

**KEANEKARAGAMAN CENDAWAN ENTOMOPATOGEN DARI  
RIZOSFIR JAGUNG PADA POLA TANAM YANG BERBEDA**

**SKRIPSI**



**FAKULTAS PERTANIAN  
UNIVERSITAS ANDALAS**

**PADANG**

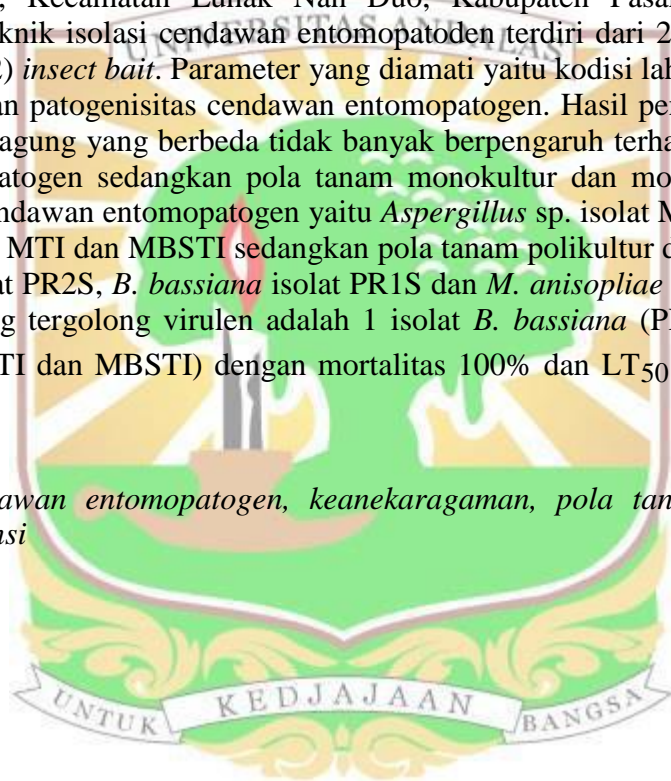
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# KEANEKARAGAMAN CENDAWAN ENTOMOPATOGEN DARI RIZOSFIR JAGUNG PADA POLA TANAM YANG BERBEDA

## ABSTRAK

Keanekaragaman cendawan entomopatogen pada tanah dipengaruhi oleh teknik budidaya seperti pola tanam, teknik perlindungan tanaman dan lain-lain. Penelitian ini bertujuan untuk mengetahui keanekaragaman dan tingkat virulensi dari rizosfir jagung. Sumber isolat cendawan entomopatogen diperoleh dari rizosfir jagung dengan pola tanam yang berbeda (jagung monokultur, jagung monokultur bekas sawit jagung polikultur) di Nagari Koto Baru, Kecamatan Luhak Nan Duo, Kabupaten Pasaman Barat, Provinsi Sumatera Barat. Teknik isolasi cendawan entomopatogen terdiri dari 2 cara yaitu: 1) teknik *serial dilution* dan 2) *insect bait*. Parameter yang diamati yaitu kondisi lahan, ciri makroskopis, ciri mikroskopis, dan patogenisitas cendawan entomopatogen. Hasil penelitian menunjukkan bahwa pola tanam jagung yang berbeda tidak banyak berpengaruh terhadap keanekaragaman cendawan entomopatogen sedangkan pola tanam monokultur dan monokultur bekas sawit diperoleh 2 jenis cendawan entomopatogen yaitu *Aspergillus* sp. isolat MRS dan MBSRS dan *M. anisopliae* isolat MTI dan MBSTI sedangkan pola tanam polikultur diperoleh 3 jenis yaitu *Aspergillus* sp. isolat PR2S, *B. bassiana* isolat PR1S dan *M. anisopliae* isolat PTI. Cendawan entomopatogen yang tergolong virulen adalah 1 isolat *B. bassiana* (PR1S) dan 3 isolat *M. anisopliae* (PTI, MTI dan MBSTI) dengan mortalitas 100% dan LT<sub>50</sub> berkisar 2,020-2,057 hari.

Kata Kunci: *Cendawan entomopatogen, keanekaragaman, pola tanam, rizosfir jagung, virulensi*



# DIVERSITY OF ENTOMOPATHOGENIC FUNGI FROM RHIZOSPHERE OF CORN AT DIFFERENT PLANTING PATTERNS

## ABSTRACT

The diversity of entomopathogenic fungi on the soil is influenced by cultivation techniques such as planting patterns, protection techniques and others. The aims of study were to determine the diversity and pathogenicity of entomopathogenic fungi from corn rhizosphere. Sources of entomopathogenic fungi isolates were obtained from corn rhizosphere at different planting patterns (monoculture of corn, monoculture of corn on formerly oil palm plantation and polyculture of corn) at Nagari Koto Baru, Luhak Nan Duo Subdistrict, West Pasaman, District, West Sumatra Province. Isolation techniques used two techniques such as: 1) series dilution and 2) insect bait. Parameters observed were land coding, macroscopic characteristics, microscopic characteristics and pathogenicity of entomopathogenic fungi. The results showed that different planting patterns did not significantly affect the diversity of entomopathogenic fungi. In monoculture and monoculture on formerly oil palm obtained 2 entomopathogenic fungi were *Aspergillus* sp. isolates of MRS and MBSRS and *M. anisopliae* isolates of MTI and MBSTI while in polyculture plants obtained 3 entomopathogenic fungi were *Aspergillus* sp. isolate PR2S, *B. bassiana* isolate PR1S and *M. anisopliae* isolate PTI. The virulent entomopathogenic fungi were 1 isolate of *B. bassiana* (PR1S) and 3 isolates of *M. anisopliae* (PTI, MTI and MBSTI) with mortality 100% and  $LT_{50}$  ranged from 2.020-2.057 days.

Keywords: *Corn Rhizosphere, Diversity, Entomopathogenic Fungi, Planting Patterns, Virulence*

