

**EFFICACY OF BACILLUS THURINGIENSIS APPLICATION FOR
CONTROLLING BAGWORM, METISA PLANA AT FELDA BESOUT 5,
SUNGKAI, PERAK.**

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ABSTRACT

EFFICACY OF *BACILLUS THURINGIENSIS* APPLICATION FOR CONTROLLING BAGWORM, *METISA PLANA* AT FELDA BESOUT 5, SUNGKAI, PERAK

The bagworm (*Lepidoptera: Psychidae*) are major defoliating pests of oil palm especially *Metisa plana* in oil palm. *Metisa plana* are considered to be severe oil palm pests and therefore should be properly managed, requiring new strategies and tactics to protect oil palm from bagworms attacks. This study was conducted to explore the potential of *Bacillus thuringiensis* using ground spray on young oil palm for monitoring and controlling bagworm, *Metisa plana* Walker (*Lepidoptera: Psychidae*) in oil palm plantation located in Felda Besout 05, Perak, Malaysia. Furthermore, the objective of this study was aim to the efficacy of *Bacillus thuringiensis* application for controlling bagworm, was assessed at 7, 14 and 21 days after treatment (DAT). These data are important for knowing the relationship between the bagworm population stage with the high and low bagworm outbreak. Ground spraying with a *Bacillus thuringiensis* (*Bt*) in Plot B which is low outbreak resulted in below the threshold level (ETL) in the population of *Metisa plana* by 21 days after treatment (DAT). The application of *Bt* successfully reduced the bagworm population in Plot A which had a heavy outbreak, but the application period would have to be extended in order to bring the population below the threshold (ETL). Lastly, if there are symptoms for bagworm infestation the effective controlled measurement must be taken immediately to prevent it from become more serious.

Keywords: *Bacillus thuringiensis*, ground spraying, *Metisa plana*, bagworm