

Studies of Direct Adventitious Bud Induction from Lateral Bud and Shoot Apex Cultures of Bromeliad *Aechmea fulgens* var. *fulgens* (Bromeliaceae)

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Abstract

This study investigated the direct adventitious bud induction and proliferation of bromeliad *Aechmea fulgens* var. *fulgens* via shoot apex and lateral bud explants culture to establish the shoot regeneration system. Microbial contamination and culture risks can be minimized or eliminated with application of good cultural management skill and selecting adequate materials. Regarding the best frequencies of direct initiation of adventitious buds derived from shoot apex and lateral bud explants were obtained on media containing a combination of 1.0 mg l⁻¹ BA with 0.5 or 1.0 mg l⁻¹ NAA, and a combination of 3.0 mg l⁻¹ BA and 0.5 mg l⁻¹ NAA, showed no significant differences between treatments. Also, the frequency of adventitious buds induced from the lower lateral buds of *A. fulgens* var. *fulgens* was the highest, at 47.5%, and the adventitious bud induction ability tended to decline with rising stem node. Finally, the adventitious buds developed and grew into intact plantlets, and could be transplanted for *ex vitro* cultivation.

Key words: Bromeliad (*Aechmea fulgens* var. *fulgens*), Adventitious bud, Shoot apex, Lateral bud

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