Poster

MICROPROPAGATION OF *DIASCOREAALATA*(VAR.RAJAALA AND KEKULU) : AN ALTERNATIVE TO CONVENTIONAL PLANTING MATERIALS

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ABSTRACT

Dioscorea alata L. is an important tuber crop and is a staple food for millions of peoples in tropical and subtropical countries (Edison *et al.*, 2006). The genus *Dioscorea* includes 600 species and is of considerable economic importance (Ayensu, 1972). Root and tuber crops are the most important food crops after cereals as these tuber crops find an important place in the dietary habits of small and marginal farmers and also with indigenous "Adivasi". Out of six hundred species of *Dioscorea* fourteen are used as edible tubers. Vegetative propagation using tuber pieces of *Dioscorea* species is the conventional method but quantity of planting material produced is not adequate for rapid multiplication. Further the tuber yield is significantly affected by viral, Fungal and nematode infections and using infected tubers as planting material transmit these diseases to the next generation. Thus *in vitro* propagation may help to overcome constraints related to the availability of high quality and with year round supply of planting material. This study was conducted to improve the micropropagation rate from nodal cuttings and to evaluate the performance of *in vitro* plants under field conditions. Shoot tips and nodal cuttings were used as explants. After surface sterilization they were inoculate into the three different multiplication media. The media consisted of MS salts, 30% sugar, 4 mg/l Glycine, 0.2 mg/l BAP, 0.1 mg/l Giberalic Acid and 2% Activated Charcoal showed better response in shoot multiplication and elongation. While rooting was good with the MS media with 2 mg/l IBA, 30% sugar and 2% Activated charcoal. After one month of acclimatization period, plantlets were introduced to the field as an observational study. The micro propagated plantlets showed better growth rate and yield compared to conventional planting materials.