

Muhammad Akbar Hidayatulloh. 140311100076. Uji Efektifitas *Trichoderma* sp. Dari Berbagai Asal Isolat Terhadap Patogen *Phytophthora palmivora* Penyebab Busuk Buah Kakao. Dibimbing oleh **Ir. Achmad Djunaedy, M.P.** dan **Diana Nurus Sholehah, S.Farm. Apt., M.Si.**

ABSTRAK

Penelitian ini bertujuan untuk mengetahui kemampuan *Trichoderma* sp. dari berbagai sumber asal isolat dalam menghambat pertumbuhan koloni *P. palmivora* penyakit busuk buah kakao. Penelitian ini dilakukan di Balai Besar Perbenihan dan Proteksi Tanaman Perkebunan (BBPPTP) Surabaya pada bulan Januari 2018 sampai dengan April 2018 menggunakan metode Rancangan Acak Lengkap (RAL) dengan faktor tunggal 5 perlakuan berupa asal isolat *Trichoderma* sp. dan 5 kali ulangan, sehingga didapatkan 25 unit percobaan. Perlakuan yang diberikan yakni *Trichoderma* sp. asal isolat pertanaman Kopi, *Trichoderma* sp. asal isolat pertanaman Kakao, *Trichoderma* sp. asal isolat pertanaman Cengkeh, *Trichoderma* sp. asal isolat endofit buah kakao, dan *Trichoderma* sp. asal isolat endofit daun kopi. Parameter yang diamati adalah kerapatan spora *Trichoderma* sp., viabilitas spora *Trichoderma* sp., jari – jari pertumbuhan koloni *P. palmivora*, dan presentase penghambatan. Hasil penelitian menunjukkan bahwa pemberian *Trichoderma* sp. berbeda nyata terhadap pertumbuhan patogen *P. palmivora* yang ditunjukkan oleh notasi (*) pada setiap perlakuan. *Trichoderma* sp. mampu menghambat pertumbuhan patogen *P. palmivora* dengan persentase penghambatan sebesar 70,24% - 74,04%.

Kata Kunci : Busuk buah kakao, *Phytophthora palmivora*, *Trichoderma* sp.

Muhammad Akbar Hidayatulloh. 140311100076. Effectiveness Test of *Trichoderma* sp. From Various Origins Isolates Against *Phytophthora palmivora* Pathogen Cause of Rotten Cocoa Fruit. Guided by **Ir. Achmad Djunaedy, MP** and **Diana Nurus Sholehah, S.Farm. Apt., M.Si.**

ABSTRACT

This study aims to determine the ability of *Trichoderma* sp. from various sources of origin of the isolates in inhibiting the growth of *P. palmivora* colonies cacao fruit rot disease. The study was conducted at Balai Besar Perbenihan dan Proteksi Tanaman Perkebunan (BBPPTP) Surabaya in January 2018 up to April 2018 using metode Completely Randomized Design (RAL) with a single factor of 5 treatment in the form of *Trichoderma* sp. and 5 replications, so as to get 25 units of experiment. The treatments are given is *Trichoderma* sp. the origin of coffee planting isolates, *Trichoderma* sp. the origin of the cocoa plantation isolate, *Trichoderma* sp. the origin of clove planting isolate, *Trichoderma* sp. origin of endophytic cacao fruit isolate, and *Trichoderma* sp. origin of coffee leaf endophytic isolate. Parameters measured were density of spores of *Trichoderma* sp., the viability of spores of *Trichoderma* sp., the radius of *P. palmivora* colonies, and the percentage of inhibition. The results showed that *Trichoderma* sp. significantly different from the growth of pathogenic *P. palmivora* shown by the notation (*) in each treatment. *Trichoderma* sp. able to inhibit the growth of pathogenic *P. palmivora* with inhibition percentage of 70,24% - 74,04%.

Keywords: Cocoa fruit rot, *Phytophthora palmivora* , *Trichoderma* sp.