

ABSTRACT

Ornamental bulbous plants have great value in the world of floriculture industry and *Amaryllis* possesses prominent position among them. The increase in demand of *Amaryllis* needs continuous cultivation to meet the market demands throughout the year so there is need of efficient micropropagation method which can produce large number of plants from single bulb in less time. Twin scaling technique was used to get maximum number (40 – 70) explants from single bulb. Twin scales along with basal disc of *Amaryllis vittata* were introduced in *in vitro* culture in MS medium with various concentrations of BAP, KIN, NAA, IAA, TDZ and 2,4-D alone as well as in combinations. The evaluated parameters included percentage of bud induction, shoot induction, root induction, leaf length, size of regenerated bulblets and number of days for bud and shoot induction. Maximum number of buds and shoots were produced when twin scales were inoculated in MS medium supplemented with 0.05 mg/L TDZ and 0.06 mg/L NAA. In combinations, MS medium supplemented with 0.04 mg/L BAP + 0.04 mg/L 2,4-D, 0.04 mg/L NAA + 0.08 mg/L KIN and 0.04 mg/L IAA + 0.08 mg/L KIN resulted in maximum bud and shoot induction. After 40 days of culture, healthy plantlets were shifted to pots for acclimatization, 1 to 2 cm of bulb sized was achieved with 3 – 4 months and 98% survival rate was recorded as a result of acclimatization. Overall 60 to 80 plantlets were regenerated from single mature *Amaryllis* bulb.