

ABSTRACT

THE EFFECT OF *Beauveria bassiana* (Balls.) Vuill. APPLICATION ON PEST POPULATION TARGET AND DIVERSITY NON TARGET ARTHROPODS IN MUSTARD (*Brassica juncea* L).

By

Resma Nurmei Winda

The mustard plant *Brassica juncea* (L.) is a kind of vegetables that can grow at low and high plain. Like other crops, mustard is not immune from pest infestation. One of the technique control that can be applied is biological control using *Beauveria bassiana*. The objective of this research was to determine the effect of *Beauveria bassiana* applications against pest population target and diversity non target Arthropods in mustard *Brassica juncea* (L.).

This research was conducted in POLINELA (Politeknik Negeri Lampung), from August 2011 to January 2012. This research used Completely Randomized Design (CRD) consisted of three treatments including the control with six replications. The treatments consisted of control without treatments of pesticide (P₀), the application of *Beauveria bassiana* (P₁) and the application of insecticide (P₂).

The results showed that application *Beauveria bassiana* with 10¹⁰ spore/ml did not effect on the population of *Crocidolomia binotalis* and *Spodoptera litura* but it decreased population of *Plutella xylostella* as high as 1,33 insect/plant on four weeks after planting. Diversity of non target Arthropods in *Beauveria bassiana* application was higher (0,88) than in insecticide application (0,86).

Key words: *Beauveria bassiana*, Diversity, Arthropods