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## Standardization of clonal macropropagation protocol of *Dillenia pentagyna* Roxb through stem branch cuttings: An important and endangered medicinal tree species

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*Dillenia pentagyna* belongs to family Dilleniaceae is commonly known as Karkat. It is small deciduous tree reaching up to the height of 10-12 mts. with a straight-bole. The species is distributed throughout in India including Andaman & Nicobar. It is a highly important medicinal tree species. Its leaves, fruits and bark show antibacterial, anti-alpha glucosidase and antioxidant property. Due to its high medicinal value, the natural occurrence of this species is declining day by day and gradually the species comes under the threat condition. The species is highly recalcitrant in nature because it is very difficult to propagate by conventional propagation methods. Now, there is an urgent need to develop an appropriate technology for its conservation and clonal propagation. An attempt has been made for standardizing the clonal propagation technique of this valuable medicinal species through stem branch cuttings under intermittent misting conditions in mist chamber. The optimum rooting response has been standardized by various PPM concentrations and treatment timings of root promoting hormones IBA and NAA. The optimum rooting response >60 percent was observed when the cutting were treated up to 20 minute with 500 ppm concentration of IBA. On an average, 6 roots with 10-15 cm length were induced from the cuttings after 30-35 days. NAA failed to induce roots from the cuttings.

### Biography

S K Tiwari has completed his PhD from Rani Durgawati University, Jabalpur. He is the Senior Scientist of State Forest Research Institute, Jabalpur a premier Forestry Research service organization. He has published more than 40 papers in reputed journals. He has been the Member of Society of *In vitro* Biology, USA, since 2013. He has more than 28 years of research experience in forest genetics, forest tree improvement, plant propagation particularly macro and micropropagation and plant biotechnology. He trained more than 2000 students and other stake holders in the field of plant tissue culture and plant biotechnology. He has also visited New Zealand as FAO Fellow in 1998 and presented paper in 2007 in SIVB conference at Indianapolis, USA.

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