

## Abstract

With the unrelenting increase in human population it is important that concerted efforts be made to increase crop productivity so as to match the expected increase in food demand. The gravity of this problem is well appreciated considering the fact that the increasing human population is occurring on a planet with constrained and diminishing natural resources.

It is therefore important to respond to this challenge by developing and disseminating technologies that increase productivity per unit area, conserve the natural resource base and impact on many rural-based communities. Droughts have played a significant role in food shortages. As a result farmers are being encouraged to grow food crops which are relatively drought tolerant and take a shorter time to mature, such as cassava.

Lack of quality planting material of farmer-preferred varieties, produced locally and at a low-cost is, however, a major constraint to cassava production. Tissue culture technology whereby plant cells and tissues are multiplied in vitro under aseptic conditions, offers a feasible solution to this. Tissue culture techniques have been employed to complement and/or aid conventional methods of plant breeding. It has been used as a tool for multiplication of superior clones, ex-situ conservation of valuable germplasm and production of pathogen-free plants. However, the technology is capital, labor and energy intensive hence out of reach for resource poor farmers. Hence, it is necessary to have low cost options for propagation of important plant species.