

ABSTRAK

Ade Alya Yasmint, NIM 4203520004 (2020), Pengaruh Indole Butyric Acid (IBA) Dan Air Kelapa Terhadap Pertumbuhan Tunas Tanaman Anggrek *Cattleya* sp. Secara In Vitro.

Penelitian ini bertujuan untuk mengamati pengaruh konsentrasi Indole Butyric Acid (IBA) dan air kelapa terhadap pertumbuhan tunas tanaman anggrek *Cattleya* sp. Secara in vitro menggunakan metode kultur jaringan. Penelitian dilakukan di Laboratorium Kultur Jaringan YAHDI pada Maret hingga Juli 2024. Terdapat 9 perlakuan dengan kombinasi konsentrasi IBA (0, 1, 2 mg/l) dan air kelapa (0, 50, 100 ml/l), yang masing-masing diulang 3 kali, menghasilkan total 27 unit percobaan. Variabel yang diamati meliputi waktu munculnya tunas, jumlah tunas, jumlah daun, dan tinggi planlet. Hasil penelitian menunjukkan bahwa tidak ada pengaruh IBA terhadap pertumbuhan tunas, namun 2 ulangan dari setiap parameter yang diamati mengalami pertumbuhan tunas yaitu IBA1 1 mg/l. Tidak ada pengaruh air kelapa terhadap pertumbuhan tunas, namun 2 ulangan dari setiap parameter yang diamati mengalami pertumbuhan tunas yaitu air kelapa 100 ml/l. Tidak ada pengaruh interaksi IBA dan air kelapa terhadap pertumbuhan tunas, namun 2 ulangan dari setiap parameter yang diamati mengalami pertumbuhan tunas yaitu I₂AK₁. Meskipun demikian, analisis varians menunjukkan bahwa pemberian IBA dan air kelapa tidak berpengaruh signifikan terhadap jumlah tunas, jumlah daun, dan tinggi planlet anggrek pada umur 6 MST. Pengamatan menunjukkan bahwa interaksi antara IBA dan air kelapa tidak cukup optimal untuk merangsang pertumbuhan tunas, dan penggunaan daun anggrek yang lebih muda memberikan hasil terbaik. Penelitian ini memberi wawasan mengenai penggunaan air kelapa dalam kultur jaringan untuk meningkatkan pertumbuhan anggrek *Cattleya*, meskipun efektivitasnya masih terbatas pada konsentrasi tertentu.

Kata Kunci: Indole Butyric Acid, Air Kelapa, Tunas Tanaman Anggrek

ABSTRACT

Ade Alya Yasmint, NIM 4203520004 (2020), This study aims to observe the effect of Indole Butyric Acid (IBA) and coconut water concentrations on the growth of Cattleya sp. orchid shoots in vitro using tissue culture methods.

This study aims to observe the effect of Indole Butyric Acid (IBA) and coconut water concentrations on the growth of Cattleya sp. orchid shoots. In vitro using tissue culture methods. The study was conducted at the YAHDI Tissue Culture Laboratory from March to July 2024. There were 9 treatments with a combination of IBA concentrations (0, 1, 2 mg/l) and coconut water (0, 50, 100 ml/l), each of which was repeated 3 times, resulting in a total of 27 experimental units. The variables observed included the time of shoot emergence, number of shoots, number of leaves, and plantlet height. The results showed that there was no effect of IBA on shoot growth, but 2 replications of each observed parameter experienced shoot growth, namely IBA1 1 mg/l. There was no effect of coconut water on tuna growth, but 2 replications of each observed parameter experienced shoot growth, namely coconut water 100 ml/l. There was no effect of IBA and coconut water interaction on shoot growth, but 2 replications of each observed parameter experienced shoot growth, namely I2AK1. However, the analysis of variance showed that the administration of IBA and coconut water did not significantly affect the number of shoots, number of leaves, and height of orchid plantlets at the age of 6 MST. Observations showed that the interaction between IBA and coconut water was not optimal enough to stimulate shoot growth, and the use of younger orchid leaves gave the best results. This study provides insight into the use of coconut water in tissue culture to increase the growth of Cattleya orchids, although its effectiveness is still limited to certain concentrations.

Keywords: Indole Butyric Acid, Coconut Water, Orchid Shoots