Resistance of forty sugarcane varieties to the Internode Borer, *Chilo sacchariphagus indicus* (Kapur).

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Chilo sacchariphagus indicus (Lepidoptera: Pyralidae) is a pest of sugarcane in Sri Lanka. Damage by the borer larvae to the stalks is by making tunnels during their feeding which causes considerable losses in the yield. The present investigation on identification of resistant sugarcane varieties for the pest has been initiated to address recent records of the occurrence of sudden peak populations of the pest in several plantations.

Thirty nine sugarcane varieties of wide genetic range obtained from seven countries were grown in three different locations in the intermediate zone, Siyambalanduwa, Sevanagala and Uda Walawe in order to evaluate the resistance to the Internode Borer.

The data on damage and percent incidence recorded at the stage of harvest from four replicates of each of the 39 varieties were analysed together with the existing commercial variety Co 775 by using the SAS Proc-probit (moddle fitting) procedure. The results showed that the two Hawaiian varieties H59-3775 and H44-3098 have higher level of resistance to the Internode Borer compared to the variety Co 775. These results were confirmed by the damage intensity analysis results. This higher level of resistance was observed in both cropping systems of sugarcane i.e. rainfed (Siyambalanduwa) and irrigated (Uda walawe) sector areas.

According to the results it can be concluded that the varieties H59-3775 and H44-3098 can be incorporated into the existing commercial cultivation for strengthening of the resistant variety spectrum for Internode Borer. These varieties can also be used for sugarcane breeding programmes to improve the resistance of the varietal spectrum for the Internode Borer.

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