

Rooting Out Hunger in Malawi with Nutritious Orange-Fleshed Sweetpotato

By September 2013, the Malawi national program had released 6 pro-vitamin A rich, orange-fleshed sweetpotato (OFSP) varieties and over 100,000 households have received planting material by working with numerous development partners. OFSP is being integrated into the Scaling-Up Nutrition (SUN) effort to combat malnutrition at the community level.



■ Interacting with group living with HIV and AIDS.

✦ What is the problem?

The Government of Malawi (GoM) is committed to poverty reduction and, since 2005 has been monitoring poverty annually. Currently, the national percentage of persons falling below the poverty line is 39%, a marked improvement from the 50% found in 2005. However, rural poverty remains much higher (43%) than urban (14%) and poverty in the rural South (51%) significantly higher than in the center (41%) or the north (31%) of the country. Since agriculture is the major occupation in rural areas, getting this sector moving is critical for food security and poverty reduction.

Malnutrition among young children remains one of the biggest challenges in Malawi. Children aged 0–23 months are the most vulnerable group with a peak incidence of mortality and morbidity. In spite of the gains made in poverty reduction, levels of malnutrition remain high, with 47% of under-five children stunted, 59% vitamin A deficient, and 13% underweight. Infant mortality also remains high, with 112 deaths per 1,000 live births estimated for 2010. The situation is exacerbated by the high prevalence of HIV/AIDS among economically active adults, currently estimated at 12%.

In Malawi, maize is the most important food crop, followed by cassava, sweetpotato, Irish potato, and sorghum. In 2011/2012, sweetpotato production in Malawi was 3.5 million metric tons. Sweetpotato is widely grown and becoming more significant as dry spells are increasing and maize is much more susceptible to dry spells than sweetpotato. Consequently, there is great interest on the part of government and other partners in mitigating these risks with nutritious orange-fleshed sweetpotato.

✦ What do we want to achieve?

The first phase of this project (4.5-years) seeks to improve vitamin A and energy intake for at least 70,000 rural households with young children, the group most vulnerable to vitamin A deficiency (VAD), using orange-fleshed sweetpotato (OFSP) as the key entry point. The 1-2-3 seed system, combined with nutrition awareness campaigns and OFSP product demonstrations, aims to stimulate demand for OFSP and ensure that by the end of the project at least 20% of households growing OFSP will earn at least US \$100 per year from OFSP sales and will increase their sweetpotato yields by 50%.

✦ How are we making it happen?

CIP and partners in relevant government departments and nongovernmental organizations (NGOs) are providing access to large amounts of OFSP planting material by building a network of decentralized multiplication sites to serve surrounding communities. The project uses subsidized vouchers to reach vulnerable households and non-subsidized vouchers for better off households. The implementation strategy includes five integrated components:

1. Strengthening partnerships with the relevant government, NGOs, and other private sector players, our implementing partners (IPs)
2. Providing access to vines through an improved decentralized “seed” system and vouchers
3. Conducting training programs, field days, and technical backstopping
4. Conducting demand creation campaigns utilizing theatre, dance, poetry, songs, chitenje (promotion cloth) and banners

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Partners

- Department of Agricultural Research Services (DARS)
- Department of Extension Services (DAES)
- Department of Nutrition, HIV and AIDS at the Office of President and Cabinet (DNHA)
- Catholic Development Commission (CADECOM)
- Millennium Villages Project (MVP)
- Concern Universal (CU)
- FAO
- Wellness and Agriculture for Life Advancement, a USAID-WALA Project is comprising 7 consortium NGOs, Africare, Emmanuel International, Project Concern International, Total Land Care, Save the Children, World Vision and ACCDI/VOCA (providing technical support to Agribusiness).
- Farmers Union of Malawi (FUM)
- Kachele Farmers' Club in Salima District
- Kazingilira Estate in Kasungu District for vine production

5. Linking to nutrition efforts led by others to encourage improved dietary practices
6. Improving post-harvest utilization and marketing

The project was designed to help achieve Agriculture Sector-Wide Approach strategic objectives including: increased productivity of promoted crops like OFSP in relevant areas, promotion of dietary adequacy, improvement in diet quality for the most vulnerable groups, intensified nutrition education, market-oriented research on priority technology needs, provision of technical and regulatory services and improved Public-Private-Partnerships (PPP) for broader growth of the agriculture sector. With respect to the wider Comprehensive Africa Agriculture Development Programme (CAADP) agenda, the project helps strengthen national research-for-development capacity and knowledge dissemination (Pillar IV) and enhances food and nutrition security (Pillar II).

The project is aligning with the National Nutrition Education and Communication Strategy adopted by the SUN 1000 Special Days movement.

✦ Where are we working?

The project is working in 15 districts: Nsanje, Chikhwawa, Zomba, Phalombe, Mulanje, Thyolo, Chiradzulu, Balaka, Machinga districts of the Southern Region of Malawi; Dedza, Lilongwe, Salima, Dowa and Kasungu districts in Central Region; and Mzimba district in Northern Region. The vine multiplication and breeding program are implemented at the Bvumbwe Research Station. DARS plans to expand to seven new research stations and multiplication sites will be established at each one.

✦ What have we achieved so far?

- In the first Phase of implementing the project (1 Oct 2009 to 30 April 2014), we have focused on food and nutrition security, and wealth creation for the poor.
- The OFSP variety Zondeni is now widely disseminated.
- Six new OFSP varieties have cleared to the final stages of virus elimination *in vitro*. These virus-free tissue culture plantlets will be used to initiate disease-free stocks of foundation material.
- A screen house at Bvumbwe research station has been rehabilitated and has disease-free planting material of Zondeni.
- The established 1-2-3 seed system has provided clean planting material to 10,968 (51% women) households who have received and grown OFSP in the 2010/2011 rainy season, 58,420 (63% women) households in the 2011/2012 rainy season and 31,659 households in the 2012/2013

rainy season. Each household received 300 OFSP vine cuttings and the OFSP vine cuttings were received only once. Hence, by the end of the first three years, a total of 101,047 households have grown OFSP in 15 districts of Malawi.

- 4,075 (47% women) agriculturalists (extension agents from government and IPs, and a few lead farmers) were trained by the project on multiplication, production, pests and diseases, postharvest handling and processing and drip irrigation installation at the national level. These trainers subsequently trained 23,569 (53% women) lead farmers at the district level. Each trained lead farmer is expected to train an additional 5 to 10 farmers.
- 295 DVMs (35.5 ha) have been established and trained in fifteen districts of Southern, Central and Northern Malawi.
- One PhD student has initiated her research on post-harvest handling and processing.
- Surveys indicate that yields in recipient households have increased yield from 6t/ha to 18t/ha after adopting the improved variety Zondeni.
- The value of total vine sales by the primary multiplier (Bvumbwe Research Station) was USD \$ 15,710. The value of vine sales by DVMs has reached US \$ 75,104 after two years of project implementation with 44% of this value coming from the non-subsidized voucher scheme.
- A baseline survey report has been published by the CIP communication office at HQ in Lima.

✦ What is next?

Monitoring activities will continue so that accurate and comprehensive data on OFSP activities are obtained. An endline survey of the Phase 1 activities was conducted in July and August 2013 in the 4 districts where the initial baseline survey was done. This will enable an in-depth understanding of how the initial recipient districts have taken up and utilized OFSP. In Phase 1, our emphasis was on OFSP consumption at the household level for food security and increased vitamin A intakes. Marketing of fresh roots and OFSP products received limited attention. However, as OFSP surplus supplies are increasing, in the second phase, this will receive greater attention. Moreover, more commercially oriented producers and agro-processors will be engaged for root and OFSP processed product commercialization. Having markets for roots will encourage sustained adoption of the different OFSP varieties.



✦ Mother and child testing OFSP juice (credit E. Abidin).



✦ Promoting OFSP chips at Fair in Chikhwawa.

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