AXILLARY SHOOT PROLIFERATION AND *IN VITRO* FLOWERING IN AN ADULT GIANT BAMBOO, *DENDROCALAMUS GIGANTEUS* WALL. EX MUNRO

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(Received 27 July 2000; accepted 22 May 2001; editor M. S. Pais)

SUMMARY

Continuous axillary shoot proliferation and *in vitro* flowering were achieved using single node explants from a mature (over 70-yr-old) field clump of *Dendrocalamus giganteus* (giant bamboo). The shoots proliferated in a basal Murashige and Skoog medium with 6 mg l^{-1} (26.6 μM) N^6-benzyladenine (BA) and 2% sucrose. The rate of shoot proliferation gradually increased to over three-fold before *in vitro* flowering took place. *In vitro* flowering was not the expression of a species-specific mechanism believed to occur during gregarious flowering, as the mother clump did not flower. The rate of shoot proliferation decreased at flowering, accompanied by reversion of flowering. The development of axillary meristems into vegetative or generative shoots depended on the level of BA. The possible role of BA, changes in the rate of shoot proliferation leading to build up, and release of stress in relation to flowering and its reversion are discussed.

Key words: Dendrocalamus giganteus; axillary shoot proliferation; *in vitro* flowering; floral reversion; N^6-benzyladenine; giant bamboo.