

## **Economic injury level of oil palm bunch moth, *Tirathaba mundella* walker for pest management recommendations in oil palm production**

### **ABSTRACT**

Oil palm bunch moth, *Tirathaba mundella* Walker is a notorious bunch feeding pest typically among oil palm aged 3-7 years old planted on peat. In order to manage the pest, an economic injury level (EIL) for the pest needs to be determined which could assist in decision-making if a control tactic is justified. In order to determine the EIL, the percentage of fertile oil palm fruitlets and oil to bunch content were determined for fruit bunches with different pest infestation severity. The severity was characterised based on the mean larvae present in fruit bunches and male inflorescences. The study found that the mean larvae count was positively correlated with the economic losses and number of parthenocarpic fruitlets. The overall oil extraction rate (OER) of moderate and severely infested fruit bunches was significantly reduced as compared to clean fruit bunches. Based on average crude palm oil (CPO) market price and production per hectare, an EIL for *T. mundella* was able to be estimated. This study suggested the EIL at 10% of oil palms per hectare moderately or severely infested. The finding of this study would benefit future pest management practice in oil palm plantation established on peatland.

**Keyword:** Economic injury level; Oil palm bunch moth; Fruit set; Oil to bunch; *Tirathaba mundella*