

**EFFECTIVENESS OF VARIOUS CONCENTRATION OF
ENTOMOPHATOGENIC FUNGI *Beauveria bassiana* (Bals.-Criv.) Vuill.
AND *Metarhizium anisopliae* Metschn. AGAINST *Hypothenemus hampei*
Ferr.**

By: Shafira Nurulina Zain

Supervised by:
R. R. Rukmowati B. and
Abdul Rizal AZ

ABSTRACT

Beauveria bassiana is one of the entomopathogenic fungi that has been widely studied for its potential as a pest control for *H. hampei*, both in the laboratory and in the field. Apart from *B. bassiana*, there are also other entomopathogenic fungi that can be used to control insect pests, namely the *Metarhizium anisopliae* fungus. This research aimed to determine the effectiveness of *B. bassiana* and *M. anisopliae* in controlling *H. hampei* pests and to determine the most effective concentrations of *B. bassiana* and *M. anisopliae* in controlling *H. hampei* attacks. The research was conducted at the Plant Protection Laboratory, Faculty of Agriculture, UPN "Veteran" Yogyakarta from April to May 2024. This research was carried out using a Completely Randomized Design (CRD) consisting of 5 (five) treatments, namely B1: *B. bassiana* concentration 30g/L, B2: *B. bassiana* concentration 40g/L, M1: *M. anisopliae* concentration 30g/L, M2: *M. anisopliae* concentration 40g/L, and control. Each treatment was repeated 4 (four) times. The parameters used were spore density, spore viability, *H. hampei* mortality, death rate, total death time, and feeding capacity. Data were analyzed using analysis of variance 5% and if there were differences between treatments, it was continued with orthogonal contrast 5%. The use of *B. bassiana* and *M. anisopliae* has a significant effect on increasing mortality, shortening death rate, shortening total death time, and reducing feeding capacity of *H. hampei*. The most effective concentration for controlling *H. hampei* on *B. bassiana* and *M. anisopliae* is a concentration of 40g/L.

Keywords: *Hypothenemus hampei*, *Beauveria bassiana*, *Metarhizium anisopliae*, coffee fruit.