EFFECTIVENESS OF BIOPESTICIDES, CLEARPEST AND BUDGET 01 AGAINST ASIAN CORN BORER *(Ostrinia furnacalis)* IN *Zea mays L.*

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FINAL YEAR PROJECT REPORT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN AGROTECHNOLOGY (HONS.) HORTICULTURE TECHNOLOGY IN THE FACULTY OF PLANTATION AND AGROTECHNOLOGY
UNIVERSITI TEKNOLOGI MARA

JULY 2020

DECLARATION

This Final Year Project is a partial fulfilment of the requirements for a Degree of Bachelor of Science in Agrotechnology (Hons.) Horticulture Technology in the Faculty of Plantation and Agrotechnology, Universiti Teknologi MARA.

It is entirely my own work and has not been submitted to any other University or higher education institution, or for any other academic award in this University. Where use has been made of the work of other people it has been fully acknowledged and fully referenced.

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ABSTRACT

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The usage of chemical pesticides in the agriculture field has increased awareness among the public due to its harmful effect. Regarding the issues, bio-pesticide application is found to be an eco-friendly alternative in preventing insect pests in the agriculture field. *Bacillus thuringiensis* and wood vinegar are respective active ingredients of biopesticide, ClearPest and Budget 01 which have the potential in controlling specific pests without giving any harmful effects toward the environment. Thus, this study aimed to compare the efficacy of ClearPest and Budget 01 against corn borer in maize and to determine their effects on the growth and yield of corn plants. A total of four treatments were carried out as follows: T1: non-treated plant, T2: crop treated with ClearPest at the recommended rate, T3: crop treated with Budget 01 at the recommended rate and T4 as a combination of ClearPest and Budget 01 of bio-pesticide at half recommended rate. The assessment of the pest attack is taken on 60 days after transplanting. This is due to the presence of pests on days 45. The assessment on corn plant was evaluated based on yield, cob weight, number of cobs, cob length, damage and leaf injury caused by corn borer at 60 days after transplanting. Based on the result, it clearly shows the effectiveness in all the treated plants against corn borer which have a positive effect in reducing the pest attack. All the bio-pesticide treatment shows their effectiveness toward growth performance and yield of the crop compared to the non-treated plant. Thus, the finding of this study are believed will lead to the efficacy of bio-pesticide usage in the prevention of chemical application and toxicity prevention toward the environment.

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