OA-10

In Vitro Micropropagations of *Dendrocalamus asper* (Schultes f.) Backer ex Heyne Through Single Node Bud Culture

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Sources of raw materials for timber-based industries tend to be more difficult to obtain in the future. Bamboo is a good alternative source for a such raw material. *Dendrocalamus asper* or giant bamboo is the most important bamboo species among 13 others commercially grown in Indonesia. Due to the high demand, bamboo can not be supplied by the traditional plantation anymore. Large scale and commercial plantation for bamboo production are required to fill the market for bamboo. New opening of large scale plantation will require supplies of large number of plant materials. Since conventional technique for bamboo propagation will not be able to produce a large number of planting material in a short perion, new technology for bamboo propagation needs to be developed. The objective of this experiment was to develop efficient and reliable protocols for micropropagating D. asper through single node bud culture.

Single node cuttings with precocious branchlets were cultured on MS and WPM medium containing cytokinin (BAP at 0 to 8 mg/l) to induce bud break. The response of different position of node on a single bamboo shoot was also investigated. Result of the experiment indicated that culturing single node cutting on MS medium resulted in more bud break than that on WPM medium, also mature bud from the middle part of the bamboo shoots gave the best results. To induce shoot elongation, single node cutting that have formed shoots (5 mm in length) were transferred to modified MS medium (with half strength of major-salt) containing BAP (3.0 mg/l), IBA (0.2 to 0.6 mg/l), and with or without glutamin (100 mg/l). Combining IBA and glutamin enhance shoot multiplication. To induce rooting, shoots were cultured on modified MS medium containing IBA (1.0 to 2.0 mg/l), IAA (1.0 to 2.0 mg/l) with or without coumarin(10mg/l).