

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

By March 2017, the project distributed 16.6 million orange-fleshed sweetpotato (OFSP) cuttings directly reaching 34,500 households. Households producing OFSP for three consecutive years and consuming it at least twice a week as part of diversified diets, usually integrated OFSP roots into other local dishes (wat, kita, mixed with injera and ganfo).

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**Fig. 1 Fig. 1** Harvesting Sweetpotatos in SNNPR. (credit F. Asfaw)

## What is the problem?

For years, the Government of Ethiopia prioritized tackling food insecurity. In the past decade, however, malnutrition has emerged as a key public health challenge equally requiring urgent attention. The Southern Nations, Nationalities, and Peoples' Region (SNNPR) and Tigray 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 become available to vulnerable populations in an affordable and sustainable manner.

## What do we want to achieve?

Our overall goal is to contribute to improved nutrition and food security in vulnerable households with young children in Tigray and

SNNPR through increased production (Fig. 1) and consumption of micronutrient-rich OFSP, and potato varieties as part of diversified diets. The project began in November 2013 and ran through March 2017. We set out 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. 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) and its implementing partners are employing a four-pronged approach to achieve project objectives:

- i. 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.
- ii. Implementing intensive nutrition education and behavior change campaigns to promote consumption of OFSP as part of diversified diets. Promotion approaches include: cooking demonstrations, OFSP recipe tasting, mass media, participatory radio programs, nutrition counseling, information, education and communication tools (flyers, brochures, posters, leaflets and bill boards), nutrition education sessions at schools, school gardens and school feeding programmes.



### Key Partners:

- Bureau of Agriculture and Rural Development (BoARD) in Tigray
- Bureau of Agriculture and Rural Development (BoARD) in SNNPR
- 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 Association of Tigray
- Egna Leegna, Goal Ethiopia
- Hawassa University
- Mekelle University
- University of Wisconsin



Fig. 2 Training on preparing bread from OFSP puree. (credit A. Kifle)

- iii. Improving and diversifying 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. 2). These activities are supported by research on value chains and training on OFSP 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 (November, 2013 to March 2017)

The project has increased the capacity of regional research institutes (SARI and TARI) to produce disease-free cuttings derived from tissue culture plantlets. Annual production capacity increased from zero to 50,000 plantlets for SARI and to approximately 30,000 for TARI. To help in the dissemination of cleaning planting material, 172 decentralized vine multipliers were established. Thirty-six (11 in Tigray and 25 in SNNPR) were active in 2016. In addition, 15 on-station net tunnels (12 in SARI and 3 at TARI) have been established for rapid multiplication of disease-free OFSP pre-basic material, which increased the annual supply of clean OFSP pre-basic material from net tunnels to 500,000 per year for SARI and 300,000 per year for TARI (Fig. 3). The project distributed 16.6 million vines reaching 34,511 households. Root producer farmer groups were set up and market linkages established with supermarkets and kiosks to strengthen OFSP fresh root supply in urban areas. OFSP school gardens were established in ten schools in Tigray



Fig. 3 On station screen house at Hawassa research center. (credit F. Asfaw)

region and OFSP nutrition promotion conducted through school agriculture and nutrition clubs in 26 schools (10 in Tigray and 16 in SNNPR); 10,600 school children consumed OFSP as part of school meals during the year (Fig. 4). Using schools proved to be an effective OFSP demonstration, vine dissemination and nutrition education strategy with school children proving to be key change agents. 79,027 people from project target areas were reached through cooking demonstrations led by nutrition promotion partners, and 8,140 people were reached with nutrition counseling sessions and house-to-house nutrition education by health extension workers and model farmers.



### What's next?

**From July 2017, Irish Aid** Ethiopia approved a follow-on project led by CIP in collaboration with national partners. The project is entitled "Strengthening institutional systems for scaling up OFSP for improved food security and nutrition in Tigray and SNNPR, Ethiopia". It is aimed at strengthening technical and institutional capacities of government agriculture and health systems for scaling up of OFSP to address vitamin A deficiency at scale. To this end, the project has four specific objectives:

- i. Diagnosis of key institutions, system linkages and coordination, technical and institutional capacity gaps and review of the OFSP evidence base to identify gaps and leverage points for system strengthening.
- ii. Technical capacity of Bureaus of Agriculture (BoA), Bureaus of Health (BoH), SARI/TARI, Agricultural Technical Vocational Education and Training, Farmer Training Centers and other stakeholders in the OFSP value chain strengthened to promote and implement sustainable OFSP technologies and services to smallholder farmers.
- iii. Evidence, best practices and lessons on using OFSP to improve food security and nutrition documented and disseminated at national, subnational and local levels
- iv. Evidence-based advocacy strengthened to influence policies and programming in support of OFSP as part of healthier diets.

The new project runs from July, 2017 to December, 2018 and targets ten woredas, five in each of the two target regions. In SNNPR, the project complements the recently initiated "Quality Diets for Better Health" project.



Fig. 4 School feeding program at Hatset Primary School Hawzen district, Tigray. (credit F. Asfaw)