

RESEARCH DIRECTIONS

Small hive beetle management

Associate Professor Robert Spooner-Hart from the Centre for Plants and the Environment together with Department of Primary Industries Victoria has been awarded a UWS Research Partnership grant to investigate the small hive beetle.

'The small hive beetle is a pest attacking Australian honeybee hives and if left unchecked it threatens the entire apiary industry' says Associate Professor Spooner-Hart. 'Loss of hives seriously impacts the honey industry and many crops reliant on honeybee pollination. Research to-date has focussed on in-hive control of the beetles which destroy the hives. Recent evidence that some chemicals attract small hive beetles provides opportunities for managing infestations outside the hives. This scoping study will conduct investigations to explore the validity of this new concept.'

The research team will develop a laboratory culture of adult small hive beetles to ensure the uniformity of individuals for the experiments. The responses of male and female beetles to a range of potential attractants and pheromones will be studied. The movement of beetles towards particular attractants in the laboratory will be backed up by wind tunnel experiments to determine the relative attractiveness of the compound(s). The attractants identified in the laboratory will be tested in the field, with the most effective used to assess several different trap designs. Investigations will also include studies of beetle landing and entry behaviour into traps.



A major outcome of this scoping study is the development of a collaborative project to develop a pheromone and attractant-based attract-and-kill system for small hive beetle management. If a pheromone-based attract-and-kill system can be developed then the small hive beetle could be largely controlled without the use of pesticides that have the potential to contaminate soil, water and honey.

Project Title: Small hive beetle management using pheromone and attractants: a scoping study

Funding has been set at: \$28,010

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For more information on UWS Research Partnership Program, check:

http://www.uws.edu.au/research/researchers/funding_opportunities/internal_research_grants