

***Effect of Application Bioinsecticide of Gadung Tuber (*Dioscorea hispida*)
Against Rice Bug In Rice Plant***

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ABSTRACT

One of the main rice pests that can reduce rice production is the stink bug. To control stink bugs, farmers usually use synthetic insecticides, which have a negative impact on the environment and the organisms around them. The alternative is to use bioinsecticides. One example of a bioinsecticide is the use of yam tuber plant extract. This study aims to determine the effect of gadung tuber bioinsecticide application on rice bugs. This research was conducted from August to November 2022 and took place at the Bioscience Laboratory, Jember State Polytechnic Plant Protection Laboratory, and in Balung Lor village, Balung District, Jember Regency. This study used 6 treatment levels (0%, 5%, 10%, 15%, 20%, and 25%) which were repeated three times using the feed dip method. Following the completion of the mortality tests at 24, 48, and 72 hours, conduct the LC50 and LC95 toxicity tests to determine field concentrations using probit analysis with Polo Plus 1.0 software. The results showed that in the GC-MS analysis results, gadung tuber contained 30 active compounds, where the highest compounds were palmitic acid at 15.46% and oleic acid at 14,5%, which could potentially be antifeedants. Toxicity results showed a LC50 of 9,9% and a LC95 of 45,8%. In the observation parameters, the results showed no significant differences in population and attack intensity, but showed significantly different results in dry paddy grain weight, where the average grain weight in the gadung tuber bioinsecticide treatment was 35,50 grams per sample, while in the insecticide treatment it was 33,50 grams/sample. The synthetic active ingredient fipronil has an average weight of 46,99 grams/sample.

Key words: *Bioinsecticide, gadung tuber, rice bug, rice*