

SWEETPOTATO PRODUCTS

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BACKGROUND

- Sweetpotato (*Ipomoea batatas* L. Lam.) is among the world's most important, versatile and underexploited food crops (CIP, 1999).
- Globally, sweetpotato is the second most economically important root crop after potato and is an important food security crop in many of the poorest regions of the world including sub-Saharan Africa (FAOSTAT, 1998).
- Over 95% of the global sweetpotato crop is produced in developing countries, where it is the fifth most important food crop (CIP, 2006).

BACKGROUND

- According to Scott et al. (2000) more than two billion people in Asia, Africa, and Latin America will depend on these crops for food, feed and income by 2020.
- Sweetpotato (*Ipomoea batatas*) is only a minor root crop in tropical Africa despite its potentials as indicated by its growth in terms of production (Tewe et al.,2003)
- Among the root and tuber crops, it is the only one that has a positive per capita annual rate of increase in production in Sub-Saharan Africa (Scott and Maldonado, 1998).

BACKGROUND

- In parts of West, Central and East Africa, sweetpotato is an important source of calories and is consumed by people of all ages (Hagenimana *et al.*, 1998).
- In West Africa both roots and leaves are consumed in various forms.
- The young leaves and vine tips of sweetpotato leaves are widely consumed as a vegetable in West African countries (Guinea, Sierra Leone and Liberia, for example), as well as in northeastern Uganda, East Africa (Abidin, 2004).

USES OF SWEETPOTATO

- Sweetpotato leaves are consumed because, according to Tewe *et al.* (2003) they are comparable to other vegetables as soup ingredient in terms of flavour, appearance, palatability, softness and acceptability
- Also Vines and leaves are used to feed livestock by farmers in West Africa.

SUMMARY OF USES OF SWEETPOTATO IN W/A

1. Boiled, roasted or baked and eaten with stew
2. Boiled and pounded with either boiled or fermented cassava as “foofoo”
3. Dried and milled for sweetening of gruel or ogi porridge
4. Sliced into chips, dried and fried in vegetable oil
5. cookies and puffs (snacks)
6. soup thickner
7. foliage for animals
8. Leaves for stew
9. Drink or beverage
10. flour
11. ‘npontopoto’

Ecological Zones	Utilization
<i>Humid</i>	Snacks, sweetpotato flour for <i>lafun</i> , vines and leaves as livestock feed, especially for rabbits
<i>Sub-Humid</i>	Foofoo, vegetables, snacks (<i>usinsin dankali</i>)
<i>Semi- Arid</i>	Boiled for food; Sweetener; Dried forage as livestock at the peak of the dry season

Table 1: Summary of sweetpotato utilization in the ecological zones of Nigeria. Source: Tewe *et al.*, (2003)

PROCESSING OF SWEETPOTATO

- Utilization of sweetpotato in West African is limited to their traditional uses.
- Its processing (flour, starch, glucose etc) is not a common venture in West Africa.
- Thus, development of technologies that will process sweetpotato into value added products would promote its production, consumption and increase its economic value.

PROCESSING OF SWEETPOTATO

- Publications on sweetpotato studies (roots and leaves) show that their proximate composition, mineral and vitamin compares favourably with various fruits and vegetables.
- Also several varieties are known to contain higher levels of minerals and protein than other vegetables (Woolfe, 1992).
- Starch and flour from some varieties of sweetpotato have good physicochemical properties.

PROCESSING OF SWEETPOTATO

- These desirable qualities place sweetpotato in a unique position in the quest to improve food security and eliminate malnutrition.
- Thus, sweetpotato can be used in the formulation of various products using its unique properties.

**SOME SWEETPOTATO
PRODUCTS
BY**

*Food Science and Technology Department,
KNUST - Kumasi*

PRODUCTS

SWEETPOTATO FLOUR PRODUCTS

Exhibition



**SWEET POTATO
FLOUR**



**SWEET POTATO
FLOUR**



SWEET POTATO
LARGE CAKE



**SWEET POTATO
COOKIES**



**SWEET POTATO
QUEENS CAKE**



**SWEET POTATO
CAKE WITH ICING**



**SWEET POTATO
YOGURT**



**SWEET POTATO
SALAD CREAM**



**SWEET POTATO
CUSTARD**



**FAARA
(BLANCHED)**



**FAARA
(FRESH)**





**UNBLANCHED DRIED
SWEET POTATO LEAVES**



**BLANCHED DRIED
SWEET POTATO LEAVES**



**PACKAGED
SWEET POTATO LEAVES TEA**

Other products include....

- Sweetpotato gari
 - Screening 18 varieties of sweetpotato for gari production
 - Optimized Blend of Sweetpotato and Cassava for gari production
- Sweetpotato starch
- Non- alcoholic beverages from Faara and Sauti
- Breakfast meal from sweetpotato/rice composite
- Minimal processed chips

RESEARCH WORK/PROJECT

Research/projects include....

- Pregelatinized Sweetpotato flour - Cocoa Beverage
- Incorporation of pregelatinized sweetpotato flour in chocolate formulation.
- Production of jelly using sweetpotato (*Ipomea batatas*) tubers.
- Enhancing the quality of sweetpotato flour bread making; inclusion of ascorbic acid and sodium carbonate

Other works include.....

- Phytochemical composition of *Ipomea Batatas* and Crackers from Underutilized flours.
- Vitamin A and Farmers Assessment of Newly Bred Sweetpotato Varieties in collaboration with Crop Research Institute.
 - Provitamin A carotenoid were higher in the leaves than the tubers.
 - TIS 83/0138, VSP 4 and CN 1448-59 were considered for snack products while EXCELL 440203 was considered as suitable for fufu due to their unique attributes with respect to taste.

CONCLUSION

- Diversifying of sweetpotato utilization and value addition would enhance its marketability, promote its production and consumption, thus increasing its economic value.

RECOMMENDATION

- Development of the crop's full potential in West Africa will require a fully integrated approach:
 - provide the farmers with quality planting material
 - strengthen linkages of producers as sources of raw material to processors – consumers (domestic and industrial)
 - managerial improvements in processing at the enterprise level
 - provide information on nutrition and uses of fresh and processed sweet potato to consumers.
 - promotional activities (education)
 - encourage use of sweet potato in households and restaurant menus

ALL HANDS ON DECK

When I run alone- run fast
When we run together- we go far

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