

The Effect Of Bioinsecticide Application On Broken Bones (*Euphorbia tirucalli*) On Arthropod Diversity In Corn (*Zea mays L.*)

Supervised by Dr. Ir. Mochammad Syarief M.P

Muhammad Fausi
Food Crop Production Technology Study Progam
Department Of Agricultural Production

ABSTRACT

Need for corn is currently increasing, but its productivity has not been met. This is caused by pest attacks and excessive use of synthetic pesticides resulting in the death of natural enemies. So it is necessary to apply an alternative to the use of broken bones plant bioinsecticides. This study aims to determine the components of the compound in broken bones plants, the toxicity of LC95, and the effect of bioinsecticide application on broken bones plants on arthropod diversity and crop yields. This study consisted of 2 stages, the first stage was the GCMS test and the mortality and toxicity tests. Mortality and toxicity tests used 6 levels of treatment namely concentrations of 0%, 5%, 10%, 15%, 20%, 25% and continued with analysis using Probit PoloPlus Ver 1.0. The second stage was a field test by comparing two treatments, namely the 21% concentration of bioinsecticide and the 2ml/l deltamethrin treatment. Arthropod sampling with Yellow Pan Trap, Sticky Trap, Pitfall Trap and Sweep Net. The results showed that the GCMS test detected 35 compound components with the highest concentration, namely Tetradecanoic acid (tertradecanoic acid) of 15.53%. Bioinsecticide toxicity test results 21%. Arthropod diversity (H') in both treatments showed moderate category, Dominance Index (C') in both treatments showed no dominance, and similarity in both treatments was classified as the same, namely 92.86%. Dry cob results per sample showed significantly different results according to the Paired Sample T-Test, namely the treatment of 165.8 g broken bone plant bioinsecticide and 133.1 g Deltametric insecticide.

Keyword: Artropoda, Bioinsecticide, Deltametrin, Aveloz.