

# Mitigating disaster in Mozambique

Working closely with government extension personnel, a two year effort to mitigate the impact of disasters in 5 provinces of Mozambique succeeded in getting new drought-tolerant orange-fleshed sweetpotato varieties distributed to over 134,000 households.



Farmer in Gondola receiving vines from the District Permanent Secretary (credit Z. Menete).

## What was the problem?

A severe drought in Southern and Central Mozambique in 2009/2010 resulted in the loss of 32 percent of planted area with an estimated 92,000 households affected. The next year, some of those same areas were hit by floods. Those areas most affected by floods and droughts were located in Maputo, Gaza, Inhambane, Sofala and Manica provinces.

At the request of the Mozambique Government, the International Potato Center (CIP) developed a response strategy for disseminating new varieties of Orange-Fleshed Sweetpotatoes (OFSP) to affected areas with the involvement of Provincial and District Agricultural personnel. The Office of United States Foreign Disaster Assistance provided financial support for this unique opportunity to help families recover from disaster and simultaneously improve their vitamin A intake.

## What did we want to achieve?

Our vision over the next five years is to have at least 50 percent of rural Mozambique households cultivating more drought-tolerant, pro-vitamin A rich orange-fleshed sweetpotatoes (OFSP). In addition, we want caregivers to be able to effectively use OFSP to improve the diet of their family, especially their youngest children most at risk of vitamin A deficiency.

The objective of this emergency response project was to assist 600,000 individuals (120,000 households) in the 60 most affected districts in five provinces (Maputo, Gaza, Inhambane, Sofala and Manica) recover from extensive crop loss due to floods and droughts by providing access to improved, drought-tolerant, OFSP varieties just released in 2011. Because of their particular vulnerability to vitamin A deficiency, 75% of the target households either needed to have a child

under 5 years of age or other vulnerable members (elderly, HIV affect, etc.). A network of trained vine multipliers was envisaged to provide sustained access to quality planting material at the community level.

## How did we make it happen?

15 new OFSP drought-tolerant varieties were released in February 2011 as result of a five-year accelerated breeding program. Earlier efforts in Mozambique had developed and tested a voucher-based distribution approach in which vulnerable households would receive vouchers and redeem them at nearby multiplication sites managed by trained decentralized vine multipliers (DVMs). We decided to compare taking this approach to scale compared to the more conventional approach of mass distribution. With the latter approach, households in a given community all receive vines on a given day. Both approaches were implemented with strong collaboration from the government extension personnel and local non-governmental personnel in the five provinces.

## What have we achieved so far?

The two year time frame of the project is an organizational challenge as multiplying sweetpotato vines and organizing large-scale distribution systems takes time. However, in just two years:

- 134,919 households (674,595 individuals) were reached with new drought-tolerant varieties of vitamin A rich Orange-Fleshed sweetpotatoes in the 5 target provinces. This is 12.4 % above project target;

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■ Drip irrigation kit installed with DVM in Barue District to conserve vines in the dry season (credit A. Zaquau).

- Primary fields with quality planting material were established in collaboration with IIAM in Umbeluzi, Chokwé and Sussundenga;
- Secondary multiplication sites with commercially oriented producers were established in strategic locations to provide planting materials to DVM's as well as to end users. In total, 14 commercial farmers (each with at least 0.5 hectares of vines) participated in the project;
- A national coordination committee consisting of technical staff from CIP, IIAM, Provincial focal points, National Directorates of Extension (DNEA) and Agriculture (DNSA) of Ministry of Agriculture was established and met regularly to plan and coordinate this national dissemination initiative;
- Improved capacity of district extension agents, provincial and national focal points, NGO's and associations through their participation into two major training events (2-3 days each). These trainings on agronomic, pest and diseases, soil and water aspects were undertaken in October 2011 and July 2012. In total, 296 people (139 in 2011 and 157 in 2012) from partner institutions were trained;
- More than 320 Decentralized Vine Multipliers (DVMs) were trained and established at community level. However, due to floods and droughts the number of DVM who distributed planting material dropped to 161 at end of the second cropping season (2012-2013);
- At least 3 major supervision and monitoring visits were undertaken annually and in each district, annual programs to train and coach decentralized vine multipliers and extension personnel were undertaken. Extension personnel learned monitoring tools for both the mass dissemination and voucher approach and collected data.
- Key important messages concerning nutritional value and where to obtain planting material disseminated through radio, TV, newspaper and field days;
- Promotion material (T-shirts, calendars, postcards, ties, flyers) designed and distributed

during field days and among key partners;

- 175 signboards were designed and established near DVM fields to make local seed producers known by the community;
- Several field days were organized by participating districts, 16 with direct participation of CIP and IIAM staff for coordination of training. These field days included information on varieties, how to best grow OFSP as well as training on agro-processing;
- 532 people, mostly women, were trained for one day on agro-processing of OFSP. Key recipes were those for juice, doughnuts, cake, chips and sweetpotato leaves as a vegetable dish.
- Capacity building and involvement of 10 training institutions in OFSP production, distribution and consumption;
- Participation in conferences, technical and planning meetings, launching of the cropping season, meetings with stakeholders, among others.

#### ✦ What are the next steps?

Varietal distribution in this two year project ended in June 2013. The project has digitized all monitoring data on dissemination. During August and September 2013, it collected endline data among a subset of beneficiary households that received material either through mass distribution or from DVMs. This will permit a deeper understanding of which of the new OFSP varieties are most preferred, whether they know that OFSP is a good source of vitamin A, and how frequently these households, especially their young children, are consuming OFSP and sharing vines with others.



■ Preparing to eat OFSP in Morrumbene (credit L. Moises).

#### Partners:

- Farmers and farmers' associations
- MINAG (Ministério de Agricultura)
- IIAM (Instituto Investigação Agrária de Moçambique)
- DNEA (Direção Nacional de Extensão Agrária)
- DNSA (Direção Nacional de Serviços Agrários)
- DPA's (Direções Provinciais de Agricultura)
- SPER's (Serviços Provinciais de Extensão Rural)
- SPA's (Serviços Provinciais de Agricultura)
- SDAE's (Serviços Distritais de Actividades Económicas)
- MINED (Ministério de Educação)
- MDN (Ministério da Defesa Nacional)
- UEM (Universidade Eduardo Mondlane)
- ACIPOL (Instituto Ciências Policiais)
- IAB (Instituto Agrário de Boane)
- IAC (Instituto Agrário de Chimoio)
- Escola Agrária de Inhamussua
- Escola Primária de Cocomela
- Escola Técnica de Cambine
- Instituto Formacao Eduacao de Adultos (IFEA)
- Instituto Formação Professores de Xai-Xai
- IPEME (Instituto de Promoção de Pequenas e Médias Empresas)
- PIREP (Programa Integrado de Reforma de Educação Profissional)
- NGO's and CBO' (World Vision, World Food Program, FAO, Caritas, Lutheran World Federation, Childfund, ATAP, APOs, Magariro, Anda, Kubatsirana, Shingirirai, LUPA, HOPE-ADPP, CESVI, Associação Kurera Wana, Centro Aberto de Jesus, ESMABAMA, ADRA, FDC, Uapeg, IRD, Associação Nhacha Djamai, Indosmar, Semoc, Pronasce, Igreja Pedra vista, Aficrimo, Rubatano, Rudo Kubatana, Aptarv, Centro Aberto de Nhamatsane, Matsatse, Centro Prisional de Nhangau, INAS)

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