SOME ASPECTS ON THE BIOLOGY AND CONTROL OF COFFEE BERRY BORER, *HYPOTHENEMUS HAMPEI* (FERRARI) (COLEOPTERA : SCOLYTIDAE)

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A B S T R A C T

Sri Lanka has tremendous scope of Coffee Industry as soil and climatic conditions are more suitable for this crop. However, coffee berry borer (CBB) Hypothenemus hampei (Ferrari) is the most serious insect pest affecting the coffee industry in Sri Lanka. The present investigations were undertaken to study some aspects of biology of the CBB and evaluate its damage potential in some selected agro-ecological regions.

Infestation of coffee berries by CBB was studied under 5 different agro-ecological regions. Results of the study showed that the CBB occurs over the 5 agro-climatic zones thus indicating a wide range of tolerance of climatic conditions. It was found that the intensity of CBB damage in highly shaded areas was higher than that of unshaded fields.

An experiment was designed to find out vertical distribution of the pest within the plant. The damage by CBB increased with the increase in plant height and maximum damage was reached around 1.5 m. height. This pattern of pest distribution may be attributed to number of berries available in different canopy levels.

Most of our coffee fields in Sri Lanka are subjected to insecticidal sprays in early berry developmental periods. However now it is clear that the CBB does not enter coffee berries which are less than 5 weeks in age. Robusta variety had higher percentage damage than the Arabica variety.

An attempt was made to study the emergence pattern of the CBB reared in the laboratory. The results indicated that the CBB displayed diurnal activity and emerged from their galleries during the day time between 900 hours to 1600 hours with a distinct peak emergence between 1400 - 1500 hours. However, between 1300 - 1600 hours about 90% of the total emergence was recorded from both Arabica and Robusta varieties.

In order to find out the varieties of coffee for resistant to CBB, one experiment was designed with 3 varieties of coffee i.e. Arabica, Robusta and Liberica. The results clearly indicated that the Liberica berries can sustain significantly bigger brood inside when compared to Arabica and Robusta varieties. Hence it is not advisable to grow Liberica coffee variety with commercial varieties such as Robusta and Arabica.