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Australian honeybees lack immunity to Varroa mite

New research has confirmed that honeybees in Australia are highly susceptible to Varroa mite, a pest that hasn't yet reached our shores but will potentially devastate the honeybees when it does.

Credit: University of Sydney

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 has 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,' says Professor Ben Oldroyd of the University of Sydney.

'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 destructor*) 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 intensive treatment with miticides is used 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 to Varroa infestation of, on the one hand, honeybees in Australia and, on the other, 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 per cent of all the Australian honeybee lines had died. This compared to a 4 per cent mortality rate over the same period for the most resistant Russian honeybee, which isn't found in Australia.

‘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,’ says Prof. Oldroyd.

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

Source: University of Sydney

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