Adventitious Rooting in Microcuttings of Selected Indigenous Landscape Trees of Malaysia

ABSTRACT

Rooting performance in microcuttings of five indigenous and one exotic landscape tree species was evaluated in a 60 days period. Rate of rooting varied greatly among species as Ilex cymosa, Tabebuia heterophylla and Agalaia korthalsii reached 100% rooting at 24, 42 and 48 days after insertion into the rooting medium followed by Lepisanthes rubiginosa and Hopea odorata species (95 & 80% rooting at 60 days, respectively). The poorest rooting ability (30% rooting at 60 days) was shown by Aporusa globifera and was first noticed at 30 days. Results of Ilex cymosa species for adventitious root induction per microcutting was markedly different from other species and it produced the highest number of adventitious roots (14.07 roots/microcutting). A. korthalsii generated the fewer, but the heaviest roots compared to I. cymosa. Rooting ability of microcuttings was highly correlated with its number of leaves produced during rooting (r = 0.869-0.981) as well as, with regenerative shoot length of the mother plants (r = 0.690-0.954). Regenerative leaf growth of mother plants and the rooting of their microcuttings was species-specific suggesting that developing association between the two parameters is difficult.

Keyword: Microcutting, Rooting, Vegetative propagation, Landscape tree