



Yam (*Dioscorea* sp.): how will this crop be revived to enhance food security in East Africa?

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Introduction

Yams (*Dioscorea* sp.) are a rich source of carbohydrates and other human nutritional elements. Yams also have a high potential as an income generation crop. Presently, due to low production and scarcity in markets, yam tubers are one of the most expensive food commodities in the east African region. Considering the important food security role being fulfilled by yams in West Africa, it is necessary to look into the reasons behind the near total disappearance of the crop in East Africa. Towards this end, the Crop Seeds Unit of FaCT Limited has recently initiated activities aiming to revive yam production. FaCT is a private company based in Kenya and working in the East African region.

Findings: Preliminary information indicates that in Kenya there is a large market for good quality yam tubers, for immediate consumption or planting, both in the urban and rural areas. This market is currently not being served since production is far below demand, and also because the few remaining production areas are distant from the key urban markets.

The major factors affecting production include lack of knowledge on appropriate production methods, poor germplasm that is highly susceptible to pest damage, chronic lack of healthy planting material and lack of supporting policies. In the Central highlands of Kenya where considerable yam production still occurs around Mt. Kenya, yams are grown in a near perennial manner, leaving the mother tuber in the soil for prolonged periods before new yam is planted on fresh ground. This practice results in poor quality vines, low yield, and serious attacks especially by soil borne pests and pathogens. Policies tilted in favor of cereal grains, especially maize and cash crops, e.g. coffee or tea are other factors that have led to a decline in productivity. Yam, compared to maize, is less vulnerable to variations in climate effects, e.g. rainfall, and therefore food security would not be so heavily compromised when rains fail. Yam harvesting, unlike maize, can also be staggered to varying times of the year without seasonal limitation, thus assuring households of a reliable source of food.



Figure 1: Seed yam in Meru region of Central Kenya with dry rot (A), soft rot (B), poorly stored in a heap (C) and tuber with withered roots unsuitable for planting (D).

Conclusion

Reviving yam production in Kenya and the East African region will require focused attention on systems to provide healthy planting materials of high yielding, agro ecologically suited and pest-disease tolerant varieties.

More efficient seed production and delivery technologies are needed. Towards this end, FaCT Limited is initiating tissue culture as a starting point to clean up and commercially redeploy existing germplasm as well as looking into possibilities of implementing the minituber seed production technology.

The major current challenges are limited access to good varieties, and poor linkage between institutions carrying research on yam in the East African region.