

International Journal of Agricultural Sciences Volume **13** | Issue 1 | January, 2017 | 71-76

■ e ISSN-0976-5670

DOI:10.15740/HAS/IJAS/13.1/71-76 Visit us : www.researchjournal.co.in

RESEARCH PAPER

Optimization of explants density for tissue culture propagation of banana cv. 'GRANDE NAINE'

G. PRABHULING* AND B.N. SATHYANARAYANA¹ Center for Horticulture Biotechnology, Directorate of Research, University of Horticultural Sciences, BAGALKOT (KARNATAKA) INDIA (Email: gprabhuling@gmail.com)

Abstract : Cost of production is always stressed as the main obstacle for tissue culture. Nutrient media is one of the most costly input which accounts for 30-35 per cent of total cost of tissue culture propagation. Production cost, therefore, can be reduced by efficient utilization of culture media. To find out optimum quantity of media required for shoot proliferation, 1- 5 multiple bud explants were incubated in each culture bottle. Explants density of 4/culture bottles was found best as it recorded higher total shoot production/l (291.94), shoot length (3.22 cm), number of leaves/shoot (2.81) and lower cost per shoot (Rs. 1.175). *In vitro* rooting was carried out with densities of 6, 8, 10 and 12 microshoots/culture bottle. The maximum response with regard to rooting had not yet been reached as there were no significant differences among the treatments. Incubation of 4 multiple bud explants and 12 microshoots per culture production of banana cv. 'GRANDE NAINE'.

Key Words : Tissue culture, Explants density, Grande Naine, MS medium, Cost/shoot

View Point Article : Prabhuling, G. and Sathyanarayana, B.N. (2017). Optimization of explants density for tissue culture propagation of banana cv. 'GRANDE NAINE'. *Internat. J. agric. Sci.*, **13** (1) : 71-76, **DOI:10.15740/HAS/IJAS/13.1/71-76.**

Article History : Received : 17.10.2016; Revised : 14.11.2016; Accepted : 14.12.2016