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Effective of Plant Growth Regulators on Mass Production from Leaf Segments Culture of *Dracaena fragrans*

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Objectives

The aim of this study was to find an effective of plant growth regulators on rapid mass production for plant regeneration through organogenesis from leaf segments culture of *Dracaena fragrans*.

Materials and Methods

1. Plant Materials: Potted plants of *Dracaena fragrans*, grown in glass house of Chonbuk Nat'l University.
2. Medium and culture conditions: Leaf segments of *Dracaena fragrans* were cultured on Murashige and Skoog(1962) basal medium containing 2,4-D, NAA and BA. Produced calli and multiple shoots were isolated and subcultured on MS media with 3.0 mg./L NAA plus 3.0 mg/L BA. All explants were incubated at 25 +1°C and in 16-h photoperiod.

Results and Discussion

Effect of 2,4-D, NAA and BA on calli and shoot formation

All explants on the 10 initiating media formed callus after about 2 weeks of culture. Three weeks later, some calli produced shoots on media with 0.5-3.0 mg/L NAA and BA(0.5-3.0 mg/L), the best production of compact and yellowish calli and shoots was on MS medium with 2.0 to 3.0 mg/L NAA and BA, respectively. Whereas on media 2,4-D(0.5-3.0 mg/L) and BA(1.0mg/L), they only induced wetted calli and did not form shoot.

Effect of NAA and BA on muliti shoot production

Rapid production and growth showed on MS medium with NAA plus BA. media..However, rooted shoot only produced on media containing 0.5-1.0 mg/L BA. The greatest frequency(80-95%) of shoot formation were induced on MS medium with 1.0-3.0 mg/L NAA plus BA and we isolated 5-8 plantlets from one explant. For rooting, shoots transferred to MS media without plant growth regulators. Plants were transferred to glass bottles for three months before being transplanted to the pot.