

Micropropagation of *Coffea arabica* cv. Cauvery via Somatic Embryogenesis

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SUMMARY

Plant regeneration through somatic embryogenesis is reported in three genotypes of *Coffea arabica* (Cauvery / Catimor) viz., S.4347, S. 4348 and S. 4350 from cultured leaf tissues. In all the experiments, MS medium supplemented with different combinations and concentrations of auxins (2,4-D and NAA) and cytokinins (Kn, BAP and TDZ) supplemented with 50 mg l⁻¹ of L-cystiene HCl were used initially for callus induction. The calli were subcultured at 30-40 days intervals onto fresh medium with 1 mg l⁻¹ each of 2,4-D and BAP and also different concentrations of BAP alone. After 4 months of incubation of the callus induction medium, embryogenic calli developed in S. 4348 genotype followed by S. 4347 and S. 4350 genotypes. Initially, low frequency of somatic embryogenesis was achieved in all the genotypes tested. However, after subculture on half-strength MS medium with 0.1 mg l⁻¹ of Kn, high frequency as well as more uniform somatic embryos were obtained. After 4-5 subcultures at monthly intervals, these somatic embryos were germinated and converted into plantlets on the same medium. Subsequently, plantlets grew further, hardened and established in the field. Regenerated plants and seedlings were compared for different morphological and agronomic characteristics.