

DEVELOPMENT OF SPECIFIC ANTHER CULTURE MEDIUM FOR SELECTED BRINJAL (*Solanum melongena* L.) VARIETIES

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Hybrid breeding is used to produce high-yielding varieties with superior traits. Production of pure lines in double haploid form, as parents to produce hybrid variety can be done through anther culture on a nutrient medium under an aseptic environment. The purpose of this study was to develop a suitable anther culture medium for selected brinjal varieties. The experiment was arranged as a two factor Completely Randomized Design (CRD) with three treatments and a control. Sterilized anthers from seven brinjal varieties; Anjalee, Padagoda, EGH-5, EGH-13, EGH-16, V-5, and 8104 were implanted on MS medium with different hormone compositions for callus induction. All treatments consisted of 1 mg L⁻¹ Kinetin and 2 mg L⁻¹ BAP and treatments; T1 to T4 were supplemented with 1 mg L⁻¹ NAA, 3 mg L⁻¹ NAA, 5 mg L⁻¹ NAA, and 0 mg L⁻¹ NAA respectively. Data on callus formation and greening percentages were taken throughout the study. Significantly, the highest percentage of callus induction (83.33 ± 16.67 , $p < 0.05$) was obtained in T2 from the hybrid variety EGH-13. No callus formation was observed in T4 (control treatment) from all varieties. Significantly, the highest percentage of callus greening (83.33 ± 16.67 , $p < 0.05$) was obtained in T2 from EGH-13. The greening of the callus was not observed in the control treatment (T4). It can be concluded that the MS medium with 1 mg L⁻¹ Kinetin, 2 mg L⁻¹ BAP, and 3 mg L⁻¹ NAA has produced the best result in callus induction and greening for the hybrid variety EGH-13.

Keywords: Callus greening, Callus induction, Double haploid