

## RINGKASAN

*Oryctes rhinoceros* merupakan hama utama tanaman kelapa sawit. Hama ini mengakibatkan rendahnya produktivitas perkebunan kelapa sawit. Upaya pengendalian *O. rhinoceros* sebagian besar menggunakan insektisida kimia. Untuk mengurangi dampak negatifnya, maka dilakukan pengendalian hayati dengan *Metarhizium sp.* Tujuan penelitian ini untuk mengetahui pertumbuhan dan potogenitas *Metarhizium sp* dari beberapa media biakan terhadap mortalitas larva *O. rhinoceros*.

Penelitian dilaksanakan di Laboratorium Balai Besar Perbenihan dan Proteksi Tanaman Perkebunan (BBPPTP) jalan Asrama, No. 124. Kelurahan Cinta Damai, Kecamatan Medan Helvetia, Medan. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) non faktorial terdiri dari 7 perlakuan yaitu A<sub>0</sub> = Aquadest steril (kontrol), A<sub>1</sub> = media PDA, A<sub>2</sub> = media PDA + *O. rhinoceros*, A<sub>3</sub> = media jagung, A<sub>4</sub> = media jagung + *O. rhinoceros*, A<sub>5</sub> = media beras, A<sub>6</sub> = media beras + *O. rhinoceros*. Parameter yang diamati adalah pertumbuhan diameter koloni jamur, awal kematian dan mortalitas.

Hasil penelitian menunjukkan bahwa jenis media biakan berpengaruh meningkatkan pertumbuhan diameter koloni jamur *Metarhizium sp*, awal kematian larva *O. rhinoceros* dan mortalitas larva *O. rhinoceros*. Media biakan jagung + ekstrak *O. rhinoceros* (A<sub>4</sub>) menghasilkan pertumbuhan yang paling baik yaitu sebesar 95 mm sedangkan media PDA dan media beras menghasilkan pertumbuhan terkecil dengan nilai 79,83 mm dan 83 mm pada pengamatan 23 HSI, untuk waktu awal kematian larva *O. rhinoceros* pada media biakan jagung + *O. rhinoceros* (A<sub>4</sub>) menghasilkan waktu yang paling cepat yaitu 8,33 hari, namun secara statistik nilainya hanya berbeda nyata pada media PDA (A<sub>1</sub>) dengan waktu 10,33 hari dan untuk uji patogenitas jamur *Metarhizium sp* dalam menyebabkan mortalitas larva *O. rhinoceros* di laboratorium, semua jenis media biakan sama baiknya.

*Kata Kunci* : Media biakan jamur entomopatogen, *Metarhizium sp*, *O. rhinoceros*.

## SUMMARY

*Oryctes rhinoceros* is the main pest of oil palm plants. This pest results in low productivity of oil palm plantations. Efforts to control *O. rhinoceros* mostly use chemical insecticides. To reduce the negative impact, biological control is carried out with *Metarhizium sp.* The aim of this research was to determine the growth and potency of *Metarhizium sp.* from several culture media on the mortality of *O. rhinoceros* larvae.

The research was carried out at the Laboratory of the Center for Plantation Seed and Plant Protection (BBPPTP), Jalan Asrama No. 124, Love Peace Village, Medan Helvetia District, Medan. This study used a non-factorial Completely Randomized Design (CRD) consisting of 7 treatments, namely A<sub>0</sub> = sterile Aquadest (control), A<sub>1</sub> = PDA medium, A<sub>2</sub> = PDA medium + *O. rhinoceros*, A<sub>3</sub> = corn medium, A<sub>4</sub> = corn medium + *O. rhinoceros*, A<sub>5</sub> = rice medium, A<sub>6</sub> = rice medium + *O. rhinoceros*. The parameters observed were the growth of fungal colony diameter, early death and mortality.

The results showed that the type of culture media had an effect on increasing the diameter growth of the *Metarhizium sp.* fungus colony, the early death of *O. rhinoceros* larvae and the mortality of *O. rhinoceros* larvae. Corn culture media + *O. rhinoceros* extract (A<sub>4</sub>) produced the best growth, namely 95 mm, while PDA media and rice media produced the smallest growth with values of 79.83 mm and 83 mm at 23 DAP observations, for the initial time of death of *O. rhinoceros* larvae on corn + *O. rhinoceros* (A<sub>4</sub>) culture media produced the fastest time, namely 8.33 days, but statistically the value was only significantly different on PDA (A<sub>1</sub>) media with a time of 10.33 days and for the pathogenicity test of the *Metarhizium sp.* fungus in cause mortality of *O. rhinoceros* larvae in the laboratory, all types of culture media are equally good.

*Keywords* : Culture media for entomopathogenic fungi, *Metarhizium sp.*, *O. rhinoceros*.