Pengaturan suhu inkubasi dan perlakuan benih dalam upaya meningkatkan daya tumbuh benih carica

Title	Pengaturan suhu inkubasi dan perlakuan benih dalam upaya meningkatkan daya tumbuh benih carica
Author Order	1 of 2
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Abstract	AbstrakBuah carica merupakan jenis buah khas tropis namun memiliki kendala dalam produksi benihnya. Benih carica memiliki daya kecambah rendah disebabkan oleh adanya lapisan sarcotesta yang menjadi penghambat dalam proses perkecambahan. Penelitian ini bertujuan untuk mengetahui pengaruh penghilangan lapisan sarcotesta terhadap viabilitas benih carica dan menentukan suhu optimum untuk mematahkan dormansi benih dan mempertahankan viabilitas benih carica. Penelitian ini dilaksanakan menggunakan Rancangan Acak Kelompok yang terdiri daridua faktor, yaitu faktor penghilangan lapisan sarcotesta terdiri atas benih tanpa sarcotesta dan ber-sarcotesta, sertafaktor inkubasi suhu, yang terdiri atas inkubasi 15 Ã‚ºC, 25 Ã‚ºC, 35 Ã‚ºC, dan 45 0C. Variabel yang diamati antara lain kadar air (%),daya hantar listrik (mS/m), laju respirasi benih (mol/g/jam), jumlah benih rusak (%), kandungan fenol, dan uji lapanganmeliputi daya kecambah (%), kecepatan pematahan dormansi (hari), potensi tumbuh maksimum (%),dan indeks vigor benih. Hasilpenelitian menunjukkan bahwa penghilangan lapisansarcotestamampu meningkatkan daya tumbuh benih carica. Suhu inkubasi 15 oC memberikan viabilitas terbaik, namun belum ditemukan suhu optimum yang mampu mematahkan dormansi benih dan mempertahankan viabilitas benih.Kata kunci: Benih caricaÃ‚Â Ã¢Â€Â™Ã‚Â Dormansi benihÃ‚Â Ã¢Â€Â™Ã‚Â SarcotestaÃ‚Â Ã¢Â€Â™ Vigor dan viabilitas benihÃ‚Â AbstractÃ‚Â Carica fruit is a typical tropical fruit with seed production problem. Carica seeds have low germination rate due to the presence of a sarcotesta layer which is an inhibitor in the germination process. The objective of this study was to determine the effect of removing the sarcotesta on the viability of carica seeds and to determine the optimum temperature to break seed dormancy and maintain viability of carica seeds. This experiment was conducted using a completely randomized block design consisting of two factors, i.e., removal treatment and temperature. The first factor was composed of removed sarcotesta seed and normal seed with sarcotesta. Temperature treatment was composed of 4 levels, i.e., 15Ã‚ºC, 25Ã‚ºC, 35Ã‚ºC, and 450C. The observed variables were moisture content (%), electrical conductivity (mS/m), seed respiration rate (mol/g/hour) number of damaged seeds (%), phenolic content, and field tests included germination rate (%), dormancy breaking speed (days), maximum growth potential (%), and seed vigor index. The results showed that removing the sarcotesta layer was able to improve growth capacity of carica seeds. Temperature treatment at 15 oC was determined as the optimum temperature that could break seed dormancy and also maintain seed viability.Keywords: Carica seedÃ‚Â Ã¢Â€Â™Ã‚Â SeedÃ‚Â dormancyÃ‚Â Ã¢Â€Â™Ã‚Â SarcotestaÃ‚Â Ã¢Â€Â™Ã‚Â Seed vigor and viabilityÃ‚Â Ã‚Â
Publisher Name	Universitas Padjadjaran
Publish Date	2021-12-11
Publish Year	2021
Doi	DOI: 10.24198/kultivasi.v20i3.32626
Citation	
Source	Kultivasi
Source Issue	Vol 20, No 3 (2021): Jurnal Kultivasi
Source Page	149-159
Url	http://jurnal.unpad.ac.id/kultivasi/article/view/32626/16549
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