

The efficacy of dusting honey bee colonies with powdered sugar to reduce varroa mite populations

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Introduction

Controlling varroa mite (*Varroa destructor* Anderson and Trueman) populations in honey bee (*Apis mellifera* L.) colonies with acaricides has been a challenge for beekeepers due to the rapid development of resistant mite populations. For this reason, many beekeepers are adopting Integrated Pest Management strategies as alternatives to chemocentric varroa control schemes. One non-chemical tool used for varroa control is dusting bee colonies with powdered sugar.



Method

The objective of our study was to determine the efficacy of powdered sugar as a varroa control by comparing mite populations, adult bee populations, and brood area in untreated colonies with those in colonies dusted every two weeks for 11 months with 120g powdered sugar per application.

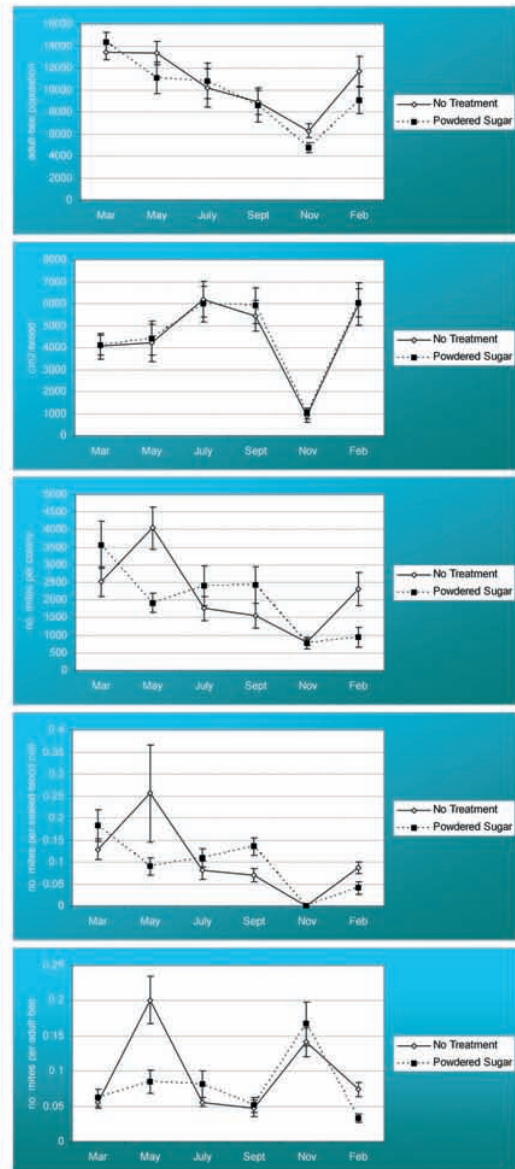


Results

Dusting colonies with powdered sugar did not significantly affect the adult bee population (treated: 10061.72 ± 629.42; control: 1069.00 ± 554.44) or amount of brood (treated: 0.080 ± 0.010; control: 0.097 ± 0.018). All data are mean ± s.e.

Conclusion

Within the limits of our study and the application rates used, we did not find that dusting colonies with powdered sugar afforded significant varroa control.



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