

**EFFECT OF CONCENTRATION AND DOSE OF PESTICIDES ON
VEGETABLE CROPS amethyst armyworm (*Spodoptera litura F.*) ON
SOYBEAN CROP**

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ABSTRACT

The use of amethyst pesticide (*Datura metel*) is one of the controls to control the armyworm (*Spodoptera litura F.*). This research was conducted to determine the effect of concentration of vegetable pesticides, and dose of amethyst vegetable pesticides, on armyworm pest mortality, pest attack intensity, number of pods, pod weight, soybean seed weight. This research was conducted in February – July 2021 at the Jember State Polytechnic Laboratory, and the cultivation area in Sumber Wringin Village, Sumber Sari District, Jember. The effect of concentration on mortality was analyzed using Completely Randomized Design (CRD) followed by Analysis of variance (ANOVA) and 5% Smallest Significant Difference Test (BNT). Testing the concentration of vegetable pesticides and doses of botanical pesticides using a factorial Randomized Block Design (RAK) consisting of two factors, the first factor is the type of pesticide consisting of two levels, namely amethyst vegetable pesticide (*Datura metel*) and synthetic pesticide containing alpha-pemethrin, the second factor is doses of botanical pesticides, consisting of 4 levels, namely K1 (1 application), K2 (two applications), K3 (three applications), K4 (four applications). The attack intensity data was analyzed using the Analysis of Variance (ANOVA) test and further tested with the Duncan Multiple Range Test (DMRT) with a level of 5%, and the yield data on the number of pods, pod weight, and seed weight were analyzed using the Analysis of Variance Test (ANOVA). Based on the results of the insecticide efficacy test, EI was obtained to control the armyworm (*Spodoptera litura F.*) at a concentration of 40% with a pest mortality rate of 83%. The intensity of pest attack in the K0W4 treatment (Application of synthetic pesticides with a dose of 4 applications) was 15% with the number of pods 40.00 g, pod weight 14.79 g, seed weight 7.66 g. Treatment K1W4 (Application of pesticide vegetable amethyst leaves with a dose of 4 applications) attack intensity 11%, number of pods 31.00 g, number of pods 18.29 g, and seed weight 7.66 g

Keywords: Amethyst, Soybean, *Spodoptera litura*.