

Stingless bee rearing and colony splitting

ABSTRACT

Stingless bee is a diverse group of highly eusocial bees (meliponines) comprising the Meliponini subfamily of the Apidae family. Throughout the tropics, various kinds of stingless bee have been reared by beekeepers for their products (honey, propolis and bee bread) and pollination services for fruits and vegetables. This meliponiculture in logs or hives is considered safe due to the bees' inability to sting, with the latter being more preferable for monitoring and managing the colonies and harvesting the products. The source of stingless bee colonies is depending on efficient hunting of feral colonies, which might affect the ecosystem. Following to the growing trend of bee rearing in Malaysia, mainly due to the smart branding strategy of the government through research institutes and universities, e.g. Malaysian Agricultural Research and Development Institute (MARDI), Universiti Malaysia Terengganu and Universiti Sains Malaysia, it is crucial to increase the number of honey-producing hives by colony splitting. The basis of colony splitting includes provision oviposition (POP), swarming and antennation. Colony splitting is necessary due to deforestation, to expand income generation and for entomological study purposes. A more advanced approach in colony splitting is to prepare and rear the virgin queen bee in vitro, resulting in more queens per one single colony. With the advancement in stingless bee rearing techniques, people may apply the colony splitting strategy to maximise stingless bee products and enhance crop production.

Keyword: Stingless bee; Honey; Meliponiculture; Colony splitting