

ABSTRAK

LAUREN THALITA AMANDA. 2023. Uji *In-Vitro* Ekstrak Metanol Biji Kembang Telang (*Clitoria ternatea* L.) terhadap Jamur *Colletotrichum* spp. Isolat Cabai Merah (*Capsicum annum* L.). Dibimbing oleh TARKUS SUGANDA dan YANI MAHARANI.

Colletotrichum spp. merupakan jamur patogen penyebab penyakit antraknosa, penyakit yang sangat merugikan pada tanaman cabai. Pengendalian penyakit antraknosa mengandalkan fungisida sintetik yang dapat menimbulkan dampak negatif bagi lingkungan dan kesehatan manusia, sehingga diperlukan alternatif pengendalian yang lebih ramah lingkungan. Tanaman kembang telang (*Clitoria ternatea* L.) sering digunakan sebagai bahan obat tradisional karena memiliki kandungan senyawa fungsional yang bersifat antijamur dan antibakteri. Penelitian ini bertujuan untuk menguji efek antijamur ekstrak metanol biji kembang telang terhadap *Colletotrichum* spp. isolat tanaman cabai. Penelitian dilaksanakan pada bulan Februari sampai bulan April 2023 di Laboratorium Fitopatologi Departemen Hama dan Penyakit Tumbuhan, Fakultas Pertanian, Universitas Padjadjaran. Metode penelitian yang digunakan adalah metode percobaan dengan teknik makanan beracun dengan Rancangan Acak Lengkap yang terdiri atas 5 perlakuan dengan 5 ulangan. Konsentrasi ekstrak yang digunakan terdiri atas 1%, 2%, 3%, kontrol, dan fungisida Benazeb 80 WP mankozeb sebagai pembanding. Hasil penelitian menunjukkan ekstrak metanol biji kembang telang memberikan penghambatan pertumbuhan koloni tertinggi (34%) pada konsentrasi 3%. Penghambatan produksi konidia sebesar 28,8% diperlihatkan pada konsentrasi 1% dan tidak terjadi penghambatan pada konsentrasi 2% dan 3%. Ekstrak metanol biji kembang telang tidak dapat menghambat perkecambahan konidia jamur *Colletotrichum* spp. Keefektifan ekstrak metanol biji kembang telang masih lebih rendah dibandingkan dengan fungisida mankozeb. Mankozebe menghambat pertumbuhan koloni *Colletotrichum* spp. sebesar 59,67%, dan menghambat total produksi serta perkecambahan konidia.

Kata Kunci: Antijamur, fungisida botani, patogen antraknosa, *Clitoria ternatea* L.

ABSTRACT

LAUREN THALITA AMANDA. 2023. In-Vitro Test of Methanol Extract of Butterfly Pea (*Clitoria ternatea* L.) Seeds Against *Colletotrichum* spp. of Red Chili (*Capsicum annum* L.) Isolate. Supervised by TARKUS SUGANDA and YANI MAHARANI.

Colletotrichum spp. are pathogenic fungi that cause anthracnose, a very detrimental disease in chili plants. Anthracnose control relies on synthetic fungicides that can have a negative impact on the environment and human health, so more environmentally friendly control alternatives are needed. The butterfly pea plant (*Clitoria ternatea* L.) is often used as a traditional medicine ingredient because it contains functional compounds that are antifungal and antibacterial. This study aimed to test the antifungal effect of the methanol extract of butterfly pea seeds against *Colletotrichum* spp. of chili plants. The research was carried out from February to April 2023 at the Phytopathology Laboratory of the Department of Pests and Plant Diseases, Faculty of Agriculture, Universitas Padjadjaran. The research method used was an experimental method with poison food techniques in a Completely Randomized Design consisting of 5 treatments with 5 replications. The concentration of extracts used consisted of 1%, 2%, 3%, control, and fungicide Benazeb 80 WP (mancozeb) as a comparison. The results showed that the methanol extract of butterfly pea seeds provided the highest inhibition of colony growth (34%) at a concentration of 3%. Inhibition of conidia production of 28.8% was shown at a concentration of 1% and no inhibition at concentrations of 2% and 3%. Methanol extract of butterfly pea seeds cannot inhibit the germination of conidia of the fungus *Colletotrichum* spp. The effectiveness of the methanol extract of butterfly pea seeds is still lower than that of mancozeb fungicide. Mancozeb inhibits the growth of *Colletotrichum* spp. colonies by 59.67%, and totally inhibits the production and germination of *Colletotrichum* spp. conidia.

Keywords: Antifungal, botanical fungicide, anthracnose pathogen, *Clitoria ternatea* L.