

## ABSTRAK

### **Rakia Munggarani Wajra, 2016, PENGARUH SUMBER KARBON PADA PEMBESARAN PLANLET *DENDROBIUM* DIAN AGRIHORTI MENGGUNAKAN MEDIA *VANCIN & WENT* (VW) DAN *MURASHIGE & SKOOG* (MS), Di bawah bimbingan Liberty Chaidir dan Sri Rianawati.**

*Dendrobium* Dian Agrihorti merupakan salah satu varietas *Dendrobium* hasil silangan Balithi yang memiliki ukuran bunga sedang, kesegaram bunga lama, bentuk dan warna yang menarik. Penelitian ini bertujuan untuk (1) mengetahui media terbaik dalam pertumbuhan anggrek *Dendrobium*, Dian Agrihorti, (2) untuk mengetahui pengaruh variasi jenis media pembesaran juga pengaruh sumber karbon pada pertumbuhan planlet dan (3) untuk mengetahui pengaruh sumber karbon yang berbeda terhadap pertumbuhan planlet. Penelitian ini dilakukan di Laboratorium Kultur Jaringan Balai Penelitian Tanaman Hias (BALITHI), Cianjur, dari Januari hingga Juni 2016. Metode yang digunakan adalah Rancangan Acak Lengkap (RAL) 2 faktor dengan 10 perlakuan kombinasi. Faktor pertama adalah media dasar, yaitu MS (M1) dan VW (M2), dan faktor kedua adalah Sumber karbon, yaitu 0,1mg/l BAP + gula (K1), 0,5 mg/l BAP + gula (K2), maltose (K3), sukrosa (K4) dan fruktosa (K5). Setiap perlakuan dilakukan dengan 3 ulangan, 3 botol percobaan setiap unit, 3 eksplan setiap botol, sehingga keseluruhan digunakan 270 planlet percobaan. Hasil analisis varian dan di analisis lanjut menggunakan uji *Duncan* dengan taraf kepercayaan 95%. Perlakuan media yang digunakan adalah PD-1 = MS + 10 % air kelapa + 1 g/l carcoal + 0,1 mg/l BAP + 20 g/l gula; PD-2 = MS + 10 % air kelapa + 1 g/l carcoal + 0,5 mg/l BAP + 20 g/l gula; PD-3 = MS + 10 % air kelapa + 1 g/l carcoal + 20 g/l maltose; PD-4 = MS + 10 % air kelapa + 1 g/l carcoal + 20 g/l sukrosa; PD-5 = MS + 10 % air kelapa + 1 g/l carcoal + 20 g/l fruktosa; PD-6 = VW + 10 % air kelapa + 1 g/l carcoal + 0,1 mg/l BAP + 20 g/l gula; PD-7 = VW + 10 % air kelapa + 1 g/l carcoal + 0,5 mg/l BAP + 20 g/l gula; PD-8 = VW + 10 % air kelapa + 1 g/l carcoal + 20 g/l maltose; PD-9 = VW + 10 % air kelapa + 1 g/l carcoal + 20 g/l sukrosa; dan PD-10 = VW + 10 % air kelapa + 1 g/l carcoal + 20 g/l fruktosa. Hasil penelitian menunjukkan bahwa Media PD-6 berpengaruh nyata pada tinggi tanaman dan juga jumlah daun, media PD-1 berpengaruh nyata pada panjang daun, media PD-10 berpengaruh nyata pada jumlah akar Anggrek *Dendrobium* Dian Agrihorti, dan media PD-9 memiliki rata-rata terpanjang.

Kata Kunci: Air Kelapa, Arang Aktif, *Dendrobium* Dian Agrihorti, MS, Sumber Karbon, VW

## ABSTRACT

***Rakia Munggaran Wajra, 2016, Different Carbon Source on Enlargement Potency of Dendrobium Dian Agrihorti Plantlets on Media Vancin & Went (VW) Dan Murashige & Skoog (MS), Supervised by Liberty Chaidir dan Sri Rianawati.***

*Dendrobium Dian Agrihorti is one dendrobium varieties result of crosses conducted by Balithi which has size media flowers, fresh flowers long lasting, attractive shape and color. This study aimed (1) to know the best media for the growth of Dendrobium orchid, Dian Agrihorti, (2) to know the growth influence of Dendrobium Dian Agrihorti plantlets to the variation of enlargement media types and (3) to know the influence of carbon sources on the growth of plantlets. This research was conducted at Tissue Culture Laboratory of Ornamental Plants Research Center (Balithi), Cianjur, from January to June 2016. The method used is Complete Random Design (RAL) two factor with 10 treatment combination. First factor are basic media, ie MS (M1) dan VW (M2). second factor are carbon source, ie 0,1mg/l BAP + sugar (K1), 0,5 mg/l BAP + sugar (K2), maltose (K3), sukrose (K4) dan fruktose (K5). With each of treatment performed consisted of 3 replications, 3 bottles of trial per unit, 3 explants per bottle, so that the whole experiment used 270 plantlets. The results were analyzed of variants and further analysis by Duncan test with 95% confidence level. Treatment of the media used is PD-1 = MS + 10% coconut water + 1 g / l carcoal + 0.1 mg / l BAP + 20 g / l sugar; PD-2 = MS + 10% coconut water + 1 g / l carcoal + 0.5 mg / l BAP + 20 g / l sugar; PD-3 = MS + 10% coconut water + 1 g / l carcoal + 20 g / l maltose; PD-4 = MS + 10% coconut water + 1 g / l carcoal + 20 g / l sucrose; PD-5 = MS + 10% coconut water + 1 g / l carcoal + 20 g / l fructose; PD-6 = VW + 10% coconut water + 1 g / l carcoal + 0.1 mg / l BAP + 20 g / l sugar; PD-7 = VW + 10% coconut water + 1 g / l carcoal + 0.5 mg / l BAP + 20 g / l sugar; PD-8 = VW + 10% coconut water + 1 g / l carcoal + 20 g / l maltose; PD-9 = VW + 10% coconut water + 1 g / l carcoal + 20 g / l sucrose; and PD-10 = VW + 10% coconut water + 1 g / l carcoal + 20 g / l fructose. The results showed that the Media PD-6 real effect on the plant height and at the number of, media PD-1 has real effect in the long-leaf, media PD-10 has real effect on the number of roots at Dendrobium Orchids Dian Agrihorti, media PD-9 had an longest average of the lenght roots.*

***Keywords: Coconut Water, Charcoal, Carbon Source, Dendrobium Dian Agrihorti, MS, VW.***