

**PATOGENISITAS BEBERAPA ISOLAT CENDAWAN
ENDOFIT DARI KACANG TANAH TERHADAP
PENGGEREK POLONG *Etiella zinckenella* Treit.
(Lepidoptera:Pyralidae)**

SKRIPSI



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**FAKULTAS PERTANIAN
UNIVERSITAS ANDALAS
PADANG
2016**

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Abstrak

Cendawan endofit merupakan cendawan yang hidup dalam jaringan tanaman yang berperan sebagai agen hayati dalam mengendalikan serangga hama tanaman. Penelitian telah dilaksanakan di Laboratorium Pengendalian Hayati Jurusan Hama dan Penyakit Tumbuhan Fakultas Pertanian Universitas Andalas Padang pada bulan Juni sampai Agustus 2016. Tujuan penelitian adalah untuk mengetahui jenis cendawan endofit dari kacang tanah yang bersifat patogen terhadap penggerek polong *E. zinckenella*. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) yang terdiri dari dua perlakuan kontrol dan empat perlakuan isolat cendawan endofit: *Aspergillus* sp. (MB 2.2.3 dan KB 3.2.1) dan *Beauveria bassiana* (TDT 1.1.2 dan TDD 1.1.1). Konsentrasi kerapatan konidia yang digunakan adalah 10^8 konidia/ml. Pengamatan dilakukan terhadap perkembangan gejala larva yang terinfeksi cendawan endofit, mortalitas larva, persentase cendawan endofit yang bersporulasi pada larva, persentase pupa terbentuk, persentase imago terbentuk, dan kerapatan konidia cendawan endofit yang bersporulasi pada larva. Hasil penelitian menunjukkan bahwa semua isolat cendawan endofit bersifat patogen terhadap *E. zinckenella*. Isolat yang paling virulen dalam mengendalikan larva *E. zinckenella* adalah *B. bassiana* isolat TDD 1.1.1 dan *Aspergillus* sp. isolat KB 3.2.1 menyebabkan mortalitas larva sebesar 60,00% dan 57,50%.

Kata kunci: Cendawan endofit, *Aspergillus* sp., *B. bassiana*, *E. zinckenella*

**THE PATHOGENICITY OF SOME FUNGAL ENDOPHYTES
ISOLATION OF GROUNDNUT TO POD BORER *Etiella
zinckenella* Treit. (LEPIDOPTERA: PYRALIDAE)**

Abstract

Fungal endophytes are fungus that lives in plant tissue which acts as biological agent in controlling insect pests. The research conducted in Biological Control Laboratory of the Department of Plant Pests and Diseases, Faculty of Agriculture Andalas University Padang in 2016 June until August. The aim of this research is knowing variety of the fungal endophytes from groundnut that are pathogenic to pod borer *E. zinckenella*. The experimental design used was Completely Randomized Design that consisted of two control treatments, and four treatments of fungal endophytes isolation: *Aspergillus* sp. (MB 2.2.3 and KB 3.2.1) and *Beauveria bassiana* (TDT 1.1.2 and TDD 1.1.1). The concentration of conidial density used was 10^8 conidia/ml. Observation conducted to the growth of larvae symptoms infected by fungal endophytes, larval mortality, the percentage of sporulated fungal endophytes on larvae, the percentage of formation on pupae, the percentage of formation on imagoes, and conidial density of sporulated fungal endophytes on larvae. The research results showed that all of fungal endophytes isolation was pathogenic to *E. zinckenella*. The most virulent isolation in controlling *E. zinckenella* larva was *B. bassiana* isolation TDD 1.1.1 and *Aspergillus* sp. isolation KB 3.2.1 caused mortality of larvae for 60,00% and 57,50%.

Keywords: fungal endophytes, *Aspergillus* sp., *B. bassiana*, *E. zinckenella*

