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An Evaluation of Native West African Vegetables

Lionard Chem Shei

Freelance Consulting, Weichsel Str. 30, 12045 Berlin-Germany

1.0 Introduction

Many species of African traditional vegetables are poorly known, being used only locally. 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). 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.

1.1 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

1.2 Materials

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

1.3 Methodology

This research was purely a desk work research; focusing on the works of other authors with the prime aim of generating with analysis a list of native West African vegetables.

First, all the vegetables were identified in terms of common name, scientific name, botanical family and types¹. Second, the identified vegetables were then evaluated based on their nutritive, economic, traditional and medicinal values.

2.0 Results

Table 1: An Evaluation of Native West African Vegetables in terms of their Nutritional, Medicinal and Economic Values

Vegetable	Edible parts	Nutritional Value	Medicinal Value	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 calices 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 camels, dysuria, strangury, mild cases of dyspepsia and debility	N.A
Okro	Fruits	Calcium, carbohydrate, protein, vitamin C, vitamin A, vitamin B1, vitamin B2	N.A ²	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, sore throats, nausea, and as a cathartic, reduce the pain of childbirth, 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, antifeedant and repellent characteristics	N.A
Bitter leaf	Leaves	anti-nutritional factors such as alkaloids, tannins, saponins and glycosides	Appetizer, treats fevers, diarrhoea, malaise. schistosomiasis, malaria and intestinal complaints	Article of trade in West and Central Africa-particularly in Cameroon and Nigeria
Black night-shades	Leaves and seed	Protein, amino acids, minerals: calcium, iron and phosphorus, vitamins A and C, fat and fibre, appropriate	Anthony's fire, the shingles, panic of the head, heart burning or heat of the stomach, inflamed throats, eye inflammations, ringworm,	Article of huge local trade in West, Cetral, East and Southern Africa-particularly in Cameroon, Ghana, Kenya,

¹ Leafy, legume, fruit and root vegetables

		quantities of methionine,	running ulcers, testicular swelling, gout and ear pains. Remedy for convulsions, insomnia, has antiseptic and anti-dysenteric properties	Madagascar and Nigeria
Baobab	Leaves, seeds and fruits.	rich in vitamins C, B1, B2, calcium, phosphorous, 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	rich in protein, carbohydrates, 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, phosphorous, 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	Has huge economic potentials in the coastal areas of West Africa
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
Grains of paradise (melegueta pepper)	Seeds	N.A	Used as a stimulant, carminative and diuretic, treats dysentery and migraines, toothaches, rheumatism.	N.A
Wild mango seed	Fruits and kernel	N.A	hernia, yellow fever, dysentery, diarrhoea, and as a broadband 'first-aid', anti-poisoning agent	seeds command a high market price in West Africa
Winged beans	Seeds and pods	Most essential minerals, proteins and edible oils, vitamin A, and carbohydrate	N.A	N.A

² No answer was found

Pigeon pea	Seeds	Calcium, magnesium, potassium, sodium, iron, zinc, copper and manganese	diabetes, hypoglycemia, obesity and artherosclerotic cardiovascular disease	N.A
Spice tree (Guinea pepper)	Dried fruits	contains high amounts of copper, manganese, and zinc	bronchitis and dysenteric conditions, bulimia, Cough. It is calmative, purgative and repulsive to pain,	N.A

3.0 Conclusion

Although native west African vegetables are not well known and documented, the few that have been identified and analyzed within the scope of the current research prove to have profound nutritional, economic and medicinal potential which if well exploited would possibly open up new markets for the global commercialization of native West African vegetables likewise, encourage the local and global cultivation, consumption and conservation of many other native West African vegetables-especially those which are presently facing the threat of extinction.

4.0 Recommendations

- Results of past/present research on native West African Vegetables should be made available to the local population; especially those with special nutritional and medicinal values rather than locking them in scientific laboratory for use by pharmaceutical and multinational companies or just for academic purposes. This way the indigenous population would be aware of the importance of these vegetables in their vicinity and thus, the need to consume and preserve them.
- Prospects on national and international commercialization of the indigenous vegetables should also be identified by research institutions/development organisations and presented to the local population in order to encourage them produce, and conserve important indigenous vegetable species in their vicinity.
- International Trade barriers and tariffs should be removed from the commercialisation of important indigenous and orphan West African vegetables while also opening new markets for the trading of these vegetables. Such a move can help encourage local farmers to produce and conserve these vegetables; as sales benefit would enable them fight poverty through increased income generated from these new markets venues and international trade mercies granted to the local farmers.

- The local population of this region should also be encouraged to identify and document indigenous vegetables in their region and vicinity. Such documentations could facilitate research work on these vegetables by the scientific world and Development organisations especially when it comes to scientifically evaluating the nutritional and medicinal value of such indigenous vegetable species.

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