

# Tackling Vitamin A Deficiency by Eating Orange in Angola

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## What is the problem?

About 60% of the Angolan population lives in rural zones that depend mainly on agriculture. The agricultural sector is still getting back on its feet following the return of peace in 2002 after a prolonged and devastating civil war. In spite of its vast agricultural potential, Angola is heavily dependent on food imports. Vitamin A deficiency is a major public health problem in Angola among young children. Pro-vitamin A rich, orange-fleshed sweetpotatoes (OFSP) can simultaneously address inadequate vitamin A intakes and food insecurity. Since most sweetpotato varieties in Angola are mainly white, cream, and yellow-fleshed, this means that time must be invested in selecting adapted orange-fleshed varieties and raising awareness about their nutritional value. Moreover, sweetpotato is primarily viewed as a subsistence crop, so its diversified use needs to be developed, especially for Angola's rapidly expanding urban centers.

## What do we want to achieve?

The project, known as the Integrated Research and Development Project of the Production and Marketing of Vegetatively Propagated Crops, is a five year initiative funded by Chevron-Sonangol via the Program for the Revitalization of Angola, and implemented by the International Potato Center (CIP) and the national research program (IIA) in collaboration with public and private partners.

The project's main objective is the sustainable increment of the economic contribution of the four major vegetatively propagated crops— banana, cassava, sweetpotato, and potato – for improved food security and poverty reduction in the rural areas of 4 provinces with diverse agro-ecologies: Uíge, Kwanza North, Huambo and Huila (Figure 1). Specific attention is given to developing and multiplying varieties resistant to economically important diseases and ensuring that they benefit at least 146,000 rural families by the end of 2013.

The development of novel products from OFSP (Golden Bread, cakes and cookies, juice) is also being promoted to generate income from



OFSP hits the market in Uíge Province (credit A. Londa)

a crop traditionally grown by women as a subsistence crop. The project is currently exploring ways to bring together OFSP producers and processors to ensure a continuous supply of OFSP roots. The focus is on developing pilot examples of sustainable value chains.



Figure 1. The 4 intervention districts in Angola



Science for a food secure future



The project contains a strong component of training and capacity strengthening of persons involved in research, extension, and the integration of techniques and methods for working with vegetatively propagated crops into educational institutions to ensure the continued availability of quality vegetative material, of improved genotypes, and the dissemination of technical information and research results. The project is headquartered at IIA's station in Huambo, which is adjacent to the Faculty of Agrarian Science, thus facilitating student participation.

### ✦ What have we achieved so far?

During the first project year new OFSP clones (as botanical seed, virus tested advanced clones, and released varieties) were introduced from CIP's Sweetpotato Support Platform in Mozambique. These were multiplied and trialed for three years. Twenty-eight clones and varieties have been identified as potential candidates for release and use in Angola.

Since work began in November 2008, 5 central rapid multiplication fields containing test OFSP materials were established in the IIA experimental stations (EEAs) of 4 provinces and 227 OFSP rapid multiplication fields were established in 8 provinces with 118 farmer associations and individual farmers, with 7,600 direct beneficiaries. Two farmers' associations are now participating in a massive distribution program of OFSP vines.

Numerous displays of OFSP-based products have taken place at the experimental station and the faculty in Chianga, as well as at fairs hosted by the Ministry of Agriculture and on special occasions such as Peace Day. One bakery in Huambo has been producing Golden Bread since 2011, with seasonal interruptions due to lack of OFSP roots during the dry season. Consumers have widely accepted Golden Bread.

To date, a total of 1,832 persons have been trained in the four provinces, with emphasis on rapid multiplication techniques for sweetpotato, OFSP processing and research, with the aim to improve the implementation of research results by working closely together with farmers. The largest group of persons trained were farmers (1,535), followed by students (132) and technicians (151) from public sector research and extension departments, non-governmental organizations, and 14 bakers.



■ Women bakers learn to process OFSP (credit B. Kowalski)

### ✦ What have we learned so far?

Sweetpotato is very well suited as a crop in a post-war context, especially the orange fleshed kind to address nutritional imbalances. Given the scarcity of genetic diversity in Angola due to the decades of war, and the intense interest of farmers to acquire new varieties and planting material, the time is favorable for promotion of new OFSP varieties.



■ Sister in Caconda displaying her Golden Bread (credit B. Kowalski).

### Partners include:

- Ministry of Agriculture, Rural Development and Fisheries (MINADERP)
- Institute for Agricultural Research (IIA).
- Faculdade de Ciências Agronómicas (FCA)
- Institute for Rural Development (IDA)
- Stations for Rural Development (EDA)
- Institute for Midlevel Technical Education (IMA)
- Municipal Administrations
- IMVF (EU)
- IOM
- CNFA (USAID)
- Action against Hunger
- World Vision
- CLUSA (USAID)
- Save the Children
- Farmer's associations
- Bakeries
- FAO (Field Schools)
- Schools
- Churches

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