Journal of Apitherapy, 2022
VOL 9, NO. 3, PAGE 01

OPINION ARTICLE

Open Access

Honey Bee Colony Performance Affected by Crop Diversity

Songkun Su*
Department of Animal Sciences, University of Zhejiang, Hangzhou, China

ARTICLE HISTORY
Received: 04-Mar-2022, Manuscript No. JAPITHERAPY-22-59423;
Editor assigned: 07-Mar-2022, Pre QC No. JAPITHERAPY-22-59423 (PQ);
Reviewed: 22-Mar-2022, QC No. JAPITHERAPY-22-59423;
Revised: 28-Mar-2022, Manuscript. JAPITHERAPY-22-59423 (R);
Published: 04-Apr-2022

Description

Due to queen polyandry, the connection between workers from different patrilines in a naturally mated queen honey bee colony is extremely complex and little understood. We present a new non-destructive method for detecting the genotype of living workers in a natural honey bee colony, allowing us to investigate the link between behaviours and genotypes. With 100 repetitions each scenario, we modelled the response of honey bee colony growth to landscape settings over a period of twelve years. The size of the colony grew as the areal percentage of flower strips increased and the distribution of flower strips became more even. However, this was only true for high-quality flower strips; low-quality flower strips had no effect on honey bee colonies. Our method can aid in determining the best quality, area proportion, and distribution of honey bee food supplies offered by flower strips in agricultural settings. Because honey bees are one of the most important living organisms on the planet, it's critical to track their lives in order to protect them from a variety of threats, including Colony Collapse Disorder, pesticides, and pests. As a result, it's critical to spot any irregularities in the honey bee colony early on, which may be achieved with the help of current technologies like monitoring systems, data processing, and analysis. Using temperature data and fuzzy logic, this study presents a solution for honey bee colony status detection. Honey bees are no exception, and as their numbers decline around the world and their genetic variety declines, the impacts of diploid male production may represent a greater threat to bee colonies' survival. In this paper, we create a model for diploid male production in a honey bee colony and show that, in the presence of sufficient resources, this phenomenon has no impact on the colony's health, but there is a limit to the sustainability of a colony with diploid male production. Honey bees contribute to the conservation of biodiversity and food security by providing pollination services, and they are also a valuable source of revenue in rural regions. Despite the fact that multiple studies and monitoring programmes have collected a huge amount of data on the key factors/stressors impacting honey bee colonies, there is a dearth of holistic and multidimensional statistical tools that integrate the various characteristics that define honey bee colony health. Such instruments are critical for the long-term management of honey bees. Various plant protection treatments can have a negative impact on bees. Neonicotinoid pesticides are of particular concern since they have been linked to the demise of large honey bee colonies when released into the environment. Sub lethal neonicotinoid dosages polluting single honey bee and their colonies (e.g. through contaminated pollen) cause physiological changes in honey bees, which may have an impact on microbiome functionality. Honey bees have symbiotic relationships with certain intestinal bacteria, which can help the adult host operate better. Age polytheism is one of the processes through which honey bees govern the distribution of labour among their colony members. The younger bees conduct in-hive functions such as heating, while the older ones perform tasks such as foraging outside the hive. It has recently been discovered that the brood's higher developmental temperatures, which occur in the centre of the brood nest, limit the age at which adults begin to forage. It's unclear whether this influence has any bearing on the colony's long-term survival.

Contact: Su S, E-mail: susongeun@zju.edu.cn