

**EFFECTIVENESS OF LIQUID SMOKE  
CONCENTRATION OF LIQUID SMOKE OF PLM OIL  
(*Elaeis guineensis* Jacq.) ON MORTALITY TOBACCO  
GRAYAK CALORERS PEST (*Spodoptera litura* F.)**

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**ABSTRACT**

The armyworm pest of tobacco plants (*Spodoptera litura* F.) is one type of pest that causes a decrease in tobacco crop production. There are several ways to control pests, one of which is using liquid smoke biopesticides of empty palm oil fruit bunches. This research was conducted in July-August 2023 at the Plant Protection Laboratory, Department of Agricultural Production, Jember State Polytechnic. The purpose of this study was to determine the effectiveness of liquid smoke biopesticide concentrations of empty oil palm fruit bunches in controlling the armyworm pest of tobacco plants (*Spodoptera litura* F.). This study used a Non-Factoral Randomized Block Design (RBD) consisting of 4 treatments with 6 replications, namely, the concentration of biopesticide liquid smoke of empty palm fruit bunches was 1%, the concentration of liquid smoke biopesticide of empty palm fruit bunches was 1.5%, the concentration of liquid smoke biopesticide of empty fruit bunches empty palm oil 2%, and, the concentration of liquid smoke biopesticides of empty palm oil fruit bunches is 2.5%. The research data were analyzed using ANOVA, if the results showed a significant effect then a 5% BNT level follow-up test was carried out, while probit analysis was used to determine LT50. The parameters used were mortality, physical changes, and LT50. The results showed that the liquid smoke biopesticides of empty fruit bunches of oil palm had a very significant effect on the mortality of armyworm pests in tobacco plants with the fastest LT50 value of 32 hours at the concentration of liquid smoke biopesticide of empty palm fruit bunches of 2.5%.

**Keywords:** *armyworm pests of tobacco plants, tobacco plants and liquid smoke biopesticides of empty oil palm fruit bunches*