

**VIRULENSI TIGA SPESIES CENDAWAN ENTOMOPATOGEN  
TERHADAP LARVA *Crocidolomia pavonana* Fabricius  
(Lepidoptera: Crambidae)**

**SKRIPSI**

Oleh

**SILVINA AMELYA**

**NIM. 1810252035**

**Pembimbing I : Dr. Ir. Hidrayani, MSc**

**Pembimbing II : Prof. Dr. Ir. Trizelia, M.Si**



**FAKULTAS PERTANIAN  
UNIVERSITAS ANDALAS  
PADANG  
2024**

# VIRULENSI TIGA SPESIES CENDAWAN ENTOMOPATOGEN TERHADAP LARVA *Crocidolomia pavonana* Fabricius (Lepidoptera: Crambidae)

## Abstrak

Ulat krop kubis (*Crocidolomia pavonana* F) merupakan salah satu hama utama pada tanaman kubis-kubisan yang dapat dikendalikan dengan cendawan entomopatogen. Tujuan penelitian untuk menentukan isolat cendawan *Beauveria bassiana*, *Metarhizium anisopliae* dan *Trichoderma asperellum* yang bersifat virulen terhadap larva *C. pavonana*. Penelitian dilakukan di Laboratorium dengan Rancangan Acak Lengkap (RAL) yang terdiri dari 4 perlakuan dan 5 ulangan. Perlakuan terdiri atas cendawan *B. bassiana*, *M. anisopliae* dan *T. asperellum* dan kontrol. Konsentrasi konidia *B. bassiana*, *M. anisopliae* dan *T. asperellum* yang digunakan  $10^8$  konidia/ml. Suspensi konidia diaplikasikan pada larva *C. pavonana*. Parameter yang diamati adalah mortalitas larva, persentase pupa terbentuk, persentase imago terbentuk dan jumlah telur yang tidak menetas. Data dianalisis dengan sidik ragam dan uji lanjut LSD pada taraf 5%. Hasil penelitian menunjukkan bahwa isolat *T. asperellum* mampu menyebabkan kematian larva dengan mortalitas paling tinggi (74.67%) yang diikuti oleh *B. bassiana* (45.33%) dan *M. anisopliae* (31.10%). Aplikasi isolat *B. bassiana*, *M. anisopliae* dan *T. asperellum* pada larva *C. pavonana* dapat menghambat pembentukan pupa (48.00%) dan imago (14.67%) serta menyebabkan telur tidak menetas (43.07%). Cendawan yang paling efektif dalam mengendalikan *C. pavonana* adalah *T. asperellum*.

Kata kunci: *Beauveria bassiana*, *Metarhizium anisopliae*, *Trichoderma asperellum*

# VIRULENCY OF THREE TYPES OF ENTOMOPATOGEN FUNGAL ON LARVAE OF *Crocidolomia pavonana* Fabricius (Lepidoptera: Crambidae)

## Abstract

Cabbage crop caterpillar (*Crocidolomia pavonana* F) is one of the main pests in cabbage plants that can be controlled using entomopathogenic fungi. The aim of the study was to determine the isolates of *Beauveria bassiana*, *Metarhizium anisopliae* and *Trichoderma asperellum* which were virulent against *C. pavonana* larvae. The research was conducted in a laboratory with a completely randomized design (CRD) consisting of 4 treatments and 5 replicates. Treatments consisted of *B. bassiana*, *M. anisopliae* and *T. asperellum* fungi and control. The concentration of *B. bassiana*, *M. anisopliae* and *T. asperellum* conidia used was 108 conidia/ml. The conidia suspensions were applied to *C. pavonana* larvae. Parameters observed were larval mortality, percentage of pupae formed, percentage of imago formed and number of unhatched eggs. Data were analyzed by variance analysis and LSD at 5% level. The results showed that *T. asperellum* isolates were able to cause larval death with the highest mortality (74.67%) followed by *B. bassiana* (45.33%) and *M. anisopliae* (31.10%). Application of isolates of *B. bassiana*, *M. anisopliae* and *T. asperellum* on *C. pavonana* larvae can inhibit the formation of pupae (48.00%) and adult (14.67%) and cause eggs not to hatch (43.07%). The fungi that was most effective in controlling *C. pavonana* was *T. asperellum*.

Key words: *Beauveria bassiana*, *Metarhizium anisopliae*, *Trichoderma asperellum*.

