

ABSTRACT

Ummah, Rohmatul. 2014. The Pathogenicity of Nematodes Entomoptogen Local Isolates Against *Spodoptera litura* larvae mortality. Thesis, Department of Biology, Faculty of Science and Technology of the State Islamic University of Maulana Malik Ibrahim Malang. Lector (I) Dr. drh Bayyinatul Muchtaromah, M.Si (II) Umaiatus Syarifah MA

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A destructive plant pest is organisms resulting in decreased yield and large losses. Common pests damage crops and are polifag is *Spodoptera litura*. In the larval stage, these pests can live in groups and spend plants overnight. Entomopathogenic nematodes are one of the biological agents that are pathogenic to insects and can be used as a pest controller.

This study aims to determine pathogenicity local isolates of entomopathogenic nematodes against *Spodoptera litura* larvae mortality, as well as the LC₅₀ and LC₉₀ values determine the nematode isolates used. This research is a randomized block design (RBD) factorial consisting of 2 kinds of treatment, ie 4 concentrations and 3 isolates. Isolates used is DKS-1, PH-1 and PH-2. The concentration consists of 0 JI / ml as a control, 50 JI / ml, 100 JI / ml, and 200 JI / ml and Repeated 3 times. Percentage mortality data were analyzed using ANOVA followed by Duncan Range Test, and probit analysis for LC₅₀ and LC₉₀ looking for value.

The results showed that the concentration of entomopathogenic nematodes effect on mortality of larvae of *Spodoptera litura*. With the concentrations used 0 JI/ml, 50 JI/ml, 100 JI ml, and 200 JI/ml. Mortality of larvae of *Spodoptera litura* is highest at a concentration of 200 JI / ml. LC₅₀ values in the isolates DKS-1, PH-1 and PH-2 is 41,51 JI / ml, 36,16 JI/ml, and 30,01 JI/ml. While the LC₉₀ value is 111,47 JI/ml, 101,57 JI/ml, and 62,51 JI/ml. Isolates PH-2 is more effective than isolate PH-1 and DKS-1 because it can cause 50% mortality of insects in the number of lower concentration. And PH-2 isolates more effectively cause 90% mortality of the test insects than PH-2 isolates and DKS-1.