...Y (*Chromolaena odorata*) LEAF EXTRACTS AS A CONTROL OPTION AGAINST BLACK WEAVER ANTS (*Dolichoderus thoracicus*) OF COFFEE

THESIS

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HAGONOY (*Chromolaena odorata*) LEAF EXTRACTS AS A CONTROL OPTION AGAINST BLACK WEAVER ANTS (*Dolichoderus thoracicus*) OF COFFEE

An Undergraduate Thesis
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ABSTRACT

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The study was conducted to assess the effectiveness of leaf extracts of hagonoy (*Chromolaena odorata*) in controlling black ants (*Dolichoderus thoracicus*); identify the effective concentration of leaf extracts of hagonoy in controlling black ants (*Dolichoderus thoracicus*); compare the effect of frequency of application of leaf extracts of hagonoy (*Chromolaena odorata*) as a botanical pesticide against black ants; and to document the natural behavior of ants nesting on coffee trees.

Three methods were used to evaluate the efficacy of hagonoy concentrations. These were residual toxicity test, feeding test and field-test. The experiment was laid in Completely Randomized Design with three replications. The experiment was set-up at the Biological Sciences Laboratory and Central Experiment Station in Cavite State University from September 2006 to February 2007.

Residual toxicity test results showed that the rate of mortality was not significantly different among treatments and days of exposure; the mortality rate was considerably low, and therefore, not enough to kill significant number of black weaver ants.

Feeding test results showed that the mortality rate caused by pesticide (50%) and pure extract mixed with honey were significantly different. Mortality rate caused by pure

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HAGONOY (*Chromolaena odorata*) LEAF EXTRACTS AS A CONTROL OPTION AGAINST BLACK WEAVER ANTS (*Dolichoderus thoracicus*) OF COFFEE[1/]

Maisie Roraldo Aviñante

[1/]A thesis manuscript presented to the Faculty of the Department of Biological Sciences, in partial fulfillment of the requirements for graduation with the degree of Bachelor of Science in Biology with contribution No._____. Prepared under the supervision of Dr. Josefina R. Rint.

INTRODUCTION

Ant is a common name for members of a family of about 9,000 species of insects that live in highly organized societies called colonies. Ant colonies have elaborate social structures in which the various activities necessary for the feeding, shelter, and reproduction of the colony are divided among specially adapted individuals. Ants belong to an order of insects called Hymenoptera, a group that also includes bees, wasps, and sawflies. Some species of wasps and bees resemble ants in that they live in colonies and are, therefore, said to be social. However, ants are the only hymenopterans in which every species is social. They are distinguished from other hymenopterans in that they have bent, or elbowed, antennae and an indented abdomen that forms a narrow waist.

During the past years, coffee farmers are annoyed by the presence of black ants due to its behavior of colonizing and inhabiting on the coffee trees. Their presence become so annoying, especially during harvest season. This is because they attack man when their nests are disturbed while detaching the berries from the tree.