

In vitro propagation of *Cryptocoryne wendtii* - a threatened, endemic aquatic ornamental plant species

A methodology was developed for *in vitro* propagation of *Cryptocoryne wendtii*, a threatened, endemic aquatic ornamental plant species which has high export potential.

About 50% contamination free cultures could be obtained by using rhizomes that were sterilized with 0.1% HgCl_2 . Factorial combinations of various concentrations of BA and

various concentration of NAA or IAA in MS medium with 30g/l of sucrose were tested for *in vitro* shoot multiplication while the effect of agitated liquid and solid media was also evaluated. Three levels of IBA in combination with two levels of activated charcoal were tested for rooting. Rooted shoots were acclimatized under two different conditions.

The highest shoot multiplication (5.8 per four weeks) was observed in 5mg/l of BA without NAA or IAA. No significant difference in shoot multiplication was observed in media NAA or IAA at any tested level. Shoot multiplication was increased with subculture level in 5 mg/l of BA medium (5.8, 8.1,12.6 and 18.3 at second, third, forth and fifth subculture levels respectively). Of tested concentraions, 15mg/I of BA gave the highest shoot number (23.6) within six weeks. These multiple shoot clusters were elongated in 1.5 mg/I BA medium before dissected them for rooting. Though 100% rooting was observed in hormone free medium, addition of activated charcoal (0.2%) improved rooting During the acclimatization of the rooted plantlets 100% plant survival was achieved in "polythene covered propagator" in contrast to 95% in water tank. The plants raised in "polythene covered propagator" reached the marketable level by 12 to 14 weeks. The "polythene covered propagator" gave high quality plants at low cost, as the system is easy to maintain while algae, pest and disease problems could be completely overcome.