Research confirms Varroa mite bad news for Aussie bees

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The worst fears of Australia's honeybee industry have been realised, with new research confirming that Australian honeybees are highly susceptible to a pest that hasn't yet reached our shores but will potentially devastate the honeybees when it does.

A research project carried out jointly by the University of Sydney's School of Biological Sciences and the Agricultural Research Service of the United States Department of Agriculture evaluated seven lines of Australian bees and found that none had any resistance to the *Varroa* mite.

"The research confirms that an incursion of this pest would have catastrophic effects on bee populations and those industries that rely on them for pollination," Ben Oldroyd, a professor in behavioural genetics at the University of Sydney, said.

"If the Australian honeybee industry and honeybee dependent crops are to have any chance of minimising the impact of *Varroa* when it arrives then it is critical that *Varroa*-resistant honeybees are bred for the Australian environment, and urgently."

The exotic *Varroa* mite (*Varroa descructor*) is present in all beekeeping countries worldwide, except Australia. The size of a sesame seed, Varroa mites attach themselves to bees and suck their blood, leaving them more susceptible to disease. Where Varroa is present it devastates beehives and requires intensive treatment with miticides to control it.

Major crops, such as almond, apple, avocado, blueberry and cucumber rely heavily on bees for pollination.

The research project, funded by the Australian Rural Industries Research and Development Corporation, compared the responses of Australian honeybees to a *Varroa* infestation with the responses of US-Italian honeybees, known to be susceptible to the mite. It also compared the Australian bees' response to that of two other types of honeybee known for their resistance to *Varroa*.

After only four months of exposure to the *Varroa* mite 44 percent of all the Australian honeybee lines had died. This compared to a 4 percent mortality rate over the same period for the most resistant Russian honeybee, which isn't found in Australia.

"This research provides a clearer picture on the potential impacts of a *Varroa* incursion in Australia," Professor Oldroyd said.

"It is largely accepted that Varroa will eventually reach Australia and the findings from our research give us an indication of just how severe an impact this pest will have on our honeybee populations.

"Because Australian honeybees have never been exposed to Varroa the chances of them being susceptible are much greater.

"The only positive side to this research is that there are breeds of bees that do have a considerable resistance to Varroa but these bees aren't currently found in Australia," Professor Oldroyd said.

Provided by University of Sydney