

ABSTRACT

Lack of duku rejuvenation can cause a decline in both the amount of production and can threaten the population. So there needs to be a way to overcome this setback with tissue culture techniques. This study aims to determine the effect of giving growth regulators 2,4-D and BAP to leaf explants (*folium*) in inducing callus. The media used in the initiation of leaf explants was MS media (*Murasigh and Skoog*) with a combination of concentrations of 0 ppm (2,4-D) + 0 ppm (BAP); 1 ppm (2,4-D) + 1 ppm (BAP); 1 ppm (2,4-D) + 2 ppm (BAP); 1 ppm (2,4-D) + 3 ppm (BAP); 1 ppm (2,4-) + 4 ppm (BAP). This research was conducted for 28 days at the Tissue Culture Laboratory of UIN Raden Fatah Palembang. The research design used in this study was a completely randomized design (RAL). The data obtained in the study were analyzed descriptively quantitative. The results of the study showed that the administration of a combination of growth regulators 2,4-D and BAP to leaf explants (*folium*) did not give a real response to callus induction. The explants experienced stagnation and browning. Encyclopedia media validation results get an overall score with a total of 97.01% belonging to a very valid category.

Keywords: 2,4-D, BAP, Leaf, Encyclopedia, Callus, Tissue Culture, MS, Duku Plant

ABSTRAK

Kurangnya peremajaan duku dapat menyebabkan kemunduran baik dari jumlah produksi sehingga dapat mengancam populasi. Oleh karena itu perlu adanya cara untuk mengatasi kemunduran tersebut dengan teknik kultur jaringan. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian zat pengatur tumbuh 2,4-D dan BAP terhadap eksplan daun (*folium*) dalam menghinduksi kalus. Media yang digunakan dalam inisiasi eksplan daun media MS (*Murasigh and Skoog*) dengan kombinasi konsentrasi 0 ppm (2,4-D) + 0 ppm (BAP); 1 ppm (2,4-D) + 1 ppm (BAP); 1 ppm (2,4-D) + 2 ppm (BAP); 1 ppm (2,4-D) + 3 ppm (BAP); 1 ppm (2,4-) + 4 ppm (BAP). Penelitian ini dilakukan selama 28 hari di Laboratorium Kultur Jaringan UIN Raden Fatah Palembang. Rancangan penelitian yang digunakan dalam penelitian ialah rancangan acak lengkap (RAL). Data yang diperoleh dalam penelitian dianalisis secara deskriptif kuantitatif. Hasil peneltian menunjukkan bahwa pemberian kombinasi zat pengatur tumbuh 2,4-D dan BAP terhadap eksplan daun (*folium*) belum memberikan respon nyata terhadap induksi kalus. Eksplan mengalami stagnasi dan browning. Hasil validasi media Ensiklopedia mendapatkan skor keseluruhan dengan total 97,01% tergolong kategori sangat valid.

Kata Kunci : 2,4-D, BAP, Daun, Ensiklopedia, Kalus, Kultur Jaringan, MS, Tanaman Duku