

**THE EFFECT OF VARIOUS CONCENTRATIONS OF NEEM LEAF EXTRACT (*Azadirachta indica* A.Juss), TOBACCO LEAVES (*Nicotiana tabacum* L.) AND COMBINATIONS OF BOTH ON *Spodoptera litura* F. ON Greens Mustard (*Brassica juncea* L.)**

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**ABSTARCT**

The aim of this research was to determine the effect of application of various concentrations of botanical insecticide neem seed extract and neem leaf extract on the mortality rate of *S. litura* larvae and the growth of *Spodoptera litura* F. pests and to determine the most effective concentration of neem leaf extract, tobacco leaf extract, and a combination of both for controlling caterpillars. grayak. This research was conducted in April – May 2023 at the Protection Laboratory of the Faculty of Agriculture, UPN "VETERAN" Yogyakarta. The research was conducted using a Completely Randomized Design (CRD) with 10 treatments, namely: 5% neem leaf extract, 10% neem leaf extract, 20% neem leaf extract, 5% tobacco leaf extract, 10% tobacco leaf extract, 20% tobacco leaf extract. , Neem leaf extract 2.5% + Tobacco leaf extract 2.5%, Neem leaf extract 5% + Tobacco leaf extract 5%, Neem leaf extract 10% + Tobacco leaf extract 10%, Control (aquades). The data obtained were analyzed using Analysis of Variance (ANOVA). If there was a real effect from the treatment, it was continued with a different test using the DMRT (Duncan's Multiple Range Test) method with a level of 5%. The results showed that the treatment of 10% neem leaf extract + 10% tobacco leaf extract was significantly better at increasing mortality, reducing the percentage of larvae becoming pupae and imago, taking significantly longer for larvae to become pupae compared to the control. The 20% Tobacco Extract treatment was significantly more capable of reducing larval feeding capacity than the Control.

**Keywords:** *Greens mustard, S. litura, N. tabacum* L., *A. Indica*.