

## ABSTRACT

**Raisal, J. N. 2014. The Test of Viability and Virulence nematode entomopatogen (*steinernema* spp.) toward the material of active insect in the Class of Insect Growth Regulator (IGR).** Thesis, Biology Department, the Faculty of Saints and Technology, State Islamic University Maulana Malik Ibrahim, Malang. Advisor I: Dwi Suheriyanto, M. P. Advisor II: Achmad Nasichuddin, M. A.

**Keywords:** *Stenernema* spp., *Insect Growth Regulator* (IGR.), Buprofezine, siromazine, *Corcyra Cephalonica*, viability, Virulence.

Nematode Entomopatogen is an animal whose form is such worm, 800-1200 µm in size, lives as a parasite toward the insect. One of nematode entomopatogen kinds is *Steinernema* spp which can be exploited. As a bio-insect, in order to control the pest insect of plants. The superiority of *Steinernema* spp. is can kill the pest instantly (24-48 hours), easy to isolate from the soil and can be combined with other particular liquid. Combination with other pesticide aims to increase the effectiveness of nematode in controlling the pest insect. This study aims to know the genre influence and the active concentrated material of insecticide (*Insect Growth Regulator*) buprofezine and siromazine toward viability and virulence of nematoda entomopatogen *Steinernema* spp.. Buprofezine and siromazine constitute insecticide which working as *cytin sintesis inhibitor* which has high selectivity so it does have potentation to be combined with nematode entomopatogen.

This study was done at the laboratory of big protected seeding hall and protected farming plants (BBPPTP) in Surabaya in July 2014. This study used a random complete plan with 4 treatments and 4 repetition. The treatments use are giving active concentration material buprofezine 0.2% (product recommendation), 0.1% (low concentration) and siromazine 0.06% (product recommendation), 0.1% (low recommendation) and siromazine 0.06% (product recommendation), siromazine 0.03% (low concentration). The data was analyzed by vary-variate (ANOVA).

The results of the study show that the influence of giving active material, buprofezine and siromazine has no influence toward viability and virulence. *Steinernema* spp.. The average percentage of viability *Steinernema* spp. Around 91-96% in 24 hours. The highest viability was gotten in the treatment of buprofezine 0.2% with the amount of *Steinernema* spp. which is capable of survival are about 1428 infective Juvenile. *Steinernema* spp. can cause mortality *Corcyra cephalonica* about 100% to the whole treatments in 48 hours after genre giving and active concentration material IGR.