

multi-media communication strategy has supported both vine dissemination models. The overall message for the communication strategy is “*Viazi lishe kwa afya bora*” (sweetpotato for better health) and promotion materials include DVM signboards, banners for promotional events, T-shirts, caps, khangas, pens, posters, fact sheets, variety information cards, flyers, technical booklets, market day promotions, jingles, sensitization meetings for district councils, radio announcements and calendars.

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 and is leading a virus degeneration study. 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 has been implemented in twelve districts: Mwanza City, Magu, Sengerema, Geita, Biharamulo, Chato, Bukombe, Muleba, Bunda, Ukerewe, Misenyi, and Musoma Rural. The mass dissemination model was implemented in four districts: Masawa, Kwimba, Tarime, and Rorya.

❖ What have we achieved so far?

To date:

- Marando Bora has covered 16 districts, in four regions across the Lake Zone of Tanzania.
- 88 DVMs have been established, and have distributed improved planting material to farmers.
- An estimated 110,000 farmers (74% of the original target), the majority of who are women, have received vines through the two dissemination models over three planting seasons: March-April 2011, October-December 2011 and March-April 2012.
- The most preferred varieties were “Polista” a white-fleshed variety which yields well and is less susceptible to virus disease; and “Kabode” an orange-fleshed variety which was liked for its colour and taste, good yields and virus tolerance. Kabode,

was introduced from the Ugandan breeding programme and is now being evaluated as part of the Tanzanian national accelerated release programme.

- Marando Bora has built local capacity by training partner staff and extension agents, strengthened partnership among stakeholders, and contributed to increased dietary diversification, improved income, and increased awareness of sweetpotato farming communities on the importance of growing sweetpotato, especially OFSP as a major source of vitamin A.
- Through demo plots many farmers were trained and had the chance to evaluate varieties.

❖ What are we learning?

Extended dry periods continue to be a challenge for the conservation and multiplication of quality planting material, emphasizing the need to invest in appropriate irrigation technologies. Many parts of the Lake Zone are virus hot-spots. The impact of sweetpotato virus disease on root yield is still being researched. In addition to using clean sources of planting material and agro-ecological location, training and supporting farmer disease identification and control practices are key to managing sweetpotato virus disease and pests. The financial sustainability of quality planting material enterprises will depend on the length of the dry season, competing high value horticultural enterprises and farmer willingness-to-pay for planting material. Group based vine multiplication enterprises, if combined with other activities to diversify risk, may have greater social sustainability.

❖ What's next?

Currently a pilot for a community based Quality Declared Planting Material (QDPM) inspection scheme is being undertaken among selected DVMs, in four agro-ecological zones. This will contribute to assessing how sustainable the DVM approach is, and also to developing appropriate QDPM inspection models for the sub-region. The study on virus degeneration in the distributed sweetpotato varieties will be completed in late 2012. A study to assess changes in Knowledge Attitudes and Practice (KAP) among men, women and youth was conducted in May 2012. This report will help us determine whether perceptions around sweetpotato have changed. The follow-up to the baseline study, scheduled for October 2012, will assess whether Marando Bora has contributed to increased dietary diversification and food security.



Young child enjoying new OFSP variety (credit: M. McEwan)

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Marando Bora: “Better vines” for higher sweetpotato production in the Lake Zone, Tanzania

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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 88 decentralized vine multipliers (DVMs) and an estimated 110,000 households have received quality vines, the majority of who are women. Research activities are contributing to our knowledge of what factors influence the sustainability of community-based multipliers compared to a mass dissemination model.



(credit: M. McEwan)
 Women leaving with vines from mass dissemination site
 (credit: M. McEwan)

✦ What is the problem?

Sweetpotato is a critical food security crop in the Lake Zone. It supplements maize and cassava and serves as a stand-by when other staples fail due to drought or disease. The orange-fleshed sweetpotato varieties (OFSP) offer high beta-carotene levels to combat vitamin A deficiency. Sweetpotato 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.

✦ 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. 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,
- Training for DVMs and farmers on how to maintain vine quality longer, and conserve vines during the dry season, and
- 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 uses DVMs, who supply their communities with quality vines in exchange for vouchers. The second model uses existing community-based groups for the mass dissemination of vines from central locations. A



Partners include:

- Catholic Relief Services (CRS)
- Kituo cha Mafunzo ya Kuboresha Mazingira na Kilimo Adilifu (KIMKUMAKA)
- Rulenge Diocesan Development Department (RUDDO)
- Mogabiri Farm Extension Centre (MFEC)
- Misungwi 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)
- Natural Resources Institute (NRI), UK
- International Potato Center (CIP)