Effectiveness of *Beauveria bassiana* and *Nomuraea rileyi* with Spray Intervals for *Spodoptera exigua* and *Thrips tabaci* Control of Red Onions

By : Waskito Tulus J

Supervisor by : Dr. Ir. Rukmowati Brotodjojo, M.Agr. and Dr. Ir. Mofit Eko Poerwanto, MP.

ABSTRACT

Pest attacks are able to reduce the yield of red onions. *Beauveria bassiana* and *Nomuraea rileyi* are entomopathogenic fungi that can be used to control pest. This study was to determine the effectiveness of entomopathogenic fungi *B. bassiana* and *N. rileyi* compared to chemical insecticide deltamethrin in controlling pests of red onions. Experiment was arranged according to the Randomized Completely Block Design (RCBD) was arranged for treatments of P0 (without pesticides), PK (spraying insectisides deltamethrin), P1 (spraying *B. bassiana* 10g/L every 5 day's), P2 (spraying *B. bassiana* 10g/L every 10 day's), P3 (spraying *B. Bassiana* 10g/L every 15 day's), P4 (spraying *N. rileyi* 10g/L every 5 day's), P5 (spraying *N. rileyi* 10g/L every 10 day's), P6 (spraying *N. rileyi* 10g/L every 15 day's). The study was conducted in Wedomartani experimental station, Ngemplak Sleman Yogyakarta from November 2018 until February 2019. Data were analyzed using analysis of varian (α:5%) followed by Duncan's Multiple Range Test (α:5%) Pest populations, crop damage intensity, number of leaves, weight of tuber/plant, weight of tuber/plot, tuber diameter, and weight of root/plant were observed. The use of *B. bassiana* and *N. rileyi* were as effective as deltamethrin in suppressing damage caused by *S. exigua* and *T. tabaci*. The use of *B. bassiana* 10 g/L with spraying intervals once every 5 days and *N. Rileyi* 10 g/L once every 5 days was as effective as deltamethrin in suppressing the pest population of *S. exigua*.

Keywords; Deltamethrin, *Beauveria bassiana*, *Nomuraea rileyi*