

**Application of Rice Husk Liquid Smoke on Population Dynamics of Armyworms (*Spodoptera litura*) in Edamame (*Glycine max* L. Merrill).**

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**ABSTRACT**

*Excessive use of synthetic pesticides can lead to resistant pests and the death of beneficial arthropods. Therefore, there is a need for alternative pest control that is environmentally friendly, one of which is liquid smoke. This study aims to assess the effect of rice husk liquid smoke pesticide application on armyworm (*Spodoptera litura*) population. Three types of insecticides consisting of rice husk liquid smoke grade 2 with 4% concentration, rice husk liquid smoke grade 3 with 3% concentration, and synthetic insecticide with imidacloprid active ingredient were compared in this study using treatment comparison method. Each type of insecticide was applied to 20 m<sup>2</sup> plot. Data were analyzed using the non-parametric Kruskal Wallis test. The results showed that the highest population dynamics in rice husk liquid smoke grade 2 was at 52 DAP, while rice husk liquid smoke grade 3, the highest population dynamics were found at 55 DAP. For imidacloprid insecticide, the population dynamics were located at 38 DAP and 48 DAP. In the fresh pod weight, the highest results were obtained from rice husk liquid smoke of grade 2 (31,20 grams) and imidacloprid insecticide (26,55 grams). It can be concluded that rice husk liquid smoke grade 2 is as effective as imidacloprid insecticide in controlling armyworms as reflected by both treatment results in the fresh pod weight per plant.*

**Keywords:** Bioinsecticide, charcoal, Cutworm, GCMS, Mao Dao