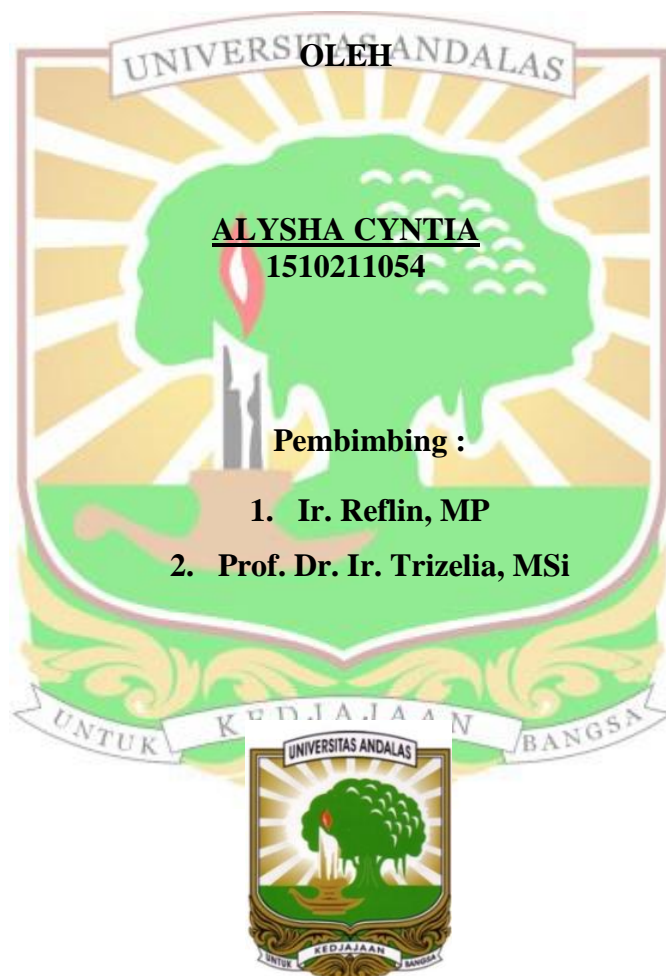


**PERENDAMAN BENIH CABAI (*Capsicum annuum* L.)
DENGAN BEBERAPA ISOLAT *Beauveria bassiana* (Bals.) Vuill
ENDOFIT TERHADAP POTENSI PENEKANAN PATOGEN
TULAR BENIH *Colletotrichum* spp. DAN MENINGKATKAN
PERTUMBUHAN BIBIT**

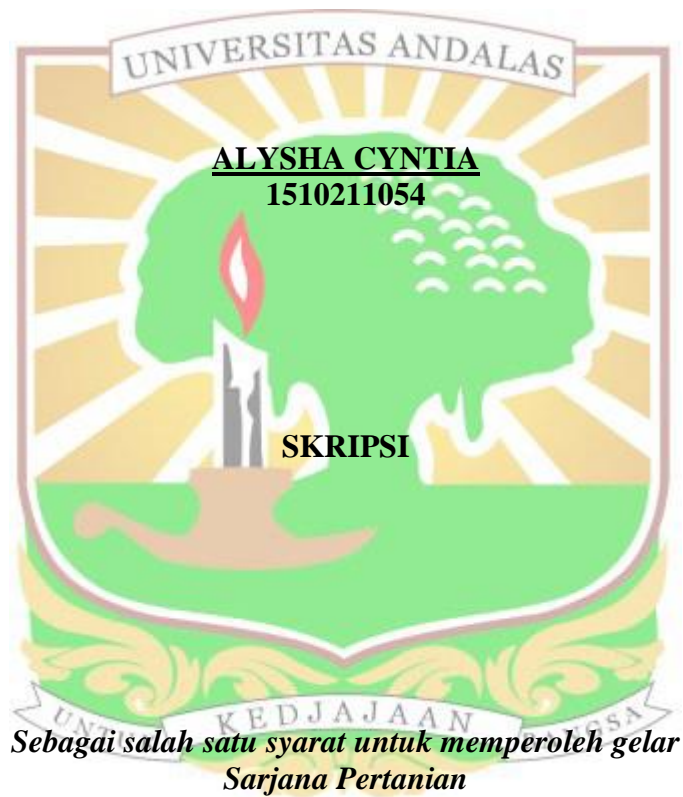
SKRIPSI



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Colletotrichum spp. DAN MENINGKATKAN PERTUMBUHAN BIBIT**

Abstrak

Colletotrichum spp. merupakan salah satu jenis jamur patogen tular benih pada tanaman cabai. Jamur *Beauveria bassiana* endofit dapat dimanfaatkan untuk mengendalikan patogen ini. Penelitian ini bertujuan untuk mendapatkan isolat jamur *B. bassiana* endofit yang terbaik dalam menekan serangan patogen tular benih yang disebabkan oleh *Colletotrichum* spp. dan meningkatkan pertumbuhan bibit cabai. Penelitian telah dilakukan di Laboratorium Pengendalian Hayati, Laboratorium Teknologi Benih, dan rumah kawat, Fakultas Pertanian. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan 4 perlakuan 16 ulangan. Perlakuan terdiri atas kontrol dan 3 isolat *B. bassiana* endofit (TD312, PD114, dan PA221). Aplikasi *B. bassiana* endofit dilakukan dengan metode perendaman benih dalam suspensi isolat *B. bassiana* selama 9 jam. Kerapatan konidia yang digunakan adalah 10^8 konidia/ml. Parameter pengamatan dalam penelitian ini yaitu persentase benih terserang jamur patogen *Colletotrichum* spp., persentase daya kecambah normal, panjang radikula dan plumula, persentase bibit muncul lapang, tinggi bibit, berat basah dan berat kering bibit. Di antara 3 isolat *B. bassiana* endofit yang di uji, isolat PD114 dan isolat TD312 lebih tinggi potensi penekanannya terhadap serangan patogen tular benih yang disebabkan *Colletotrichum* spp. Kedua isolat ini juga lebih mampu meningkatkan pertumbuhan bibit cabai dibandingkan dengan isolat PA221.

Kata kunci : *Beauveria bassiana*, *Colletotrichum* spp. endofit, patogen tular benih

**SOAKING CHILLI SEEDS (*Capsicum annuum* L.) WITH SOME
ISOLATES OF *Beauveria bassiana* (Bals.) Vuill ENDOPHYT AGAINST
THE POTENTIAL PRESSURE OF SEED BORNE PATHOGEN OF
Colletotrichum spp. AND IMPROVING SEED GROWTH**

ABSTRACT

Colletotrichum spp. is one of type of seed-borne pathogenic fungi in chilli plants. The endophytic *Beauveria bassiana* fungus can be used to control this pathogen. The aimed of this study was to obtain the best endophytic *B. bassiana* fungi isolates from the attack of seed pathogens which was caused by *Colletotrichum* spp. and increasing the growth of chilli seeds. The study has been conducted at the Biological Control Laboratory, Seed Technology Laboratory, and wire house, Faculty of Agriculture. This study used a completely randomized design (CRD) with 4 treatments of 16 replications. The treatments consisted of control and 3 endophytic *B. bassiana* isolates (TD312, PD114, and PA221). The application of *B. bassiana* endophytic was conducted by immersing the seeds in a suspension of *B. bassiana* isolates for 9 hours. The conidia density used was 10^8 conidia/ml. The observation parameters in this study were the proportion of seeds attacked by the pathogenic fungus *Colletotrichum* spp., the proportion of normal germination capacity, the length of the radicles and the plumules, the proportion of seedlings appearing in the field, seed height, wet weight and dry weight of the seeds. In 3 endophytic *B. bassiana* isolates tested, PD114 isolates and TD312 isolates had a higher suppression potential for the attack of seed-borne pathogens which was caused by *Colletotrichum* spp. The two isolates were also able to increase the growth of chilli seeds compared to PA221 isolates.

Key word : *Beauveria bassiana*, *Colletotrichum* spp. endophytic, seed-borne pathogens.