

Efficacy of *Bacillus thuringiensis* Berliner subspecies *kurstaki* and *aizawai* against the bagworm, *Metisa plana* walker on oil palm

ABSTRACT

The efficacy of *Bacillus thuringiensis* subspecies *kurstaki* (Btk) and *aizawai* (Bta) against the third and fifth instar larvae of *Metisa plana* on oil palm was studied. The objective of the study was to determine the level of kill achievable with six selected Bt products on *M. plana*. Laboratory bioassays were performed on formulations containing Btk: Dipel® ES, Dipel® DF, Dipel® WP and ABG-6429 FC® (research formulation), and Bta: Florbac® SC and Xentari® WG at temperatures of 24°C-29°C and 55%-80% relative humidity (RH) by using leaf dipping method. Both subspecies were shown to be effective on the bagworms. In most cases, the third instar larvae required lesser amount of Bt and shorter time for a satisfactory kill compared to the fifth instar larvae.

Keyword: Bioassay; Bagworms; *Metisa plana*; *Bacillus thuringiensis* subspecies *kurstaki* and *aizawai*