

**STUDY ON THE RESPONSE OF DIFFERENT
CYTOKININS IN MICROPROPAGATION OF
KOLIKUTTU (SILK) BANANA (*Musa spp.*)**

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ABSTRACT

Kolikuttu banana shows least responses in multiplication under *in vitro* conditions. In concern with the huge demand for Kolikuttu banana plants it is of immense importance to identify the suitable protocols to increase the multiplication rate of Kolikuttu banana under *in vitro* conditions. This research was conducted to identify a suitable protocol to enhance the multiplication rate of silk banana in response to cytokinin. Twelve different treatments with four different cytokinins (BAP, BAP with Adenine Sulfate, 2ip and Kinetin) were used in the experiment. MS supplemented with myo-inositol 100 mg^l⁻¹, ascorbic acid 100 mg^l⁻¹, sugar 30g^l⁻¹ and IAA 1mg^l⁻¹ was used to prepare the relevant treatments and 3 g^l⁻¹ of agar used to solidify the medium. Banana shoot tips were sterilized using 15% Clorox solution for 15 minutes followed by 0.2% HgCl₂ for 3 minutes then quick dip in 70% Ethanol and finally washed thrice with sterilized distilled water. Explants of 2 cm x 2 cm base with a 2.5 cm height were inoculated as single ex-plant per one vessel. Weekly observations were made before and after sub-culturing based on the number of buds belongs to explants. Experiment was set up as Complete Randomized Design (CRD) with three replicates and the data were analyzed through Kruskal-Wallis and ANOVA using MINITAB statistical package. Turkey's test was used for the mean comparison at 5% level of significance. MS medium supplemented with 6 mg^l⁻¹ of BAP proved to be the most responsive medium for better establishment and proliferation of Kolikuttu banana as it recorded the highest number of buds (6 buds) in sub culturing phase.