

INSECTICIDE EFFICACY OF LIQUID SMOKE HUSK CHARCOAL AGAINST WHITEFLY (*BEMISIA TABACI*) ON SOYBEAN EDAMAME.

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ABSTRACT

Whitefly is the most detrimental pest in edamame soybean cultivation where whitefly can cause necrotic spots and chlorosis on leaves. Liquid smoke of husk charcoal is a plant-based insecticide that has been proven to control whitefly pests. This research was carried out in two stages, namely the first stage of research was carried out at the Jember State Polytechnic Plant Protection Laboratory and the second stage was a field test carried out in Dukuh Mencek Village, Sukorambi District, Jember Regency. The purpose of the first stage is to determine the reference concentration in the field based on mortality and insecticide efficacy tests. The purpose of the second stage was to compare the 2 treatments on 2 different lands, namely the application of Liquid Smoke Charcoal Husk and the application of a synthetic chemical insecticide with the active ingredient Deltamethrin. Observation parameters include pest population, attack intensity, and yield of wet pod weight. Laboratory test data analysis used a completely randomized design with 6 treatments and 3 replications. Data analysis using Anova further test using BNT 5%, Ei using Abbot. Field test data analysis using data normality and data homogeneity, if the data is not normal and not homogeneous, then the test is continued using Mann-Whitney if the data is normal and homogeneous using the simple pyretic T test. The result of this research is that the efficacy of liquid smoke insecticides to control whitefly pests is a concentration of 15 ml/L and is the reference concentration in the field. The results in the field also showed that the application of husk charcoal liquid smoke was significantly different from the application of synthetic chemical insecticide with a concentration of 10 ml/L deltamethrin active in controlling whitefly pests, which means that the use of husk charcoal liquid smoke can replace chemical insecticides with the active ingredient deltamtrin in controlling tick pests. cloudy. The weight of wet pods on land with the application of liquid smoke of husk charcoal is 41.42 grams per plantation. The weight of wet pods in the field of application of deltamethrin was 37.54 grams per planting.

Keywords: *Liquid Smoke of Husk Charcoal; Deltamethrin; Soya bean ; whitefly*