PENGUJIAN BERBAGAI KONSENTRASI EKSTRAK BUAH SIRIH HUTAN (*Piper aduncum* L.) UNTUK PENGENDALIAN JAMUR PATOGEN TULAR BENIH PADA CABAI (*Capsicum annuum* L.)

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Abstrak

Jamur tular benih merupakan salah satu penyebab penurunan hasil produksi tanaman cabai. Penggunaan ekstrak buah sirih hutan dapat menekan pertumbuhan jamur tular benih pada cabai. Penelitian ini bertujuan untuk mendapatkan konsentrasi ekstrak buah sirih hutan yang efektif dalam mengendalikan jamur tular benih pada cabai. Penelitian terdiri dari 2 tahapan yaitu di Laboratorium dengan menggunakan Rancangan Acak Lengkap (RAL) dan di Rumah Kaca dengan menggunakan Rancangan Acak Kelompok (RAK). Penelitian di Laboratorium terdiri dari 1) *Blotter test* dengan menggunakan 7 perlakuan dan 16 ulangan; 2) Uji daya kecambah dengan menggunakan 7 perlakuan dan 8 ulangan. Penelitian di Rumah kaca terdiri dari uji lapang menggunakan 7 perlakuan dan 8 ulangan. Perlakuan yang digunakan yaitu kontrol, konsentrasi ekstrak buah sirih hutan 0,25%, 0,30%, 0,36%, 0,43%, 0,51% dan 0,60%. Data yang didapatkan dianalisis menggunakan sidik ragam dengan uji lanjut Least Significance Different (LSD) pada taraf 5%. Parameter pengamatan terdiri dari persentase benih cabai yang terserang jamur, karakteristik jamur patogen tular benih cabai, persentase benih terserang masing-masing jamur, persentase benih berkecambah normal, persentase bibt muncul lapang, persentase bibit terserang jamur, persentase bibit mati, persentase bibit yang *pre-emergence damping off* dan persentase bibit yang *post-emergence damping off*. Hasil penelitian menunjukkan bahwa semua konsentrasi efektif dalam menekan jamur tular benih pada cabai dengan efektivitas yang berbeda-beda. Konsentrasi ekstrak buah sirih hutan paling efektif yakni konsentrasi 0,60%.

Kata Kunci : Cabai, ekstrak buah sirih hutan, jamur patogen tular benih

TESTING VARIOUS CONCENTRATIONS OF FOREST BETEL FRUIT EXTRACT (*Piper aduncum* L.) FOR CONTROLLING SEED-BORNE PATHOGENIC FUNGI ON CHILI PEPPER (*Capsicum annum* L.)

Abstract

Seed-borne fungus is one of the causes of decreased production of chili plants. The use of forest betel fruit extract can suppress the growth of seed-borne fungi in chili. This study aims to obtain a concentration of forest betel fruit extract that is effective in controlling seed-borne fungi in chili. The research consists of 2 stages, namely in the Laboratory using a Completely Randomized Design (CRD) and in the Greenhouse using a Randomized Group Design (RGD). Research in the laboratory consists of 1) Blotter test using 7 treatments and 16 replicates; 2) Germination test using 7 treatments and 8 replicates. Research in the greenhouse consists of field tests using 7 treatments and 8 replicates. The treatments used were control, concentration of forest betel fruit extract 0.25%, 0.30%, 0.36%, 0.43%, 0.51% and 0.60%. The data obtained were analyzed using variance analysis with Least Significance Different (LSD) further test at the 5% level. The observation parameters consisted of the percentage of chili seeds attacked by fungi, the characteristics of chili seed-borne pathogenic fungi, the percentage of seeds attacked by each fungus, the percentage of normal germinated seeds, the percentage of bibt emerged in the field, the percentage of seedlings attacked by fungi, the percentage of dead seedlings, the percentage of seedlings that pre-emergence damping off and the percentage of seedlings that post-emergence damping off. The results showed that all concentrations were effective in suppressing seed-borne fungi in chili with different effectiveness. The most effective concentration of forest betel fruit extract is 0.60% concentration.

Key words : Chili, *Piper aduncum* fruit extract , seed-borne pathogenic fungi