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In- vitro propagation of sugarcane (Sacchurum *officinarum* L.)

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Experiments were carried out to find out the suitable surface sterilisation procedure using different concentrations (15%, 20% and 25%) of Clorox (5.25% Sodium hypochlorite) with different time durations (10, 15 and 20 minutes) to obtain higher survival percentage of *in- vitro* cultured sugarcane auxiliary buds. Murashige and Skoog (MS, 1962) medium was used as establishment medium and after establishment cultures were transferred to proliferation media. Different combinations of IBA (0.3, 0.4, 0.5 and 0.6 mg/l) with 1 mg/l BAP in MS media were tested as shoot proliferation media. MS medium with and without charcoal along with different combinations of IBA (0.5, 1.0, 1.5 and 2 mg/l) and 0.2 mg/l BAP were tested as rooting media. Time taken for rooting and length of the roots was recorded in weekly intervals.

Results revealed that 25% Clorox for 20 minutes exposure time was the best steriliation procedure to obtain highest survival percentage of sugarcane auxiliary buds. 0.4 mg/l IBA and 1 mg/l BAP gave the highest proliferation rate (1: 10). Long hairy type roots were observed in media containing activated charcoal. The time taken for root induction was 2 weeks in MS medium with 1 mg/l IBA, 2 mg/l BAP and activated charcoal.

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