

Nutritious Orange-Fleshed-Sweetpotato for Niassa, Mozambique

During the past year, the project conducted nutrition trainings in eight districts and continued market development activities for fresh roots and orange-fleshed sweetpotato bread. Since the beginning of the project, 13,790 direct beneficiaries (54% of them women) received quality vines and 4,113 (61% women) of them participated in nutrition training.

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Fig. 1 Rural children curious about the new Power Bread. (credit J. Low)

What is the problem?

Niassa is the most remote and sparsely populated of Mozambique's provinces with a population density of just 11-12 persons per km² of land (compared with the national average of 30 persons per km²). Niassa suffers from very high rates of child malnutrition. Forty-five percent of children less than five years of age are stunted, levels of vitamin A deficiency are high, and nutritional knowledge among caregivers low. Baseline data indicated that 76% of households in target districts are growing sweetpotato (average plot size 300 m); indicating that knowledge of the crop is widespread and the introduction of orange-fleshed sweetpotato (OFSP) would be a marginal change.

What do we want to achieve?

The key aim of the 3.5 project, which began in November 2012, is to improve vitamin A and energy intake for at least 20,000 rural households with women and young children using orange-fleshed sweetpotato focused, food-based approaches that ensure at least 20% of households growing OFSP earn 50 USD or more per year from OFSP sales, and increase average sweetpotato yields by 50% by mid-2016. Capacity building and testing novel approaches

to maximize impacts from OFSP-based nutritional and agricultural programming are keys to achieving these objectives.

Where are we working?

The project is working in 8 districts of in Niassa Province, Mozambique (Lago, Muembe, Sanga, Chimbunila, Lichinga, Mandimba, Cuamba and Mecanhelas), covering 29 Administrative Posts, 87 communities and 267 villages (Fig. 2, with dominant OFSP varieties grown highlighted).

How are we making it happen?

CIP and partners are providing access to quality OFSP planting material by creating a network of decentralized multiplication sites and trained farmer multipliers to serve surrounding communities through vine distribution. The households consume leaves and roots and sell the production surplus to the market and bakeries. The implementation strategy includes:

- Testing of drought-tolerant OFSP varieties in participatory On-Farm-Trials (OFTs) with farmers, to select the best varieties at the community levels with the producers men and women;
- Identifying and training decentralized vine multipliers (DVMs) so that quality planting materials of the new varieties preferred by farmers can be easily accessed;
- Conducting training programs, field days and technical backstopping;
- Coordinating distribution of vines to rural households in collaboration with partner organizations;
- Informing communities about the nutritional value of OFSP through demand creation campaigns and literacy programs.
- Linking to nutrition efforts led by others to increase impact on dietary practices;
- Facilitating fresh root market development and OFSP processed product utilization.



- Partners**
- Instituto de Investigação Agrária de Moçambique- Agrarian Research Institute (IIAM)
 - Associação Progresso (AP)
 - Secretariado Técnico de Segurança Alimentar e Nutrição- Technical Secretariat for Food Security and Nutrition (SETSAN)
 - Serviço Distrital de Actividade Economicas- District Service for Economic Activities (SDAE)
 - União dos Camponeses e Associações de Lichinga- Farmer's Union of Lichinga (UCA)
 - Diocese Anglicana de Lichinga— Anglican Diocese in Lichinga
 - Ajuda de Desenvolvimento do Povo para Povo- People for People Development Aid (ADPPP)
 - Padaria Maria—Maria's Bakery
 - Padaria Pao Dourado- Golden Bread Bakery

Varietade	Numero Distrito
Delvia	5
Bela	4
Gloria	4
Irene	2
Jane	2
Erica	2
Cecilia	1
Sumaia	1

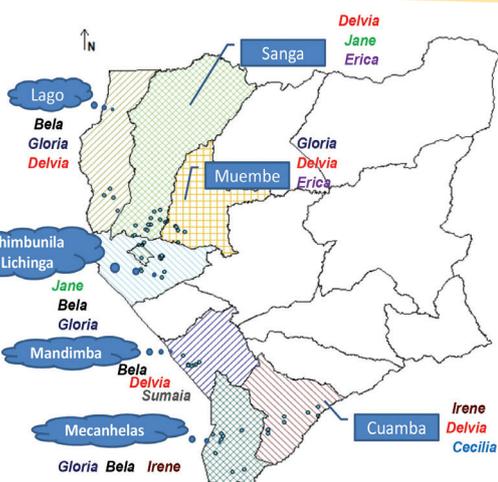


Fig. 2 Intervention zones and adopted OFSP varieties per district



Who are we working with?

IIAM, Association Progresso (AP) and Diocese de Niassa (Anglican diocese) are the major partners. In the third year, collaboration expanded with public sector extension in the eight districts for mass multiplication, and UCA and ADPP also participated. With its own funds, SETSAN distributed OFSP vines to other districts in Niassa. Two new bakers (Pao Dourado and one small baker) starting testing the OFSP Power bread in 2015.



What have we learned so far?

- Uptake of OFSP is high in Niassa. From 2013 OFTs to date, eight varieties were selected and five of them (Delvia, Gloria, Bela, Irene and Sumaia) were widely distributed. Delvia is the preferred variety in five districts; Bela and Gloria varieties also score high in four districts (Fig. 2). Two new clones (105260, MUSG11022-11) from OFTs in the lowlands were more preferred in terms of yield and taste than Gloria, the dominant lowland choice during the past two years.



Fig. 3 Farmer appreciated new OFSP during training in Lago. (credit. B. Rakotoarisoa)

- The project focused on screening out poor performing DVMs and providing additional training and supervision to committed DVMs. In addition, some successful producers (Fig. 3) were identified to be future DVMs.
- A study of 104 growers in Sanga district, found increased vine conservation in lowland areas (47% of households) compared to a baseline survey in 2013 (32%), while vine conservation in upland fields dropped from 47% at baseline to 33% in 2015.
- Disseminating vines is the core activity. Ten out of the fifteen first-tier decentralized vine multipliers (FDVM) and twenty-two out of forty-four second tier DVMs (including 7 women) distributed 37,000 kilograms of vines of Delvia, Gloria, Bela, Irene, Jane and Sumaia varieties to 13,790 direct beneficiaries (54% women) since the beginning of the project in November 2012. This includes beneficiaries from an emergency distribution after flooding in Cuamba and Mecanhelas districts, in response to a request from the provincial agriculture office for disaster recovery support.
- SETSAN also supplied vines for Mecula District to initiate OFSP vine multiplication from this year to contribute to reducing the food insecurity and vitamin A deficiency through improving culinary preparation (Fig. 4).
- A market survey among 390 households indicates acceptance of the OFSP "Power Bread", with 30% of wheat flour replaced by OFSP puree. Over 90% of the participants preferred "Power Bread" to the conventional bread (100% wheat flour) because of its nutritional value, taste and appearance. The OFSP products processed in Lichinga were demonstrated during several events in Lichinga, Mandimba, Chala-Chimbunila, Nairobi, Nampula and Maputo and were very appreciated by consumers.



What's next?

As the project enters its last year, we are on track for achieving our goal of reaching 20,000 households by December 2015. An assessment of the progress will be carried out with the partners by November 2015 and the final evaluation will be conducted in June-July 2016. There is considerable demand from farmers and government for a phase 2, so that the OFSP value chain can be expanded throughout Niassa.



Fig. 4 Vegetables with OFSP and eggs for soup. (credit B. Rakotoarisoa)