



An Australian Government Initiative

# The Pollination Program



Horticulture Australia

**RIRDC**  
Nurturing new ideas

## ACHIEVEMENTS 2013

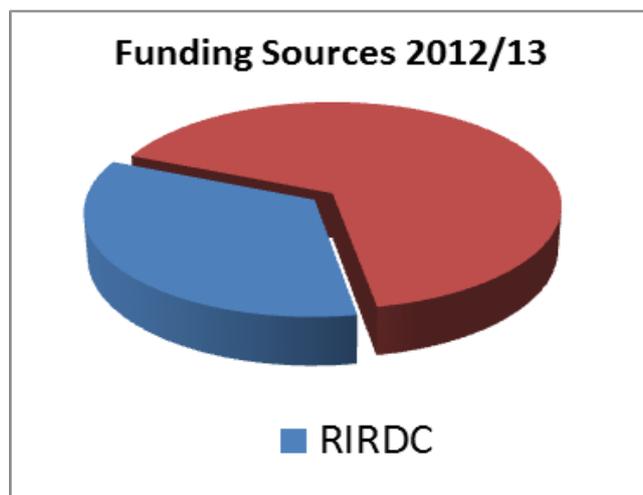
A major challenge facing Australia's beekeeping industry is being prepared for an incursion by exotic pests or diseases, with the Varroa mite (*Varroa destructor*) the most significant threat. It would substantially increase beekeepers' costs, reduce their productivity and limit the current extensive movement of hives around Australia.

It would also destroy the population of escaped European honey bees which currently provides incidental pollination on which many horticultural industries now largely rely, including apples and pears.

For this reason, in 2007 a number of horticultural industries joined forces with their honeybee counterparts to implement a multi-industry research effort to ensure industries are ready for this exotic pest and food pollination is protected.



Varroa mites target honeybee brood cells and lay eggs on the larvae



More than \$1 million has been invested in the Pollination Program since then.

Funds are provided by the Honeybee Research and Development Program through the Rural Industries Research and Development Corporation (RIRDC), with industry levies matched by funds provided by the Australian Government.

The majority of funds have come through Horticulture Australia Limited (HAL) from the apple and pear, almond, avocado,

cherry, vegetable and summerfruit levies and voluntary contributions from the dried prune and melon industries, with matched funds from the Australian Government.

The Pollination Program website contains research reports, media releases and information about past and current projects. It also has case studies on different horticultural industries, including apples and pears, outlining details of the impact of pollination on those crops.

Visit [www.rirdc.gov.au/pollination](http://www.rirdc.gov.au/pollination)



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## Research completed by the Pollination Program:

- A report analysing entry pathways confirmed hitching a ride in ships is the most likely way for exotic bee pests to reach Australia.
- A simulation exercise confirmed how difficult Varroa would be to eradicate, once detected.
- Urban hobby beekeepers were engaged to test passive surveillance and monitoring of pests.
- The report *Pollination Aware* highlighted the risks of relying on incidental pollination. 35 case studies profiled the yield and quality benefits gained pollination at optimal levels
- Industry expert's workshopped options for chemical and non-chemical Varroa control.
- A Honey Bee Industry Biosecurity Plan was developed and distributed to all registered beekeepers together with a poster on how to identify Varroa mite.
- A booklet listed common agricultural chemicals and how they may affect honey bees.
- A manual provided growers with advice on how to get the best out of pollination.

Commodity	Responsiveness (%)	Commodity	Responsiveness (%)
Tree crops		Vine crops	
Almond	100	Blueberry	100
Apple	100	Cucumber	100
Apricot	70	Kiwi	80
Avocado	100	Pumpkin	100
Cherries	90	Rockmelon	100
Citrus	0-80	Squash	10
Grapefruit	80	Watermelon	70
Lemon & lime	20	Seed production	
Macadamia	90	Beans	10
Mandarin	30	Broccoli	100
Mango	90	Brussel sprouts	100
Nectarine	60	Cabbage	100
Orange	30	Canola seed	100
Papaya	20	Carrot	100
Peach	60	Cauliflower	100
Pear	50-100	Celery	100
Plum & prune	70	Clover	100
Ground crops		Lucerne	100
Peanuts	10	Mustard	100
Broadacre crops		Onions	100
Canola	15		
Cotton	10		
Soybeans	10-60		
Sunflower	30-100		

Source: *Pollination Aware: The Real Value of Pollination in Australia* (RIRDC Pub. No. 10-081, August 2010)

## Projects currently underway:

- The development of hive screened bottom boards suited to Australian conditions
- The development of a new system of electronic hive monitoring
- The development of prototypes for two different surveillance traps for European and Asian Honey Bees

## Priorities for 2013-14:

- Understanding industry reliance on feral honeybees
- Development of an Australian Bee Health and Management website
- National Bee Pest Surveillance Program (2013-15) and facilitator
- Almond industry planning and preparedness for an incursion of Varroa mite

**For more information visit [www.rirc.gov.au/pollination](http://www.rirc.gov.au/pollination)**