

# RESEARCH DIRECTIONS

## Pollination by Native Stingless Bees

**Associate Professor Robert Spooner-Hart and Dr Tony Haigh from the Centre for Plant and Food Science together with Rijk Zwaan Australia Ltd have been awarded a UWS Research Partnership Program grant to assess the potential for the use of the two most common Australian stingless bees for pollination of selected vegetable seedling crops under greenhouse conditions. This project will form a significant component of PhD student Megan Halcroft's studies.**

'There is a problem of poor pollination of a range of crops for seed production, in particular those requiring insects for cross pollination under greenhouse conditions. The current pollinator, the European honeybee, is poorly adapted to these conditions, and can also cause health problems due its tendency to sting workers,' says Associate Professor Spooner-Hart. 'Crop pollination is threatened by introduction of honeybee pests and disease, several of which including the world's most destructive honeybee pest the varroa mite that occurs in all our neighbouring countries, so it is believed it is only a matter of time before it will be present in Australia.'

Various vegetable seed crops (carrot, cauliflower, leek) have been identified by the industry partner, because of difficulties in using honeybees to pollinate. The crops will be assessed in greenhouse trials to be conducted in three climate-controlled greenhouse chambers. After flowering, seed from all plants will be harvested, weighed and the number of seeds per plant will be counted. Data of both bee visitation rate and subsequent seed yield and quality parameters will be analysed, to determine which stingless bee species contributed most to pollination



and seed set.

The potential outcomes will include an increased efficiency in the pollination of vegetable seed crops in Australia and it may protect the industry against the impact from honeybee pests and disease. Worker safety will also be increased if the risk of bee stings is removed.

**Project Title:** Can native stingless bees be used as pollinators of vegetable seed crops?

**Funding has been set at:** \$11,302

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**For more information on UWS Research Partnership Program, check:**

[http://www.uws.edu.au/research/ors/funding\\_opportunities/internal\\_research\\_grants](http://www.uws.edu.au/research/ors/funding_opportunities/internal_research_grants)