrood. Varroa was discovered in hives in New Zealand in 2000.

Source:ASUREQuality Limited.

Ministry for Primary Industries (2017). Apiculture Monitoring Programme

<https://www.mpi.govt.nz/dmsdocument/27678-apiculture-ministry-for-primary-industries-2017-apiculture-monitoring-programme>

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- Early warning system to detect new incursions of exotic bee pests and pest bees
- A range of surveillance methods conducted at sea & air ports considered most likely entry points





To promote best biosecurity management practices for beekeepers in Australia through:

- Development of the Code of Practice
- Honey Bee Biosecurity Online Training
- Bee Biosecurity Officers

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Materials for crop producers



Maximise your avocado crop with better pollination

THE BASICS OF AVOCADO POLLINATION

Avocado flowers open first as female and then as male. The female flowers are located in the upper part of the tree and the male flowers are located in the lower part of the tree. The female flowers are open for a short period of time and the male flowers are open for a longer period of time. The female flowers are open for a short period of time and the male flowers are open for a longer period of time. The female flowers are open for a short period of time and the male flowers are open for a longer period of time.

What you need to know

Avocado flowers are open for a short period of time and the male flowers are open for a longer period of time. The female flowers are open for a short period of time and the male flowers are open for a longer period of time. The female flowers are open for a short period of time and the male flowers are open for a longer period of time.

Maximise your macadamia crop with better pollination

THE BASICS OF MACADAMIA POLLINATION

Macadamia flowers are open for a short period of time and the male flowers are open for a longer period of time. The female flowers are open for a short period of time and the male flowers are open for a longer period of time. The female flowers are open for a short period of time and the male flowers are open for a longer period of time.

What you need to know

Macadamia flowers are open for a short period of time and the male flowers are open for a longer period of time. The female flowers are open for a short period of time and the male flowers are open for a longer period of time. The female flowers are open for a short period of time and the male flowers are open for a longer period of time.

Top Tip

Identify the key components of macadamia pollination. A number of factors can affect the pollination process and it is important to identify the key components of macadamia pollination. A number of factors can affect the pollination process and it is important to identify the key components of macadamia pollination.

THE AUSTRALIAN HONEY BEE INDUSTRY

Biosecurity Code of Practice

VERSION 1
Nationally endorsed
July 2016

CERTIFICATION OF COMPLIANCE WITH THE CODE

Date of year last successful completion of an approved Honey Bee Pest and Disease Training Course or the Biosecurity Biosecurity Training and Assessment Program in compliance with Section 5 of the Code:

Provide reference No. _____

Date year which all Hives were inspected to comply with Sec. 2.1 of the Code: _____

Date year which all Hives were inspected to comply with Sec. 2.2 of the Code: _____

Tick the method(s) used for hive examination:

Sugar shake

Alcohol wash

Drone wrapping

Date of year last independent honey test for American foulbrood in compliance with Sec. 10 of the Code: _____

Testing laboratory: _____

Laboratory reference number: _____

Result: Positive/Negative

During the past 12 months I have maintained management standards that are in full compliance with the Australian Honey Bee Industry Biosecurity Code of Practice, including maintained accurate, legible, records of biosecurity-related activities in accordance with Sec 5 of Section 5 of the Code. Y/N/NO

I certify that the above information is true to the best of my knowledge

Name: _____

Signature: _____

Date: _____

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BeeAware

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Honey bee pollination

How beekeepers and growers can improve pollination results

About BeeAware

Managing pollination services in the presence of varroa

Effect of a varroa incursion on beekeepers and crop producers

Bee Biosecurity Video Series

Plant Health AUSTRALIA

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Current activities

- All governments, 32 ports, surveillance for 18 bee pests
- Sentinel hives (140)
- Catchboxes (109)
- Floral sweep netting at 15 high risk ports
- Exotic honey bee virus and Tracheal mite diagnostics (over 200 samples each to date)
- Asian hornet trapping (just commenced)
- Floating swarms captured at sea/airports

Plant Health AUSTRALIA

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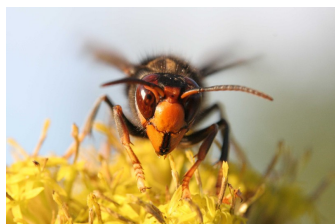
Improve and deploy Remote 'smart technology' Catchboxes



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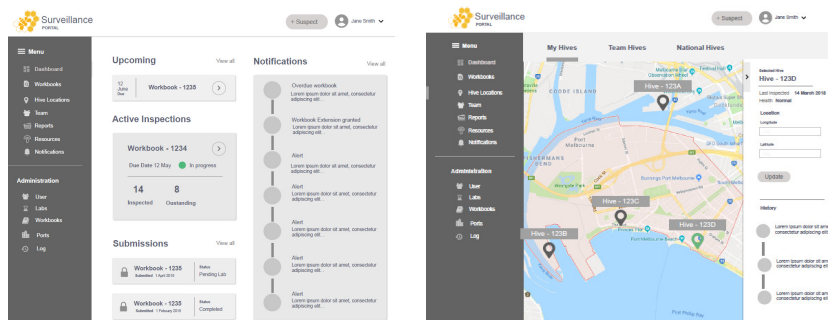
Asian Hornet trap trial



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Development of a NBPSP Data Portal System



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Nationally consistent Surveillance

Alcohol washing

How to make an alcohol washing kit

- Acquire the correct size jar for use
- Sterilise the jar by autoclaving for 15 minutes
- Wash the jar with soap and water
- Rinse the jar with distilled water
- Dry the jar in a clean, dust-free area

Equipment required

- 1 litre jar with lid
- 100 ml alcohol
- 100 ml water
- 100 ml distilled water
- 100 ml 70% alcohol
- 100 ml 70% alcohol
- 100 ml 70% alcohol
- 100 ml 70% alcohol
- 100 ml 70% alcohol
- 100 ml 70% alcohol

Rendez Surveillance of Bat Boes

Surveillance kit

- 1. 100 ml jar with lid
- 2. 100 ml alcohol
- 3. 100 ml water
- 4. 100 ml distilled water
- 5. 100 ml 70% alcohol
- 6. 100 ml 70% alcohol
- 7. 100 ml 70% alcohol
- 8. 100 ml 70% alcohol
- 9. 100 ml 70% alcohol
- 10. 100 ml 70% alcohol

National Bee Pest Surveillance Program - Preliminary Field Survey - August 2015

Sugar shaking bees to detect external parasites

Equipment required

- 100 ml jar with lid
- 100 ml alcohol
- 100 ml water
- 100 ml distilled water
- 100 ml 70% alcohol
- 100 ml 70% alcohol
- 100 ml 70% alcohol
- 100 ml 70% alcohol
- 100 ml 70% alcohol
- 100 ml 70% alcohol

NAQS Asian honey bee floral surveillance manual

Author: Arthur Blay, Suzanne Schaeffer, Susanna Barrett, Sally Coover

National Bee Pest Surveillance Program Operations Manual Version 1.1 (June 2017)

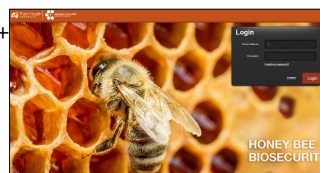
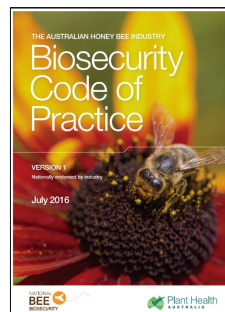
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Code of Practice & Biosecurity for Beekeepers

- Code outlines how to care for hives
 - What can be done to prevent pest and disease spread
 - Training and planning
 - Identifying exotic pests
 - Hive and equipment maintenance
 - Accurate record keeping

- Online training course
 - One available option for training requirement
 - Free for beekeepers & permanent staff with 50+
 - Reduce cost for hobby beekeepers \$20
 - 1.5 hours to complete
 - Certificate of completion



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So what are the needs of dependant pollination industries ?

- Strong peak industry body AHBIC and for those pollination dependant industries
- Adoption of the Code of Practice by beekeepers
- A supported biosecurity system that reduces risk of entry, spread and establishment of exotic pests and diseases
- Strong and focused surveillance system
- Data management to support domestic and international market access (area freedom data)
- Ongoing training
- Good working relationships with beekeepers
- Healthy bees

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