The Marketing, Processing and Utilization Community of Practice pursues strategies to increase adoption of orange-fleshed sweetpotato

Numerous countries began using orange-fleshed sweetpotato purée in commercially baked products this year as bottlenecks in its use are addressed and consumer surveys indicate widespread acceptance.

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Fig 1. The Marketing, Processing and Utilization CoP members during their annual meeting in Dar-es-Salaam, Tanzania (credit C. Bukania)

What is the problem?

The Sweetpotato for Profit and Health Initiative (SPHI) was launched in 2009, as a coalition of research and development organizations working to promote the effective production and diversified use of sweetpotato in 10 million households in 17 countries in sub-Saharan Africa (SSA) by 2020. These organizations are committed to strive to improve diet quality by 20% and crop incomes by 15% among beneficiary households in the target countries.

Orange-fleshed sweetpotato (OFSP), rich in beta-carotene, the precursor of vitamin A, is particularly being promoted due to its potential to address vitamin A deficiency. While many OFSP varieties have been released, in many cases there was not a complementary effort to develop marketable products. Most sweetpotato in SSA is consumed boiled or steamed. However, the adoption and utilization of OFSP by rural and urban consumers relies largely on our ability to address their different needs and preferences while concurrently resolving bottlenecks related to post-harvest storage, processing and value addition, product development and marketing.

To address these bottlenecks more effectively, the Marketing, Processing and Utilization Community of Practice (MPU-CoP) was established in 2014. It brings together professionals working at all levels of the sweetpotato value chain, as well as private sector players who are innovating processing and utilization of OFSP for commercial products.

What do we want to achieve?

We want to improve the sweetpotato value chain by researching and implementing actions that will remove bottlenecks related to processing, marketing and utilization of fresh roots and processed sweetpotato products. This requires the development of essential capacities and technologies, as well as marketing and advocacy to stimulate demand for OFSP products in rural and urban markets.

How are we making it happen?

We share information among ourselves, identifying research gaps and networking to resolve common problems and develop joint projects. In addition to an annual face-to-face meeting of our members (Fig. 1) to discuss the latest progress, we hold online discussions throughout the year to share experiences and lessons.

We are improving interaction between product developers, consumers and sweetpotato breeders, so that varieties being developed can pay more attention to end-user preferences.

We are strengthening the capacity of OFSP processors to develop a wider range of products, establish processing units, adhere to quality management systems, package and market their products. We also create awareness about the nutritional and health benefits of OFSP products among consumers (Fig. 2), and members are

The Sweetpotato for Profit and Health Initiative (SPHI), launched in 2009, seeks to improve the lives of 10 million African households in 17 Sub-Saharan African (SSA) countries by 2020 through providing access to improved varieties of sweetpotato and their diversified use. Support for the establishment of the Platforms and the holding of community of practice meetings is provided by the Sweetpotato Action for Security and Health in Africa (SASHA) Project, led by the International Potato Center (CIP) with over 26 collaborating partners.

Fig 2. Awareness creation on the utilization of OFSP in Oyo and Kwara States, Nigeria (credit O. Oyegbola)

Fig 3. Golden sweetpotato bread has gained popularity in households in Tamale, Northern Ghana (credit E. Abidin)

Fig 4. Community nutrition promoters display their OFSP dishes after a cooking demonstration in Sanga District, Mozambique (credit C. Bukania)

provided advocacy tools to use with local and national governments for OFSP as an integral component of their food and nutrition security strategies.

What have we achieved?

To date, three annual meetings of the MPU-CoP have been held. In 2016, the theme of the meeting was 'Rebranding OFSP for Health and Wealth.' Held in Dar-es-Salaam, Tanzania, the meeting was attended by 35 participants (14 men and 21 women) from 17 organizations. The CoP is trying to increase the participation of women and youth into different levels of the value chain.

The idea of developing OFSP bread and other marketable products has been championed, researched and piloted extensively by different members of the MPU-CoP. Bread recipes have been developed with OFSP purée (steamed and mashed roots) incorporated in the range of 35-50%. By 2016, OFSP bread and other baked products are being produced by bakeries in Mozambique, Ghana (Fig. 3), Kenya, Rwanda, Nigeria and Malawi. Other products that are doing well in the market include doughnuts, cupcakes, cookies, biscuits and sweetpotato chips. In many countries, our members are also now promoting the use of OFSP in traditional dishes to enhance their nutritional content (Fig. 4). Feedback from end-users is considered an important factor in linking breeding efforts to OFSP adoption. The MPU-CoP sent a representative to the SpeedBreeders and Genomics CoP that was held in June 2016 in Nairobi, with the mandate of sharing insights about end-user preferences and requirements. Some of the points raised were:

- The food industry with large scale operations requires OFSP varieties that have a regular shape that is easy to wash and peel and high amounts of beta-carotene.
- OFSP crisps manufacturers prefer OFSP varieties OFSP varieties that do not turn into a dark color when fried as crisps. OFSP juice processors prefer OFSP varieties with high moisture content and vitamin C (particularly, for juice) and high amounts of beta-carotene.
- Rural consumers in Africa prefer OFSP varieties that are high in dry matter just like the local white-fleshed and yellow-fleshed varieties.

Breeders are working on increasing iron and zinc content in OFSP. They will need to work with nutritionists to assess the bioavailability of these micronutrients when target levels are reached. It is known that vitamin C, present in OFSP, can enhance iron/zinc absorption by the body.

This feedback was well received by the sweetpotato breeders, who recognize the importance of balancing the need to speed up the release of varieties bred for resistance to drought, pests and diseases, and earliness, while at the same time paying attention to quality traits meeting end user preferences.

The MPU-CoP launched two discussions on the Sweetpotato Knowledge Portal (1) Nutrition, youth and gender lenses on orange-fleshed sweetpotato: What would make our story more convincing and more integrative to policy makers? (2) Challenges and solutions to scale up OFSP purée for bread baking.

What's next?

During this year's meeting, we streamlined the roles and functions of the MPU-CoP leaders in a bid to improve interaction and learning among members. Leaders will strengthen coordination of online discussions, and improve liaison between the MPU-CoP and other CoPs, community leaders, academic and research institutions and policy makers. Members will be encouraged to increase their scientific contributions through publication and conference participation. In addition, we will undertake an outreach program to increase membership and to advocate for OFSP adoption. We also agreed on four topics for the online discussion forum for the coming year.

We will harness our collective expertise to develop appropriate post-harvest storage and processing technologies and to scale up existing ones to promote value addition. We remain committed to increasing participation of youth and women in the OFSP value chain. All these efforts will lead to higher vitamin A intake among consumers, and increase income opportunities for sweetpotato processors and producers.

SASHA
Sweetpotato Action for Security and Health in Africa

Led by CIP, the-ten year Sweetpotato Action for Security and Health in Africa (SASHA) project is designed to improve the food security and health of poor families in Sub-Saharan Africa (SSA) by exploiting the untapped potential of sweetpotato.

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