

Effectiveness of the Entomopathogenic Fungus *Beauveria bassiana* for the Control of Aphids (*Aphis glycines*) in Soybean Plants

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ABSTRACT

*One of the factors causing the decline in soybean production in Indonesia is pest attacks from the beginning of growth to harvest. *Aphis glycines* (Homoptera: Aphididae) is an important pest of soybean. One of the potential entomopathogenic fungi as a pest control agent is *Beauveria bassiana*. This research was conducted to determine the effect of the *B. bassiana* mushroom in reducing the intensity of *A. glycines* pest attacks by comparing the use of papaya leaf vegetable pesticides and their effect on the amount of production and yields of soybean plants. Tests were carried out at the Laboratory of Pest and Plant Protection, Department of Agricultural Production, Jember State Polytechnic and at PT. Sirtanio Organik Indonesia (SOI), used six treatments namely control, 5% concentration, 10% concentration, 15% concentration, 20% concentration, and 25% concentration. Where each treatment was repeated five times. The data obtained were then analyzed for variance and continued with the BNT test with a significance level of 5%. The results showed that all isolates of *Beauveria bassiana* and papaya leaf pesticides were capable of infecting and causing death of *A. glycines*. The results of research on the intensity of pest attacks showed no significant difference, and the final results of this study showed that the application of *B. bassiana* and papaya leaf vegetable pesticides had no effect on the amount of production, yields and number of soybean plant pods.*

Keywords: *Soybean, *Beuveria bassiana*, *Aphis glycines*, papaya leaf vegetable pesticide*