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-flushed sweetpotato varieties distributed to over 134,000 households.

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 Flushed Sweetpotatoes (OFSP) to affected areas with the involvement of Provincials 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-flushed 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 5 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, 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 mass dissemination and voucher approach and to the national dissemination initiative. The two year time frame of the project is an initiative; a network of trained vine multipliers was envisaged to provide sustained access to quality planting material at the community level.

Primary fields with quality planting material were established in collaboration with IAM/Imbuelu, Chokwe and Suduanda, and secondarily with commercial oriented producers were established in strategic locations to provide planting materials to DVMs 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/IAM, provincial focal points, National Directors 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, pests 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 DVMs who distributed planting material dropped to 161 at the 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.

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 IAM staff for coordination of training. These field days included information on varieties, how to best grow OFSP as well as training on agro-processing;
• At least 52 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.

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• Farmer in Gondola receiving vines from the District Permanent Secretary (2nd left, Menete).

• Orange-flushed sweetpotatoes in the 5 target provinces. This is 12.4% above project target;

• Drip irrigation kit installed with DVM in Barue District to conserve vines in the dry season (credit F. Zapata).

• Preparation of kit with OFSP in Manhiçue (credit L. Moises).

Partners:
• Farmers and farmers’ associations;
• MINAG (Ministerio de Agricultura);
• IAC (Instituto Agrário de Coimbra);
• IAB (Instituto Agrário de Beira);
• Instituto Formacao Eduacao Profissional (IFEA);
• IAC (Instituto Agrário de Beira);
• Instituto Formacao Educao Profissional de Albufeira (IFPA);
• Instituto Formacao Profissionais de Alentejo;
• PTF (Programa de Propostas e Medias Empresas);
• PIPF (Programa Integrado de Pesquisa e Formacao Profissional);
• AGP (Agrofood Project, World Food Program, FAD);
• Creas, Lutherford (World Federation for Christian Education, WEC);

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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 to disperse 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 affected, 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 district permanent secretaries (DVS). Provincial focal points, National Directors of Extension (DENA) 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, NGOs and associations through their participation into two major training events (23 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 supervising 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.

What have we achieved so far?
The two year time frame of the project is an organizational challenge as multiplying sweetpotato vines and establishing 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;
- 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 IAMA staff for coordination of training. These field days included information on varieties, how to best grow OFSP as well as training on agro-processing;
- 332 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 end 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. During field days and among key partners;

- 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.

For more information on the Sweetpotato Knowledge Portal, visit the Sweetpotato Knowledge Portal (www.sweetpotatoknowledge.org)