

**PENGARUH KONSENTRASI KALIUM NITRAT DAN
LAMA PERENDAMAN BENIH TERHADAP PEMATAHAN DORMANSI
BENIH PEPAYA**

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INTISARI

Biji pepaya bersifat dorman tidak dapat segera berkecambah meskipun berada pada lingkungan yang memungkinkan untuk perkecambahan sehingga menghambat penyediaan bibit. Untuk mempercepat perkecambahan benih dorman perlu perlakuan pematihan dormansi. Penelitian ini bertujuan mengetahui konsentrasi kalium nitrat dan lama perendaman benih yang paling baik untuk mematahkan dormansi benih pepaya. Penelitian dilaksanakan di Green House, Kebun Percobaan Universitas Mercu Buana Yogyakarta, Kaliurang Sedayu pada bulan Oktober sampai Desember 2020. Penelitian ini merupakan percobaan faktorial $3 \times 3 + 1$ kontrol yang disusun dalam Rancangan Acak Lengkap (RAL). Faktor pertama yaitu konsentrasi KNO_3 terdiri atas tiga aras yaitu 10; 15; dan 20%. Faktor kedua adalah lama perendaman benih terdiri atas tiga aras, yaitu 6; 8; dan 10 jam. Hasil penelitian menunjukkan tidak ada interaksi antara faktor konsentrasi KNO_3 dengan lama perendaman benih terhadap perkecambahan dan vigor bibit pepaya. Konsentrasi larutan KNO_3 berpengaruh nyata terhadap kecepatan berkecambah benih pepaya sedangkan lama perendaman tidak berpengaruh nyata. Benih pepaya yang direndam dalam larutan KNO_3 konsentrasi 20% berkecambah lebih cepat daripada konsentrasi 0 dan 10% . Pertumbuhan bibit pepaya tidak dipengaruhi oleh konsentrasi dan lama perendaman benih dalam larutan KNO_3 .

Kata kunci: pepaya, dormansi benih, pematihan dormansi, kalium nitrat

THE EFFECT OF POTASSIUM NITRATE CONCENTRATION AND SOAKING DURATION ON DORMANCY BREAKING OF PAPAYA SEED

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ABSTRACT

Papaya seeds are dormant and cannot germinate immediately even though they are in an environment that allows for germination, thus inhibiting the provision of seeds. To accelerate the germination of dormant seeds, dormancy breaking treatment is needed. This study aims to determine the best potassium nitrate concentration and soaking duration in dormancy breaking of papaya seed. The study was conducted at the Green House, Experimental Station Mercu Buana University Yogyakarta, Kaliurang Sedayu from October to December 2020. This study was a 3 x 3 +1 control factorial experiment arranged in a Completely Randomized Design (CRD). The first factor is the concentration of KNO_3 which consists of three levels, namely 10; 15; and 20%. The second factor is the duration of soaking the seeds consisting of three levels, namely 6; 8; and 10 hours. The results showed that there was no interaction between the KNO_3 concentration factor and the immersion time of the seeds on the germination and vigor of papaya seeds. The concentration of KNO_3 solution had a significant effect on the speed of germination of papaya seeds, while the immersion time had no significant effect. Papaya seeds soaked in 20% KNO_3 solution germinated faster than 0 and 10% concentrations. The growth of papaya seeds was not affected by the concentration and duration of soaking the seeds in KNO_3 solution.

Keywords: papaya, seed dormancy, dormancy breaking, potassium nitrate