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## Response of spine gourd genotypes (*Momordica dioica* Roxb.) to micropropagation

Shrinivas Jadhav, Parmar L D and Chauhan R M  
Sardarkrushinagar Dantiwada Agricultural University, India

The present studies were carried out on four different genotypes of Spine Gourd (*Momordica dioica* Roxb.) to standardize a reliable procedure for shoot and root initiation. The cultures were initiated using node explants of genotypes  $R_1P_{17}$ ,  $R_2P_5$ ,  $R_9P_7$  and  $R_{11}P_5$  and different plant tissue culture mediums composed of MS-medium supplement with combination BAP, IBA and NAA. The results for shoot and root initiation revealed that none of the explants was able to induce shoot and root on MS medium without hormones, but the explants of all genotypes cent per cent survived on MS medium supplemented with combination of BAP, IBA and NAA. Shoot initiation and shoot proliferation were greatly affected by the genotypes, medium combinations and their interactions. MS + 1.0 mg/l BAP + 0.2 mg/l NAA medium for genotype  $R_1P_{17}$  initiated early shoot and genotype  $R_{11}P_5$  produced more number of shoots. Highest shoots length was produced by the  $R_{11}P_5$  genotypes. Medium MS + 1.0 mg/l BAP + 0.2 mg/l NAA was identified as the most efficient and can work as common medium for regeneration of Spine Gourd under micropropagation. The regenerated shoots of 3 to 4 cm in length were found ideal for *in vitro* root induction. The results revealed that the MS medium containing 0.5 mg/l NAA was the most effective medium for the root initiation in regenerated shoots of all the genotypes. The highest root length was reported by  $R_1P_{17}$  genotype on MS + 1.0 mg/l IBA. The medium MS + 1.5 mg/l NAA recorded significantly minimum number of day to initiation of root and MS + 0.5 mg/l IBA recorded significantly maximum root length. The rooted shoots were successfully established in polythene bags containing sand, soil and FYM in 1:2:1 ratio. The established plants were finely transplanted in the field conditions.

### Biography

Shrinivas Jadhav is pursuing PhD, 4th semester at Department of Genetics and Plant Breeding at Sardarkrushinagar Dantiwada Agricultural University, Sknagar, Gujarat. He completed Postgraduate studies MSc (Agri.) from Sardarkrushinagar Dantiwada Agricultural University, Gujarat with OGPA of 6.93/10 and completed under graduation from Marathwada Agricultural University, Parbhani, Maharashtra with OGPA of 7.11/10. He is a Life time member (membership) of GAAS (Gujarat Association of Agricultural Sciences). He is working as an Assistant Professor at CSMSS College of Agriculture, Aurangabad, affiliated to Marathwada Agricultural University. He attended many international and national conferences and has published research papers in reputed journals and news article.

[shrisjadhav@hotmail.com](mailto:shrisjadhav@hotmail.com)

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