

FORAGING BEHAVIOUR OF HONEY BEE, *Apis cerana* (F.) IN PULIYANKULAMA AREA OF SRI LANKA

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This study was conducted at the apiary of faculty farm, Rajarata University of Sri Lanka to identify the foraging behaviour of Honey bees (*Apis cerana*) in dry zone. Diurnal rhythm of honey bees were observed by inspecting the number of bees incoming with and without pollen at different time periods of the day using two colonies in the apiary. The experiment was carried out continually for a period of two weeks. Samples of flowers were collected from five different areas in close proximity to the apiary. Volume and sugar content of the nectar were measured in these flowers using a micro syringe and a refractometer respectively. Using a haemocytometer, the pollen concentration was measured in each collected species. Pollen key was prepared at the laboratory for the future identification of bee forages. The daily pollen collection of the forages showed a distinct pattern and collection did not take place throughout the day at the same rate. Over 90% of the daily pollen income was received during 08.00 hours to 14.00 hours and maximum Colony Performance Index (60.8) was recorded at 11.35 am. During 12.00 hour the pollen collection was drastically declined and increased again 13.00 hour. The nectar volume was higher in *Musa* (1.3×10^{-2} ml) and lowest in *Antigonon*. *Gliricidia*, *Hibiscus* and *Nerium* contained 3.3×10^{-3} ml, 1×10^{-2} ml and 1×10^{-2} ml nectar respectively. Sugar concentration was highest in *Hibiscus* (Brix value = 54°) and the lowest in *Gliricidia* (Brix value = 19°). *Musa* and *Nerium* contained sugar of 20° and 36° respectively. The highest pollen concentration was recorded in Kurunegala desi (4.8×10^3) (*Tridax procumbens*) and the lowest in *Gliricidia* (3.2×10^3) (*Gliricidia sepium*). *Musa*, *Tridax*, *Antigonon*, *Hibiscus*, and *Gliricidia* were recognized as the most suitable forage plants to maintain in an apiary.

Key words: Foraging, Honeybee, Nectar, Pollen