

A concise review of *Dendrocalamus asper* and related bamboos: Germplasm conservation, propagation and molecular biology

ABSTRACT

Bamboos represent an emerging forest resource of economic significance and provide an avenue for sustainable development of forest resources. The development of the commercial bamboo industry is founded upon efficient molecular and technical approaches for the selection and rapid multiplication of elite germplasm for its subsequent propagation via commercial agro-forestry business enterprises. This review will delve into the micropropagation of *Dendrocalamus asper*, one of the most widely cultivated commercial varieties of bamboo, and will encompass the selection of germplasm, establishment of explants in vitro and micropropagation techniques. The currently available information pertaining to molecular biology, DNA barcoding and breeding, has been included, and potential areas for future research in the area of genetic engineering and gene regulation have been highlighted. This information will be of relevance to both commercial breeders and molecular biologists who have an interest in establishing bamboo as a crop of the future.