Marando Bora "Better vines" - For higher sweetpotato production in the Lake Zone of Tanzania

SASHA
Sweetpotato Action for Security and Health in Africa

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Access to timely, quality sweetpotato planting vines in the Lake Zone of Tanzania can improve food security and nutrition, especially during times of drought, crop disease, and hunger. The Marando Bora project has established and trained 27 decentralized vine multipliers (DVMs), who have distributed quality vines to 10,000 households. Working with women's groups the project has increased women's participation as vine multipliers to 70% and has ensured that 73% of the vine recipients were women.

Women collecting clean planting material from a BRAC supported vine multiplier (credit J. Low)

What is the problem?

Sweetpotato is a critical food security crop in the Lake Zone of Tanzania. It supplements maize and cassava and serves as a stand-by when other staples fail due to drought or disease. The orange-fleshed varieties (OFSP) offer high beta-carotene levels to combat vitamin A deficiency. Sweetpotato has a short growing season and produces yields even under unpredictable rainfall patterns. But its potential is compromised due to lack of sufficient and timely access to disease-free or "clean" planting material.

Because sweetpotato is vegetatively propagated, the usual source of planting material for farmers without access to areas with residual moisture during the dry season is the vines left in the field from the previous season's crop. But in areas with a long dry season, the vines become desiccated. Leftover roots re-sprout with the onset of rains but up to two months are then needed to produce sufficient vines for planting. As a result:

- The amount of planting material is limited, restricting the total area that can be planted.
- Sweetpotato is planted late, reducing the potential for high root production.
- There is a greater risk of transmitting pests and diseases from one season to the next through using planting material from old fields.

The combination of these factors leads to lower yields, decreased production, and enormous lost opportunity for bridging the chronic hunger period and improving food security and nutrition.

What do we want to achieve?

The aim of Marando Bora is to increase availability and timely access to clean planting material of existing and new improved varieties to 150,000 farmers. This is being achieved through strengthening the seed system to be able to multiply and distribute seed to farmers effectively. Specifically, the project seeks to provide:

- Higher yielding sweetpotato varieties, with characteristics preferred by consumers
- OFSP varieties with sufficiently high levels of beta-carotene to improve Vitamin A status
- Disease-free planting material for vine multiplication and root production
- Timely access to vines, early in the growing season

CENTRO INTERNACIONAL DE LA PAPA
CIP

MARANDO BORA
MAVUNO ZAIDI

Partners include:

- Catholic Relief Services (CRS)
- Kituo cha Mafunzo ya Kuboresha Mazingira na Kilimo Adilifu (KIMKUMAKA)
- Rulenge Diocesan Development Office (RUDDO)
- Mogabiri Farm Extension Centre (MFEC)
- Mwanza Rural Housing Project (MRHP)
- Diocese of Shinyanga (DOS)
- Tanzania Home Economics Association (TAHEA)
- Buhemba Rural Agricultural Center (BRAC)
- Lake Zone Agriculture Research and Development Institute (LZARDI)
- Mikocheni Agriculture Research Institute (MARI)
- Helen Keller International (HKI)
- International Potato Center (CIP)

Pre-hardening tissue culture plantlets at Maruku (credit S. Namanda)

- Training for DVMs and farmers on how to maintain vine quality longer, and conserve vines during the dry season,
- Communication products to increase awareness of the benefits of using disease-free planting material, the benefits of OFSP varieties and where quality vines can be obtained.

How are we making it happen?

We are testing two distribution models in order to understand which is more cost effective and sustainable. The first model, which has been implemented to date, uses DVMs, who supply their communities with quality vines in exchange for vouchers. The second model, to be implemented in October 2011, will use existing community based groups for the mass dissemination of vines.

Coordinated implementation is critical for success. CRS is the in-country lead, working with BRAC, Kimkumaka, RUDDO, TAHEA and local government extension services to support the training and establishment of DVMs. For the second model: CRS is working with the DOS, MRHP, and MFEC to use Savings and Internal Loans Communities (SILC) and other groups as an entry point for the mass dissemination of quality sweetpotato planting material. Research input and multiplication of primary material is being provided by LZARDI researchers based at Ukiriguru and Maruku. Mikocheni Agriculture Research Institute (MARI) is providing back up for sweetpotato virus testing.

Another key component of the work is to increase awareness about the potential benefits of sweetpotato. These include its food security and nutritional benefits (particularly OFSP), its income-generation potential, and the yield benefits from planting clean planting material. HKI is bringing its expertise in communication to the project.

Where are we working?

The project is working in the Mwanza, Mara, Kagera and Shinyanga Regions of Lake Zone, Tanzania. The DVM model will be implemented in twelve districts: Mwanza City, Magu, Sengerema, Geita, Biharamulo, Chato, Bukombe, Muleba, Bunda, Ukerewe, Misungwi and Musoma Rural. The mass dissemination model will be implemented in four districts: Masawa, Kwimba, Tarime, and Rorya.

What have we accomplished so far?

To date:

- Over 35,000 virus-free tissue culture plantlets were used to establish foundation and primary multiplication sites.
- A baseline study covering 640 households was conducted in September 2010.
- 27 DVMs have been established.
- Over 10,000 households have received quality vines (February-May 2011).
- 73% of the vine recipients have been women.

At the outset we knew that women are the primary sweetpotato growers. We learned, however, that our initial selection criteria for DVMs were biased against women (i.e. requirements for land, access to irrigation and literacy for record keeping). By working with women's groups, the project has managed to increase women's participation in vine multiplication from around 50% in the first group of DVMs to 70% in the second group of DVMs.

What's next?

Preparations are underway so that by September 2011, a total of 83 DVMs will be ready to serve their communities with quality vines, backed up by training, communication materials and activities. We are expecting to reach 66,400 households using the DVM approach and 45,000 households through mass multiplication from September through November 2011, with the remaining 29,000 households obtaining vines in 2012.

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