

ABSTRAK

PENGARUH KOMBINASI KONSENTRASI KALIUM NITRAT (KNO_3) DAN LAMA PERENDAMAN TERHADAP VIABILITAS DAN VIGOR BENIH ASAM JAWA (*Tamarindus indica* L.)

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Benih asam jawa (*Tamarindus indica* L.) memiliki kulit benih yang keras sehingga sulit untuk berkecambah, untuk itu diperlukan perlakuan benih sebelum disemaikan dengan menggunakan kalium nitrat (KNO_3). Penelitian ini bertujuan untuk mengetahui pengaruh kombinasi konsentrasi dan lama perendaman benih asam jawa dalam larutan KNO_3 terhadap viabilitas dan vigor benih. Percobaan dilakukan di *Screen House* Mугarsari, Fakultas Pertanian, Universitas Siliwangi, Tasikmalaya pada bulan Mei 2023 sampai dengan Juli 2023. Menggunakan Rancangan Acak Lengkap dengan 8 perlakuan. Perendaman benih dilakukan pada berbagai kombinasi konsentrasi dan lama perendaman yaitu: A = air selama 24 jam; B = air selama 36 jam; C = KNO_3 0,5% selama 24 jam; D = KNO_3 0,5% selama 36 jam; E = KNO_3 1% selama 24 jam; F = KNO_3 1% selama 36 jam; G = KNO_3 1,5% selama 24 jam; H = KNO_3 1,5% selama 36 jam. Setiap perlakuan diulang sebanyak 4 kali, data pengamatan dianalisis menggunakan uji F dan jika terdapat pengaruh dilanjutkan dengan Uji Jarak Berganda Duncan pada taraf α 5%. Hasil penelitian menunjukkan bahwa kombinasi konsentrasi dan lama perendaman dalam KNO_3 berpengaruh terhadap viabilitas dan vigor benih asam jawa. Kombinasi perlakuan yang lebih baik dihasilkan pada konsentrasi KNO_3 1% dengan lama perendaman 24 jam.

Kata kunci : asam jawa, konsentrasi, lama perendaman, viabilitas, vigor

ABSTRACT

THE EFFECT OF COMBINATION OF POTASSIUM NITRATE (KNO₃) CONCENTRATION AND SOAKING TIME ON THE VIABILITY AND VIGOR OF TAMARIND SEEDS (*Tamarindus indica* L.)

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Tamarind seeds (*Tamarindus indica* L.) have hard seed coats making it difficult to germinate, for this reason seed treatment is required before sowing using potassium nitrate (KNO₃). This study aims to determine the effect of the combination of concentration and soaking time of tamarind seeds in KNO₃ solution on seed viability and vigor. The experiment was conducted at the Mugarisari Screen House, Faculty of Agriculture, Siliwangi University, Tasikmalaya from May 2023 to July 2023. Using a Completely Randomized Design with 8 treatments. Soaking the seeds was carried out in various combinations of concentrations and soaking time, namely: A = water for 24 hours; B = water for 36 hours; C = 0,5% KNO₃ for 24 hours; D = 0,5% KNO₃ for 36 hours; E = 1% KNO₃ for 24 hours; F = 1% KNO₃ for 36 hours; G = 1,5% KNO₃ for 24 hours; H = 1,5% KNO₃ for 36 hours. . Each treatment was repeated 4 times, the observational data were analyzed using the F test and if there is an effect, continued with Duncan's Multiple Distance Test with a level of α 5%. The results showed that the combination of concentration and soaking time in KNO₃ affected the viability and vigor of tamarind seeds. A better treatment combination was produced at a concentration of 1% KNO₃ with 24 hours of soaking time.

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