

PENGARUH INTENSITAS CAHAYA DAN KONSENTRASI PUPUK DAUN TERHADAP PERTUMBUHAN BIBIT ANGGREK DENDROBIUM

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INTISARI

Anggrek merupakan salah satu tanaman hias yang populer di Indonesia. Potensi anggrek sebagai bagian dari keanekaragaman hayati perlu dilestarikan dari kepunahan. Penelitian ini bertujuan mengetahui pengaruh intensitas cahaya dan pemberian pupuk daun *Growmore* serta interaksi keduanya terhadap pertumbuhan bibit anggrek *Dendrobium*. Penelitian ini dilaksanakan di *Greenhouse* UPT Kebun Kaliurang, Fakultas Agroindustri, Universitas Mercu Buana Yogyakarta dengan ketinggian ± 114 m dpl, dari bulan April hingga Juli 2018. Penelitian ini merupakan percobaan faktorial. Rancangan penelitian ini adalah Rancangan Acak Lengkap dengan 6 perlakuan yakni I1 = di bawah naungan (65 %), I2 = di bawah sinar matahari secara langsung, P1 = pupuk daun *Growmore* 0,5 g/liter air, P2 = pupuk daun *Growmore* 1 g/liter air, dan P3 = pupuk daun *Growmore* 1,5 g/liter air yang dikombinasikan dan 3 ulangan hingga terdapat total 18 unit percobaan. Hasil penelitian menunjukkan bahwa pertambahan tinggi tanaman anggrek pada perlakuan pengaruh intensitas cahaya dan pemberian pupuk daun *Growmore* tiap minggunya berbeda nyata. Pertambahan jumlah daun tanaman anggrek pada perlakuan pengaruh intensitas cahaya minggu ke 2, 3, 8 dan pemberian pupuk daun *Growmore* minggu ke 5 dan 8 berbeda nyata. Pertambahan panjang daun tanaman anggrek minggu ke 1, 2, 6, 7, 10, 11 dan pemberian pupuk daun *Growmore* tiap minggunya berbeda nyata. Pertambahan jumlah akar tanaman anggrek pada perlakuan pengaruh intensitas cahaya dan pemberian pupuk daun *Growmore* tidak berbeda nyata. Pertambahan panjang akar tanaman anggrek pada perlakuan pengaruh intensitas cahaya dan pemberian pupuk daun *Growmore* berbeda nyata. Pertambahan jumlah tunas tanaman anggrek dan saat munculnya tunas tanaman anggrek pada perlakuan pengaruh intensitas cahaya dan pemberian pupuk daun *Growmore* tidak berbeda nyata. Bobot segar brangkasan tanaman anggrek dan bobot kering brangkasan tanaman anggrek pada perlakuan pengaruh intensitas cahaya dan pemberian pupuk daun *Growmore* berbeda nyata.

Kata Kunci: *Anggrek Dendrobium, bibit, pupuk daun, growmore, intensitas cahaya, naungan, tanpa naungan*

THE EFFECT OF LIGHT INTENSITY AND CONCENTRATION OF LEAF FERTILIZER ON THE SEEDLING GROWTH OF DENDROBIUM ORCHID

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ABSTRACT

Orchid is one of the most popular ornamental plants in Indonesia. The potential of orchids as part of biodiversity needs to be conserved from extinction. This study aims to determine the effect of light intensity and Growmore leaf fertilizer and their interaction on the growth of seedlings of *Dendrobium* orchids. This research was carried out in the Greenhouse UPT Kaliurang, Faculty of Agro-industry of University of Mercu Buana Yogyakarta with an elevation about + 114 m above sea level started from April until July 2018. This research is a factorial experiment. The design of this study was a Randomized Complete Design with 6 treatments namely I1 = under shade (65%), I2 = under direct sunlight, P1 = 0.5 g of Growmore /L of water, P2 = 1 g of Growmore /L of water, and P3 = 1.5 g of combined Growmore leaf fertilizer /L of water and 3 replications until there are 18 in total of experimental units. The results showed that the increase in the height of orchids in the treatment of the effect of light intensity and Growmore leaf fertilizer were significantly different in weekly basis. The increase in the number of orchid leaves in the treatment of the influence of light intensity in week 2nd, 3rd, 8th and the application of Growmore leaf fertilizer in week 5th and 8th were significantly different. The growth of orchid leaves length started from week 1st, 2nd, 6th, 7th, 10th, 11th and Growmore leaf fertilizer were significantly different. The increase in the number of roots of orchids in the treatment of the influence of light intensity and the application of Growmore leaf fertilizer was not significantly different. The increase in the length of the roots of orchids in the treatment of the effect of light intensity and Growmore leaf fertilizer was significantly different. The increase in the number of orchid shoots and the emergence of orchid buds in the treatment of the influence of light intensity and Growmore leaf fertilizer was not significantly different. Fresh weight of orchid stover and dry weight of orchid stover with light intensity treatment and Growmore leaf fertilizer were significantly different.

Keywords: *Dendrobium orchid, seeds, leaf fertilizer, growmore, light intensity, shade*