

Mutmainna. (180311100077). Efektivitas Ekstrak Daun Sirih Hijau (*Piper betle* L.) dan Mimba (*Azadirachta indica* A. Juss) terhadap Penyakit Antraknosa (*Colletotrichum* sp.) pada Buah Cabai Merah (*Capsicum annuum* L.)

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui efektivitas ekstrak daun sirih hijau (*Piper betle* L.) dan mimba (*Azadirachta indica* A. Juss) terhadap cendawan *Colletotrichum* sp. penyebab penyakit antraknosa pada buah cabai merah (*Capsicum annuum* L.). Penelitian ini dilaksanakan pada bulan Desember 2021 hingga juni 2022 di Laboratorium Terpadu Program Studi Agroteknologi, Fakultas Pertanian, Universitas Trunojoyo Madura, Bangkalan. Penelitian dilakukan secara *in vivo* dan *in vitro* dengan menggunakan Rancangan Acak Lengkap (RAL) Non Faktorial, dengan 8 perlakuan konsentrasi dari masing-masing uji dan kontrol yang diulang sebanyak 4 kali. Parameter pengamatan meliputi persentase daya hambat terhadap pertumbuhan cendawan *Colletotrichum* sp., masa inkubasi cendawan *Colletotrichum* sp., dan insidensi penyakit antraknosa pada cabai (*Capsicum annuum* L.). Berdasarkan penelitian dapat disimpulkan bahwa pengaplikasian ekstrak daun sirih hijau dan mimba berpengaruh nyata pada hari ketiga hingga kesepuluh HSI, namun tidak berpengaruh nyata pada hari kesebelas dan keduabelas HSI terhadap persentase daya hambat diameter koloni *Colletotrichum* sp. jika dibandingkan antar konsentrasi. Namun jika dibandingkan antar ekstrak tidak memberikan pengaruh yang nyata. Sedangkan untuk pengujian persentase insidensi penyakit dan masa inkubasi ekstrak daun mimba memberikan hasil yang lebih baik dibandingkan ekstrak daun sirih hijau.

Kata Kunci: Cabai merah (*Capsicum annuum* L.), *Colletotrichum* sp., ekstrak daun mimba (*Azadirachta indica* A. Juss), ekstrak daun sirih hijau (*Piper betle* L.).

Mutmainna. (180311100077). The Effectiveness of Green Betel Leaf Extract (*Piper betle* L.) and Neem (*Azadirachta indica* A. Juss) Against Anthracnose (*Colletotrichum* sp.) on Red Chili (*Capsicum annuum* L.). Supervised by: Ir. Achmad Djunaedy, M.P. and Dr. Ir. Gita Pawana, M.Si.

ABSTRACT

This study aimed to determine the effectiveness of extracts of green betel leaf (*Piper betle* L.) and neem (*Azadirachta indica* A. Juss) against the fungus *Colletotrichum* sp. the cause of anthracnose in red chili (*Capsicum annuum* L.). This research was conducted from December 2021 to June 2022 at the Integrated Laboratory of the Agrotechnology Study Program, Faculty of Agriculture, Trunojoyo University Madura, Bangkalan. The study was conducted in vivo and in vitro using a non-factorial completely randomized design (CRD), with 8 concentrations of each test and control treatment which was repeated 4 times. Parameters observed included the percentage of inhibition on the growth of the fungus *Colletotrichum* sp., the incubation period of the fungus *Colletotrichum* sp., and the incidence of anthracnose in chili (*Capsicum annuum* L.). Based on the research, it can be concluded that the application of green betel leaf extract and neem had a significant effect on the third to tenth day of DAI, but did not significantly affect on the eleventh and twelfth days of DIC on the percentage of inhibition of the diameter of *Colletotrichum* sp. when compared between concentrations. However, when compared between extracts did not give a real effect. Meanwhile, for testing the percentage of disease incidence and incubation period of neem leaf extract gave better results than green betel leaf extract.

Keywords: *Colletotrichum* sp., green betel leaf extract (*Piper betle* L.), red chili (*Capsicum annuum* L.), neem leaf extract (*Azadirachta indica* A. Juss).

