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## In vitro propagation studies in Vanilla (Vanilla planifolia Andr)

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A n investigation was carried out at the tissue culture laboratory of department of Horticulture, College of Agriculture, University of Agricultural Sciences, Dharwad to find out the best explant, gelling agent, growth regulator for shoot and root initiation and hardening media. Among the explant viz., leaf segment, shoot tip, axillary bud, internode and aerial rootsthe axillary bud and shoot tip were found the best for culture establishment by producing morenumber of adventitious shoots with early emergence of primordia (in 14 and 21 days respectively after inoculation of explants). Among the gels used for standardization, sago at 50 g/l+agar 1g/l emerged as the sole replacement of agar which best resulted in terms of shoot proliferation and subsequent growth by producing 3.83 shoots/explant, 4.07 cm shoot length and 0.40 cm shoot girth. It was also found best replacement for agar which minimized the cost by four times. The influence of growth regulator on shoot growth indicated that MS+BAP 1.5 mg/l produced significantly more number of shoots (4.7 shoots or explants), higher number of leaves per shoots (4.50 leaves or shoot) at 45 days after inoculation of axillary bud explant. The maximum numbers of roots with good length in short time (8.8 days) were observed on 0.5 mg/l IBA supplemented media. Soil+coco coirpith (1:1) and sand+soil+coco coir pith (1:1:1) gave the maximum (100%) survival percentage with better plant vigor resulting as suitable medium for hardening.

## Biography

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