Effect of Liquid Smoke of Onion rind on Whitefly Pest (Bemisia tabaci) on Edamame Soybean Plants

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ABSTRACT

Edamame soybean has the potential to be developed because the edamame soybean plant has an average production of 3.5 tons per hectare. This average is higher than regular soybean production, which produces the average of 1.7-3.2 tons per hectare. One of the problems in the cultivation of edamame soybeans is the attack of whitefly pests. On the edamame soybean plant. Whitefly nymph causes damage by sucking sap from leaves, eating phloem tissue until the growth of the plant dicreases, and pulling out honeydew which becomes intermediary for the development of sooty mold fungi that can inhibit photosynthesis. Based on this problem, an environmentally pest control innovation is needed by utilizing traditional market waste, that is onion skin into liquid smoke that can be expected to be able to control the breeding of whitefly pests. This study applies liquid smoke of onion skin with a concentration of 10%. The edamame variety used is ryoko. This study are used two designs, that is the efficacy test with a completely randomized design (CRD) non-factorial with 6 treatments and 3 replications. Then the field research design is using Non-Parametric which compares two research plots between plant plots that are applied liquid smoke of onion skin with synthetic chemical insecticides with the active ingredient Imidacloprid 5%. This research was conducted in Patemon Village, Pakusari District, Jember Regency. From the results of the study, it was found that the application of synthetic chemical insecticides with an active ingredient of 5% imidaloprid had a significant effect on attack variables and also yields.

Keywords: *edamame soybeans, liquid smoke, whitefly*