

Effect of Trebone (Etofenprox) dosage on population density of cluster caterpillar, *Spodoptera litura* (F) (Lepidoptera: Noctuidae) in Mukunuwenna, *Alternanthera sessilis* (L)

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Alternanthera sessilis (L) is popular among Sri Lankans as a highly nutritious, cheap food. Sri Lankans consume *A. sessilis* as a raw food. *Spodoptera litura* (F) was found to be the major pest species of *A. sessilis* during this study. The present study indicates that farmers use a higher dose of Trebone (Etofenprox) than the dose recommended by the department of Agriculture to control *S. litura*. In the present study, the population density and the percentage leaf damage of *S. litura* under the effects of two different pesticide dosages: i.e. recommended dosage, Farmers' dosage (excess amounts of Trebone) were compared. Controlled experiment was carried out without application of pesticides. Sampling was done at two day intervals during one harvesting cycle which was started from March, 2007 to 2007 April. Population density of *S. litura* was significantly different

($P < 0.05$) among treatments. Abundance of *S. litura* was significantly decreased under the influence of farmers' method than the recommended dose of Trebone. Leaf damage caused by *S. litura* is significantly different between treatments ($P < 0.05$). Leaf damage of *S. litura* in the control is 35.44% while it was 7.06% and 15.02% in farmers' method and recommended method respectively. Recommended dosage of Trebone which failed to reduce the abundance of *S. litura* indicates a possible development of resistance of the pest. The study also revealed that farmers do not comply with the pre harvesting periods and frequency of application of Trebone as recommended by the Department of Agriculture. Overall findings highlight the risk of consumption of excess pesticide residues unintentionally by human.