IN VITRO SHOOT MULTIPLICATION OF ANTHURIUM ANDREANUM ‘TROPICAL’ VIA PLB CULTURE

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Summary
In this study, shoot regeneration via PLB formation derived from TCL-callus (1 × 5 × 5 mm) were compared to direct-shoot regeneration from callus. In addition, silver nanoparticles were supplemented to the medium to investigate the growth ability of in vitro and greenhouse Anthurium planlets. The results shown that, ratio of PLB formation and number of PLB per explant on MS1 medium added 1 mg/l BA, 0.08 mg/l 2,4-D and 0.5 mg/l Kn archived the best results (91.25% and 44.67 PLB; respectively) after 8 weeks of cultured. Shoot regeneration via PLB was about 5-fold more effective than direct-shoot regeneration from callus after 4 weeks of cultured. After 8 weeks transferred into greenhouse, the growth and survival rate (92.00%) of in vitro 12 week old shoots cultured on medium supplemented 7 ppm silver nanoparticles at a density of 10 shoots per vessel were higher than those in other treatments.

Keywords: Anthurium, callus, growth, PLB, silver nanoparticles.