



An Evaluation of Native West African Vegetables

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Background

Many species of African traditional vegetables are poorly known, being used only locally. They are difficult subjects for conventional agronomic study, often being cultivated in small patches in domestic gardens or growing as weeds in marginal areas within farms or wild in forest areas. However, they are extremely important for nutrition and farm income throughout Africa, often supplying most of the daily requirements for vitamins A, B complex and C (ascorbic acid) for rural people (Guarino, 1997). The production and utilization of vegetables can make a much-needed contribution to better nutrition and income in many African countries but there is a serious threat that many species will drop out of use in some areas if no appropriate countermeasures are taken (Ingrid,1995) . In Africa, these traditional vegetables have been in the past relatively neglected by both local population and research institutions, and their potential remains to be fulfilled (Maundu, 2004).

Powerful tools for tackling many basic problems in sub-Saharan Africa -- namely hunger, malnutrition, and rural poverty -- could literally spring from the ground. The region is home to hundreds of indigenous vegetables that have fed Africans for tens of thousands of years. Most of these plants are resilient enough to thrive in poor soil and well-suited to the small plots and limited resources of village families (US National Academy of Science, 2006).

Knowing the nutritional, medicinal and economic value of native West African vegetable could definitely add value to the cultivation, consumption, conservation, and regional/international commercialization of native west African vegetables. Such knowledge if well exploited could as well serve as one of the main corridors for hunger and poverty alleviation in the West African region.

Research Objectives

- To evaluate native West African vegetables in terms of their i) nutritional, ii) economic and iii) medicinal values,
- To give suggestions for higher sustainability of cultivation, consumption and conservation of native vegetables in West Africa

Materials and Methods

Materials

Material used for the realisation of this research include the following: Agricultural Journals, Textbooks, Monographs, Periodicals, Internet database and Personal information

Methodology

This research was entirely a desk-work based research; characterised by a theoretical analysis of research works previously carried out by other authors.

NB: What is reported here is what the author readily laid hands upon at the time of material investigation.

Results

A) Identification of Vegetables

Altogether, twenty two Native West African Vegetables were identified in this research as follows:

- i) Jute (*Corchorus Ollivius*), ii) Roselle (*Hibiscus sabdariffa*)



Family: Tiliacea

- iii) Cranberry Hibiscus (*Hibiscus acetosella*)



Family: Malvaceae

- v) Eru (*Gnetum africanum*)



Family: Gnetaceae

- vii) Black Nighthshade (*Solanum scabrum Miller*)



Family: Solanaceae

- ix) Peanuts (*Arachis hypogaea L.*)



Family: Fabaceae



Family: Malvaceae

- iv) Baobab (*Adansonia digitata*)



Family: Bombacaceae

- vii) Cat's whiskers (*Cleome gynandra*)



Family: Capparaceae

- viii) Bitter leaf (*Vernonia amygdalina*)



Family: Asteraceae

- x) winged bean (*Psophocarpus tetragonolobus*)



Family: Fabaceae

- xi) Pigeon peas (*Cajanus cajan*) xii) Bambara Groundnut (*Vigna Subterranea*)



Family: Fabaceae



Family: Fabaceae

- xiii) Cowpea (*Vigna unguiculata*)



Family: Papilionaceae

- ixv) Fluted pumpkin (*Telfairia occidentalis*)



Family: cucurbitaceae

- xv) West African gherkin (*Cucumis anguria*)



Family: Cucurbitaceae

- xvi) African eggplant (*Solanum aethiopicum*)



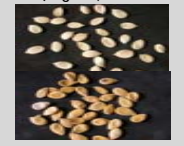
Family: Solanaceae

- xvii) okra (*Abelmoschus esculentus*)



Family: Malvaceae

- xviii) Egusi (*Citrullus colocynthis*)



Family: Cucurbitaceae

- ixx) Wild Mango Seed (*Irvingia gabonensis*)



Family: Ixonanthaceae

- xx) Grains of Paradise (*Aframomum melegueta*)



Family: Zingiberaceae

- xxi) Guinea pepper-No pictures

- xxii) White Ginger-No pictures

B) Table 1: Evaluation of Vegetables: Nutritional, Medicinal and economic Values

Vegetable	Edible parts	Nutritional Value	Medicinal Value-therapy	Economic Value
Jute	Young leaves and shoot tips	calcium, phosphorus, iron, sodium,potassium, beta-carotene, thiamine, riboflavin, niacin and ascorbic acid.	Treats ailments such as aches and pains, dysentery, enteritis, fever, pectoral pain and tumours	Annual Export of West African Roselle calicos amounts to \$130million
Roselle	Shoots, leaves and flowers	Calcium, Phosphorus, Iron, niacin, Riboflavin, Thiamine, ascorbic acid, fat protein, carotene	Treats: Blood pressure, after effect of drunkenness, coughs, feet cracks and boils, sores on carnets, dysuria, stranguy, mild cases of dyspepsia and debility	
Okro	Fruits	Calcium, carbohydrate, protein, vitamin C, vitamin A, vitamin B1, vitamin B2	N.A	
False roselle	Leaves and roots	N.A	N.A	N.A
Eru	Leaves	Important source of protein, essential amino acids and mineral elements	Therapeutic agent: enlarged spleen, beriberi, niacosis, and as cathartic, reduce the pain of chills, and a dressing for warts and boils	Article of trade in West and Central Africa-particularly in Cameroon, DRC and Nigeria
Cat's whisker	Leaves	vitamins (A and C), minerals: calcium, iron, also contains some protein and edible oils	has insecticidal, antifoliant and repellent characteristics	N.A
Bitter leaf	Leaves	anti-nutritional factors such as alkaloids, saponins, tannins and glycosides	Appetizer, treats fevers, schistosomiasis, diarrhea, malaria, malaria and intestinal complaints	Article of trade in West and Central Africa-particularly in Cameroon and Nigeria
Black nighthshades	Leaves and seed	Protein, amino acids, minerals: calcium, iron and phosphorus, vitamins A and C, fat and fibre, appropriate quantities of medicine.	Anthonies fire' the shingles, paining of the head, heart burning or heat of the stomach, inflamed throats, eye inflammations, ringworm, running ulcers, testicular swelling, gout and ear pains. Remedy for convulsions, insomnia, has antiseptic and anti-dysenteric properties	Article of huge local trade in West, Central, East and Southern Africa-particularly in Cameroon, Ghana, Kenya, Madagascar and Nigeria
Baobab	Leaves, seeds and fruits.	rich in vitamins C, B1, B2, calcium, phosphorus, iron, trace minerals and protein.	All parts of the plant are reputed to have medicinal properties	baobab have economic potential locally/international
cowpeas	dried seeds, fresh seeds, pods, leaves and young stems	protein, carbohydrates, rich in Ca, P and vitamin B.	N.A	Article of local trade in West and Central Africa-particularly in Cameroon
peanut	seeds	Protein, fat, carbohydrate, Minerals: Calcium, phosphorus, magnesium, sodium, potassium, vitamin A, riboflavin, etc	gonorrhoea, externally use for treating rheumatism - blood disorders, in folk medicine as an anti-inflammatory, aphrodisiac and decoagulant.	N.A
Bambara groundnut	Seeds	Rich source of Protein	N.A	Article of Trade in the West and Central African region:Cameroon, Nigeria, Ghana, Mali, etc
Fluted pumpkin	Seeds, Young shoot and leaves	Rich in protein and fat	N.A	N.A
African Eggplant	Leaves and fruits	Protein, fat, carbohydrate, Minerals: Calcium, etc	N.A	N.A
Egusi	Seeds	rich in oil, protein, - tocopherols and carbohydrates.	Has ribosome-inhibiting properties, potential as a therapeutic agent for HIV/AIDS	Article of Huge Trade potential in West and Central Africa-particularly Cameroon, Ghana and Nigeria

NB: Due to space problem, please contact the Author (chemleo@yahoo.co.uk) for more information on the rest of the vegetables

Conclusion

Although native west African vegetables are not well known and documented, the few that have been identified during the current research prove to have profound nutritional, medicinal and economic potential which if well exploited could i) lead to possible reduction of poverty and health improvement in the region, ii) the conservation of orphan and native West African vegetables which today are under the threat of extinction due to many reasons; which include but not limited to the abandonment of local vegetable species cultivation in preference to exotic vegetable species and/or unsustainable management of indigenous vegetable species plus negligence by major scientific research institutions, iii) open new markets for the commercialization of native West African vegetables. This therefore implies that, research institutions and development organizations-most especially those which have carried out or are today carrying out research on Native West African vegetables, have to make results available to the local population as well as sensitize them on the advantages of consuming, producing and preserving indigenous vegetable species in this region.

For References, Contact Author: Chemleo@yahoo.co.uk