

Biological attributes and management of Sugarcane stem borer *Chilo infuscatellus* (Snellen) (Lepidoptera: Pyralidae)

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Abstract

Sugarcane stem borer *Chilo infuscatellus* is the most devastating pest that causes huge economic losses in the sub-tropics. It is pivotal to find out management strategies for this pest for higher production of sugarcane. The biology of *C. infuscatellus*, efficacy of *Trichogramma chilonis* and granular insecticides for its management has been studied. Results indicated that the incubation period of *C. infuscatellus* was 2.30 days, where the total larval developmental duration was 23.30 and the pupal duration was 5.90. The male and female longevity was 3.90 and 4.800 days, respectively. The total life cycle of *C. infuscatellus* male and female was 36.80 and 38.00 days, respectively. The total female fecundity was 315.90 eggs and the eggs hatchability rate was 90.87. The mean percent parasitism of *T. chilonis* on *C. infuscatellus* was 87.01%, the percentage of adult emergence was 76.11% and the total developmental time of *T. chilonis* on *C. infuscatellus* was 8.74 days under laboratory conditions. Furthermore, the results

Regarding the efficacy of granular insecticides and *T. chilonis* in the field were significantly different from each other. The minimum mean percent infestation (3.58%) was recorded in plot treated by Fipronil followed by Carbofuran (4.26%) and *T. chilonis* (5.63%). The maximum mean number of infestation (13.34%) was recorded in the control plot. It is recommended to include the use of Fipronil @ 16 kg/ha or to release of *Trichogramma* for the management of *C. infuscatellus* in future IPM programs.

Biography

My Name is Said Hussain Shah. I have completed my Bs.c (Hons) and Ms.c (Hons) in Plant Protection from the The Agriculture University Peshawar, Pakistan