

SURVEY ON HONEYBEE PARASITES IN SELECTED LOCATIONS IN SRI LANKA

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One of the most significant threats to honeybee colonies worldwide is posed by mites as parasites, which can weaken and destroy bee populations by feeding on the bees' body fluids and their larvae. The escalating loss of honeybee colonies due to the proliferation of these bee parasites is a concern, exemplified by 40–50% decline in colonies in the United States in recent years. Understanding the current dynamics of parasite populations in local beekeeping areas is imperative for implementing effective control measures. The objective of this study was to assess the prevalence and distribution of parasitic mites affecting honeybee colonies in Sri Lanka. A field survey was conducted in four regions of Sri Lanka: Kandy, Anuradhapura, Kurunagala, and Kegalle, sampling a total of 84 honeybee colonies. Parasites were preserved in 70% ethanol, with slides prepared for species identification. Further a questionnaire was conducted with 34 farmers to record the management practices. Mites were observed in 74 colonies and 224 mite specimen slides were prepared. Notably, *Varroa* spp., *Tyrophagus putrescentiae*, *Neocyphophanes* spp., *Uropodina* spp., and *Braula coeca* were identified, with one unknown species documented. Of the identified species, three were parasitic; *Varroa* spp., *Uropodina* spp., and *Braula coeca*, while two were flower mites; *Tyrophagus putrescentiae* and *Neocyphophanes* spp. Out of parasitic mites, five colonies exhibited infestation with *Varroa* spp. Another colony showed an infestation of an unknown species and *Neocyphophanes* spp. Further, 62 colonies were found to be infested solely with *Neocyphophanes* spp., and four colonies exhibited infestations of *Braula coeca*. Results of the survey revealed that the majority of farmers adhere to the recommended management practices, underscoring the importance of awareness and adherence to effective beekeeping strategies. This study provides essential information for developing targeted interventions to control and mitigate the impact of parasitic threats on honeybee colonies in Sri Lanka.

Keywords: Beekeeping, Distribution, Mites, Survey, *Varroa*