EFEKTIVITAS CENDAWAN ENTOMOPATOGEN *Beauveria bassiana* Bals. TERHADAP PENETASAN TELUR DAN PERKEMBANGAN *Eurydema pulchrum* Westw. (Hemiptera : Pentatomidae)

SKRIPSI

Oleh

PUTRI PERTIWI NENGSIH
NIM. 2110251006

Pembimbing :
Prof. Dr. Ir. Trizelia, M.Si
Prof. Dr. Ir. Reflinaldon, M.Si

FAKULTAS PERTANIAN

UNIVERSITAS ANDALAS

PADANG

2025

EFEKTIVITAS CENDAWAN ENTOMOPATOGEN *Beauveria bassiana* Bals. TERHADAP PENETASAN TELUR DAN PERKEMBANGAN *Eurydema pulchrum* Westw. (Hemiptera : Pentatomidae)

Abstrak

Eurydema pulchrum Westw. merupakan salah satu hama penting pada tanaman kubis-kubisan. Salah satu jenis cendawan entomopatogen yang berpotensi untuk pengendalian *E. pulchrum* adalah *B. bassiana*. Tujuan dari penelitian ini yaitu untuk mendapatkan isolat cendawan *B. bassiana* yang efektif dalam menghambat penetasan telur *E. pulchrum* di laboratorium. Penelitian dilakukan di Laboratorium Pengendalian Hayati Departemen Proteksi Tanaman Fakultas Pertanian Universitas Andalas Padang, dari bulan Desember 2024-Maret 2025. Rancangan penelitian yang digunakan adalah RAL (Rancangan Acak Lengkap) dengan 6 perlakuan dan 4 ulangan. Perlakuan terdiri dari isolat cendawan *B. bassiana* WS, *B. bassiana* TD312, *B. bassiana* PA221, *B. bassiana* PB211, *B. bassiana* PD114, dan kontrol. Kerapatan konidia cendawan yang digunakan adalah 10^8 konidia/ml. Suspensi konidia diaplikasikan pada telur *E. pulchrum*. Variabel pengamatan yang diamati adalah persentase telur *E. pulchrum* yang tidak menetas, mortalitas nimfa, persentase imago terbentuk, perbandingan jumlah imago jantan dan betina, masa pra-oviposisi, oviposisi, dan pasca-oviposisi, jumlah kelompok telur dan telur yang diletakkan. Hasil penelitian menunjukkan semua perlakuan isolat cendawan *B. bassiana* dapat mempengaruhi persentase telur *E. pulchrum* yang tidak menetas. Persentase telur *E. pulchrum* tidak menetas setelah aplikasi cendawan *B. bassiana* berkisar antara 30,85% - 56,99% dengan efektivitasnya yaitu berkisar antara 93,25% - 96,34%, perlakuan juga dapat menyebabkan mortalitas nimfa dan mempengaruhi terbentuknya imago.

Kata kunci : cendawan entomopatogen, *E. pulchrum*, *B. bassiana*

EFFECTIVENESS OF THE ENTOMOPATHOGENIC *Beauveria bassiana* Balls. ON EGG HATCHING AND DEVELOPMENT OF *Eurydema pulchrum* Westw. (Hemiptera : Pentatomidae)

Abstract

Eurydema pulchrum Westw. is one of the important pests of cabbage plants. One type of entomopathogenic fungus that has the potential to control *E. pulchrum* is *B. bassiana*. The purpose of this study was to obtain an isolate of *B. bassiana* fungus that is effective in inhibiting the hatching of *E. pulchrum* eggs in the laboratory. The research was conducted at the Biological Control Laboratory of the Department of Plant Protection, Faculty of Agriculture, Andalas University, Padang, from December 2024 to March 2025. The research design used was Completely Randomized Design (CRD) with 6 treatments and 4 replications. The treatments consisted of fungal isolates *B. bassiana* WS, *B. bassiana* TD312, *B. bassiana* PA221, *B. bassiana* PB211, *B. bassiana* PD114, and control. The density of fungal conidia used was 10^8 conidia/ml. Conidia suspension was applied to *E. pulchrum* eggs. The observed variables were the percentage of *E. pulchrum* eggs that did not hatch, nymph mortality, percentage of imago formed, comparison of the number of male and female imago, pre-oviposition, oviposition, and post-oviposition periods, number of egg groups and eggs laid. The results of the study showed that all treatments of *B. bassiana* fungal isolates could affect the percentage of unhatched *E. pulchrum* eggs.The percentage of *E. pulchrum* eggs that did not hatch after application of *B. bassiana* fungus ranged from 30.85% - 56.99% with its effectiveness ranging from 93.25% - 96.34%. The treatment can also cause nymph mortality and affect the formation of imago.

Keywords : entomopathogenic fungi, *E. pulchrum*, *B. bassiana*


UNIVERSITAS ANDALAS
UNTUK
KEDJAJAAN
BANGSA