

**PATOGENISITAS TIGA JENIS CENDAWAN ENTOMOPATOGEN
TERHADAP TELUR KEPIK HIJAU (*Nezara viridula* L.) (Hemiptera:
Pentatomidae)**

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Abstrak

Kepik hijau (*Nezara viridula* L.) merupakan hama penting bagi beberapa tanaman seperti kedelai, padi, jagung, cabai, kacang panjang, kapas, jeruk dan tanaman polong lainnya. Kerusakan tanaman akibat *N. viridula* menyebabkan penurunan hasil dan kualitas tanaman. Salah satu pengendalian *N. viridula* yang digunakan yaitu cendawan entomopatogen. Penelitian ini bertujuan untuk mengetahui patogenisitas isolat *B. bassiana*, *M. anisopliae* dan *T. asperellum* terhadap telur *N. viridula* serta mendapatkan isolat yang paling efektif mengendalikan *N. viridula*. Rancangan penelitian yang digunakan adalah RAL (Rancangan Acak Lengkap) dengan 4 perlakuan dan 5 ulangan. Penelitian ini dilakukan di Laboratorium Pengendalian Hayati Departemen Proteksi Tanaman Fakultas Pertanian Universitas Andalas Padang, dari bulan Januari- Mei 2024. Perlakuan terdiri atas cendawan *B. bassiana*, *T. asperellum*, *M. anisopliae* dan kontrol. Konsentrasi konidia *B. bassiana*, *T. asperellum*, dan *M. anisopliae* yang digunakan 10^8 konidia/ml. Suspensi konidia diaplikasikan pada telur *N. viridula*. Parameter yang diamati adalah mortalitas telur *N. viridula*, mortalitas nimfa instar I dan persentase imago terbentuk. Data analisis dengan sidik ragam dan uji lanjut LSD taraf 5%. Hasil penelitian menunjukkan bahwa isolat *B. bassiana* mampu mematikan telur *N. viridula* dengan mortalitas 80%. Mortalitas nimfa instar I mencapai 88,80% pada perlakuan *B. bassiana* dan kematian nimfa total semua cendawan uji mencapai 100%. Dari tiga jenis cendawan yang diuji, *B. bassiana* lebih efektif mengendalikan *N. viridula* dibandingkan *M. anisopliae* dan *T. asperellum*.

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

PATHOGENICITY OF THREE TYPES OF ENTOMOPATHOGENIC FUNGI ON THE EGGS OF GREEN STINK BUG (*Nezara viridula* L.) (Hemiptera: Pentatomidae)

Abstract

The green stink bug (*Nezara viridula* L.) is an important pest for several crops such as soybeans, rice, corn, chili, long beans, cotton, oranges, and other leguminous plants. Damage to crops caused by *N. viridula* leads to a decrease in both yield and quality of the plants. One of the controls for *N. viridula* used is entomopathogenic fungi. This research aims to determine the pathogenicity of the isolates *B. bassiana*, *M. anisopliae*, and *T. asperellum* against the eggs of *N. viridula*, as well as to identify the most effective isolate for controlling *N. viridula*. The research design used is a Completely Randomized Design (CRD) with 4 treatments and 5 replications. This research was conducted at the Biological Control Laboratory of the Department of Plant Protection, Faculty of Agriculture, Andalas University, Padang, from January to May 2024. The treatments consist of the fungi *B. bassiana*, *T. asperellum*, *M. anisopliae*, and a control. The concentration of conidia of *B. bassiana*, *T. asperellum*, and *M. anisopliae* used was 10^8 conidia/ml. The conidial suspension was applied to the eggs of *N. viridula*. Parameters observed were *N. viridula* egg mortality, the mortality of first instar nymphs, and the percentage of imago formation. Data analysis using variance analysis and LSD follow-up test at a 5% level. The results showed that *B. bassiana* isolates were able to kill *N. viridula* eggs with 80% mortality. First instar nymph mortality reached 88.80% in the *B. bassiana* treatment and total nymph mortality of all test fungi reached 100%. Of the three fungi tested, *B. bassiana* was more effective in controlling *N. viridula* than *M. anisopliae* and *T. asperellum*.

Keywords: *Beauveria bassiana*, *Trichoderma asperellum*, *Metarhizium anisopliae*

