B-141 Studies on the micropropagation of banana (*Musa* spp) var. Embul (AAB)

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Banana is the most widely cultivated fruit crop in Sri Lanka. Owing to polyploidy and parthenocapy all commercial cvs do not set sterile seeds and are thus, propagated by suckers.

However, healthy planting material is always in short supply. *In vitro* culture techniques offer an effective alternative with vigorous, disease free planting material. The present study was intended to develop a mass multiplication technique for cv Embul.

Shoot tip and male floral aspices were used as sources of explant and the use of calcium hypochlorite (5% clorox) was effective in surface sterilization. Isolated explants were inoculated onto MS basal medium supplemented with different combinations of auxins (2,4-D and IAA) and cytokinins (BAP). Phenolic browning was a common problem and use of activated charcloal (500 mg/l) and ascorbic acid (20 mg/l) in the establishment medium and frequent subculturing were effective against browning. Rate of survival was low with smaller shoot tips and vertically split shoot tips failed to survive. Increasing concentrations of BAP seems favourable to enlarge size of shoot tips. Globular protrusions were observed around the base of the enlarged shoot tips after the second subculturing but only a few developed into shoots, after the 4th subculture onto the same medium. At the same time root initiation was observed when subcultured onto a medium supplemented with BAP (3 mg/l) and IAA (2 mg/l). Roots elongated rapidly and branched profusely, shortly after the initiation, on the same medium. Callus initiation from shoot tips could be observed, subcultured onto a medium containing BAP (1 mg/l) with varying concentrations of 2,4-D (1,2,4 mg/l). Callus was greyish white, loose and failed to proliferate profusely. Comparatively a high rate of callus formation was observed from floral apices, when cultured in a medium containing BAP (1 mg/l) with varying concentrations of 2,4-D (1,2,4 mg/l). In both cases callus remained fresh only for about 2 weeks and failed to regenerate shoots or roots.