

Rooting Out Hunger in Malawi with Nutritious Orange-Fleshed Sweetpotato

By the end of the third year of the project, the Malawi national program has released 6 pro-vitamin A rich, orange-fleshed sweetpotato (OFSP) varieties and over 62,000 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.



Training trainers in OFSP processing in Kasungu (credit E. Abidin)

✦ 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% having vitamin A deficiency, 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?

This 4.5-year program 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

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2. Providing access to vines through an improved decentralized “seed” system and vouchers
3. Conducting training programs, field days, and technical backstopping
4. Sponsoring demand creation campaigns utilizing theatre, dance, poetry, songs, and banners
5. Linking to nutrition efforts led by others to increase impact on dietary practices
6. Promoting postharvest utilization and small-scale marketing

Malawi launched the Scaling-Up Nutrition (SUN) 1000 Special Days initiative in July 2011, which focuses on improving nutrition among pregnant women and children less than two years of age (the first 1000 days) at the community level. 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 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?

- The variety Zondeni that was available in year 1 is now widely disseminated.
- Six 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 62,425 households who have received and grown OFSP in the 2010/2011 and 2011/2012 rain season.
- 4,075 agriculturalists (extension agents and farmers) were trained on multiplication, production, pests and diseases, postharvest handling and processing and drip irrigation installation. They are expected to train others.
- 169 DVMs (28 ha) have been established and trained in fifteen districts of Southern, Central and Northern Malawi.
- One PhD student has initiated her field research on Post Harvest Handling and Processing.



■ Young children & women are key target groups (credit E. Abidin)

- 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 after two years of project implementation
- The value of vine sales by DVMs has reached US \$ 58,237, with 44% of this value coming from the non-subsidized vouchers

✦ What is next?

Monitoring activities will continue so accurate data on OFSP activities in Malawi can be obtained and adjustments made if needed. A baseline survey conducted in 3 districts at the beginning of the project will enable benefits to be understood in more detail after conducting an endline survey near the project's end. Marketing for fresh roots and OFSP products on a small-scale will be more given more attention in the final 1.5 years of the first phase of this effort (2012/2013 rainy season and in November 2013 to April 2014). In the proposed second phase, nutrition and marketing will receive even greater emphasis. In addition, commercially oriented individuals and companies will be engaged to work commercialized vine sales of disease-free planting material and OFSP product processing.

Partners include:

- Department of Agricultural Research Services (DARS)
- Department of Extension Services (DAES)
- Department of Nutrition, HIV and AIDS at the Office of President and Cabinet
- Catholic Development Commission (CADECOM)
- Millennium Villages Project (MVP)
- Concern Universal (CU)
- FAO
- Wellness and Agriculture for Life Advancement (WALA)
- Farmers Union of Malawi (FUM)
- Kachele Farmers' Club in Salima District

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