

## ABSTRACT

### INFLUENCE OF SOME ISOLATES *Metarhizium anisopliae* (Metch.) Sorokin TOWARD MORTALITY OF COCOA FRUIT BUG SUCKERS (*Helopeltis theivora* Waterhouse)

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Suckers cocoa (*Helopeltis theivora* Waterhouse) is one of the main pests on cocoa, so its presence should be alerted. In the first year losses caused of pests reaching 36%, and the next year may reaching 61-75%. Based on the importance of cocoa plantation to cultivate because of it has high economic value, so it is necessary to control pests intensively attacking. And one of good control is using natural enemies, one of them is entomopathogenic *Metarhizium anisopliae* (Metch.) Sorokin. This fungus is known as a microbial insecticide. Fungi are from different hosts or geographic regions will also be different the virulence of the insect. The research conducted in August 2011 aims to determine the growth rate, density, viability and virulence of *Metarhizium anisopliae* (Metch.) Sorokin from several different places, on mortality of cocoa fruit suckers (*Helopeltis theivora* Waterhouse). The results showed that diameter of the highest growth rate and show the real difference is the isolates from Bantul, with an average of 8.862 cm (6 hsi). The density of fungal conidia does not show real difference but in average isolates from UGM with  $9.667 \times 10^8$ /ml relatively highest of the other isolates. Conidias viability of *Metarhizium anisopliae* (Metch.) Sorokin also does not show real differences, but on average isolates are relatively more superior than other is of the isolates from UGM with the value reaching 72.258%. While virulence rate can be seen from the mortality percentage of *Helopeltis theivora* Waterhouse. Which relatively highest and its virulence is the isolates from UGM, with the average result reaching 81.25%. The result showed that the level of virulence of isolates from Tegineneng, Gadingrejo, UGM, Bantul, Tegineneng, Gadingrejo, UGM, Bantul, and Trimurjo is not real difference among each other that is around 61,250% - 81,250%.

Key words: *Metarhizium anisopliae*, natural enemies, entomopathogenic, diameter, density, viability, mortality.