

**PATHOGENICITY OF ENTOMOPATHOGENIC NEMATODES
Steinernema sp. WITH DIFFERENT CONCENTRATION TO *Spodoptera*
litura Mortality**

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ABSTRACT

Until now, the control of *S. litura* relies on the intensive application of insecticides with high doses. The use of natural enemies, particularly parasitoids and insect pathogens, as biological insecticides has been considered by many to be the most viable pest management alternative. This study was to identify the effectiveness of entomopathogenic nematodes for reducing *Spodoptera litura* larvae population, determine the best entomopathogenic nematodes (EPN) concentration that is effectively reduce the *Spodoptera litura* larvae. This research will be conducted at the Plant Protection Laboratory of the Universitas Pembangunan Nasional "Veteran" Yogyakarta. The research time starts from December 2023 to February 2024. This research used a completely randomized design (CRD) consisting of 5 treatments. The treatments are P1 = 50 IJ/mL, P2 = 100IJ/mL, P3 = 150IJ/mL, P4 = 200IJ/mL, P5 = 250IJ/mL, P0 = 0 IJ/mL. Each treatment was repeated 4 times. The data obtained were analyzed with variance analysis (ANOVA) at the 5% level, then further tested using the BNJ test at the 5% level. The results of this study obtained that Entomopathogenic Nematodes (EPN) can increase the mortality of *S. litura* after third instar. The highest result on mortality of *S. litura* shown on P4(200IJ/mL) and P5 (250IJ/mL) of killing total 97,5% of 80 larval test in 96 hours.

Keywords: *nematodes, larvae, S. litura, Steinernema spp., mortality*