

# Scaling out sweetpotato and potato-led interventions to improve nutrition and food security in Tigray and SNNPR, Ethiopia

Strengthening the seed value chain is key to any sweetpotato intervention. Getting disease-free starter material is essential. Quality orange-fleshed sweetpotato vines (16.9 million cuttings) have been distributed reaching 36,460 households in two and a half years.

SEPTEMBER 2016



Fig. 1 OFSP vine multiplication under screen house conditions at TARI, Tigray Region (credit A. Frezer)

## What is the problem?

Chronic food insecurity and malnutrition are major public health problems facing Ethiopia, especially in the Southern Nations, Nationalities, and Peoples' Region (SNNPR) and Tigray, which suffer from repeated incidences of drought. The prevalence of vitamin A deficiency among children below five years of age is more than 60% in Tigray and 61% in SNNPR, and it is also a problem among pregnant and lactating women. To address this problem, there is need for effective integration of more nutritious crops into local farming and marketing systems, so that key nutrients will become available to vulnerable populations in an affordable and sustainable manner. This project contributes to this solution through expansion of production, utilization, and consumption of nutritious orange-fleshed sweetpotato (OFSP) and potato varieties.

## What do we want to achieve?

The overall goal of this project is to contribute to improved nutrition and food security in vulnerable households with young children in Tigray and SNNPR through increased production

and consumption of micronutrient-rich OFSP, and potato varieties as part of diversified diets. The project began in November, 2013 and runs through December, 2016. We seek to achieve four objectives:

- Expanded smallholder production of nutritious sweetpotato and potato varieties;
- Increased consumption of OFSP and potato as part of more nutritious diets;
- Improved and diversified market access for OFSP and nutritious potato; and
- Increased institutional and policy support to nutrition-focused agriculture.

## Where are we working?

The project is being implemented in the SNNPR and the Tigray region in the north of Ethiopia. At present, the project covers a total of 75 *kebeles* (villages) in 20 *woredas* (districts) in the two regions.

## How are we making it happen?

The International Potato Center (CIP), in collaboration with implementing partners, is employing a four-pronged approach to achieve the project objectives:

- Providing technical and financial support** to the national research system (Southern Agricultural Research Institute (SARI) and Tigray Agricultural Research Institute (TARI)), private sector operators and trained farmers to produce quality planting material for OFSP root production (Fig. 1).
- Implementing intensive nutrition education and behavior change campaigns**, in collaboration with NGOs (Mums for Mums, Egna Leegna, Goal and Women's Association of Tigray), to promote consumption of OFSP as part of diversified diets (Fig. 2). Promotion approaches include: cooking demonstrations, OFSP recipe tasting, mass media, participatory



### Key Partners:

- Bureau of Agriculture and Rural Development (BoARD) in Tigray
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- Bureau of Health in Tigray
- Bureau of Health in SNNPR
- Bureau of Education in Tigray
- Southern Agricultural Research Institute (SARI)
- Tigray Agricultural Research Institute (TARI)
- Mums for Mums
- Women's Association of Tigray
- Egna Leegna
- Goal Ethiopia
- Hawassa University
- Mekelle University
- University of Wisconsin





**Fig. 2** Ms. Tirhas Woldu with her two daughters enjoying OFSP roots and injera in Cheleqot district, Tigray (credit A. Frezer)



**Fig. 3** OFSP Anbasha (bread) baked by Ms. Tirhas Woldu, a farmer in Cheleqot district, Tigray Region (credit A. Frezer)



**Fig. 4** Preparation of OFSP for the School Feeding Programme in Debreberhan district, Hawzen (credit A. Frezer)

radio programmes, nutrition counselling, information, education and communication tools (flyers, brochures, posters, leaflets and bill boards), nutrition education sessions at schools, school gardens and school feeding programmes.

- iii. **Improving and diversification of value chains for OFSP and nutritious potato** by linking OFSP producers to markets, including markets for new processed products that use OFSP as an ingredient, like bread (Fig. 3). These activities are supported by research on value chains and training on OFSP processing and product development, marketing and business skills.
- iv. **Supporting institutionalization of policies promoting nutrition-sensitive agriculture**, by collaborating with the Bureaus of Agriculture and Health, and striving to foster collaboration between the two entities through joint trainings of staff from the two departments and technical roundtables.

### What have we achieved so far (November, 2013 to June 2016)?

**So far, the regional research institutes (TARI and SARI)** have produced and acclimatized over 151,276 *in vitro* plantlets of two OFSP varieties. Approximately 1,149,070 basic, disease-free OFSP vine cuttings have been distributed to almost 75 private and decentralized vine multipliers (DVMs) for further multiplication in the two regions. The 75 DVMs have been linked to suppliers of quality foundation primary seed materials. In addition, 38 net tunnels (16 on-station and 22 on-farm), which protect disease-free starter material from virus-transmitting insects, were constructed to enhance production of clean planting material. The project has so far distributed 16.9 million vines reaching 36,460 households. Root producer farmer groups have been set up and market linkages established with supermarkets and

kiosks to strengthen OFSP fresh root value chain in urban areas. Twenty-four school gardens have been established in the two regions. In Tigray 18,450 school children consume OFSP as part of the school feeding programme (Fig. 4). Different nutrition and OFSP promotional activities (Fig. 5) have been used (cooking demonstrations, school gardens/feeding, nutrition counselling at health posts, festivals, posters, radio) targeting households in all 75 project *kebeles* and major urban towns.

### What's next?

**The project has already started establishing** collaboration with private tissue culture laboratories interested in engaging in producing OFSP pre-basic and basic planting material to supplement production from the national research institutes. These laboratories will be linked to primary and secondary vine multipliers. Additionally, the project will expand the on-station and on-farm net tunnel activities and pilot drip irrigation and on-farm conservation technologies to further strengthen the seed system. The project will continue promotion activities: the very popular cooking demonstrations will be expanded and consolidated in the newly established intervention districts; and we will strengthen promotion activities targeting traders and processors in urban areas. Value chain activities will be strengthened and the project has established partnerships with several large scale root producers and is exploring introduction of OFSP based processed products (puree and juice) targeting urban consumers. Regarding promotion activities, the project will continue promotion activities, especially the very popular cooking demonstrations, will be expanded and consolidated in the newly established intervention districts. We will strengthen our promotion activities in urban areas, especially those targeting traders and processors.



**Fig. 5** Promotion of OFSP by a women's group of Mekelle in Tigray Region during Ashenda celebrations (credit A. Frezer)