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PROCEEDINGS

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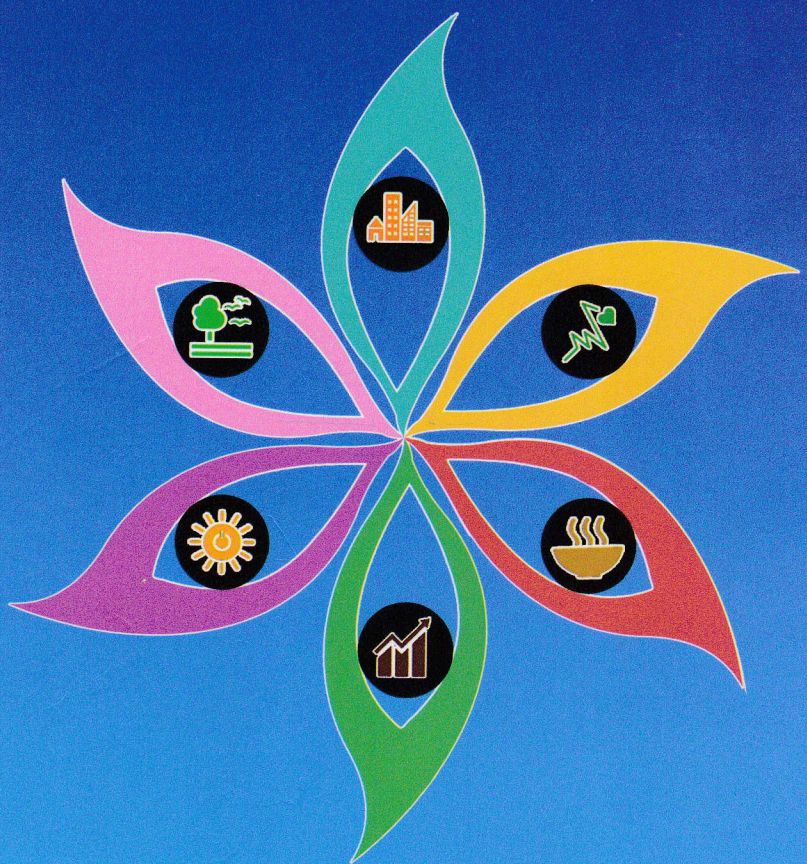

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Development of a somatic embryogenesis protocol for tea (*Camellia Sinensis*l.) O. Kuntze) from leaf calli

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Somatic embryogenesis is an efficient regeneration system with high genetic integrity which useful in tea crop improvement. The present study was conducted with the objective of developing a viable somatic embryogenic protocol from leaf calli of tea. Leaf segments of 3rd leaves of TRI 2043 and 2024 cultivars were used to induce calli and for induction of somatic embryos 2nd and 3rd sub cultures were selected. Calli were inoculated in MS media with (i) 2 mgl^{-1} benzyl amino purine + 3 mgl^{-1} naphthol acetic acid; and (ii) 2 mgl^{-1} benzyl amino purine + 3.5 mgl^{-1} naphthol acetic acid growth regulator combinations. The greatest amount of embryogenic callus proliferation in both cultivars was achieved from 3rd subcultures using 2 mgl-1 benzyl amino purine + 3.5 mgl^{-1} naphthol acetic acid medium. Compact and friable callus was observed in all culture bottles 3 weeks after culturing and friable calli was reported as the best for somatic embryo induction. Somatic embryoids were observed in 2 mgl^{-1} benzyl amino purine + 3 mgl^{-1} naphthol acetic acid of TRI 2043. Significantly highest relative growth rate (92.21 %) was observed from leaf callus in 2 mgl^{-1} benzyl amino purine + 3.5 mgl^{-1} naphthol acetic acid of TRI 2024 when, using 2nd subculture (Mean value 83.89). second subculture of leaf callus in MS medium with 2 mgl^{-1} benzyl amino purine + 3 mgl^{-1} naphthol acetic acid is better to induce somatic embryos.

Keywords: Leaf callus, Somatic embryogenesis, Somatic embryos