

EFFECT OF GROWTH REGULATORS ON PROLIFERATION AND ROOTING IN VITRO OF CHRYSANTHEMUMS (*CHRYSANTHEMUM MORIFOLIUM* L.)

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INTRODUCTION: Chrysanthemum commonly known as Gul-e-Daudi or Autumn Queen belongs to the family Compositae (Asteraceae). It is highly valued as a cut flower worldwide with its diverse floral types and colors. Today, it is the world's second most economically important floricultural crop following the rose. Also, chrysanthemums have an ancient reputation in the East as a medicinal plant. It is generally propagated using suckers and terminal cuttings, these conventional propagating methods are very slow. Chrysanthemums are susceptible to infection by many viruses. These problems have been solved by applying micropropagation methods. The objectives of this study were to establish a protocol for mass and commercial propagation of Chrysanthemum.

MATERIALS AND METHODS: Experimental design was performed as a factorial in format of completely randomized design (CRD) with At least 4 replicates (each replicate 5 explants). Duncan's multiple range test at $P < 0.05$ were used for statistical analyses. Analyses were performed using SAS. The explants material were placed on a MS media containing varied concentrations of BAP (0,0.5,1,1.5,2mg/l) and kin (0,0.5,1,1.5,2 mg/l) with NAA (0,0.2,0.5,1 mg/l) with 3% sucrose, 7 g/l agar and 0.4% of Activated carbon.

RESULTS AND DISCUSSION: In this experiment, the best medium for rooting and shoot proliferation with respect to the maximum length, in MS medium supplemented with 1.5 mg/l BAP and 0.2 mg/l NAA was observed. About 95% of the plantlets grown in tissue culture were favorable.

Keywords: *Chrysanthemum*, micropropagation, growth regulators, nodal segments

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