EFFECT OF BIOAGENT APPLICATION *Beauveria bassiana* ON ARTHROPOD DIVERSITY IN RICE PLANTS (*Oryza sativa* L.*)*

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ABSTRACT

The need for rice increases as the population grows, but its productivity decreases due to pests and excessive use of synthetic insecticides, leading to the death of natural enemies. Natural control is needed, one of which is with bioinsecticides such as biological agents. This study aims to determine the effect of the application of biological agents Beauveria bassiana on arthropod diversity and rice crop yields. This research was conducted on rice cultivation land in Dukuh Mencek Village, Sukorambi District, Jember Regency. This study used a survey method, which used direct observation by comparing 2 fields and with the help of Yellow Pan Trap, Sticky Trap, and Pitfall Trap traps for arthropod sampling. Data analysis using ecological index calculations and the Mann-Whitney Test. The results of research in rice fields treated by biological agents Beauveria bassiana obtained 25 species with a total of 3477 individuals. While in the treatment of synthetic insecticide Imidacloprid obtained 25 species with a total of 1054 individuals. There is no difference in the application of the biological agent Beauveria bassiana with the insecticide Imidacloprid synthesis to the diversity of arthropods that act as herbivores and predators, but there are differences in predators. Meanwhile, the treatment between biological agents and Imidacloprid synthesis insecticides showed a significant effect on the weight yield of dry rice fields (GKS). Shannon Wiener's diversity index (H') in the two treatments showed the medium category, the Dominance Index (C') in both treatments showed no dominance, and the similarity of types (ISS) was similar.

Keyword: *Arthropoda, biological agents, Imidacloprid, Beauveria bassiana.*