

Exploring Opportunities for Sweetpotato in Nigeria

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For two months in late 2011, a rapid appraisal was conducted in selected states of Nigeria to understand the current role of sweetpotato in the food economy and to identify promising sweetpotato value chains for further research and investment. From the nutrition side, promotion of orange-fleshed sweetpotato linked to school feeding and other nutrition-linked endeavors appears promising. Fried sweetpotato products and the partial substitution of wheat flour with sweetpotato puree in bakery products are the best bets for income earning processed product investments.



■ NRI's Gideon Onumah interviewing young sweetpotato trader at Mandala market near Abuja (credit J. Low)

✦ What is the problem?

Nigeria is home to over 50% of West Africa's population. Its petroleum dependent economy has led to widespread income disparities and a heavy dependence on food imports, such as wheat. 70% of the population depends on agriculture for its livelihood and 70% of the population is below the poverty line (2007 est.). Malnutrition is widespread, with over 41% percent of children under five years of age stunted – i.e. chronically malnourished (2008) and the prevalence of vitamin A deficiency at 29.5%, a level of public health concern.

Nigeria is renowned for its consumption of yam and cassava. It is also one of the largest producers of sweetpotato in Sub-Saharan Africa (SSA) with annual production estimated at 3.9 million metric tons per year. Sweetpotato is grown in all 36 states. Despite this, the crop has received little attention from policy makers and scientists, yields are low (6-7 tons/ha compared to 21.6 tons/ha for China and 50 tons/ha for South Africa), and its contribution to the Nigerian

diet is only a seventh of cassava's. This in spite of its short production cycle (3-4 months), its ability to produce on marginal soils, and the potential to exploit its roots and vines (4% protein) for both human and animal production (especially dairy and pig).

✦ What do we want to achieve?

We need to better understand sweetpotato's current and potential role in the Nigerian food economy. We need to pinpoint entry points for developing and promoting sweetpotato that make agronomic and economic sense, which in turn will raise its profile among policy makers and practitioners. Following a rapid appraisal of the range of potential uses, we need more detailed information on promising value chains, so that we understand the relationship between the actors in the value chains (paying attention to gender roles), the margins, tradable qualities and potential future benefits. We need to utilize the information generated to galvanize public and private sector actors to invest in and exploit sweetpotato's unrecognized potential in Nigeria.

✦ Where are we working?

Nigeria is a large, complex country. Due to the limited time and resources available for the study, we focused the majority of the effort in three areas chosen because of the existence of interested stakeholders. These areas are:

1. Osun State, focused on sweetpotato growing areas that align with the School Feeding Program;
2. Kwara State, focused on areas where sweetpotato is particularly important in cultural traditions;



The Sweetpotato Action for Security and Health in Africa (SASHA) Project, led by the International Potato Center with over 26 collaborating partners, developed the terms of reference for the Nigeria Sweetpotato Value Chain Study. The study was led by Gideon Onumah of the Natural Resources Institute (NRI). Team members included Adewale Dipeolu and Ganiyat Fetuga from the University of Agriculture, Abeokuta (UNAAB), with inputs from Jan Low (CIP), Ted Carey (CIP), and Keith Tomlins (NRI).

3. Nassarawa State and other areas surrounding Abuja (population 2006: 776,000), the nation's capital.

✦ How are we making it happen?

This rapid assessment was specifically intended to gather and analyse evidence on the desirability and feasibility of investing in development of sweetpotato value chains for fresh root marketing and processed products in selected producing areas and markets. Market surveys and key informant interviews were conducted. The report aims to guide stakeholders in determining options which make the most sense to invest in in the short, medium, and longer term.

✦ What have we learned?

Sweetpotato already is utilised in diverse forms in Nigeria. The bulk of the crop is currently marketed as fresh roots to households which eat it either boiled or fried. This market shows the greatest prospects for rapid growth in the short to medium term, in particular as it services a growing number of street-food vendors are selling fried sweetpotato chips targeting school children and urban low income workers. Vitamin A rich, orange-fleshed sweetpotato varieties are unknown and would have to be introduced with an appropriate demand creation campaign. The other top two value chains with good prospects are the emerging sweetpotato crisps industry and marketing of sweetpotato fries (chips) by fast food outlets.

Nigeria's food import bill has been expanding dramatically during the past decade and 96% of wheat is imported. Policy makers are already targeting cassava for wheat flour substitution; sweetpotato is most promising as well. Though trials by various institutions have confirmed the technical feasibility of partial substitution of wheat flour with sweetpotato flour in the bakery and confectionary industries in Nigeria, the economics of producing the sweetpotato flour shows that it is currently not financially viable, especially for a food-grade quality flour product. However, from an economic standpoint, there is potential to use boiled and mashed sweetpotato (so-called puree) as a partial wheat flour substitute in bakery products.

Although in recent times, sweetpotato is reaching commercialised levels in certain regions of Nigeria, Nigerian consumers are largely unaware of its nutritional and health benefits; the fact that the bulk of the farmers do not yet see the crop as a business opportunity and the lack of investment have limited the sector's growth.



■ Nigeria's Minister of Agriculture (man holding root) at Stakeholder Consultation Forum in July 2012

✦ What is next?

Fortuitously, the conducting of this rapid assessment coinciding with the launching of Nigeria's Agricultural Transformation program, focused principally on cassava and rice. Moreover, the RAC project initiated its advocacy activities in Nigeria around the same time, focusing on Nassarawa, Benue, and Kwara States. Joint SASHA-RAC efforts led to the Federal Ministry of Agriculture and Rural Developments' co-sponsoring of a two day Sweetpotato Stakeholder Consultation Forum in July 2012, with 102 participants drawn from Federal Ministries of Agriculture, Health, Trade and Investment, Universities, Polytechnics, other research institutes, non-governmental organizations, farmers' associations, the private sector and the media. Results from this study along with a proposed intervention strategy for 6 states were discussed, revisions suggested, and approved. In his keynote address, Dr. Akinwumi Adesina, the honorable Minister of Agriculture and Rural Development, pledged the Ministry's commitment to invest in the promotion of production, processing, and utilization of orange-fleshed sweetpotato as part of the agricultural transformation agenda, with a committed budget line beginning in 2013. A sweetpotato value chain team will be constituted to further develop the effort.

The Reaching Agents of Change (RAC) project, led by the International Potato Center in close collaboration with Helen Keller International, seeks to ensure the capacity of African institutions, advocates, and implementing organizations to generate awareness, obtain funding, and effectively implement medium- to large-scale programs to combat vitamin A deficiency (VAD) and food insecurity by exploiting the potential of orange-fleshed sweetpotato (OFSP). The five target countries are Tanzania, Mozambique, Nigeria, Ghana, and Burkina Faso.