

Life table and population parameters of *Nilaparvata lugens* Stal. (Homoptera: Delphacidae) on rice

ABSTRACT

Survival and fertility characteristics of the brown planthopper (BPH), *Nilaparvata lugens* were assessed in the laboratory and field. Life tables and population parameters of the BPH were constructed in an environment with unlimited food supply and that was free of natural enemies. The highest mortality occurred in the immature stage, especially in the first and second instars. The life table analysis showed that the population density of BPH decreased gradually. The survival ratio of male to female was 0.512:0.488. The females lived for a maximum of 20 days. The trend of oviposition showed a peak at around the tenth day of the female life. The highest number of eggs produced per female per day was 9.63. The intrinsic rate of increase (r_m) in egg production per female per day was 0.0677 and the daily finite of increase (λ) was 1.0688 females per female per day, with a mean generation time (T) of 34.05 days. The net reproductive rate (R_0) of the population was 10.02. The population doubling time (DT) was 10.42 days.

Keyword: *Nilaparvata lugens*; Life table; Rice; Brown planthopper