

# Sweetpotato Action for Security and Health in Africa



## Developing sustainable seed systems

### What is the problem?

Sweetpotato is a vegetatively (also known as clonally) propagated crop grown on an annual basis. The crop is started each year by planting cuttings or vines. We use the term "seed system" to mean any planting material taken from neighboring crops or from plants re-emerging from roots left in the ground from the previous season. Only sweetpotato breeders use "true" or botanical seeds. Crops like sweetpotato, which are propagated from cuttings, unfortunately accumulate diseases, such as viruses, through each successive generation. In comparison, nature provides a self-cleaning mechanism for crops like cereals that are propagated from true seeds, as only few viruses are transmitted through the seed. In much of Africa, the planting material for sweetpotato available to farmers becomes successively infected with viruses, which reduce the yield and vigor of the crop. Access to quality (disease free) planting material is a struggle for smallholder farmers, particularly in dry conditions or following the dry season, when there may be very few

sources of vines for the next cycle. As a result, in dry areas farmers have difficulty obtaining sufficient quantities of vines to plant in time for the onset of the rains.



### What do we want to achieve?

A sustainable seed system aims to ensure that growers have ready access to adequate quantities of planting material of the varieties they want, of the quality they need, and at the time they are ready to plant. Much of the SASHA project is devoted to the breeding of new, improved varieties of sweetpotato, with enhanced characteristics important to smallholder farmers in Africa, such as virus and drought resistance and improved Vitamin A content. This important work loses its value if there are no mechanisms, or seed systems, in place to ensure the rapid and effective dissemination of these new varieties to the millions of farmers who could benefit from them.

### How are we going to make it happen?

This component involves developing

The Sweetpotato Action for Security and Health in Africa (SASHA) is a five-year initiative designed to improve the food security and livelihoods of poor families in Sub-Saharan Africa by exploiting the untapped potential of sweetpotato. It will develop the essential capacities, products, and methods to reposition sweetpotato in food economies of Sub-Saharan African countries to alleviate poverty and under-nutrition.

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and testing strategies to ensure effective multiplication, dissemination, and exchange of disease-free planting material (vines) of improved varieties. It also includes the development and testing of improved methods to conserve planting material through dry periods. More specifically, it involves strategies to more efficiently link farmers with public sector distribution programs and integrate those with for-profit nurseries where possible.

In dry areas, simple ideas such as burying roots and watering them 6-10 weeks before the expected rains to produce a flush of new vines when the farmer needs them most may hold a solution to the timing problem and potentially buffer vulnerable people from change stresses. Such ideas have already been piloted in Uganda and will be tried on a much larger scale.

A common failing made by earlier efforts to distribute planting material on a large scale was to produce vines of varieties that were not necessarily chosen by the farmers and to simply transport and distribute them to smallholder farms, whether they were ready to receive them or not. A system of distributing vouchers to farmers, which can be redeemed for planting material grown at local sites, effectively empowers those farmers, to receive vines of the varieties they prefer and when they need them.

Over time, the aim is to enable farmers to start to add value to their crop; for example, by processing the roots or using the leaves as animal fodder, thus increasing their income and reducing their dependency on

subsidies. An important aspect will be to examine which strategies assure women, who make up the majority of sweetpotato farmers, the best access to vines and whether women are as successful as men at commercially-oriented vine production.

## Where are we going to work?

Much of the work will be centered in Uganda and Tanzania, but with important activities in Mozambique, Ghana, and Rwanda. With further funding, the hope is to expand the work to other countries, such as Malawi and Ethiopia.



• A small plot of sweetpotato being conserved from water flowing out from the family washing facility (Tanzania; courtesy NRI)

## Who are we going to work with?

Along with the International Potato Center (CIP Nairobi, Uganda, and Mozambique), key partners in this work will include Catholic Relief Services (Tanzania), Helen Keller International (Tanzania), the Natural Resources Institute (UK), LIZARDI (Tanzania) Mikocheni Research Center (Tanzania), and the Food and Environment Research Agency (UK).



• Sweetpotato planting material being multiplied during the dry season in the spillover from the village pump (Malawi; courtesy NRI)

## What's next?

Vines of farmer-preferred varieties will be distributed to some 150,000 households during the first 3 years of the project in the Lake (Victoria) Zone of Tanzania. This is an area where 15 million people depend on sweetpotato as a food security crop and as insurance against any failure of cereal crops through drought. Given widespread, informal, farmer-to-farmer sharing of vines for planting, the number of direct plus indirect beneficiaries is likely to exceed 1 million families in the first 5 years of the project. Within 10 years, the project is expected to improve lives for 10 million households throughout Sub-Saharan Africa.



• Quality sweetpotato planting material being grown with access to water on the shores of Lake Victoria (Tanzania)

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