

Life cycle of oil palm bunch moth, *Tirathaba mundella* walker (Lepidoptera: Pyralidae) reared under laboratory conditions on artificial diet

ABSTRACT

Tirathaba mundella Walker is an important pest in many oil palm plantations especially those established on peatland. The life cycle of *T. mundella* has not been described in detail despite its economic importance. This study aimed to describe the bionomic characteristics of *T. mundella*, rearing on an artificial diet, at 25 °C. The duration of a complete metamorphosis cycle of *T. mundella* was about 51.63 ± 3.80 days. The incubation period was the shortest (3.33 ± 0.80 days.), The most detrimental stage of the pest to oil palm is at larval stage, which took 33.90 ± 2.60 days before pupating. The pupal period took about 5 to 11 days with a mean \pm SD period of 8.53 ± 1.48 days. The average of the adult's longevity was about 6.05 ± 1.81 days. There is no statistical difference between the duration of male and female longevity. Adult male and female moths reared in captivity feed with 10% sucrose solution would mate readily and produce fertile eggs. The mean preoviposition period were 4 days. Successful of rearing *T. mundella* using artificial diet under laboratory conditions promises laboratory assessment for pesticide development which is less tedious and time consuming than conventional field experiments.

Keyword: Oil palm bunch moth; *Tirathaba mundella*; Life cycle; Artificial diet