

Studies of Adventitious Bud Induction and Proliferation from Lateral Bud and Shoot Apex Cultures of Bromeliad *Guzmania* 'Focus' (Bromeliaceae)

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Abstract

This study investigated the different combinations of BA and NAA, different nodal positions and decapitation on the adventitious bud induction and proliferation of bromeliad *Guzmania* 'Focus' to establish the shoot regeneration system. Regarding the best frequencies of 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 + 0.5 or 1.0 mg l⁻¹ NAA, and a combination of 3.0 mg l⁻¹ BA + 0.5 mg l⁻¹ NAA. Also, the frequency of adventitious buds induced from the lower lateral buds of *G.* 'Focus' was the highest, at 35%, and the adventitious bud induction ability tended to decline with rising stem node. In addition, the adventitious buds began to form on day 16 after the *G.* 'Focus' decapitated plantlets had been cultured in medium supplemented with 3.0 mg l⁻¹ BA + 0.5 mg l⁻¹ NAA. However, this phenomenon did not occur in case of undecapitated explants, where only protruding nodules appeared. Finally, the adventitious buds developed and grew into intact plantlets, and could be transplanted for *ex vitro* cultivation.

Key words: Bromeliad (*Guzmania* 'Focus'), Adventitious bud, Decapitation

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