

**INFLUENCE OF BIO-INSECTICIDES A MIXTURE OF EXTRACT
NEEM LEAF AND LEMONGRASS TO CONTROL THE FALL
ARMYWORMS (*Spodoptera frugiperda*) IN WAXY CORN**
Supervised by Dr. Ir. Mochamad. Syarief, MP

Monica Yuliana Wijayanti

Study Program of Food Crop Production Technology
Departement of Agricultural Production, Jember State Polytechnic
Mastrip Street Po. Box 164, Jember 68101

ABSTRACT

*Corn is a secondary crop which plays an important role in providing food needs in Indonesia. However, there is a decline in corn production every year. The decline in corn production was caused by the main pest of corn plants, namely armyworm (*Spodoptera frugiperda*) which caused losses of around 8.3 to 20.6 million tons in Africa. Control using chemical insecticides will damage the environment, while neem leaves and lemongrass have organic potential as bioinsecticides in controlling armyworm. This research aims to determine the content of toxic compounds in bioinsecticides, the value of LC₉₅, the effect of bioinsecticide application on populations, the intensity of attacks and the yield harvest of waxy corn plants. The research was carried out in August-November 2023 at the Plant Protection and Biosciences Laboratory and on ricefield in Wringintelu Village, Puger District, Jember Regency. The first stage in the laboratory includes various tests, namely the GCMS test, mortality test, and determining the activity properties of the mixture. Mortality test using concentrations of 0%, 5%, 10%, 20%, 40% followed by analysis using poloplus version 1.0. The second stage in the ricefield was to compare the 2 treatments in each plot, namely bioinsecticide with a concentration of 22% and methomyl 3 grams/liter, with population parameters, intensity of attack and weight of the husked harvest per sample. The research results showed that after data analysis, bioinsecticide and chemical insecticide treatments, it results did not differ significantly in population parameters, attack intensity and crop yields.*

Keyword : Bioinsecticide, Corn Plants, Lemongrass, Metomil, Neem Leaves, *Spodoptera Frugiperda*