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Honeybee R&D News

Chairman's Foreword

Michael Hornitzky, Chairman, HBRDC (RIRDC)

Welcome to the modified Honeybee R & D News which has been reduced to two pages and focuses on Honeybee and Pollination R & D activities. This issue features the research work of Dr Diana Leemon who has recently completed her study of fungal bio-control of small hive beetle and feedback from Jonathan Monson who completed the Marcus Oldham Rural Leadership Program in July.

A key document which drives the Honeybee R & D Program is the five year Honeybee R & D Plan. The aim of this Plan is to improve the productivity, sustainability and profitability of the Australian beekeeping industry through the organisation, funding and management of a research, development and extension program. The six underpinning objectives of the current Plan are

(i) pest and disease protection,
(ii) productivity and profitability enhancement to lift beekeeper income,
(iii) resource access security and knowledge,
(iv) pollination research,
(v) income diversification including new product development, and
(vi) extension and communication and capacity building.

The current Plan (2007-2012) is due to finish at the end of this financial year.

The Honeybee R & D Committee is in the process of developing the next five year Plan. To assist in its development the Committee has sought AHBIC's advice and input into what areas of research, development and extension it would like included. If you have any suggestions for the next Plan please send them to your Beekeeping Association. State Associations have been encouraged to send ideas to AHBIC.

For further information about the RIRDC Honeybee Research and Development Program, feel free to browse the RIRDC website (www.rirdc.gov.au) or contact the Program Co-ordinator, Helen Moffett, on phone or by email Helen.Moffett@rirdc.gov.au

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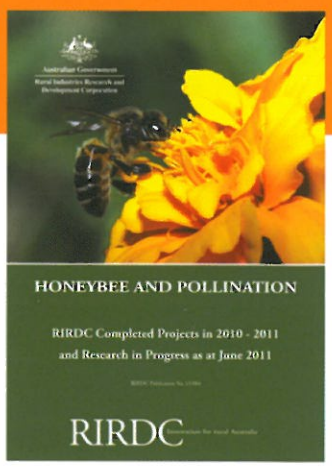
New RIRDC Honeybee-related Publications

To Buy RIRDC Books and Reports
Order online at www.rirdc.gov.au or call 1300 634 313.
Many books and reports are also available to download free of charge from www.rirdc.gov.au

Research in Progress - Honeybee and Pollination 2010-11 (Free)
Code: 11-084 **Author(s):** RIRDC **ISBN:** 978-1-74254-267-6

RIRDC Honeybee and Pollination Completed Projects in 2010–2011 and Research in Progress at June 2011 contains short summaries of continuing projects as well as those that were completed during 2010–2011.



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Honeybee R & D Program Completed Projects 2010-2011

In hive fungal bio-control of small hive beetle has been completed and is being prepared for publication. Conducted by Dr Diana Leemon, from Qld DPI, this research has demonstrated:

- A granular formulation of *Metarhizium* spores applied to soil will block the pupation of SHB larvae
- Isolates of *Beauveria* can potentially limit the number of destructive larvae developing in hives by killing large numbers of adult SHB and severely limiting the number of offspring that surviving adults can produce.
- Diatomaceous earth used in traps, especially those hung between frames, will coat the sensilla of adults, stopping these beetles leaving the traps and causing their death within 1-2 days.
- Volatiles produced by hive products altered by SHB larvae and yeasts are highly attractive to adult SHB, and identical chemicals are present in the volatiles produced by pure yeasts isolated from the slime associated with SHB larvae.
- An attractant mix composed of pure yeasts, slime from larval production and honey comb was able to lure all emerging adult SHB into traps deployed in the field trials assessing the larval control by a *Metarhizium* based product.
- The yeast *Kodamea ohmeri* was present in all adult SHB sampled from different locations in both Queensland and NSW; it was also present in all stages of the SHB life cycle. This yeast was also found to make up most of the slime associated with SHB larval development on hive products.
- There is a wide genotypic variation between the isolates of *K. ohmeri* isolated from SHB in Australia. Of great concern is that some of the Australian isolates seem identical to isolates of *K. ohmeri* that were the causal agent of lifethreatening fungemia in an immuno-compromised patient overseas. ***See the Health Warning below.***
- A preliminary test on the virulence of three Australian SHB-derived isolates of *K. ohmeri* towards healthy mice showed that the mice had cleared the yeast from their bodies when examined after a month.

Health Warning

Exposure to this yeast when cleaning up hives destroyed by SHB yeasts could pose a risk of infection in older or immuno-suppressed beekeepers, especially if hives and frames are cleaned by hosing. Hosing hives could result in large numbers of yeast cells in water droplets that might get inhaled. However this risk can be minimised if beekeepers first treat slimed up hives and frames with household bleach (drench or spray, following manufacturer's instructions for suitable dilution) before hosing to clean up. In addition beekeepers should be advised to wear a simple disposable paper mask (flu mask) and disposable gloves when cleaning up hive materials.

Marcus Oldham Report

Each year the RIRDC Honeybee Committee sponsors one Australian beekeeper to do the Marcus Oldham Rural Leadership Program. The year, the sponsored nominee was Jonathan Monson. The following are excerpts from Jonathan's Report on the program, which also demonstrates the high calibre of industry members who attend the course.

The key sessions in the course for me were "Understanding the place of vision", "Conducting meetings at work", "Leadership and team building" and "Public Speaking".

"Understanding the place of vision" – In this session we learned that having a vision is one of the most important aspects of what makes a leader, without a vision or a goal no one will follow you.

"Conducting meetings at work" – This session I felt was of most importance because meetings and conferences are where most of the decisions are made which affect an industry. After this session I feel more confident in attending industry conferences and standing up for what I believe is right.

"Leadership and team building" – How people react in team situations is vital to achieve the overall goal. I learnt that sometimes it's more effective to be a follower and support someone with different strengths to achieve the goal rather than to lead directly. To be able to recognize when to step up and when to support is crucial in being a leader.

"Public Speaking" – This session was definitely not my strong point, although I did learn a lot of useful techniques and tips when speaking to a group. I believe that my strengths would be more effective when used behind the scenes or with small groups but public speaking is frequently unavoidable in leadership roles, which is why the session was so important to me.

..... The Marcus Oldham Rural Leadership Program has opened my eyes to the possibilities of being a leader. What I plan to do now is to become an active member of my industry association, become a member of my local State Emergency Service, and to write a submission to the Department of Agriculture, Fisheries and Forestry on the current development of the National Food Plan outlining the 3 main areas in sustainability and some possible solutions.