

ABSTRAK

PENGARUH KOMBINASI KONSENTRASI DAN LAMA PERENDAMAN DALAM ASAM KLORIDA TERHADAP VIABILITAS DAN VIGOR BENIH SAWO (*Manilkara zapota L.*)

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Tanaman sawo (*Manilkara zapota L.*) memiliki kulit benih yang keras sehingga sulit berkecambah, untuk itu diperlukan perlakuan benih sebelum disemaikan dengan menggunakan asam klorida (HCl). Penelitian ini bertujuan untuk mengetahui pengaruh kombinasi konsentrasi dan lama perendaman benih sawo dalam larutan HCl terhadap viabilitas dan vigor benih. Percobaan dilakukan di Laboratorium Dasar, Laboratorium Proteksi Tanaman, Laboratorium Produksi, dan *Screen House* Fakultas Pertanian Universitas Siliwangi, Tasikmalaya pada bulan Januari sampai dengan Februari 2024. Menggunakan metode eksperimen dengan Rancangan Acak Kelompok dengan 10 perlakuan. Perendaman benih dilakukan pada berbagai kombinasi konsentrasi dan lama perendaman yaitu: A = *aquadest* selama 24 jam; B = HCl 15% selama 5 menit; C = HCl 15% selama 10 menit; D = HCl 15% selama 15 menit; E = HCl 30% selama 5 menit; F = HCl 30% selama 10 menit; G = HCl 30% selama 15 menit; H = HCl 45% selama 5 menit; I = HCl 45% selama 10 menit; J = HCl 45% selama 15 menit. Setiap perlakuan diulang sebanyak 3 kali, data pengamatan dianalisis menggunakan uji F dan jika terdapat pengaruh dilanjutkan dengan Uji Scott-Knott dengan taraf 5%. Hasil penelitian menunjukkan bahwa kombinasi konsentrasi dan lama perendaman dalam larutan asam klorida berpengaruh terhadap viabilitas dan vigor benih sawo. Perendaman benih sawo dalam asam klorida dengan konsentrasi 15% selama 5 menit sampai dengan 15 menit berpengaruh paling baik terhadap viabilitas dan vigor benih sawo, kecuali pada pengamatan bobot kering kecambah.

Kata kunci: konsentrasi, lama perendaman, sawo, viabilitas, vigor

ABSTRACT

THE EFFECT OF A COMBINATION OF CONCENTRATION AND SOAKING TIME IN HYDROCHLORIC ACID ON THE VIABILITY AND VIGOR OF SAPODILLA SEEDS (*Manilkara zapota* L.)

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Sapodilla plant (*Manilkara zapota* L.) have a hard seed coat that makes it difficult to germinate, so it is necessary to treat the seeds before sowing using hydrochloric acid (HCl). This study aims to determine the effect of a combination of concentration and soaking time of sapodilla seeds in HCl solution on seed viability and vigor. The experiment was conducted in the Basic Laboratory, Plant Protection Laboratory, Production Laboratory, and Screen House of the Faculty of Agriculture, Siliwangi University, Tasikmalaya from January to February 2024. Using an experimental method with Randomized Group Design with 10 treatments. Soaking the seeds was carried out in various combinations of concentration and soaking time, namely: A = *aquadest* for 24 hours ; B = 15% HCl for 5 minutes; C = 15% HCl for 10 minutes; D = 15% HCl for 15 minutes; E = 30% HCl for 5 minutes; F = 30% HCl for 10 minutes; G = 30% HCl for 15 minutes; H = 45% HCl for 5 minutes; I = 45% HCl for 10 minutes; J = 45% HCl for 15 minutes. Each treatment was repeated 3 times, the observation data were analyzed using the F test and if there was an effect, it was continued with the Scott-Knott Test with a level of 5%. The results showed that the combination of concentration and soaking time in hydrochloric acid affected the viability and vigor of sapodilla seeds. Soaking sapodilla seeds in hydrochloric acid with a concentration of 15% for 5 minutes to 15 minutes has the best effect on the viability and vigor of sapodilla seeds, except for the observation of sprout dry weight.

Keywords: concentration, soaking time, sapodilla, viability, vigor