

Thesis Title Utilization of Tissue Culture
 Technique for Propagation of *Melia* spp.
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 (Environmental Biology)
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Date of Graduation 25 May B.E. 2535 (1992)

ABSTRACT

Tissue culture technique applied for mass propagation of *Melia* spp. is possible. The modified LS basal medium used in this study is composed of macronutrients, micronutrients from LS medium, vitamins of B5 proposed by Gamborg, 6 g/l agar and 10% coconut water. The explants used in this experiment were young leaf, petiole, internode, terminal bud and axillary bud from young plant. The optimum concentration of BA for multiple shoot induction from axillary bud and terminal bud was 1 mg/l. Callus cultures can be readily initiated and proliferated from petiole and internode in the basal medium supplemented with 1 mg/l NAA plus 1 mg/l BA but no callus mass was observed from young leaf explant. The derived callus cultured on basal medium supplemented with 1 mg/l BA regenerated shoots which had a vigorous growth in basal medium with 0.25 mg/l BA. The individual shootlets regenerated vigorous roots within 7 - 10 days after immersion of the basal cut end into the solution of 1 mg/l

IAA and 1 mg/l IBA for 1 day, then transferr^{al} to basal medium; 85% of the treated shoots rooted. One month old plantlets were then transplanted into pots filled with sterilized vermiculite under high humidity conditions. The survival percentage was about 21%, most of the mortality being due to fungus infection.