

# Scaling Up Sweetpotato through Agriculture and Nutrition in Kenya

SEPTEMBER 2016

A total of 18,526 households were reached with OFSP vines and nutrition messages by August 2016. Previously non-existent in households, OFSP is being consumed at least twice a week, especially when the roots are in season. This past season, over 150 tons of roots were delivered to the puree processor, Organi Limited. This is a significant milestone considering that in 2015, the processor struggled to obtain 500 kg per day to initiate processing.



Fig.2 Training on integration of OFSP into young child feeding practices and the family diet (credit C. Muhindi)

## What is the problem?

Vitamin A deficiency (VAD) is the leading cause of preventable blindness in children and increases the risk of illness and death from severe infections. VAD is a significant public health problem in Kenya that affects 84% of children and 39% of women (particularly pregnant women). In pregnant women VAD causes night blindness and may increase the risk of maternal mortality.

## What do we want to achieve?

Orange-fleshed sweetpotato (OFSP) has the potential to contribute to reduction of VAD. Only 125 grams of most OFSP varieties supply the recommended daily allowance of vitamin A for children and non-lactating women. In addition, the short maturity (3-4 months), low input requirement and ease of integration in kitchen gardening makes OFSP an excellent food based approach to reduce the high prevalence of VAD. SUSTAIN Kenya is more than half-way in reaching its goal of 35,000 households with children under five years of age receiving OFSP planting material and nutrition education by 2018. We expect that these households will produce OFSP at least twice a year and consume OFSP at least twice per week when it is in season. We would like to reach at least 100,000 consumers with a commercially traded product that uses OFSP as a major ingredient, developed with a commercial partner. We expect that this will in turn increase OFSP root production.

## How are we making it happen?

The project is strongly anchored in the community strategy approach developed by

the Ministry of Health. This approach allocates about 100 households to the constant follow-up of one community health worker with regards to adoption of key public health interventions. Further, households have been clustered into community units for ease of administration and supervision of health interventions. SUSTAIN Kenya works in 33 community Units (CUs) across the five counties. Within each CU, a trained decentralized vine multiplier produces OFSP planting material (vines) that are disseminated to beneficiaries. Initial contact with the beneficiaries is made at the health facility either while attending ante-natal care or post-natal care. This elaborate agriculture-nutrition approach has reached 28 health facilities. In addition, we are supporting the development of a value chain linking OFSP producers to a factory producing OFSP purée (steamed and mashed).

## Where are we working?

We are working in Homa Bay, Migori, Nyamira, Kisumu and Siaya counties in the former Nyanza province.

## What have we achieved?

A total of 18,526 households were reached with OFSP vines and nutrition messages by August 2016. There is increased interest in OFSP, as over 80% of those receiving coupons redeemed them within a week, compared to 38% of coupon recipients in 2014. In addition, over the three years of project implementation, the total number of coupons issued and redeemed has increased (Fig. 1). Previously non-existent in households, OFSP is being consumed at least twice a week when the roots are in season. Through strong



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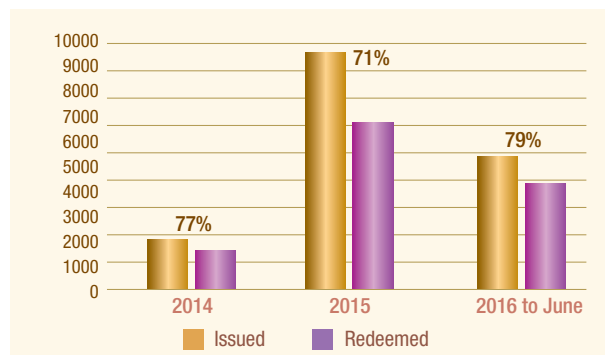


SUSTAIN is a 5-year program (2013-2018), coordinated by the International Potato Center (CIP) with support from UKAid, to scale up the nutrition benefits of biofortified orange-fleshed sweetpotato (OFSP) to 1.2 million households with under-5 year old children in Kenya, Malawi, Mozambique, Rwanda, and Bangladesh. SUSTAIN supports an integrated set of interventions in agriculture, nutrition, and marketing to increase production and consumption of OFSP. SUSTAIN emphasizes rigorous monitoring, operational research, and independent evaluation to assess the scalability of these interventions and contribute to global evidence on achieving large scale nutrition outcomes through biofortified crops.

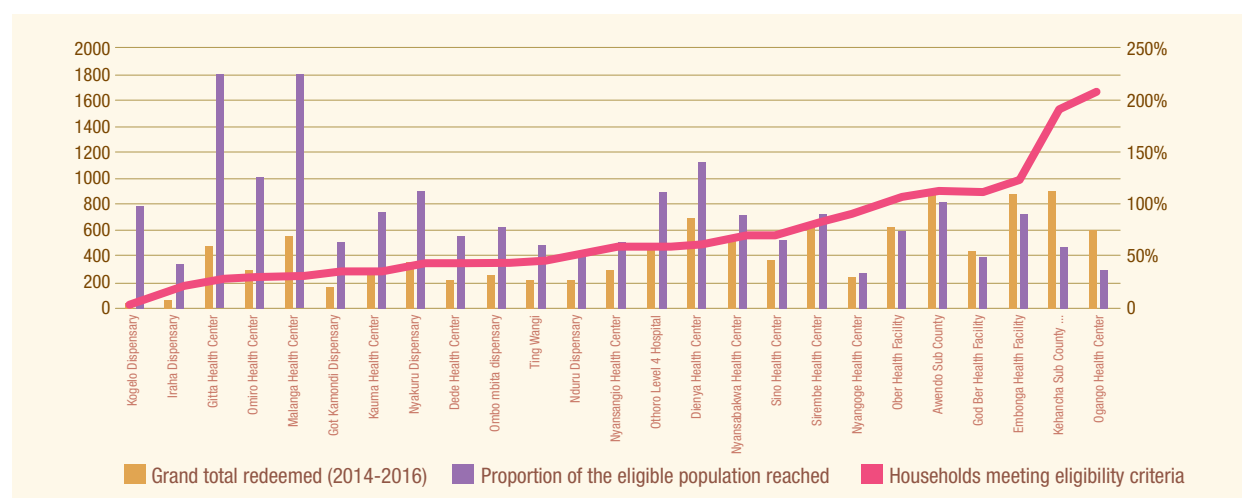


**Fig.4** Off-loading of roots at Organi Limited (credit B. Kiplagat)

collaborative behavior change efforts with the Ministry of Health, OFSP has become part of the complementary feeding practices (Fig. 2). Implementation of the integrated agriculture-health approach has also registered early initiation of ante-natal care as well as enhanced completion rate for post-natal care. This has been possible due to persistence



**Fig.1** Number and percentage of coupons redeemed for vines



**Fig.3** Beneficiaries reached with vines compared with the eligible population within a CU

nutrition education particularly extended to households with either pregnant women or a child under five years. Out of 28 health facilities working with the project, 50% have disseminated vines to half of the eligible population, while 17% have reached beneficiaries beyond the eligible population. This means that in addition to beneficiaries in their CU, coupons have been received by beneficiaries residing outside the CU (Fig. 3).

Together with our commercial partners, we have made progress towards reaching at least 100,000 consumers with a processed product that utilizes substantial amounts of OFSP. This has resulted in more farmers taking up OFSP as a commercial crop. This past season, over 150 tons of roots were delivered to Organi Limited (Fig. 4). This is a significant milestone considering that in 2015, the processor could hardly find 500 kg per day to initiate processing. Use of Open Data Kit (ODK) has been piloted in the project. Six agriculture extension staff and 12 community health extension workers provide real time reports on field activities. We are starting to get feedback regarding the deployment of ODK data collection for continuous monitoring. This pilot stage has allowed the project to respond faster to issues emanating in the field - an attractive feature of ODK reporting.

## Who do we work with?

SUSTAIN is a partnership between public sector agricultural and health institutions in Kenya and CIP. For the commercial value chain, the private sector food technology firm Euro Ingredients Ltd supports Organi Limited, a new private company that processes purée in the production area. This is then shipped to Tusky's, who use it to produce OFSP bread for their chain of supermarkets. As of August 2016, OFSP bread was being sold in 26 Tusky's stores.

## What's next?

In the coming year, we expect to reach 15,000 households with agro-nutrition-health service intervention. This will be led by a team of 264 community health workers that have been trained on seven key thematic areas on integration of OFSP in complementary feeding as well as in family diets. On the marketing side, we will continue to diversify clientele for OFSP puree utilization to assure the puree processor (Organi Limited) increased volumes traded per day to 2,000 kgs by end of 2017. Use of unpeeled roots has increased throughput to 15%. We will therefore provide technical support to Organi Limited to operationalize high fiber puree production from unpeeled OFSP roots. We will also facilitate the creation market linkages for fresh roots in rural and urban areas.