

# Why Invest in Orange-fleshed Sweetpotato in Nigeria?



## A Vitamin A and Food Security Powerhouse Packed into One Root



■ Selling fried sweetpotato slices as a snack is profitable for women (credit J. Low)

Sweetpotato, with roots that are white or yellow inside, is grown throughout Nigeria. The crop is produced in all 36 states, with around a third of total production concentrated in the North-Central States. A little known fact is that Nigeria is the second largest sweetpotato producing country in Sub-Saharan Africa after Uganda. Area under sweetpotato is increasing in Nigeria, in part because this crop provides more food (194 MJ) per hectare per day than maize (145 MJ), cassava (138 MJ), or yam (94 MJ). Its shorter maturity period (3-5 months vs 9-24 for cassava and 8-11 for yam), ability to grow under marginal conditions, lower soil fertility requirements compared to yam, and flexible

planting and harvest times, are also driving its expansion.

So why invest in **orange-fleshed** sweetpotato (OFSP), a product that is so little known in Nigeria? The answer is simple: to cost-effectively improve nutrition, empower women, and increase income earning opportunities, even for the poorest households.

### ✦ Invest for better nutrition

Every year, an estimated 861,000 Nigerian children die before the age of 5. Over a third of these deaths are attributed to undernutrition. Forty-one percent of children under five are stunted. Infant and young child feeding is characterized by low rates of exclusive breastfeeding, poorly timed introduction of complementary foods and a high prevalence of deficiencies of essential micronutrients (vitamin A, zinc and iron). Almost 30% of preschool aged children in Nigeria are deficient in vitamin A, a micronutrient that helps young children grow and develop normally and stay healthy. Women of childbearing age, food insecure and HIV/AIDS affected households are also at high risk of vitamin A deficiency (VAD).

The National Root Crops Research Institute has already incorporated OFSP into its conventional sweetpotato breeding efforts because it values **biofortified** crops –staple foods with very high levels of at least one essential micronutrient. OFSP is extremely rich in bioavailable beta-carotene, which the body converts into vitamin A (retinol) at a ratio of 12 to 1. **Just one small root (100-125 grams) of most OFSP varieties can supply the recommended daily allowance of vitamin A for children under five years of age.** Even at low yields (6 tons/ha), just





■ Nigerian girls enjoying OFSP (credit J. Njoku)

500 square meters can generate an adequate annual supply of vitamin A for a family of five. That is why **OFSP is a vitamin A powerhouse**. OFSP can be used as an entry point for changing behaviors that lead to large increases in vitamin A intakes among young children and mothers. In addition, OFSP contributes significant amounts of vitamins C, E, K and several B vitamins. Leaves also have good micronutrient contents and adequate protein (4%) for use as food and animal feed.

Urban consumers in Nigeria are increasingly becoming conscious of the need to avoid consuming foods like refined white breads that increase the risk of diabetes (reflected in high glycemic index values). Sweetpotato is a good source of dietary fiber (2.5-3.3 g/100 gm) and is classified as a low glycemic index food.

### ✦ Invest to empower women

In many parts of Nigeria, sweetpotato is grown, sold and processed in small quantities by women. OFSP provides women, as producers who also play a key role in making decisions about child feeding and household nutrition, with a low cost product that addresses both VAD and undernutrition. Due to its relatively lower cost of production than yam or cassava and the higher productivity of many OFSP varieties, women can grow surplus OFSP and sell both roots and processed products. The orange color attracts consumers. Women can make

significant profits from selling sweetpotato products. Higher female income typically translates into better household nutrition and welfare.

### ✦ Invest to improve income-generating opportunities

High rates of urbanization in Nigeria have given rise to the need for inexpensive but healthy foods for the urban poor and created concurrent demand for fast food outlets and healthier foods by a growing middle class. The nutritional advantages of OFSP offer a unique opportunity to promote increased marketing and processing of sweetpotato, which will boost demand and ultimately producers' incomes. A campaign just incorporating OFSP into bread would vastly improve vitamin A intakes and create market opportunities. Backed by an effective nutrition awareness campaign, OFSP roots sell at a higher price than white-fleshed roots.

OFSP can substitute for potato in making chips and crisps and serve as a partial substitute (20-50%) for wheat flour in bakery products. OFSP products have a golden color that make it easy for marketing campaigns to promote them as vitamin A enhanced products, thus increasing demand. Since all classes of farmers can grow OFSP, investing in fresh root and product marketing can easily be pro-poor if governments provide a supportive policy environment. For example, the Nigerian government can consider sweetpotato in addition to cassava in its import substitution strategies.

**Wealth without Health  
is of little value. OFSP  
is a healthy food for all.**

**The Reaching Agents of Change (RAC)** Project advocates for increased investment in orange-fleshed sweetpotato food-based approaches to combat vitamin A deficiency (VAD) among children less than five years old and their mothers. RAC also builds institutional capacity to design and implement gender sensitive projects to ensure wide access and utilization of orange-fleshed sweetpotato in selected African countries. Its efforts contribute to the broader Sweetpotato for Profit and Health Initiative (SPHI) which aims to improve the lives of 10 million African families by 2020.

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