IN VITRO SHOOT INITIATION OF *Artocarpus heterophyllus* Lam. (Jack fruit) - Moraceae

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Artocarpus heterophyllus is recognized as a versatile multipurpose tree species in all tropical countries. Its popularity is mainly due to its value as timber, food, fodder, fuelwood and a vast array of medicinal and other non-wood products.

Seed propagation is the cheapest, easiest and most convenient method but has disadvantages in that the progeny may differ from the parent plant due to the high level of cross-pollination. Vegetative propagation is very useful but has a relatively poor success rate. Developing a tissue culture technique for clonal propagation of the species will be very useful for qualitative improvement of the plant with *in vitro* mutagenesis and cell hybridization.

Four types of explants (mature embryos, apical meristems of young seedlings, apices from mature plants and nodal segments) were used in order to initiate shoots *in vitro*. The embryos from seeds soaked in water for 24 hours produced shoots after 8 weeks of incubation and the success rate was 50% while embryos from dry seeds only produced roots. There was no significant effect of cold storage (refrigeration) on shoot initiation from mature embryos.

It has been found 88% of young apical meristems produced shoots in Campbell and Durzan medium compared to 60% in Murashige and Skoog medium. Only 1/ 3 of produced multiple shoots. Shoot initiation from nodal segments was a rare event. Callus has been produced from mature apices. Removal of the sheathing cover around the apex enhanced the shoot initiation from mature apices.