Effect of Growth Regulators on *In-vitro* Shooting of *Calathea ornata* for Commercial Cultivation

G.H.N. Maheepala[1], D. de Silva [2], P.E. Kaliyadasa[1] and G.Y.A.D.D. Perera[1]

[1] *Department of Export Agriculture, Uva Wellassa University, Badulla, Sri Lanka*
[2]*Serandib Horticulture Technologies (Pvt) Ltd, Boralesgamuwa, Sri Lanka*

Clathea ornata is a foliage plant belongs to the family Marantaceae, having high commercial value all over the world as a house plant due its attractiveness. This study, focused to develop cost effective shoot induction protocol to obtain high number of shoots for commercial usage. The effects of different sterilization techniques, explant types, various combination and concentration of plant growth regulators on shoot induction were studied. The meristem explant showed high induction rate of shoots with minimum contamination percentage when explant treated with 20% (v/v) NaOCl for 10 minutes, 0.3% HgCl2 in 15 minutes and 70% alcohol 2 minutes. Further, the maximum number of multiple shoots were obtained in MS basal medium supplemented with 3.0 mg l^{-1} 6-Benzyl Amino Purine (BAP) and 3.5 mg l^{-1} Naphthalene Acetic Acid (NAA). Initiated shoot then sub cultured for shoot multiplication in terms of highest number of shoots and shoot length was observed in MS media in combination with BAP 3.0 mg l^{-1} with NAA 3.5 mg l^{-1}.

Keywords: Sterilization, NAA, BAP, Sub culture, In-vitro shoots