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Varietal differences of two cassava varieties (*Manihot esculenta* Crantz) in response to low cost tissue culture technology.

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ABSTRACT

Objective: One impediment to adoption of tissue culture technology is the differential response of various crop varieties to the process necessitating development of protocols that target specific varieties or focus on a few varieties that respond better. The varietal differences in response to tissue culture can be attributed to genotypic differences among the various cultivars. In this study the morphogenetic response of nodal explants from two cassava varieties to low cost tissue culture medium was determined with the aim of optimizing a low cost medium that can be used to regenerate a number of cassava varieties.

Methodology and results: Nodal cuttings from cassava varieties Muchericheri and KME 1 were initiated on a developed low cost

medium in which locally available fertilizers were used as alternative sources for MS macro- and micronutrients. Subsequent growth, elongation and production of leaves, nodes and roots was monitored and compared weekly between the two varieties. There was no significant difference in response to the low cost medium between the two varieties but Muchericheri had a superior performance producing a higher number of leaves, nodes and roots than KME 1

Key words: *varietal differences, nodal explants, low cost medium*