

Conservation of *Curcuma caesia* Roxb.- A critically endangered species via *in vitro* plant regeneration from organogenic callus

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ABSTRACT

A novel protocol for callus mediated shoot regeneration and somatic embryogenesis was established for *Curcuma caesia* Roxb, a critically endangered species of North east India. Vigorous callus growth was observed in MS medium containing higher concentration of 5.0 mg l⁻¹ 2, 4-D from pseudostem explants. More than 70% of the pseudostem explants of this species responded for callus induction within 22 days of culture. After 4 subcultures these callus showed embryogenic response in MS medium containing 2.0 mg l⁻¹ BAP with 0.05 mg l⁻¹ NAA. Shoots were successfully regenerated on MS medium with a concentrations of 0.25 mg l⁻¹ Kn and 0.05 mg l⁻¹ GA₃ within 25 days of transfer. Single shoots transferred into MS basal medium free of plant growth regulator rooted well with (80%) survivability under field condition.

Key words: *Curcuma caesia*, callus induction, somatic embryogenesis, plant regeneration

