

Feeding behaviour, food consumption indices and infestation of the tiger moth, *Atteva Sciodoxa*, on *Eurycoma Longifolia* Jack (Tongkat Ali).

ABSTRACT

Atteva sciodoxa is a serious pest of *Eurycoma longifolia* Jack (Tongkat Ali) plants in Malaysia. The larvae feed gregariously by building communal webs on terminal shoots. Observations in this study showed infestation levels between 65.0 ± 2.03 and $92.6 \pm 1.13\%$ with a population intensity of 2.4 ± 0.28 and 9.5 ± 0.77 larvae per leaf on a plantation plot in Setiu, Terengganu. The infestation was observed from 0.5 to 9.0 year old *E. longifolia* plantation with plant height of 45.2 ± 1.25 to 151.2 ± 5.44 cm. The highest food ingestibility and efficiency of conversion of digested food was $75.2 \pm 0.32\%$ and $67.8 \pm 0.74\%$ respectively, in the fifth instar larvae while the highest efficiency of conversion of ingested food and approximate digestibility was $37.0 \pm 1.21\%$ and $63.1 \pm 0.73\%$, respectively in the third instar larvae. The food ingestibility and efficiency of conversion of digested food increased with increasing age of larva, while the efficiency of conversion of ingested food and approximate digestibility decreased. The highest food consumption index of 0.51 mg dry leaf mg^{-1} larval body weight day⁻¹ was recorded in the fourth instar larva and the highest relative growth rate was 0.16 mg larval body weight gain mg^{-1} larval body weight day⁻¹ in the third instar. The overall consumption index of 0.23 and growth rate of 0.08 indicates *A. sciodoxa* has high food consumption and assimilation on the host plant, *E. Longifolia*. This reflects the extent and speed of attack the insect is capable of on tongkat Ali plants.

Keyword: *Atteva Sciodoxa*; Tiger moth; Feeding behaviour; *Eurycoma Longifolia*; Tongkat Ali.