RESPONSE TWO *GLADIOLUS CV* TO PROPAGATION *IN VITRO*

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ABSTRACT

The study was carried out in Plant Tissue Culture laboratory Department of Horticulture and Landscape Design , College of Agriculture and Forestry , Mosul University , to propagate two *Gladiolus cv*s . "White prosperity" a white flowers and Mascany a red flowers by Tissue culture technique and using terminal and lateral dormant buds and cultured on MS medium supplemented with different concentrations of BA and rooting the shoots produced in vitro from cultured on MS medium supplemented with IBA at different concentrations , and to study the effect of sucrose levels and pp_{333} on corm production from rooted shoots . Data showed that White prosperity has significant differences compared with "Mascany" for most parameters . Terminal buds produced shoots more than lateral buds . Terminal buds cultured on MS medium supplemented with 0.5 mg / L BA gave the highest shoots number and length at initiation and multiplication stages . Treatment at 1 mg / L BA give highest corm number , Data showed 4.20 shoot / explant and average length 4.66 cm obtained from cultured terminal buds on MS medium supplemented with 0.5 mg / L BA and also from cultured terminal buds on MS medium supplemented with 0.5 and 1.0 mg / L BA for White prosperity cv. After eight weeks , while highest shoots number 2.60 shoot / explant and average

length 3.00 cm obtained from cultured terminal buds of Mascany cv. on MS medium supplemented with BA at 0.5 mg / L . Highest percentage of rooting 90-100 % obtained from shoots cultured for two cv. With average root number 6 root / explant with highest length 3.40 cm for White prosperity cv. from cultured on MS medium supplemented with 1.0 mg / L IBA , while root number 7.70 and length 5.80 cm for Mascany cv. from cultured on the same medium , 4.0 cormlet obtained from planting rooted shoots on MS medium supplemented with 120 gm sucrose with 10 mg / l pp_{333} . The study explained that there were no significant differences between plants produced from corms produced *in vitro* or corms produced in field .