

Jumpstarting Orange-Fleshed Sweetpotato in West Africa through Diversified Markets

In the third year of the project, pilot efforts to develop markets for orange-fleshed sweetpotato to generate income and help combat vitamin A deficiency, are accelerating in Ghana, Nigeria and Burkina Faso.

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Fig 1. Pretesting Quality Declared Planting Material (QDPM) inspection in Nigeria (credit O. Osho)

What is the problem?

Micronutrient deficiency is a serious public health problem in Ghana, Nigeria, and Burkina Faso in West Africa. Unlike wasting, it is often difficult to recognize and is thus referred to as *Hidden Hunger*. Orange-fleshed sweetpotato (OFSP) can significantly reduce vitamin A deficiency (VAD) among vulnerable populations (particularly young children and lactating mothers) at the community level. While sweetpotato is a well-known, and often commercially important crop in West Africa, OFSP varieties are not widely available. The nutritional value of OFSP is not widely recognized, so it is not yet sought after by consumers and marketers. This has held back its potential to contribute to combating VAD and to improving farmers' incomes.

What do we want to achieve?

We want demand for OFSP to be market-led in West Africa, both in areas where the crop is currently important (but OFSP is not), and in areas where sweetpotato is not particularly important, but where it has the potential to be. We expect that market demand for OFSP will

greatly stimulate its production, ensuring profits for producers, and nutritional benefits for a large population of consumers, including young children and their mothers, who are particularly at risk of VAD. We are working at different locations in the three countries, to explore distinct market opportunities in informal and formal markets for OFSP in fresh and processed forms.

Where are we working?

We targeted pilot locations in Ghana, Nigeria and Burkina Faso. In Ghana, we work in communities in the Upper East and Northern Regions, where at the start of the project, sweetpotato ranged from being the most important cash crop (districts around Bawku), to moderate (districts around Navrongo), and only minor importance in the farming system (Tolon and Kumbungu Districts near Tamale). In Nigeria, we work in Osun State, where a successful school lunch program is piloting OFSP on the menu, and in adjacent Kwara State, traditionally a major producer of sweetpotato. In Burkina Faso, we work in communities near Orodara in Kennedougou Province in the southwest of the country, which are major suppliers to sweetpotato fresh markets in Burkina Faso and Mali.



Implementing Partners

NGOs
iDE-Ghana
iDE-Burkina Faso
Association of Church-Based Development Projects (ACDEP)
Partnership for Child Development (PCD)

Private sector
E-Darkey Association
Vekon Bakery
Kukobila Nasia Farms
NAFASO

National programs
Institut de l'Environnement et de Recherches Agricoles (INERA)
Council for Scientific and Industrial Research (CSIR) – Crops Research Institute (CRI)
CSIR – Savanna Agricultural Research Institute (SARI)
National Root Crops Research Institute (NRCRI)
O-Meals
University for Development Studies (UDS)
Ghana Health Service (GHS)
National agricultural extension services
Ghana School Feeding Program (GSFP)



Fig 2. OFSP promotion day in Bobo-Dioulasso in Burkina Faso (credit I. Koara)



How are we making it happen?

This three year effort that began in April 2014 is working toward these outcomes: (1) to establish commercial sweetpotato seed systems to provide clean planting material year round; (2) to develop formal and informal markets for OFSP; (3) to enable farmers including women, to participate in OFSP value chains and (4) to increase consumption of OFSP and other vitamin A-rich foods by vulnerable target populations, particularly women and children under the age of five. In each location, we are working with relevant government agencies and NGOs to identify markets and organize farmers into groups capable of serving those markets and accessing inputs and credit, if required. By conducting awareness and demand creation campaigns at the local level and advocating for OFSP for food and nutrition security at all levels, demand is created in both formal and informal markets. Capacity building and partnerships are integral to our endeavors to achieve project outcomes.



What have we achieved so far?

Roughly half way through the last year of implementing the project, we are well on the way to achieving our vision: To demonstrate sustainable and inclusive market-driven approaches for OFSP that lead to increased incomes and improved health through consumption of vitamin A-rich OFSP, especially in women and children.

In Ghana, Nigeria and Burkina Faso:

- Through the 2016 planting season, 54 Decentralized Vine Multipliers (DVMs) (110 vine producers) and 76 groups of root producers (1,423 farmers, 32% women) were recorded. The recently completed midline survey shows that 32% of sweetpotato fields in Ghana in the target areas are covered by OFSP and more than 120,960 households benefited either directly or indirectly from OFSP across the three countries since the start of the project.

- Quality Management Protocols for Quality Declared Planting Material (QDPM), and Good Agricultural Practices were developed.
- Pretesting of QDPM was done in each country (Fig 1). Teams comprising a lead farmer from each group, an extension officer and the inspected farmer were created to ensure that farmers bought clean planting materials for root production.
- Dry season storage root production was introduced to ensure supply of OFSP roots to the school feeding programs piloted in Nigeria and Ghana.
- Radio programs were supported as part of our marketing strategy.
- Formal and informal markets identified and developed include the school feeding programs in Nigeria and Ghana, urban and local markets (Fig 2) in all three countries, Ghana Health Services (GHS) counseling, and bakeries in four regions of Ghana.
- M&E tools were developed to monitor the DVMs as well as market prices and volumes, using Open Data Kit (ODK) forms.

In Ghana, in 2016:

- In the dry and rainy season production in the Northern Region, under the management of Association of Church-Based Development Projects (ACDEP), 11 DVMs sold 812,430 OFSP vine cuttings: 268,400 cuttings (2,684 bundles) were bought by ACDEP for its nutrition intervention; 157,200 cuttings (1,572 bundles) were sold through subsidized vouchers by the Jumpstarting Project within the GHS intervention to reach pregnant and lactating women; while 386,830 cuttings (3,868 bundles) were sold to farmers for cash. A total of GHc 40,622 (\$10,551) was generated as income for the DVMs. During the dry season production, eight small-scale producers (three women) and one large-scale producer (male) sold 8,015 kg of OFSP storage roots: 4,655 kg to retailers and consumers; 895 kg to two caterers for the Ghana School Feeding Program; and 2,465 kg to a wholesale buyer in Accra. They earned a total of GHc 6,371 (US\$ 1,655).





Fig 3. The Ghana School Feeding Program kicks off in Kumbungu (credit I. Dorgbetor)

- In the Upper East Region, under the management of iDE-Ghana, market demand analysis, bi-weekly radio discussions on nutrition, production and vine availability were carried out. Partnership was established with seven processors. 315,600 cuttings (3,156 bundles) were sold by 11 DVMs through a subsidized voucher scheme as part of the willingness to pay assessment at the GHS, generating GHc 15,780 (US\$ 4,099).
- In the GHS willingness to pay assessment, 4,728 pregnant women and lactating women received OFSP planting material through a voucher scheme. Each woman got a bundle of 100 cuttings and was encouraged to buy additional bundles. Data on the vines bought is still being compiled. A similar effort using storage roots will be implemented during the harvest season (October to December 2016). Thus, we will reach more pregnant and lactating women, as we gather evidence for decisions on how to continue the program through willingness to pay.
- In the Ghana School Feeding Program intervention (Fig 3), since 23 June 2016, 788 children from two schools in Kumbungu District, Northern Region have been receiving OFSP meals once a week. A total of 895 kg of OFSP storage roots were supplied by commercial root producers to the program, which will be expanded in the coming school year.
- OFSP bread was recently introduced to the product line of Vekon Bakery in Sogakope, Volta Region (Fig 4), which employs more than 100 people (75% women). Currently, the bakery buys 100 kg of OFSP roots from farmers daily. The demand for OFSP bread is increasing. Therefore, we need to increase the area under production and to improve varieties through the breeding program. A number of additional bakeries were trained in Accra,

Tamale and Bolgatanga, with the aim of expanding the market opportunity for OFSP bread, which is easy to produce, is popular with consumers and profitable for bakers.

In Nigeria, in 2016:

- Six DVMs sold 12,647 bundles of OFSP vine cuttings to 13 groups of storage root producers (284 farmers; 30% women). During the dry season of 2016, they grew 26.6 ha of OFSP in 12 Local Government Areas and sold 79.8 tons of OFSP roots to 17 schools. The six DVMs earned roughly 2,529,400 Naira (\$12,647). The root producers earned at least \$16,000.
- Three types of markets were developed: (1) 17 schools with a total of 8,157 pupils benefiting from the O-Meals School Feeding Program in Osun State; (2) 114 food vendors or caterers and five street food vendors supplying food for the school feeding program; and (3) a baker supplying bread to ten schools (one in each Local Government Area in Osun State).
- A hectare of OFSP was cultivated at Agriculture and Rural Management Training Institute (ARMTI) and backstopped by the National Root Crops Research Institute (NRCRI) in Ilorin, Kwara State. Together with the Agriculture Development Program, we linked ARMTI to trained street vendors to sell OFSP processed products such as chinchin, soft drink ("dono"), and doughnuts, puff puff (mandazi), gari, pap powder, crisps and vegetable soups. ARMTI plans to offer their training of trainers course on "Everything you want to know about sweetpotato" in late 2016.

In Burkina Faso, in 2016:

- Thirty-seven DVMs (93 farmers) and one big seed company produced 1,210,000 cuttings (12,100 bundles), which were sold within two communities in the project area and outside the project area e.g. in neighboring Mali. Six groups of root producers (100 farmers, 40% women) were identified in five communities in Kéné Dougou Province and directly linked to wholesalers, who



Fig 4. Veronica Konu, the proprietor of Vekon Bakery selling OFSP bread (credit T. Muzhingi)

sell in four large urban markets in Burkina Faso (Bobo, Ouaga, Dori, and Kaya) and Sikasso, which is the market gate to Mali.

- Partnership has been established with the Ministry of Agriculture and a number of NGOs such as Helen Keller International, Catholic Relief Services and Farm Radio International, who are implementing food and nutrition security programs. This effort led by Institut de l'Environnement et de Recherches Agricoles (INERA) will accelerate vine dissemination and increase the acreage

under OFSP production to supply markets established by the CIP-led Jumpstarting Project, and implemented by the two implementing partners, INERA and iDE in Burkina Faso.

The pilot activities in Ghana served as a focal point for powerful advocacy by Mrs. Nane Annan and H.E. Kofi Annan, who came to Kumasi in March 2015, to Tamale in August 2015, and to Sogakofe and Abor in Volta Region in August, 2016 (Fig 5). The visits are strongly contributing to creating awareness and support for ongoing and future OFSP dissemination and upscaling efforts.



What next?

The project is in its last year. We will conduct an end-line assessment to draw lessons from across the project countries, identify strategies for replicating and going to scale and specific areas requiring further action research. In Ghana, a proposal to scale out the benefits of OFSP to 500,000 households, building on the approaches piloted under the Jumpstarting Project has already been developed, and we are in the process of identifying funding and partners for this effort. We expect that diversified markets and value chain development will continue to be a key area of focus. As market demand develops, it will spur demand for improved production and postharvest technologies, including storage, handling and processing technologies, and the nutritional benefits of OFSP will be available to all.



Fig 5. Kofi Annan addresses durbar in Abor, Volta Region to raise OFSP awareness (credit T. Speijer)

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