

**Determination of larval instar of *Bactrocera papayae* (Diptera : Tephritidae) on guava, *Psidium guajava*, Linn. based on morphometric characters**

**ABSTRACT**

Morphometric characters such as length and width of the *Bactrocera papayae* larvae could be used to determine the larval instars at their immature stage. Observation in this study indicated that *B. papayae* underwent three larval instars. The duration for the first instar, second and third instar was 4,4 and 7 days respectively. There was a significant difference in the length and width within larval instars of *B. papayae*. After hatching, the length of the larvae was 1.04 mm and the longest could reach up to 8.32 mm while the width starts from 0.18 mm and could reach up to 2.08 mm before completing all instars during the immature stage. Means length of the larvae were  $1.27 \pm 0.03$ ,  $4.33 \pm 0.05$  and  $7.84 \pm 0.07$  mm whilst means width were  $0.23 \pm 0.01$ ,  $1.04 \pm 0.01$  and  $1.85 \pm 0.03$  mm for the first instar, second instar and third instar respectively. Moulting process of the larvae occurred twice between day-4 and day-5 and also between day- 8 and day-9.

**Keyword:** *Bactrocera papayae*; Instars; Moulting; Length; Width; Larvae