Insecticidal Activity of Acacia (Samanea saman) Bark Extract Against Adult Rice Black Bug (Scotinophora sp.)

Gloria, Rubeliene Chezka
Obafial, Nadine Antonette
Colas, Myrelle Angela

Rice black bug (Scotinophora sp.) is a serious invasive pest of rice (Oryza sativa). Heavy infestation of this bug could result to severe crop loss or complete yield loss. Commercially available pesticides pose harm and threat to beneficial insects as well as to humans. The study aims to determine the insecticidal activity of Acacia (Samanea saman) bark extract on the average mortality rate of rice black bug. The extraction was done using the continuous extraction method using Soxhlet apparatus with sufficient amount of 95% ethanol placed in solvent flasks (4.8 liters). Five treatments were prepared with different concentrations: T1= 164 mg/ml, T2= 328 mg/ml, T3= 492 mg/ml, T4= 39.36x10^3 mg crude extract, and T5=negative control. Ten black bugs were placed in each set-up. The whole rice plants were sprayed with various treatments and were observed every after 24 hours for 7 days. One-Way ANOVA showed that there is a significant difference in the number of dead rice black bugs among treatments (F=83.083; p=.000). Scheffe test showed that among the five treatments, T4= 39.36x10^3 mg crude extract has the highest number of black bugs killed (M=9.67). Qualitative analysis showed that the rice black bugs were paralyzed and rapid decomposition of pest was observed. The results proved that the extract from acacia bark is effective against rice black bug. In 2014, Gonzales & Tolentino reported the Acacia bark as being rich in alkaloids. It may be possible that the observed activity maybe attributed to the presence of alkaloid in the acacia bark.

Awards Won:
Second Award of $2,000