

Dessy Rahmayani. NIM 180311100044. Uji Daya Hambat Senyawa Eugenol Daun Cengkeh (*Syzygium Aromaticum* L.) Terhadap Patogen Penyakit Busuk Buah Kakao (*Phytophthora palmivora*). Dibawah bimbingan Dr. Ir. Gita Pawana, M.Si dan Aris Budiman, S.P., M.Si.

ABSTRAK

Kakao (*Theobroma cacao* L.) adalah salah satu komoditas unggulan subsektor perkebunan di Indonesia yang memberikan sumbangan devisa negara terbesar ketiga setelah kelapa sawit dan karet. Namun terjadi penurunan produktivitas kakao karena adanya serangan hama dan penyakit, yang paling utama yaitu penyakit busuk buah kakao yang disebabkan oleh cendawan patogen *Phytophthora palmivora*. Pengendalian penyakit busuk buah kakao umumnya menggunakan fungisida sintetik, akan tetapi penggunaan secara intensif mengakibatkan peningkatan toleransi strein patogen dan akumulasi residu fungisida, sehingga diperlukan pengendalian alami menggunakan senyawa eugenol daun cengkeh yang diketahui memiliki aktivitas anti cendawan. Tujuan dari penelitian ini yaitu untuk mengetahui daya hambat senyawa eugenol daun cengkeh terhadap pertumbuhan cendawan patogen *P. palmivora*. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan perlakuan senyawa eugenol kontrol negative (P0), kontrol positif (P1), P2, P3, P4, dan P5 sebanyak 4 kali ulangan dengan 2 kali sampel. Variabel dalam penelitian ini adalah uji daya hambat pertumbuhan diameter koloni dan luas bercak koloni busuk buah kakao. Data dianalisis menggunakan uji ANOVA dan uji Duncan Multiple Range Test (DMRT) dengan α : 5%. Hasil penelitian menunjukkan senyawa eugenol daun cengkeh berpengaruh nyata terhadap pertumbuhan diameter koloni, uji daya hambat koloni dan luas bercak koloni cendawan *P. palmivora*.

Kata kunci : Kakao (*Theobroma cacao* L.), *Phytophthora palmivora*, senyawa eugenol daun cengkeh

Dessy Rahmayani. NIM 180311100044. Inhibitory Test Eugenol of Clove Leaf Compounds (*Syzygium Aromaticum* L.) Against Pathogen Black Pod Rot Diseases in Cocoa Fruit (*Phytophthora palmivora*). Under the guidance of Dr. Ir. Gita Pawana, M.Si and Aris Budiman, S.P., M.Si.

ABSTRACT

Cocoa (*Theobroma cacao* L.) is one of the leading commodities in the plantation sub-sector in Indonesia, which contributes the third largest foreign exchange contribution to the country after oil palm and rubber. However, there was a decrease in cocoa productivity due to pest and disease attacks, the most important being cocoa pod rot disease caused by the fungal pathogen *Phytophthora palmivora*. Control of cocoa pod rot disease generally uses synthetic fungicides, but intensive use results in increased tolerance of pathogen strains and accumulation of fungicide residues against *P. palmivora*, so natural control is needed using clove leaf eugenol compounds which are known to have anti-fungal activity. The purpose of this study was to determine the inhibitory power of clove leaf eugenol compounds against the growth of the fungal pathogen *P. palmivora*. This study used a completely randomized design (CRD) with treatment with eugenol compounds as negative control (P0), positive control (P1), P2, P3, P4, and P5 with 4 replications with 2 samples. The variables in this study were the test of the inhibition of the growth of the diameter of the colony and the area of the colony spots of cacao pod rot. Data were analyzed using ANOVA test and Duncan Multiple Range Test (DMRT) with : 5%. The results showed that clove leaf eugenol compounds had a significant effect on the growth of colony diameter, colony inhibition test and colony area of the fungus *P. palmivora*.

Key words : Cocoa (*Theobroma cacao* L.), *Phytophthora palmivora*, clove leaf eugenol compounds