**PATHOGENICITY TESTS OF THE *Beuveria bassiana* (Bals.) Veuil. WITH THE ADDITION OF VARIOUS CONCENTRATIONS OF DIFFERENT SOURCES OF CHITIN IN THE PROPAGATION MEDIA ON THE COFFEE BERRY BORER (*Hypothenemus hampei* Ferr.)**

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## ABSTRACT

*Beuveria bassiana* is an entomopathogenic fungus, that is useful for controlling *Hypothenemus hampei.* Lack of use *Beuveria bassiana* is an entomopathogenic fungus that is useful for controlling *Hypothenemus hampei*. Disadvantages of using entomopathogenic fungi, if it is mass-produced continuously, it will reduce the quality of the fungus and the pathogenicity to pests to become less virulent, increasing it by adding a source of chitin to the propagation medium as additional nutrition. The purpose of this study was to determine the effect of adding chitin sources with different concentrations in the multiplication media on the quality of the fungus and the pathogenicity of the fungus *B. bassiana* against *H. hampei*.The research was conducted at the Pakem Biological Laboratory of the Department of Agriculture and Food Security, Sleman, DI Yogyakarta. The experiment consisted of 2 stages (quality test of *B. bassiana* and pathogenicity test against *H. hampei*) using a Single Factor Completely Randomized Design and treatment as follows: without the addition of chitin 0g/200 g (Control), the addition of *Tenebrio molitor* chitin sources (1 g/200 g; 2 g/200 g; and 3 g/200 g) and the addition of shrimp shell chitin sources (3 g/200 g; 4 g/200 g; and 5 g/200 g). The experimental results of the spore quality test and the pathogenicity of the fungus *B. bassiana* against *H. hampei* gave an effect on the chitin-added media on the control. In the spore quality test, treatment of *T. molitor* chitin 2 g/200 g; ($7,53x10^8$ spores/mL and 84,48%) and shrimp shell chitin 4 g/200 g ($7,34x10^8$ spores/mL and 83,09%) produced high-quality fungus. While the pathogenicity test, treatment of chitin (*T. molitor* 2 g/200 g and shrimp shell 4 g/200 g resulted in good pathogenicity (highest mortality percentage; the fastest death rate was 5,1 and 4,7 days; the fastest *Lethal Time of* 50% was 4,264 and 3,883 days, and the lowest feeding power was 0,55 and 0,51 grams).

Keywords: Spore quality, pathogenicity, *Beuveria bassiana, Hypothenemus hampei*, chitin.