FEASIBILITY OF TWIN EXIT APPARATUS (TEA) TO FACILITATE STINGLESS BEE (*HETEROTRIGONA ITAMA*) POLLINATION OF FRUITS UNDER NET-ENCLOSED CULTIVATION

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ABSTRACT

This experiment evaluated twin exit apparatus (TEA) to facilitate the use of stingless bee (*Heterotrigona itama*) pollination to produce fruit grown under plastic roof net house. The stingless bee hive was placed just outside the net house with the TEA attached; with one entrance hole to the inside and an exit hole to the outside. The entrance and exit holes are opened at 10:00 am and closed at 7:00 pm. The TEA innovation has enabled apiculture for sustainable enclosed farming. The stingless bee colony is no longer subjected to high temperatures inside the net house and crop yield is maximized. Closing the exit hole to the outside until 10:00 am directs the bees into the net house for pollination and at latter part of the day for resin and pollen collections from the wild. Our results showed that there was a significant increase in yield when the bees were directed into the net house for pollination. The yield obtained was as good as under open conditions. The TEA method was cheap and simple to apply.

Keywords: stingless bee, *Heterotrigona itama*, enclosed cultivation, pollination, sustainable