Abstract

Mansoa alliacea L. commonly known as Garlic vine is a perennial vine capable of curing many ailments. Although this species is extensively used in medicines but the availability of this plant locally is short. Our drawbacks to commercial industry is poor seed germination and survival. The present study proposed a reliable method for callus induction of *Mansoa alliacea*. For callus induction, juvenile explants of mature plant of Garlic vine were cultured on MS medium supplemented with various concentrations and combinations of auxins and cytokinins.The effect of combinations of BAP (6-benzyl adenine), NAA (1-naphthalene acetic acid), kinetin (KN), 2, 4-Dichlorophenoxy acetic acid, IBA, IAA and Thidiazuron on callus formation was investigated. It was found that growth regulators and their concentrations have obvious effects on the callus induction, value of callus index and callus physical nature. Moreover, callus was formed at different times among five kinds of explants i.e. apical bud, node, leaf lamina, internode and petiole. The best callus induction capabilities were obtained with 1.5 mg/L BAP in combinations with 0.1 mg/L NAA from apical bud and leaf explants, 1 mg/L BAP+ 2.5 mg/L NAA from internode explants and 0.5 mg/L BAP + 0.4 mg/L NAA for nodal explants. Apical bud calli gives 100 percent result with maximum callus formation on MS medium within 7 days. The calli have very little regenerative potential and cannot used as a stock callus as it dies very quickly.