



## agriculture & environmental affairs

---

Department:  
Agriculture  
& Environmental Affairs  
**PROVINCE OF KWAZULU-NATAL**

### **SWEET POTATO VINE MULTIPLICATION FOR SMALL-SCALE FARMERS IN KWAZLU-NATAL**

**Tony Naicker**

*Horticultural Science, Cedara*

*E-mail: [tony.naicker@kzndae.gov.za](mailto:tony.naicker@kzndae.gov.za)*

#### **Background**

Sweet potatoes as a crop have been cultivated widely throughout KZN for many years on both a commercial and subsistence level. However, the lack of good quality, virus-free planting material is a major constraint to sweet potato production amongst small-scale farmers. The discipline of Plant Breeding, UKZN in conjunction with the Horticultural Science section at Cedara developed and released several new locally adapted cultivars. The Centre for Potato Improvement (CIP) based in Lima, Peru has released a number of improved sweet potato lines in Africa and in particular is promoting the use of orange fleshed cultivars in Sub-Saharan Africa to combat vitamin A deficiency, which is prevalent in the diets of rural people in this region.

The Horticultural Science section has multiplied up and distributed relatively large quantities of high quality, disease-free sweet potato planting material, with the specific intent of improving the food security and nutrition of rural communities.

## **Results**

This project was not a trial, but involved the distribution of planting material of selected sweet potato cultivars, namely A40, Beauregard and 199062.1 into communities, for home plantings and plantings within community gardens. Mother stock is maintained in the Cedara greenhouses which are used to establish nursery blocks at the Makhathini Research Station. Vine cuttings are distributed to various clients comprising individual farmers, NGO's, Departmental Extension Officers and Officers from the Department of Health.

## **Methods**

Virus free sweet potato vines were cut into 7cm lengths, dipped into spore kill then planted in seedling trays to bulk up in the greenhouses at Cedara. In March, when the vines were a length of 40cm, they were cut into approximately 30cm long pieces using a hedge trimmer. The vines were then planted at Makhathini research station for multiplication. The land was ploughed, disked and rotavated after which it was ridged for a fairly good soft seed bed. The ridges were 30cm high. The inter row spacing was 90cm. On the ridge, holes were opened to a depth of 15cm in the moist soil. The intra row spacing of the holes was 30cm. The vines were then planted to a depth of approximately 15cm after which the herbicide linnex was applied to control the weeds. The sweet potato vines were then irrigated.

## **Conclusions**

Over a period of several months, from September 2013 to March 2014, approximately 60 000 cuttings were distributed. Based on the amount of planting material distributed throughout the province over the past four seasons, it is estimated that between 700-1000 tonnes of sweet potatoes were produced and this has contributed to improved food security of rural house-holds. Based on the interest shown in the sweet potato vines, it is recommended that extension officers and NG'Os distribute the vines to interested and suitable small-scale farmers.