

Sick bees eat healthier

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Dr Lori Lach, Senior Lecturer at JCU, said the study compared the feeding habits of healthy bees to those infected with the gut parasite *Nosema ceranae*.

In the study, published recently in the journal *Microbial Ecology*, the researchers first gave groups of bees different kinds of pollen. They found that sick bees, and not healthy bees, lived longer when they had access to the pollen that was more nutritious, even though it also increased the number of [parasites](#) found in their gut.

"The real question then was - when the bees had the opportunity to select their own food, would they choose what was good for them?" said Jade Ferguson, the student who conducted the project for her Honours degree.

The answer was yes. When given the option to forage on artificial [flowers](#) with either high quality pollen, lower quality pollen, or sugar water, healthy bees showed no pollen preference. However, twice as many infected bees selected the higher quality pollen than the lower quality pollen.

"*Nosema ceranae* is one of the most widespread parasites of adult honey bees in the world, and a lot of studies have investigated its effects on bee physiology. Ours is the first study we're aware of to investigate effects on floral choice," said Dr. Lach.

It is still unclear how the bees distinguish between pollens of different

quality. However, the choices bees make will likely affect the native and crop flowers they visit. Flowers vary greatly in the quality of [pollen](#) they offer and are often competing for pollinators. Parasites appear to be one more factor that may influence which flowers are visited.

More information: Jade A. Ferguson et al, Honey Bee (*Apis mellifera*) Pollen Foraging Reflects Benefits Dependent on Individual Infection Status, *Microbial Ecology* (2018). [DOI: 10.1007/s00248-018-1147-7](#)

Provided by James Cook University

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