A Survey of Moth Borers and Mites Damaging Sugarcane in Commercial Plantations at Sevanagala, Sri Lanka

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ABSTRACT

Sugarcane is a plantation crop in Sri Lanka for producing sugar and jaggery and it is grown in an area of nearly 18,000 ha. Pests and diseases have been problems and the productivity of the crop has been reduced significantly due to their direct and indirect damages. A number of fifty five (55) species of insects have been identified as pests of sugarcane with varying degrees of importance in Sri Lanka. Regular surveys on pest infestations are essential to combat pest outbreaks and it is an official procedure conducted over a defined period of time to determine the characteristics of a pest population or to determine which pest species occur in an area. Therefore, a pest survey was conducted in the commercial sugarcane plantations at Sevanagala from July to September 2018 to determine the damage incidence of shoot borers and stalk borers (*Chilo sacchariphagus*, *Sesamia inferans*) sugarcane spider mite and blister mite (*Aceria sacchari*). Forty (40) fields with the variety SL 96 128 were selected randomly from both the rain-fed section and the irrigated section under two age categories i.e. below and above 5 months age. Randomly selected fifteen (15) number of one meter (1m) row length plots and thirty (30) plants were used to collect data from the below and above 5 months age fields respectively. In addition to that, spider mite infested sugarcane fields (3 -5 months aged) with the varieties; CO 775 and SL 96 128 were selected from Uda Walawe and Sevanagala and spider mite infested fifty (50) plants were inspected from each variety and each location to determine the variation of damage incidence of them on lower, middle and upper leaves. The number of larvae and adults of *Stethorus* sp. (bio- control agent of Spider mite) were counted on all the leaves of infested 50 plants from the variety SL 96 128 from each location. Totally 38.42 hectares were inspected during the study period. According to the results, the average damage incidence (%) of shoot borers in rain-fed and irrigated

sectors were 0.46% and 1.17% respectively. The overall damage incidence was 0.81%. The overall damage incidence and intensity of stalk borers were 7.33% and 0.42% respectively. The overall damage incidences of spider mite for fields with below and above 5 months age were 45.8% and 64.7% respectively. Significantly high damage incidences were recorded from the irrigated fields than the rain-fed fields. The lower leaves (24.9%) had significantly more infestations followed by the middle (8.8%) and upper leaves (1.6%). 414 adults and 279 larvae of *Stethorus* sp. have been recorded from Uda Walawe while only 89 adults recorded from Sevanagala. Significantly high damage incidences of blister mite have been recorded in the rain-fed fields than the irrigated fields.

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