



CSIR-Crops Research Institute, Kumasi

Sweetpotato Postharvest Program



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1st Meeting of SSP-West Africa (SPHI)
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Nutritional value of Sweetpotato

- Sweetpotato is more nutritious than most other starchy crops
- Among the top 3 food sources of potassium, and very low in sodium
- Rich source of anti-oxidant, anti-inflammatory and anti-mutagenic compounds
- Recently classified as an antidiabetic food – lower Glycemic index than Irish potato; protects against insulin resistance

Table 1. Certain health beneficial functions of sweetpotato

| Health Beneficial Function | Components |
|-----------------------------|-----------------------------------|
| Antioxidative activity | Polyphenol, vitamins, anthocyanin |
| Reduction of liver injury | Anthocyanin, beta-carotene |
| Antimutagenicity | Polyphenol, vitamins, anthocyanin |
| Anticarcinogenesis | Dietary fiber, polysaccharide |
| Antimicrobial activity | Dietary fiber |
| Anti-inflammation | Dietary fiber |
| Promotion of bowel movement | Dietary fiber, jalapin |
| Anti-diabetic effect | Acidic glycoprotein |
| Ultraviolet protection | Polyphenols, vitamins |

(Islam et al., 2003 and Islam, 2006)

The role of CSIR-Crops Research Institute

- The CSIR-Crops Research Institute in a bid to promote sweetpotato utilization in the country has released several high-yielding varieties.
- However, low adoption rates of these improved varieties have been associated with limited options in utilization.
- Sweetness perception has also been a drawback in product acceptability except in some snack-type preparations.

Opportunities

- Sweetpotato has tremendous genetic diversity
 - Colour of peel and inner flesh ranging from white/cream through orange to purple
 - Wide variation in taste, texture and flavour
- This opens up many opportunities for utilization research for both domestic and industrial applications

UTILIZATION RESEARCH: SOME ACHIEVEMENTS

Sweetpotato Breakfast Mix (1st Prototype)



- Healthy for both children and adults
- Quick-cooking, high beta-carotene; pregelatinized





SWEETPOTATO FRUIT
PUNCH

SWEE
YO



Development of Sweetpotato (*Ipomoea batatas*) leaves as a green leafy vegetable

- Sweetpotato leaves are known to be more nutritious than many other green leafy vegetables
- It has a higher content of lutein (good for eyesight), polyphenolics (anti-oxidants), calcium and vitamin K in comparison with 12 kinds of the major commercial vegetables (Yoshimoto *et al*, 2005).
- Low patronage is due to unpalatability of some genotypes and insufficient knowledge about preparation methods

Sweetpotato green leafy vegetable



OBJECTIVES:

- To add variety to the Ghanaian diet
- Capitalize on the unique nutrients in sweetpotato leaves to boost the health of the Ghanaian consumer (anti-aging properties)
- Create specialised markets for dual-purpose sweetpotato varieties and thereby increase earnings of producers

PROMOTION

Past and current efforts

- School farms (Ohawu, Volta Region)
- National Sweetpotato Expo (Late Capt. Quarshiegah)
- Boarding school feeding test project (St. Louis Secondary school)
- Hotels and restaurants (Pink Panther, Kumasi)

On-coming activities

- Sweetpotato utilization drive (publications, promotions) in 3 selected Regions
- Exhibitions, training/demonstrations to consumers and small-scale processors

Table 3. Tapping sweetpotato's full potential in the Ghanaian economy

| Pertinent issue/ Area of focus | Required action/Relevant Stakeholder (s) |
|---|---|
| 1. Change wrong perceptions about sweetpotato and remove stigma as “poor man’s food” | •Long-term community-based Social Marketing (NGO’s); Inclusion in primary and secondary school curricula (GES) |
| 2. Sustained promotion for increased utilization | •Public awareness campaigns, training and demonstration, legislation (Research bodies, Agric. Extension, Policy makers, school feeding programs, NGO’s) |
| 3. Create sustainable value chains | •Link up producers, traders, processors, retail outlets and other markets (Agric. Ministry, private sector, financial institutions, Government Policy Makers) |
| 4. Push orange-fleshed sweetpotato as Public health tool in food-based approach to alleviating vitamin A deficiency in children of school going age | •Ghana Health Service, NGO’s, Agro-processors, Policy makers |

**THANK YOU
VERY MUCH**



[Spicy Sweet Potato Fries](#)