

In vitro regeneration of local *Musa* varieties using different growth regulators

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Abstract

A study was carried out to standardize a simple and efficiently protocol for micro propagation of banana using shoot meristem. After growing *in-vitro* cultures on different hormonal combinations, Murashige and Skoog's medium supplemented with BAP, Kinetin, IAA, NAA and ADS, BAP(3mg/l), IAA(1mg/l), NAA(0.1mg/l) and ADS 75 mg showed maximum shoot proliferation. Initiation of shoot bud and establishment of culture from shoot meristem was achieved on solid media. Further shoot proliferation of cultures up to 6 subcultures of 21 days each was achieved on the agar gel solidified hormonal supplemented media after culture establishment. The proliferated shoots were excised and transferred to different root induction media, which resultantly showed that MS media supplemented with NAA (2mg/l), was the most efficient root inducing media. Rooted plantlets after primary and secondary hardening were transferred to the green house. Finally, these disease free plants were successfully established in soil.

1.Introduction

Eatable bananas (*Musa* spp.) are the significant fruits for rural and metropolitan shoppers in the tropical and sub-tropical countries. The genus *Musa* (family Musaceae) begins in Asia (Simmonds, 1962). Developed banana is gotten from two diploid types of family *Musa*. *M. acuminata* (Malaysia) and *M. Balbiciana* (India) parent genomes (Stover & Simmonds, 1987; Simmonds, 1962; George *et al.* 2000). Banana is a decent wellspring of sugars, proteins, nutrients and minerals. Numerous vermin and infections (especially viral sicknesses for example banana mosaic infection) oblige banana production which brought about genuine outcomes for environment through the utilization of pesticides. Thus, major limitations in the banana creation framework are the non-accessibility of infection free, consistent with type planting material, low ripeness because of triploidy, slow engendering and long interval of time from one age to the next generation. "Traditional rearing is troublesome because of its