

# Scaling Up Sweetpotato Through Agriculture and Nutrition in Mozambique

SUSTAIN wants to achieve a better nutrition status through the production, marketing and consumption of a biofortified crop: the Orange-fleshed sweetpotato. The project runs from 2013 to 2018 and covers four countries: Rwanda, Kenya, Malawi and Mozambique. In Mozambique SUSTAIN works in Manica Province in the Center and Maputo Province in the South.

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White and orange-fleshed varieties on the market of Ponto 38 in Chimoio. (credit R. Brouwer)

## What is the problem?

OFSP varieties were first introduced in Mozambique in the late 1990s, with the first OFSP varieties bred in Mozambique released in 2011. Even though there has been a significant improvement in acreage and productivity, sweetpotato is still grown mainly for home consumption on small plots with an average acreage per household of 300 m<sup>2</sup>.

This feature hinders the supply to urban consumers who depend on the market. SUSTAIN verified that in the capital city Maputo about 85% of the population consumes white-fleshed sweetpotato and about 64% also eat orange-fleshed varieties. However, OFSP appears in less than one-third of the meals, largely because consumers are unable to buy OFSP as it is not always available on the market. Small-scale production by farmers limits supply and obviously, also constrains the potential positive impact of OFSP on health of rural consumers.

## What do we want to achieve?

SUSTAIN in Mozambique intends to address the issues mentioned above. It aims at scaling up the production and consumption of OFSP through:

- Sustainable production of healthy, virus-free vines of bio-fortified high-yielding varieties,
- Improvement of the diet of in particular households with children under five years old through increased diversity and vitamin intake, and
- Development of the urban market for fresh and processed roots.

The underlying assumption is that developing the market through improved harvest and post-harvest practices and through the development of products such as bread, biscuits and juice will raise the crop's attractiveness for producers and boost production. SUSTAIN combines development with research. Documenting the different steps and identifying and explaining the driving mechanisms for expected and unexpected



SUSTAIN is a 5-year partnership (2013-2018), coordinated by CIP and financed by the UK Department for International Development, to scale up the nutrition benefits of biofortified orange-fleshed sweetpotato (OFSP). The goal is to reach 1.2 million households with under-5 year old children in Kenya, Malawi, Mozambique and Rwanda. SUSTAIN supports integrated interventions in agriculture, nutrition, utilization and marketing to strengthen production and consumption of OFSP. SUSTAIN emphasizes rigorous measurement and evaluation in order to assess the scalability of these interventions and contribute to global evidence on achieving large scale nutrition outcomes through biofortified crops.



Sign for decentralized vine multiplier in Macate (Manica Province) (credit R. Brouwer)



Dish being prepared for the leaves taste test in Manica (July 2014) (credit L. Moises)

outcomes constitute its fourth objective. SUSTAIN Mozambique aims to reach 35,000 direct beneficiaries and an additional 175,000 indirect producer beneficiaries by the end of 2018. Market development activities will enable OFSP to reach at least 100,000 urban and rural consumers.

### Where are we working?

In Mozambique SUSTAIN works along two important economic corridors: the Beira corridor in the center and the Maputo corridor in the south. They have about 3 million inhabitants (600,000 households), 15% of which are under five years of age. There are four major urban areas: Maputo and Matola in the Maputo Corridor; Beira and Chimoio in the Beira Corridor. The population density in the districts outside the main urban centers varies between 6.9 to 125.1 persons per square kilometer. In 2014, activities are concentrated on Manica and Maputo provinces. The two provinces represent distinct conditions. Maputo is dry and moderately warm and Manica has an altitude modified climate with higher rainfalls and lower temperature.

The capital city, Maputo, is a separate province. With 1.1 million inhabitants it is a key potential market for OFSP and dominates all economic activities in the Maputo corridor.

### How are we making it happen?

CIP combines investigation with innovation. It develops new agricultural technologies and ways to disseminate them. At the same time it assesses the dissemination process to learn about the mechanisms of adoption and the possible impacts on the lives of producers and consumers. Partnerships with farmers, NGOs, government agencies and business are key. Under SUSTAIN in Manica, a network of vine multipliers is being set up that will cover large parts of the target area. Vine distribution will be integrated with nutrition communication and education efforts at the community level. In Maputo province, a multiplier network initiated under a previous project will be utilized in partnership with district governments and local NGOs. Private companies will be mobilized to engage in processing, with options such as bread, pastry, biscuits and juice being explored. Institutional consumers such as the Central Hospital in Maputo, schools through gardening, and the airline catering company are other important options to pull the market and push the public image of OFSP as a healthy food for all.

### What have we achieved so far?

- 48 on-farm trials testing 15 OFSP varieties produced by CIP and IIAM have been laid out in seven districts in Manica. Taste tests of leaves and roots and a rough assessment of the productivity of these varieties against local varieties have been completed. These tests combined with experiences in multiplying varieties over 2013/2014 will guide multiplication at least 21 DVM sites for the 2014/15 cropping season.
- An OFSP market monitoring system covering the cities of Chimoio and Maputo was launched July 15. The monitoring is integrated with the market monitoring system run routinely by the Ministry of Agriculture.
- A quick consumer survey in Maputo City and Boane district in the Maputo corridor area, with another in Chimoio planned for 2014 provide insights in the consumption patterns, awareness about OFSP and market opportunities.
- The selection of a partner – the Economic Development Agency of Manica (ADEM) – which will carry out a voucher-based distribution system connected with nutrition communication and education for at least 8,000 target households in Manica in seven districts by April 2015.
- CIP participated a trade fair in Manica on 1 and 2 August, where staff sold vines, demonstrated products and identified new potential partners.
- Potential businesses with the potential to engage in OFSP processing are being contacted.



On-farm trial with six varieties at close to Chimoio (credit A. Naico)