

**Effectiveness of Water Hyacinth Leaf (*Eichornia crassipes*) Bioinsecticide on Armyworm (*Spodoptera frugiperda*) Pest on Glutinous Corn Plants**  
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**ABSTRACT**

*Armyworm (*Spodoptera frugiperda*) is classified as a polyphagous pest, capable of causing damage to sticky corn plants. The attack rate reached 26.4% and 55.5% which resulted in yield loss of 11.57%. This study aims to determine the effect of *Eichornia crassipes* bioinsecticide treatment on armyworm pests (*Spodoptera frugiperda*). The research was conducted in August-November 2023 at the plant protection laboratory, bioscience laboratory, and glutinous corn cultivation field in Antirogo Village, Sumpersari District, Jember. There were two tests in this study, namely laboratory tests and field tests. Laboratory tests to conduct GCMS tests obtained the results of the analysis of water hyacinth leaf extract compounds with active ingredients that have the potential as bioinsecticides, these compounds are flavonoids, terpenoids, steroids, and alkaloids. The mortality test continued with 6 concentrations including 0%, 5%, 10%, 15%, 20%, and 25%, then toxicity testing analyzed by probit regression to find the LC50 and LC95 values. The second research stage is a field test with a comparison of two different plots, the treatment of water hyacinth leaf bioinsecticide with a concentration of 25% and the active insecticide methomyl 2 grams/liter. Observations of 28 HST-37 HST on the population and intensity of attack of armyworm pests from both treatments obtained significantly different results, as well as crop yields.*

**Keywords:** *Bioinsecticide, Glutinous Corn, Methomyl, Spodoptera frugiperda, Water Hyacinth*