

## **Market-chain innovation enhances smallholders' access to markets: Insights from the sweet potato sub-sector in Uganda**

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### **Abstract**

Smallholder farmers in developing countries such as Uganda are faced with the difficulty of accessing sustainable markets. Such farmers include those growing sweet potato, and are becoming increasingly marginalized as urban markets demand better quality, quantity and sustainable supply of agricultural commodities. Research and Development (R&D) actors on the other hand are often challenged on how to position farmers to benefit from existing market opportunities. Pilot application of the Participatory Market Chain Approach (PMCA) on the Sweet potato sector demonstrated the resultant benefits to farmers in engaging with other market chain actors to develop innovations to exploit existing market opportunities.

Key words: Livelihoods opportunities, platform processors, sweet potato, traders, Uganda

### **Résumé**

Les petits agriculteurs des pays en développement comme l'Ouganda sont confrontés à la difficulté d'accéder à des marchés durables. Les agriculteurs concernés sont ceux de pommes de terre de plus en plus doux, et sont de plus en plus marginalisés par la demande des marchés urbains de meilleure qualité, la quantité et la fourniture durable de produits agricoles. Les acteurs de la Recherche et du Développement (R & D) d'une part, sont souvent contestés sur la façon de positionner les agriculteurs à bénéficier des opportunités de marché existantes. L'Application Pilote de l'Approche Participative à la Chaîne du Marché (PMCA) sur le secteur de la patate douce a démontré les avantages qui en résultent pour que les agriculteurs s'engagent avec d'autres acteurs de la chaîne du marché pour développer des innovations des opportunités d'exploitation existant.

Mots clés: Les possibilités des moyens de subsistance, les plateformes de transformation, la patate douce, les commerçants, l'Ouganda

## Background

Sweet potato has steadily grown in importance as food and cash crop in Uganda. Uganda is the 2<sup>nd</sup> largest producer of sweet potato in the world, after China. The crop therefore has great potential for food security and improving livelihoods small-holder producers. However, commercialization of sweet potato is hampered by a number of challenges faced by market chain actors in the production-marketing-consumption continuum. This calls for Research and Development interventions that involve all market chain actors in identification of challenges and existing market opportunities.

In the period 2005 to 2009, Mukono Zonal Agricultural Research and Development Institute (MUZARDI), coordinated a multi-stakeholder project piloting the Participatory Market Chain Approach (PMCA), on the sweet potato commodity. The PMCA, a methodology that was initiated in Latin America, had proven to be useful for generating pro-poor innovation (Bernet *et al.*, 2006). The project objectives were (i) to identify existing sweet potato market-chain actors, their interests, activities, challenges and opportunities; (ii) to provide a platform for generating trust and collaboration among market chain actors; (iii) to facilitate market chain innovations such as new products, technologies and institutions; and (iv) to strengthen capacity for market-chain actors to lobby and advocate for favourable market and marketing policies

## Literature Summary

In modernizing agricultural markets, small farmers are often at a significant disadvantage relative to larger commercial farmers, who benefit from economies of scale and better access to market information, services, technology, and capital (Wilkinson and Rocha, 2006). Collective action, usually in the form of farmer cooperatives, has been proposed as one way to improve the market participation of small farmers (Shepherd, 2007). However, farmer organization is only part of the solution. Market-chain innovation is also needed to allow smallholder farmers to benefit from participating in emerging high-value markets. Numerous value-chain approaches have been developed to foster pro-poor market development (Merlin, 2004; Bernet *et al.*, 2006). However, there is limited information of the application and results on such processes (Horton *et al.*, 2008). This paper contributes to this information by highlighting the results of use of the PMCA on the sweet potato sector in Uganda.

## Research Approach

The project area comprised five districts representing two production agro-ecologies and one commercial centre. Luwero

## Implementation Process

and Mpigi districts were selected as representatives of the main producing districts in the Lake Victoria Crescent Zone (LVCZ) covering central Uganda, while Kumi and Soroti districts were selected as the main producing districts in the Teso Farming System (TFS) in eastern Uganda. Kampala district, the capital city of Uganda, was selected because it is the major market for sweet potato.

The project was implemented using the generic three-phase approach of the PMCA (Bernet *et al.*, 2006).

**Phase I.** The objective of phase I was to identify market-chain actors, their activities, challenges and market opportunities. A market-chain survey was conducted in September–October 2005 to obtain (mainly qualitative) information concerning the sweet potato market chain. Interviews were conducted using a checklist administered to market-chain actors. A total of 55 sweet potato market-chain actors were interviewed. Phase I was concluded with a workshop in which 83 actors participated. During the workshop, two thematic groups—Orange-fleshed Sweet Potato (OFSP) Processing Group and Fresh Roots Sweet Potato Group—were formed.

**PMCA Phase II.** The objective of PMCA Phase II was to discuss and analyze business opportunities in each thematic group. Each thematic group had a total of five meetings in five months. Market-chain actors were also facilitated to visit sweet potato production areas as well as processing and marketing centres. The tools used in Phase II included SWOT (strengths, weaknesses, opportunities and threats) analysis of potential innovations and rapid market appraisals to evaluate potential business opportunities. Work plans for implementation in Phase III were generated by the thematic groups. Phase II was concluded in a workshop in August 2007, in which 54 actors (24 women and 32 men) participated.

**PMCA Phase III.** The objective of Phase III was to implement the activities in the work plan (generated in Phase II) to make the proposed market opportunities a commercial reality. As in Phase II, a total of five meetings were held for each thematic group. During this phase, small working groups worked around each market innovation. The main tool used was focus-group discussions with consumers who provided information for development of the marketing concepts for various market innovations. Phase III was concluded in September 2007 with

a gathering of PMCA project market-chain actors, the supporting R&D actors, government leaders and the press. In the Final Event, sweet potato innovations were launched to the public. More than 250 people participated in this event.

**Backstopping support after PMCA Phase III.** Following the launch of sweet potato innovations, in 2007, Mukono ZARDI maintained the support to participating market-chain actors until 2009. The major activities included: (i) monitoring of commercial innovations to ensure that the new products were adequately refined and moved into commercial production; (ii) facilitating multi-stakeholder platforms for R&D actors and existing farmers' groups, processors and traders that could support continued future innovations; and (iii) supporting farmer evaluation of sweet potato varieties for market acceptability.

## Research Application

**Technological, commercial and institutional innovations generated.** The project provided a platform for over 50 sweet potato market chain actors to interact and generate technological, commercial and institutional innovations.

During Phase 2, SULMA Foods - a private firm, sent samples of a new sweet potato variety *NASPOTI* to the Uchumi supermarket in Kampala. After a positive market test and orders were placed for this variety, SULMA Foods engaged contract farmers to produce this variety, in addition to a red-skinned variety they were supplying previously and also increased their marketing outlets.

Better concepts of marketing fresh potatoes targeting upmarket consumers were developed. A portable kiosk for marketing clean, sorted and graded sweet potato and its products was constructed and used for the first time at the final event of the PMCA in 2007. It was later relocated to a local market where farmers used it for marketing OFSP and sharing information on sweet potato production.

One outstanding success story was registered in Bagyabasaaga women-farmers' group in Luwero district in central Uganda, specializing in producing OFSP. The group's initial objective was to promote the production and consumption of OFSP rich in beta-carotene (a precursor of Vitamin A) in order to improve the health of the communities, especially children and women. Before involvement in the platform, the group had difficulty to sell their excess OFSP, because consumers disapproved of its

carrot-like attributes. Through the discussion platforms, the group linked up with a flour processor that uses dry OFSP chips, and snack processors, which started to produce a fried snack from OFSP. They subsequently built business relationships that boosted their sales.

The new snack food product made from orange-fleshed sweet potato was developed by a processor producing *Solanum* potato snacks. After the launch, the processor (TomCris) received many requests for this product. Efforts were then geared towards supporting sustainable and consistent supply of fresh sweet potatoes for processing. Composite flours containing OFSP were developed and pilot-marketed by two processing firms, USPPA and Kasawo Millers. The two firms were facilitated to develop appropriate packaging for the products, and they registered increase in sales. USPPA increased the quantity of sweet potato uptake from farmer groups in Soroti.

Capacity for producing competitive products was built among participating market chain actors. They gained useful information and knowledge on a range of topics on production and post-harvest technologies, marketing problems, marketing concepts, and innovation processes. It was noted that farmers in particular had gained self-confidence and became more assertive during the process. Initially, they were cautious with researchers and more superior market agents, but by the end of the process, many of these individuals had developed a voice and expected to be heard.

The results of the work reported demonstrate that market chain innovation can improve marketing of agricultural commodities. R&D actors therefore ought to exploit approaches that promote market chain innovation in order to help small-holder farmers' access markets.

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