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Honeybee R&D News

Chairman's Foreword

Michael Hornitzky, Chairman, Honeybee Advisory Committee

Last November the Honeybee Advisory Committee held a meeting to consider preliminary research proposals (PRPs) for funding. Eighteen PRPs with a broad range of topics were considered. Eight were accepted, 6 were rejected and 4 are still under consideration. Among those that were accepted were:

- the development of a test for the detection of Africanization in imported semen;
- evaluating environmental impacts of remote poisoning feral honeybee colonies;
- a pheromone trap to catch queen bees;
- and securing past and present beekeeping knowledge for present and future generations.

The principal investigator for each accepted project has been invited to submit a full research proposal which will be considered by the Committee at the March meeting.

The Honeybee Advisory Committee meeting was preceded by a workshop to progress the Honeybee & Pollination Security (HPS) Cooperative Research Centre (CRC) Bid.

The HPS CRC aims to generate and manage excellent science which will deliver tools, techniques and knowledge to honeybee (and honeybee-related) industries over an 8 year period. The workshop considered that the bid should proceed to submission in 2012 subject to the bid participants committing sufficient funding.

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

Current R&D Committee

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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

Understanding the Spread of Honeybee Pests and Diseases:

$25.00 (30 pages)
Code: 11-102 **Author(s):** Jonathan Arundel
Published: 7 Oct 2011 **ISBN:** 978-1-74254-282-9

This RIRDC research focused primarily on an attempt to develop an agent-based model of both managed and wild honeybee colonies and their movements. The purpose of this model was to understand both the spread of honeybee diseases and pests, and the effectiveness of strategies to minimise this spread.

This report will be of interest to scientists, policy makers and government agencies responsible for managing biosecurity.

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Elroy the Super Bee Dog

We're all familiar with sniffer dogs being used by Customs and Quarantine to detect illegal drugs and foodstuffs. Sniffer dogs are said to be the most reliable way to detect explosives such as roadside bombs. They are now entering new fields such as bedbug, termite and mould detection in houses and detecting forms of cancers in patients.

A new RIRDC Honeybee Program project involves training a sniffer dog to detect American Foulbrood (AFB), a serious disease in bee hives. Elroy, a 13 month old beagle is currently going through a training program that will allow him to be able to detect the odour given out by AFB.

Photo 'Elroy' courtesy Martin Dominick, K9 Centre

AFB is a lethal bacterial disease that affects the brood of honeybees when they are in the larval stage. The infected larvae die and decay in the cells and form a scale, which releases infectious spores. The decaying brood has a unique odour, and this is what Elroy is being trained to detect.

According to trainer Martin Dominick "The dog's sense of smell is incredible - they can detect odour at a rate of 1 gram diluted in 80,000,000 gallons of water, or a single termite under the floor of a house." Martin says the concept of dogs sniffing out AFB is not new. "In the USA, the State of Maryland has trained sniffer dogs to detect AFB since the 1970's and are still using them. This is the first time that this has been trialled in Australia."

If the dog can detect AFB in early stages there will be less cross infection to other hives, and fewer hives will be destroyed resulting in less loss of production. Also, the dog can inspect a whole apiary very quickly. Once trained, Elroy will be able to inspect 100 hives in 45 minutes. Trained dogs could be hired out at an hourly rate. Elroy's training regime will involve learning obedience and searching techniques and empty beehives. He will then be trained to detect the odour of AFB at all stages, from freshly infected cells to dried-out infected brood. The Biosecurity Sciences Laboratory in Queensland is preparing the range of samples of AFB to be used in the trial.

A "bee proof suit" is being made for Elroy to protect him while he is on the job, but without impairing his sense of smell. Also, the testing will be done at night when the bees are less active. Once the suit is ready and Elroy has completed his training he will be taken to an aviary. 100 hives with samples randomly planted will be screened by Elroy and an apiary inspector and the results compared. At the end of the 12 month project, Elroy will live in Tintinarra in South-East SA with apiarist Josh Kennett.

Queen Bee Levy

Following the West Australian Annual Conference in 2011, it was evident that there was some uncertainty as to the maximum number of hives a producer can sell in a year, where the producer has bred the queens, before the producer needs to pay a queen bee levy.

Accordingly, RIRDC sought clarification from the Levies Revenue Service within the Commonwealth Department of Agriculture, Fisheries and Forestry.

This figure has been calculated below, using information from the following link on the DAFF website, and the calculations have been confirmed as correct by the DAFF Levies Revenue Service.
(http://www.daff.gov.au/__data/assets/pdf_file/0011/183467/60_queen_bees_notice.pdf).

- The rate of domestic levy and export charge for queen bees = 0.5% of the sale price.
- Deeming: If a queen bee is sold as part of a transaction and the price for the queen bee is not separately determined, the queen bee is taken to have been sold for $9.00.
- The levy paid on a queen deemed to be valued at $9 = 0.5% x $9 = $0.045.
- The maximum number of $9 queens that can be sold per year without needing to pay the minimum levy of $50 in a levy (financial) year = $50/$0.045 = 1,111.

Thus, when a beekeeper is selling hives and has produced the queens in those hives him/her self, the beekeeper is allowed to sell 1,111 such beehives before the minimum levy of $50.00 is payable.

Please note that the calculation is completely different for a commercial queen breeder, for whom the queen bee levy is still 0.5% of the actual sale price of the queens. Here, for example, for queens sold at $20.00 each, the levy paid on each queen would be 0.5% x $20.00 = $0.1, and the maximum number of queens that could be sold before the minimum levy of $50 becomes payable is $50/$0.1 = 500.