**Effect of seed kernel and leaf extracts of neem (*Azadirachta indica*) on selected sap-sucking insect pests of sugarcane**

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Many insect pests are associated with sugarcane plants in Sri Lanka including sucking pests causing a heavy economic loss and require the control of pest populations. The study was conducted with the objective of determining the effect of neem seed kernel and leaf extracts on sap-sucking insect pests in sugarcane cultivation. Sugarcane Woolly Aphid (SWA) (*Ceratovacuna lanigera*), Pyrilla Plant Hopper (PPH) (*Pyrilla perpusilla)* and Sugarcane Pink Mealy Bug (PMB) (*Saccharicoccus sacchari*) were used as test insects on variety SL 96 128. Ethanol and aqueous extracts were prepared with the neem seed kernel or leaf powder added in concentrations of 50g/300 mL of distilled water and ethanol separately and stirred for two hours continuously and then each extract was allowed to stand for another hour. The extracts were prepared in 2 %, 5 % and 10 % (W/V) concentrations for the bioassay. For each pest, mortality tests were conducted to study the toxicity effect of the extracts and feeding tests were conducted to measure the anti-feeding effect by using parafilm sachet technique and erythrosine dye test. Percentage mortality for toxicity effect and amount of honey dew-stained area and number of salivary flanges on leaf for anti-feeding effect were recorded. Treatment means were compared using one-way and two-way ANOVA with Tukey’s multiple mean comparison test. Effective time period for all four extractions for each pest were recorded as 72 hour. Ethanol extract of neem seed kernel was significant (p < 0.05) for SWA and PPH compared to the aqueous extracts for mortality and anti-feeding tests. The best concentration of ethanol extract of neem seed kernel is 10% (W/V). Mortality percentage of SWA, PPH and PMB for neem seed kernel ethanol extraction were 100 %, 76.66 %, 20 % at 10 % (W/V) respectively. None of the tested extraction was effective over PMB.

**Keywords:** *Ceratovacuna lanigera, Neem****,*** *Pink Mealy Bug, Plant extract, Pyrilla perpusilla*