

ABSTRACT

THE EFFECT OF BASIC MEDIA AND TRIPTON ON THE IN VITRO GROWTH OF SELF-SEEDLING RESULTS OF 'UNILA CAMPUS GARDEN' DENDROBIUM ORCHIDS

By

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Public interest in orchids needs to be increased to maintain their sustainability by hybridizing orchid parents that have superior characteristics and continued with the propagation of orchids from crosses through in vitro culture. This study aims to study the effect of three types of basic media with or without the addition of tryptone, and the interaction of both on the growth of seedlings from selfing of *Dendrobium* orchids 'Unila Campus Garden' in vitro. Six treatments were arranged factorially (3 x 2) in a completely randomized design (CRD), with the first factor being three basic media formulations, namely Murashige and Skoog (MS), ½ MS and 2 g/l Growmore (NPK 32:10:10). The second factor was without tryptone and with the addition of 2 g/l tryptone. Each treatment was repeated three times, and each experimental unit consisted of 3 bottles in which 5 explants were planted. The seedling growth data obtained from this study were analyzed for variance (ANOVA), then if there was a significant difference between treatments, the smallest significant difference (LSD) test was carried out at the 5% level. The observation results showed that there was no interaction between the base media and tryptone in almost all observation variables. The 2 g/l Growmore base media produced seedling growth that was as good or better than ½ MS media, and both were almost always better than MS media for the growth of *Dendrobium* orchid seedlings in vitro. The addition of tryptone to the media can increase seedling growth as indicated by the height and fresh weight of the seedlings.

Key words: Orchid, *seedling*, *Dendrobium*, basic media, trypton.

ABSTRAK

PENGARUH MEDIA DASAR DAN TRIPTON TERHADAP PERTUMBUHAN *IN VITRO SEEDLING* HASIL *SELFING* ANGGREK *DENDROBIUM* 'UNILA CAMPUS GARDEN'

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Minat masyarakat terhadap anggrek perlu ditingkatkan untuk mempertahankan kelestariannya dengan cara hibridisasi tetua tetua anggrek yang memiliki sifat unggul dan dilanjutkan dengan perbanyakan anggrek hasil persilangan melalui kultur *in vitro*. Penelitian ini bertujuan untuk mempelajari pengaruh tiga jenis media dasar dengan atau tanpa penambahan tripton, serta interaksi keduanya terhadap pertumbuhan *seedling* hasil *selfing* anggrek *Dendrobium* 'Unila Campus Garden' *in vitro*. Enam perlakuan disusun secara faktorial (3 x 2) dalam rancangan acak lengkap (RAL), dengan faktor pertama tiga formulasi media dasar, yaitu Murashige dan Skoog (MS), ½ MS dan 2 g/l Growmore (NPK 32:10:10). Faktor kedua adalah tanpa tripton dan dengan penambahan tripton 2 g/l. Setiap perlakuan diulang tiga kali, dan setiap unit percobaan terdiri 3 botol yang di setiap botolnya ditanam 5 eksplan. Data pertumbuhan *seedling* yang diperoleh dari penelitian ini dianalisis ragamnya (ANOVA), lalu jika terdapat perbedaan nyata antar perlakuan dilakukan uji beda nyata terkecil (BNT) pada taraf 5%. Hasil pengamatan menunjukkan, tidak terdapat interaksi antara media dasar dengan tripton pada hampir semua variabel pengamatan. Media dasar 2 g/l Growmore menghasilkan pertumbuhan *seedling* yang sama baiknya atau lebih baik daripada media ½ MS, dan keduanya hampir selalu lebih baik daripada media MS untuk pertumbuhan *seedling* anggrek *Dendrobium in vitro*. Penambahan tripton pada media dapat meningkatkan pertumbuhan *seedling* yang ditunjukkan oleh tinggi dan bobot segar *seedling*.

Kata kunci: Anggrek, *seedling*, *Dendrobium*, media dasar, tripton