

Honey bee hive collapse associated with Argentine ants and viral pathogens

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Eligible for student prize

Honey bees are at risk from many threats, including invasive species and viral pathogens. Infestations of invasive Argentine ants in the Northland region are reported to cause hive death in both commercial and hobby apiaries. Hives in sites with and without infestation were monitored for five months - those with ants had only 52.8% mean survival compared to 89.5% at control sites. Argentine ants are also hosts to *Deformed wing virus* (DWV), a key player in global honey bee decline. Mean DWV infection was always higher in bees where ants are present. Current management of movement of honey bee hives requires reform to reduce ant spread as no effective eradication method currently exists.

