

**EFFICACY OF LEMONGRASS (*Cymbopogon citratus* DC. Stapf) EXTRACT
AGAINST BANANA CORM WEEVIL (*Cosmopolites sordidus* Germar)**

A Project Report

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BACHELOR OF SCIENCE IN AGRICULTURE

By

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ABSTRACT

This study was conducted at the College of Agriculture, Resources, and Environmental Sciences laboratory room, Central Philippine University, Jaro, Iloilo City from August 13 to 18, 2019. This study aimed to determine the efficacy of lemongrass (*Cymbopogon citratus* DC. Stapf) extract against banana corm weevil (*Cosmopolites sordidus* Germar). Specifically, the study was conducted to determine the mortality percentage of banana corm weevils, and LC₅₀ and LC₉₀ values of lemongrass extract. The experimental treatments were composed of lemongrass extract at 20, 40, 60, 80 and 100 % concentrations. Synthetic insecticide was used as positive control while distilled water served as negative control. These treatments were laid-out in a completely randomized design (CRD) with three replications. Earliest signs of toxicity were observed on corm weevils in the positive control with 100 % mortality 24 hours after the introduction of the treatment. On the other hand, weevils on the negative control sturdily survived for 120 hrs. The differences among the treatment means were highly significant ($P < 0.01$). The 100 % LE was found to be the most effective among the different LE concentrations following the positive control 24 to 48 hours after introduction. It was then observed to be comparable to the positive control 72 to 120 hours after introduction with 100 % mortality. On the other hand, the computed LC₅₀ value was at 89 % while, the LC₉₀ value was at 90 % LE. This means that 89 and 90 % LE concentration can kill 50 and 90 % banana corm weevil population, respectively. Based on the results of the study, the lemongrass is effective in controlling banana corm weevil.