B-148: *In vitro* growth performance of rattan (*Calamus thwaitesii*) under different chemical and physical conditions

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In vitro growth performance of rattan seedlings under normal culture conditions are observed to be very slow. Therefore, present study was carried out to determine suitable culture conditions for improved growth performance of the seedlings. The seeds were put into running water and put in 10% Chlorex solution for surface sterilization. Upper halves of the seeds were separated, Embryos were cultured in either Y_3 or MS basal medium supplemented with 4.0mgl^{-1} 6-Benzylaminopurine (BAP), 1.5g charcoal. Then the two groups of cultures were separated into 8 batches with 25 embryos, and incubated at different temperature (23 and 34.5°C) under two different photoperiod regimes (12 and 24 h) for 21 days.

After 21 days incubation at 34.5°C and 24h photoperiod in Y_3 medium, the highest number (92) of well grown plantlets were obtained. The number of well grown plantlets in all other combinations was below 80. Due to the fact that Y_3 and MS medium have very little difference in their chemical composition. High temperature and fullday photoperiod could be the reason for the fast growth of rattan seedlings. Considering the above results, it is reasonable to say that Y_3 + 4mgl^{-1} BAP + 1.5g charcoal medium incubated at 34.5°C under 24 h photoperiod is the best combination for the fast growth of rattan seedlings.