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***In-vitro* flowering in *Dendrocalamus giganteus*)Giant Bamboo)**

The life cycle of bamboos is not well understood as certain species die after mast seeding and flowering just once in their lifetime. A rare phenomenon of *in –vitro* flowering in auxiliary shoots raised from a non-flowering field grown mature clump of *D. giganteus* was studied. Non-flowering auxiliary shoots maintained in a liquid shoot proliferation medium, transferred to a basal MS medium with 0, 6, 8 and 12 mg/ L, 6-benzylaminopurine (BAP) were induced to flower in the presence of BAP.

Shoots did not proliferate or develop florets in the absence of BAP. The highest number of spikelets (47) was observed in cultures transferred to 3 mg/ L, BAP while it was less (29 to 33) at the higher BAP levels. The shoot number was highest at 6 Mg/ L, BAP. Transition of spikelets into clusters of shoots was observed in flowering cultures. The *in –vitro* spikelets and florets were smaller than those that developed in field clumps. *In –vitro* florets had six anthers and anthesis took place while the anther number varied from 4 to 8 *in –vitro* and anthesis did not take place.

Most of the microspores were empty. Although the cause of flowering in field clumps is not understood, *in –vitro* flowering observed in this study appeared to have been caused by physiological factors with BAP playing a role. Absence of flowering in the mother clump also suggests that *in –vitro* flowering was triggered by a physiological factor. Further investigations in the mechanism of *in –vitro* flowering need to be carried out for a better understanding of flowering and the development of an *in –vitro* flowering system in this species.