

# Why Invest in Orange-fleshed Sweetpotato in Tanzania?



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



Children love eating OFSP (credit R. Kapinga)

Sweetpotato, with roots that are white or yellow inside, is widely grown throughout Tanzania. It is the fourth most important food crop and is particularly important in the densely-populated Lake Victoria Zone. This easy to grow, resilient crop is known as the classic food security crop that is there when the maize fails. Area under sweetpotato in Tanzania is expanding, in part because this crop provides more food (194 MJ) per hectare per day than maize (145 MJ) or cassava (138 MJ)). Its short maturing period (3-5 months), ability to grow under marginal conditions 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 Tanzania? 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 133,000 Tanzanian children die before the age of 5. Over a third of these deaths are attributed to undernutrition. Thirty-eight percent of children under five years old are stunted. Infant and young child feeding in Tanzania 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). Every year deficiencies in iron, vitamin A and folic acid alone cost Tanzania over US\$ 518 million, around 2.65 % of the country's GDP. An estimated 24% of preschool aged children are deficient in vitamin A, a micronutrient that helps young children grow and develop normally and stay healthy. Women of childbearing age and food insecure and HIV/AIDS affected households are also at high risk of vitamin A deficiency (VAD).

The Tanzanian National Sweetpotato Research Program has already incorporated OFSP into its conventional 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 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





■ **Golden bread** substitutes 38% of wheat flour (credit S. Mann)

and several B vitamins. Leaves also have good micronutrient contents and adequate protein (4%) for use as food and animal feed.

Urban consumers in Tanzania 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 most part of Tanzania, sweetpotato is grown, sold and processed in small quantities by women. Firstly, 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. Secondly, due to its relatively low cost of production 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 Tanzania 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 to eat a boiled OFSP root for breakfast instead of bread would vastly improve vitamin A intakes and create market opportunities. Backed by an effective nutrition awareness campaign, OFSP roots can 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.

## OFSP is a healthy food for all.



■ **Women participating** in evaluating different OFSP varieties (credit R. Kapinga)

**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.

#### Contacts:

**Revelian Ngaiza (HKI)**  
Promotion Expert, RAC Project  
rngaiza@hki.org

**Kido Mtunda**  
Sweetpotato specialist  
kidomtunda@yahoo.com

**Jan Low (CIP)**  
SPHI Leader  
j.low@cgiar.org