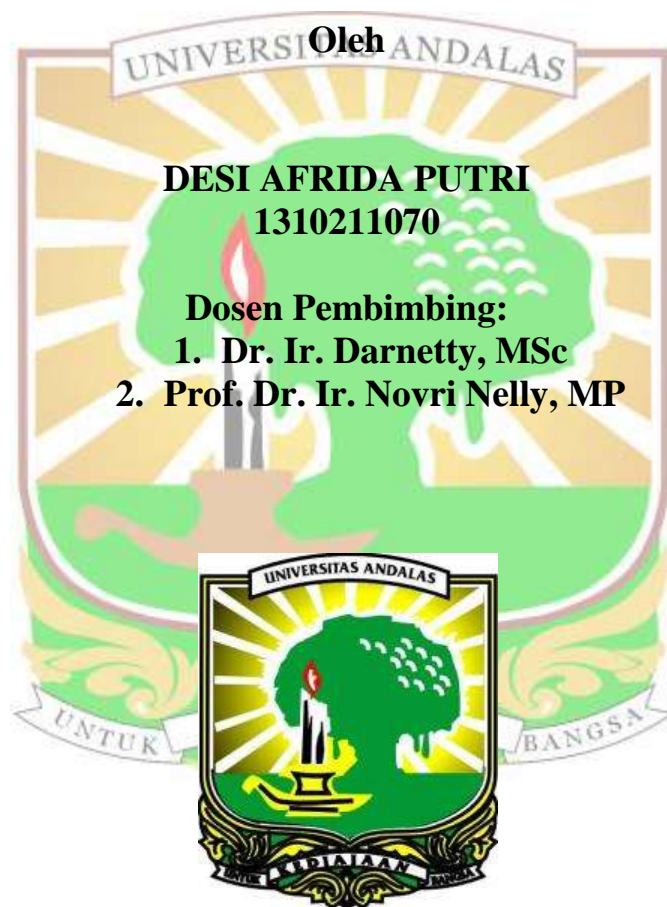


**EFEKTIVITAS FILTRAT BIAKKAN *Trichoderma harzianum*
DALAM MENGENDALIKAN *Fusarium fujikuroi* Nirenberg
PADA BIBIT PADI (*Oryza sativa* L.)**

SKRIPSI



**FAKULTAS PERTANIAN
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2018**

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Abstrak

Fusarium fujikuroi merupakan salah satu penyebab penyakit pada tanaman padi. Beberapa penelitian telah membuktikan bahwa filtrat *Trichoderma harzianum* mampu menekan berbagai jamur patogen. Tujuan dari penelitian ini adalah untuk mendapatkan konsentrasi filtrat biakkan *T. harzianum* yang efektif dalam mengendalikan *F. fujikuroi* pada bibit padi (*Oryza sativa* L.) Penelitian telah dilaksanakan di Laboratorium Fitopatologi dan di Rumah Kaca Fakultas Pertanian Universitas Andalas sejak bulan Oktober 2017 sampai Januari 2018. Rancangan yang digunakan dalam penelitian ini adalah Rancangan Acak Lengkap (RAL) dengan 6 perlakuan dan 4 ulangan. Perlakuan terdiri dari konsentrasi filtrat biakkan *T. harzianum* yaitu (A) 0% (kontrol / tanpa filtrat), (B) 25%, (C) 50%, (D) 75%, (E) 100% dan (F) kontrol (tanpa *F. fujikuroi*, tanpa filtrat). Parameter pengamatan adalah (1) persentase benih terserang jamur *F. fujikuroi* di medium PPA, (2) ketebalan koloni, (3) luas koloni, (4) jumlah benih berkecambah, (5) persentase bibit muncul lapang, (6) persentase bibit yang memperlihatkan gejala bakanae, (7) persentase benih mati, (8) persentase bibit mati, (9) persentase bibit *stunting*/ kerdil, (10) tinggi bibit, (11) jumlah daun. Hasil penelitian menunjukkan bahwa filtrat biakkan *T. harzianum* efektif menekan pertumbuhan dan perkembangan jamur *F. fujikuroi* dengan konsentrasi yang efektif adalah 100% dengan efektivitas penekanan luas koloni 77,38%, jumlah benih berkecambah 55,78%, bibit yang memperlihatkan gejala bakanae 80,06%, benih mati 60,09%, bibit mati 52,97%, dan bibit *stunting*/ kerdil 60,09%.

Kata kunci: *filtrat, Trichoderma harzianum, Fusarium fujikuroi, padi*



EFFECTIVITY OF *Trichoderma harzianum* CULTURED FILTRATE TO CONTROL *Fusarium fujikuroi* Nirenberg ON RICE SEEDS (*Oryza sativa* L.)

Abstract

Fujikuroi Fusarium fungus is one of the cause of disease in rice plants. Several studies have proven that *Trichoderma harzianum* filtrate is able to suppress various pathogenic fungi. The aim of this research was to get the effective concentration of *T. harzianum* filtrate for controlling *F. fujikuroi* on rice (*Oryza sativa* L.) seedlings. The research was carried out in the Phytopathology Laboratory and in the Greenhouse of the Faculty of Agriculture, Andalas University from October 2017 to January 2018. The design used in this study was the Completely Randomized Design (RAL) with 6 treatments and 4 replications. The treatments consisted of the concentration of cultured *T. harzianum* filtrate ie (A) 0% (control / without filtrate), (B) 25%, (C) 50%, (D) 75%, (E) 100% and (F) control (without *F. fujikuroi*, without filtrate). The parameters observed were (1) the percentage of infected seed by *F. fujikuroi* in PPA medium, (2) the colony thickness, (3) the colony area, (4) the number of germinated seeds, (5) the the percentage of germinated seeds in the field (6) the percentage of seeds showing symptoms of bakanae (7) percentage of dead seeds, (8) the percentage of dead seeds, (9) the percentage of stunting / dwarf seedlings, (10) seed height, (11) number of leaves. The result of the study showed that the filtrate of *T. harzianum* was effective in suppressing the growth and development of *F. fujikuroi* fungus with effective concentration of 100%. With the effectiveness in suppressing the colony area 77.38%, the number of seeds germinated 55.78%, the seeds showing symptoms bakanae 80, 06%, the number of dead seeds 60.09%, the number of dead seedlings 52.97% dead seeds, and the dwarf seedlings 60.09%.

Keywords : filtrate, *Trichoderma harzianum*, *Fusarium fujikuroi*, rice