

***Efficacy of Lemongrass Oil (Cymbopogon nardus) AGAINST ATTACKS OF
Spodoptera frugiperda caterpillar pests ON CORN PLANT***
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ABSTRACT

This research was carried out in two stages, namely the first stage of research conducted at the Plant Protection Laboratory of the Jember State Polytechnic aimed at assessing the Insecticide Efficacy (EI) to determine the reference concentration in the field based on mortality and insecticide efficacy. The purpose of the second phase of research is to compare the efficacy of citronella oil with the insecticide deltamethrin. The number of sample plants for each field was 50 plants. Data analysis used a completely randomized design with 6 treatments, namely K0 (Control), K1 (1000 ppm), K2 (2000 ppm), K3 (3000 ppm), K4 (4000 ppm), and K5 (5000 ppm). Each treatment was repeated 3 times with 5 caterpillars used per replication. Further test using the Least Significant Difference (BNT) 5% using SPSS 15.0 software. Insecticide Efficacy using Henderson and Tilton with an Insecticide Efficacy value of 70% which is effective for application in the field. Phase 2 research is a field test, conducted in Balung lor Village, Balung District, Jember Regency from August to October 2020. Data analysis includes normality test and homogeneity test, if normal and homogeneous data are further tested using paired sample t-test. If the data is not normal or homogeneous, then it is further tested using the Mann-Whitney test. Data were analyzed using SPSS 15.0 software. The conclusion of this study was that the efficacy of citronella oil insecticide in controlling caterpillars *Spodoptera frugiperda* in the field was 5000 ppm. The intensity of attack on citronella oil treatment was 20% and on deltamethrin insecticide treatment was 17%. The yield of citronella treatment with an average cob weight of 166.6 grams and the deltamethrin insecticide treatment was 84.9 grams.

Keywords: Corn plant; citronella oil insecticide; Spodoptera frugiperda