SECTION B

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Studying the efficacy of selected fungicides against root rot disease of betel vine (*Piper betel* L.) in the Batticaloa district

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Root rot caused by the soil borne fungi *Sclerotium rolfsii*, is a serious disease of betel vine in the Batticaloa district. Identification in early stage and effective control measures of this disease is essential to minimize economic losses. In order to find out suitable fungicide/s to control root rot disease in betel vine, an experiment was conducted at the microbiology laboratory of Department of Agricultural Biology, Eastern University, Sri Lanka from September to November 2007. This experiment was arranged in a Completely Randomized Design (CRD) consist of five treatments and four replicates. Fungicides Captan 50% WP, Homai (Thiophanate- methyl 50% WP + Thiram 30% WP) and copper fungicide (copper 50% WP), which are commonly used for soil treatment were tested using poison food technique on Potato Dextrose Agar (PDA) media at the rates recommended by the Department of Agriculture, Sri Lanka. PDA plates unamended with fungicides were served as control. Fungicides amended plates were centrally inoculated with 5 mm diameter mycelial disc of *S. rolfsii* from 3 days old culture and incubated at room temperature (30 ^{o}C ± 2 ^{o}C) under aseptic condition. Radial mycelial growth of *Sclerotium rolfsii* was measured daily and percent inhibition was calculated. Result of this experiment revealed that, Homai had the highest level of inhibition (96.47%) of the mycelial growth of *Sclerotium rolfsii* at the recommended rate and found significantly better than the other treatments. Captan effectively controlled the growth of this fungus (83.27%) next to Homai. Homai produces Benzimidazole carbamate and it could interfere with the nuclear division of *Sclerotium rolfsii* thus, the fungus could be sensitive to the Benzimidazole carbamate. From this experiment it could be stated that the fungicide Homai could be possibly used to control root rot disease in betel vine at the recommended dosage level.

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