

# DONATA

## Promotion and Dissemination of Orange-fleshed Technologies in East and Central Africa

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### Introduction

An estimated 27 million children in Eastern and Central Africa (ECA) under the age of 5 were Vitamin A deficient in 2007, with a prevalence of around 40% (UNSCN, 2010). Levels of vitamin A deficiency are highest in drier areas, where the diversity of micronutrient rich foods is lowest. Only 125 grams of most OFSP varieties can supply the recommended daily allowance of vitamin A for children and non-lactating women. Even at low yield levels (e.g. 5 tons/ha), a family of five can obtain their annual supply of vitamin A from a 500 square meter (0.05 ha) plot. In addition, vine tops have excellent micronutrient contents and adequate protein for use as feed or food. Also, sweetpotato produces more food per unit area per unit time, than other major staples and tolerates occasional dry spells and yields even on less fertile soils, (Woolfe, 1992). The The Dissemination of New Agricultural Technologies in Africa (DONATA) project is a 4.5 year intervention operational in Ethiopia, Kenya, Rwanda, Tanzania, and Uganda whose overall objectives is to improve livelihoods and increase economic growth for resource poor farmers in East and Central Africa. The specific objectives include:

- ▶ Enhanced uptake of OFSP technologies and innovations in Ethiopia, Kenya, Rwanda, Tanzania and Uganda
- ▶ Strengthened capacities for disseminating and scaling up OFSP innovations in the production to consumption continuum in ECA
- ▶ Enhanced availability of information on OFSP innovations and uptake approaches to stakeholders in ECA.

This has been achieved through transfer and promotion of proven, available and emerging technologies for production, storage and processing of OFSP into higher value products, development of agro-enterprises, and by linking farmers to markets.



FARA Board Meeting 2012: visit to DONATA OFSP site in Rwanda

### The approach

The project utilizes multi-stakeholder platforms consisting of National Agricultural Research Institutions, NARIs), non-governmental organizations, community based organizations, farmer organizations, private sector, public sector extension agents and universities. Members of the Innovation Platforms for Technology Adoption (IPTA) work together at district level to increase production, consumption and marketing of pro-vitamin A-rich orange-fleshed sweetpotato (OFSP) fresh roots, planting material (vines) and processed products.

20 IPTAs have been formed and are functional as outlined in the table below:

Country	Number of IPTAs	Locations
Ethiopia	2	Awassa, Areka
Kenya	3	Busia, Bungoma, Mumias
Rwanda	4	East, West, North, South Rwanda
Tanzania	9	Bukoba, Sengerema, Misungwi, Ukerewe
Uganda	2	Lira, Gulu

### Achievements

1. **Improved access to quality seed in the project areas.** Access to quality OFSP seed at the commencement of the growing season was a major challenge in most of the project areas. Eleven OFSP varieties are being promoted: Ejumula, Kakamega, Kabode, Vita, Carrot C, Jewel, Cacearpedo, Gihingamukungu (97-062), Tulla, Kulfo and SPK031. Currently, a total of 74 ha of seed at primary, secondary and tertiary levels is available.

Table 1: Expansion of area under OFSP multiplication 2009-2012

	2009 Ha.	2010 Ha.	2011 Ha.	June 2012 Ha.
PMS	2.7	8.6	9.1	3.4
SMS	28.1	26.5	41	43.7
TMS	26.7	61.7	43	26.8
<b>Total</b>	<b>57</b>	<b>97</b>	<b>93</b>	<b>74</b>



Left: Conservation of sweetpotato planting material in ensete plantation, Southern Ethiopia.

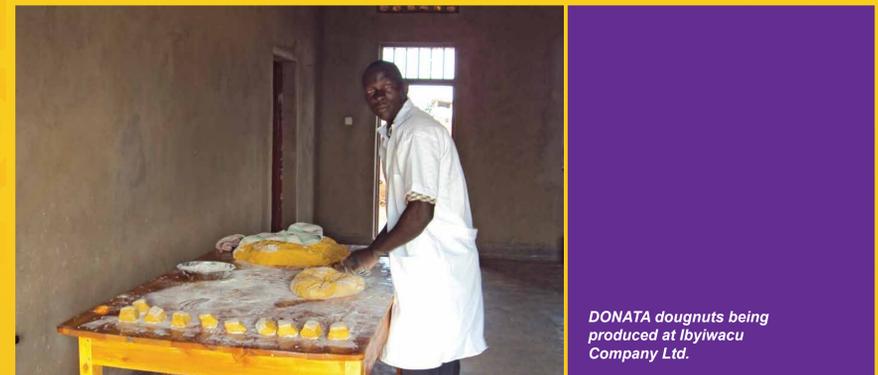
Right: Use of double dug beds for dry season conservation of sweetpotato planting material in Rwanda.

2. **Technologies in uptake pathways include.** Rapid multiplication techniques, vine conservation, disease identification and management. Value-added products which are being promoted include: OFSP flour, snack foods, baked products, and juices in addition to boiled and fried fresh roots. Pilot processing units have been established in Kenya, Tanzania, Rwanda and Uganda. Small-scale sweetpotato processing equipment for promotion and demonstration including peelers, chippers, and slicers are being piloted in all countries.
3. **Skills and capacity enhancement of stakeholders.** 5 MSc. students will be completing their studies this year, while 4,474 farmers, 772 trainers, and over 100 agro processors and traders have been trained in various disciplines with an aim of improving OFSP businesses along the value chain. As a result, productivity, throughput as well product quality have greatly improved, among others.
4. **Increased awareness and commercialization of OFSP products.** Through various promotion channels, OFSP is now recognized as a nutritious and commercial crop. Innovative uptake pathways that have been utilized include schools in Uganda and Tanzania; traditional birth attendants in Uganda; youth and volunteer groups, the media, agricultural shows and farmer field days in all project areas. Lobbying and advocacy has been done, and in Rwanda for example farmers have successfully lobbied for utilization of wetlands for OFSP production.



Training Traditional Birth Attendants (TBA) in OFSP root production, so that they increase awareness of the benefits of OFSP to pregnant Mums, Ataik, Northern Uganda.

5. **New products and market channels.** Duhange Cooperative in Rwanda has now been registered as Ibyiwacu Company Ltd. It has successfully introduced and is now marketing a range of OFSP confectionary products including bread, biscuits, 'DONATA' doughnuts and 'Gato'. The amount of products sold has increased by over 50% in 2012.



DONATA doughnuts being produced at Ibyiwacu Company Ltd.

6. **Improved capacity of IPTAs to support farmers and other chain actors.** IPTAs have gained experience in ensuring services flow smoothly for the satisfaction of the various actors. E.g. large buyers are linked to reliable sources of products. In Kenya, the demand for OFSP flour in high end supermarkets in Nairobi has increased from 500 kg in 2008 to 5mt per month in 2012.

### Lessons Learnt

- ▶ Harmonizing and leveling member expectations from the IPTA process is essential to avoid potential conflicts over resources and benefits
- ▶ IPTAs, as learning and evolving platforms need to plan for turnover of value chain actors – new actors bring new blood and ideas
- ▶ Engendering the IPTA and the value chain would lead to more equitable sharing of benefits so accrued
- ▶ Farmers are eager to research and validate technologies on-farm
- ▶ Seed is a viable business when driven by entrepreneurs: more effort is needed in coordinating demand and supply
- ▶ The media is a powerful ally in promoting agricultural innovations
- ▶ Traders and brokers play an important role in upgrading value chains, and researchers need to devise ways to work with them.

### References

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3. Woolfe J. 1992. *Sweet potato: an Untapped Resource*. Cambridge: Cambridge University Press.

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 Uganda: NARO, Gulu University, Red Cross, Virtuous Springs, DETREC, AFSRT, Mega FM, GDFA, FFS-Network  
 Tanzania: LZARDI, TAHEA, Kolping, LG, SIDO