THE EFFICACY OF DIFFERENT BOTANICALS AGAINST RICE WEEVIL (*Sitophilus oryzae* L.)

A Project Report

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By

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ABSTRACT

This study was conducted at Central Philippine University, Jaro, Iloilo City from November 12, 2019 to December 2, 2019. The objective of the study was to determine the percent rice grain weight loss, percent mortality and percent survival of rice weevils. The study utilized the same amount (20 g) of dried leaves of botanicals namely: hagonoy *(Chromolaena odorata* L.*),* guava (*Psidium guajava* L.*),* madre de cacao (*Gliricidia sepium* Jacq. Steud.), alagau (*Premna odorata* Blanco*),* lantana (*Lantana camara* L.*)*, lemongrass (*Cymbopogon citratus* DC. Stapf,*)* and citronella (*Cymbopogon nardus* L. Rendle*)* against rice weevil (*Sitophilus oryzae* L.). Fifty grams of rice grains without dried leaves of botanicals served as negative control. The treatments were laid out in a completely randomized design with three replications. Ten rice weevils (5 males : 5 females) placed in each plastic containers, containing 50 g of rice grains with corresponding treatments and kept at room temperature for 20 days. The percent rice grain weight loss, mortality, and survival of rice weevils was recorded for one–week at one– day interval with the final observation taken at day 19. The result of the study revealed that Alagau had the highest rice weevil mortality of (30 to 66.66 %) at 1 DAI to 5 DAI while on the 7 DAI and 19 DAI, all the botanicals showed 80 to 100% mortality on rice weevils. Consequently, there is a reverse relationship between the mortality and survival. Meanwhile, the percent grain weight loss of all grains with botanicals were lower compared with those of the untreated grains. The use of the botanicals had

showed a potential in the control of rice weevils in storage, supported by the decreased survival of the weevils as the mortality increased.