Background

The current status of sweetpotato processing in sub-Saharan Africa is both challenging and promising. It is challenging because of the inadequacy of sweetpotato manufacturing technologies for processed products, and promising due to the increased demand by consumers for convenient and healthy products.

A highly successful pilot project in East Africa has already demonstrated that it is possible to develop innovative and healthy products based on orange-fleshed sweetpotato, that some market segments are willing to pay a premium for healthy food and that commercially viable products based on sweetpotato can be established in East Africa through linkages along the entire value chain, from field production to supermarket retailing.

Objectives

The overall goal of the project is to contribute to improved nutrition and incomes in Kenya, Malawi, Rwanda and Uganda through profitable and vibrant orange-fleshed sweetpotato-based value chains. The project promotes the commercialization of purée products by creating demand and adding value in baked and fried food products. Specifically, it will seek to:

a. increase the productivity and production of orange-fleshed sweetpotato among smallholder farmers linked to processing activities;

b. establish sweetpotato purée processing capacity in commercial enterprises in Malawi, Rwanda and Uganda.

c. develop market chains for sweetpotato purée-based bakery products in the above countries; and

The increased demand from consumers in East Africa for convenient and healthy products needs to be matched by sweetpotato manufacturing technologies. This intervention will promote the commercialization of sweetpotato purée products and value addition in baked and fried products.

Project profile

Orange-fleshed sweetpotato purée-based food applications, East Africa

Enhancing nutritional outcomes, post-harvest loss management, and youth and women’s empowerment
d. pilot a long-life (shelf-stable life of 12-24 months) sweetpotato purée for use in bakeries, culinary establishments (coffee shops, hotels and restaurants), and for ready-to-eat food formulations in Kenya, using hot-fill thermal processing technology.

**Approach**

The project will be implemented using a model successfully developed by Euro-Ingredients Limited, the International Potato Center (CIP) and partners in Kenya.

To fully exploit the benefits of orange-fleshed sweetpotato, a strategy of innovative market creation will be pursued to stimulate the consumption of healthy sweetpotato products. The project supports small- and medium-scale enterprises to think of new ways to develop value proposition and business models. As well as securing the financial sustainability of primary producers, particularly women smallholders, the improved accessibility of technologies and markets for sweetpotato purée will in turn boost employment and economic growth.

Phase I of the project will develop a commercially viable sweetpotato-purée prototype. Phase II will comprise work on equipment, factory design and food product development and research on consumer acceptance and willingness to pay in target markets, as well as on gender and nutritional impact. Project partners will work with purée processors in the participating countries to validate the commercial viability of key products. During phase III, capacity for purée production will be established in existing commercial food processing enterprises in Malawi, Rwanda and Uganda with purée bakery products launched and promoted for rapid uptake. Finally, phase IV will pilot the thermal processing of sweetpotato to make a purée that has a 12–24-month shelf-life at ambient conditions without the use of preservatives.

**Expected outcomes**

The direct beneficiaries of the project will mostly be women smallholder farmers—15,000 are targeted—in the participating countries. The following specific outcomes are expected: At least one women- and/or youth-led enterprise in each country will profitably produce and market orange-fleshed sweetpotato purée-based bakery applications. Each processor will create at least 15 jobs, mostly for young people and women, and will develop business linkages with at least 500 smallholder farmers.

At least two bakeries in each participating country will produce and market sweetpotato purée-based products, reaching annual sales of at least USD 100,000 after three years. At least 30 informal vendors in each participating country will produce and market sweetpotato purée-based products, reaching annual sales of at least USD 3,000 per vendor over the three years, creating new employment and income opportunities for rural and urban youth.

Shelf-stable purée will be used to produce breads, buns (burger buns and sweet buns), muffins, cup cakes, cookies, chapati and other fried products (doughnuts, mandazi), and purée concentrate-based products (baby foods, porridge, soups and smoothies) to ascertain its functional properties. At least one industrial and 10 rural bakeries will use shelf-stable purée in Kenya, as will at least two hotels or restaurants, two food outlets, and one school.

**Key outcomes**

<table>
<thead>
<tr>
<th>Category</th>
<th>Target (in each country)</th>
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<tbody>
<tr>
<td>Women- and youth-led enterprises profitably making and marketing orange-fleshed sweetpotato purée for bakeries</td>
<td>1 enterprise</td>
</tr>
</tbody>
</table>
| Purée processors | 15 jobs  
500 linked smallholder farmers |
| Bakeries | 2 with annual sales of USD 100,000 |
| Informal vendors of sweetpotato purée-based products | 2 with annual sales of USD 3,000 |
| Bakeries using shelf-stable sweetpotato purée in Kenya | 1 industrial  
1 rural |
| Other users of shelf-stable sweetpotato purée in Kenya | 2 hotels/restaurants  
2 food outlets  
1 school |

**Duration**

February 2019–October 2021

**Budget**

USD 383,755

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