

ABSTRACT

NAME OF INSTITUTION: De La Salle University- Dasmariñas

ADDRESS: Bagong, Bayan, Dasmariñas, Cavite

TITLE: Insecticidal Property of Chloroform Extracts of Marigold, Wild Sunflower, Chilli Pepper and Neemseed Against Corn Weevil

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FINDING SOURCE: Parents/Allowance COST: P 6,000

DATE STARTED: November, 1997 DATE COMPLETED: February, 1998

OBJECTIVES OF THE STUDY:

A. General: "The study (was done to) determine the effect of different botanical extracts in the mortality of corn weevil."

B. Specific: To determine which among the different botanical extract concentrations used causes the highest mortality rate of Corn Weevil.

SCOPE AND COVERAGE:

This is an experimental study on the effect of different botanical extracts against the mortality of corn weevil conducted in the Natural Sciences Laboratory at De La Salle University- Dasmariñas from April 7, 1997 to May 7, 1997.

The mortality rate of corn weevil after the application of botanical extract was gathered every 3 to 5 min when alive corn borer was still observed.

METHODOLOGY:

A total of 118 petri dishes was used and divided into five treatments. Each treatment was further divided into three subtreatments with 25%, 50% and 75% of botanical extracts, respectively. Each treatment was replicated three times. There were twenty corn weevils provided with enough amount of food in each petri dish.

Extracts from different botanical plants were made by extracting the juice from plants, diluting it with water and an addition of chloroform which served as its solvent.

MAJOR FINDINGS: *revealed that 5/*

✓ Botanical extracts of Marigold, Neemseed and Chilli pepper showed to be the most effective against the mortality of Corn Weevil than Sunflower extract. It covered a very short time with undetermined difference between each treatment. ✓

From the varying concentrations of each treatment concentration 3:1 and 2:2 produced a great effect against the mortality rate of Corn Weevil with the undetermined difference between each concentration.

CONCLUSIONS:

1. All botanical extracts caused mortality to Corn Weevil, wherein Marigold, Neemseed and Chilli pepper showed to be the most effective botanical extracts in causing the mortality of Corn Weevil than Sunflower extracts.

2. Concentrations 3:1 and 2:2 of Marigold, Neemseed and Chilli pepper such as 15 mL of botanical extracts in 5 mL of water and 10 mL of botanical extracts in 10 mL of water, respectively provided the most significant effect on the mortality rate of Corn Weevil.
3. Statistically, there was significant difference in between treatments such as T1 Marigold, T2 Sunflower, T3 Chilli pepper and T4 Neemseed, for its efficacy against Corn Weevil.
4. Among varying concentrations, 1:3 concentration provided a statistical significant difference in between treatments. Concentration 1:3 means 5 mL of botanical extracts in 15 mL of water.

RECOMMENDATIONS:

1. The researchers recommend to use other equipment for plants extraction like rota vap for an easier way of extraction.
2. If a future study follows the same procedure, other solvent materials should be used which are cheaper and more readily available such as acetone, methanol, ethanol and ether to test also its effectiveness and which among of these are most effective.
3. As for the procedure, the plant before extracting should be weighed first and then the volume taken for an alternative study.

4. Test insects such as rice stemborer, azuki bean weevil, red flour beetle, armyworm, diamondback moth, green leaf hoppers, brown plant hoppers and corn borer ,which play an important role in the growth of agricultural plants should be used.

