

## EST SSR Marker Analysis of Tissue Cultured Plantlets of Festival and Sweet Charlie Cultivars of Strawberry

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The clonal fidelity of micropropagated plantlets of two Strawberry cultivars namely Festival and Sweet Charlie using EST-SSR markers were evaluated. It is an important fruit crop belonging to the family Rosaceae. The nodal cultures were initiated on Murashige and Skoog medium supplemented with different concentrations of 6-benzyladenine (BA) and kinetin (KN) as sole and in combinations. The maximum numbers of shoots were obtained on MS medium supplemented with BA (1.5 mg/l) and KN (0.5 mg/l) in combinations. Shoot cultures were maintained through repeated subculturing on same medium. Using this protocol, about 30-40 shoots were obtained after 5 months from a single explant. Rooting of shoots was achieved on MS medium supplemented with indole-3-butyric acid (1.0-1.5 mg/l). Micropropagated plantlets were subjected to evaluation of genetic uniformity using EST-SSR markers. Out of fifteen primers screened, twelve primers showed amplification and the PCR profiles obtained were found to be clear, reproducible and monomorphic. The results concluded that the tissue culture raised plantlets of strawberry were genetically identical and clonally uniform. Thus, a comprehensive micropropagation protocol was developed for the two cultivars of strawberry and the genetic uniformity was confirmed using EST-SSR markers.

### Biography

Nand Kishor Sharma has completed his M.Sc. (Agriculture Biotechnology) at the age of 24 years from Rajendra Agricultural University, Pusa and has created some biological useful Websites using JavaScript and HTML coding. He has published several research papers in National and International journals and has presented some research papers in national seminars.

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