

**EFFICACY OF SUGAR APPLE (*Annona squamosa* Linn.) SEED EXTRACTS
AS BIO-PESTICIDE AGAINST GREEN LEAFHOPPER
(*Nephotettix virescence* Distant.)**

A Project Report

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BACHELOR OF SCIENCE IN AGRICULTURE

By

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ABSTRACT

The study was conducted at the Central Philippine University College of Agriculture, Resources, and Environmental Sciences research area at the Research and Development Building, Jaro, Iloilo City from November 28, 2018 to March 15, 2019. The study aimed to evaluate the effectiveness of sugar apple seeds extracts (SASE) as bio-pesticide against the green leafhopper (GLH). The study was composed of five experimental treatments (15%, 20%, 25% SASE, synthetic insecticide and distilled water) which were laid-out in a completely randomized design with three replications. Ten pairs of adult GLH were introduced in each experimental plot. The results obtained after 24 hours of application revealed that the use of SASE at 25% resulted in insect mortality of 59.30% which was comparable to the GLH mortality in plants treated with 20% and 15% SASE. At 48 and 72 hours after the application of SASE, the insect mortality continued to increase following the same trend after 24 hours of application. At both stages, synthetic insecticide killed the entire insect population. However, after 96 hours of application the use of SASE at 25% had a statistically similar mortality as GLH in plants sprayed with synthetic insecticide. After 120 hours, GLH from plants applied with SASE at 20% and 25% had a comparable mortality to those plants sprayed with commercial insecticide. The LC_{50} and LC_{90} values at 24 and 120 hours

were 19.5×10^4 ppm and 24.55×10^4 ppm, respectively. Plants from all treatments had a comparable heights and number of tillers.