



Can drooping saliva for *Gnetum africanum* match growing scarcity in Cameroon?

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Date: 10/09/2008

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Summary: This paper addresses the growing scarcity of the green and edible plant *Gnetum africana* (Eru locally) in Cameroon. It occurs naturally in almost all tropical rain forest belts of Cameroon including Mount Fako region, Manyu Division in the South West and most forested areas of Centre, South, Littoral and East provinces. It argues that the plant must be effectively domesticated or sustainably exploited not to be extinct. It holds that poor harvesting methods, over demand and ecological changes by human activities may also be reasons for growing scarcity. It advocates for wide spread activities towards research on domestication, training on domestication as well as check on quantities exported as means of reducing scarcity.

Eru, biologically known as *Gnetum africanum* is a green creeping and climbing plant found in most parts of Cameroon. It is edible and found naturally in the Mount Fako forest region, the Manyu Forest and other neighbouring forested enclaves in Ndian Division in the South West as well as in most forests in Centre, South, East and Littoral provinces. It is eaten in the South West with fufu made out of fermented cassava (“Water fufu”), garri, and pounded cocoyams fufu (Arrey, 2008). In the Centre province it is used in making “Nkok” which is eaten with Cassava, cocoyams or plantains. Besides these provinces where it occurs naturally, it is also consumed nationally especially in the Urban centres and close to Universities as it is considered to be a heavy meal among poor people and students who cannot afford three daily meals. It is also considered very tasty and nutritious as the green plant is mostly cooked with red meat, Cray fish, another green vegetable “water leaf”, “bush meat”, red oil and fish. It is also an income earner to many women who buy from forest areas and sell fresh cuts in markets or cooked in both restaurants and along sidewalks in urban economies. Many rural families also depend on daily harvesting for their sustenance.

However following academic research and field work/interviews of users of *Gnetum africanum* in Cameroon from 2002-2008 coupled with recent consultative meetings between African Centre for Community and Development and Limbe Botanic Garden engaged in pilot domestication of *Gnetum africanum* for close to 10 years in 2008, it was revealed that the plant was getting even scarcer. The reasons given for this growing scarcity include the following:

- Poor methods of harvesting which have prevented natural replenishing. Indiscriminate harvesting has prevented many species from completing their

natural cycle hence a reduction in viable seeds for specie continuity and even more scarcity.

- Extensive demand for the plant domestically and internationally (Arrey, 2008) as much of it is harvested and exported to Nigeria and Equatorial Guinea as a thriving business by small scale and giant dealers. It should be noted that *Gnetum africanum* is consumed extensively in Nigeria as “Akassi” and “Afang” which are soups used in eating garri, pounded yams etc.
- Habitat loss due to forest clearance for agriculture and the expansion of human settlements into forested areas.
- Logging and wood cutting for fuel have also mutated the natural ecology for the growth of eru leading to more recalcitrant species and more scarcity.

The consequences of above listed points therefore include:

- A continuous increase in Scarcity from the wild.
- The increase scarcity mentioned above has impacted on the cost of acquiring eru from the wild and the cost of buying it in the markets.
- This has impacted negatively on the poor households who depend on it as a livelihood earner and other categories like urban poor and University students who are paying higher for smaller quantities of Eru or Nkok. Women sellers of fresh and cooked *Gnetum africanum* are also buying a more expensive product and are loosing their customers who are switching to other edible vegetable alternatives like “Bitter leaf”, “Green”, “Okongobong” etc.
- These factors have thus buttressed a strong need for domestication as a means of replenishing exhausted, degraded forests and also a tool to increase availability of the plant in the markets and among the poor.

Worth noting that, these consequences above are also worsening due to other independent factors which are economic, geographic and socio-political. They include the following factors;

- The incapacity to restrict tribal communities from harvesting “*Gnetum africanum*” from their natural forests or to install the notion of conservation amidst their needs to be fed. This difficulty tallies with the notion that most forest communities still look at forest resources as primarily theirs culturally and legally

and other stakeholders like the state and conservators as outsiders (Richard, 1996; Sharpe, 1998; Burnharm, 2000; Arrey, 2008).

- The incapacity to control the out flow of “*Gnetum africanum*” to neighbouring countries like Nigeria and Equatorial Guinea due to porous frontiers and corrupt police and custom officials who are regularly bribed to allow the indiscriminate exportation of the plant.
- The fact that the plant is an income bringer in areas with little other livelihoods option to “eru harvesting” or animal hunting makes reduction of exploitation difficult hence reiterating even more the need for domestication. Poor women engaged in harvesting and selling the plant are also uneducated and cannot be easily mobilised into other job markets.
- It is a cultural plant to many tribes. It is more extensively harvested in some regions or some communities like Beti, Bayang, and Ewondo where it is a staple than other areas. It is however despite this, consumed nationally. Communities use the plant in cooking their traditional dish during marriages, funerals or festivals. This reiterates the argument that the plant is likely to be exploited continuously as long as these occasions remain part of the Cosmic visions of extensive consumers like the Ejagam, Bayang, Ewondo, Beti etc
- There is a general Global food and fertiliser scarcity in the World Market that has prevented or reduced consumption and production movements to fertilised food stuff (Dorward and Poulton, 2008; Arrey, 2008). People in Cameroon cannot afford high fertilisers to grow species like “Green”, “Okongobong” in mass scale and hence contend themselves with forest products like *Gnetum africanum* presumed to be readily available in the forest.
- With a population of about 16.1 million in 2004, Cameroon thus has even more “*Gnetum africanum*” eaters and potential eaters hence reiterating further the need for domestication.

While the Limbe Botanic Gardens has pioneered the move towards domestication in Cameroon or even Central Africa with its “Eru Gene Bank” (close to 10 years old), the points listed above suggest the need for even more extensive, vigorous and far reaching programmes. The programmes should include:

- Government, private and internationally sponsored institutions seeking to oversee the establishment of many Gene Banks that can readily react to “*Gnetum africanum*” depletion according to the rate of scarcity or according to regions or forests. These genebanks will help conserve *Gnetum africanum* and other wild species from extinction.
- More Gene Banks will also better research into selecting high performing varieties for domestication. It should be noted that Limbe Botanic Gardens has presently tested yields from “Eru” cuttings and seeds as well from different soils including volcanic soils, poultry farm residues etc. It has also cultivated different varieties in Blocks indicating the provinces from where the *Gnetum africanum* species were gotten.
- Gene Banks will also lead to better conservation of plants with low viability (recalcitrant species).
- Conservation education will also flourish from Gene Bank programmes. This is vital as conservation and cosmic view points especially on forest exploitation including the harvesting of *Gnetum africanum* often clash (Arrey, 2008).
- Apart from Gene Bank programmes, better synergies between government, local governments, conservators and forest livelihoods must be established. This calls for umbrella organisations and partnerships capable of monitoring scarcity and designing best policies to check it. This calls for bottom-top processes and the possible emergence of quasi autonomous non governmental organisations (QUANGOS) that can include many more stakeholders in *Gnetum* management. It also calls for learning as a tool for “*Gnetum africanum*” conservation and domestication. This is vital as funding has so far been scanty while trial plots like in Limbe Botanic Garden are too small to impact extensively.
- More so, Overseas Development Assistance and more government financial assistance towards research in “*Gnetum africanum*” and livelihoods dependent on it must be stepped up especially as users have increased over time.
- For zones without other lucrative professional ventures from Eru harvesting, more schools and jobs must be created or better alternative agricultural schemes most

be introduced to better the lives of the poor. Subsidising agriculture to increase yield or better access to fertiliser use is imperative here.

- There must be conscious efforts to sensitise people over communication channels like local radios and television on the need for better harvesting methods, better forest farming methods and the dangers of over exploitation and over exportation.
- Training into domestication should also be increased. It should be noted that the Limbe Botanic Gardens has recently trained Many Women on domestication and is working with other organisations like CENDEP to provide domestication training to individuals and communities in the last 3 years. These moves are however small and hampered by minimal funds. To impact seeds and cuttings must be distributed widely to more dependent stakeholders in the country.

The article has thus demonstrated that many people are dependent on *Gnetum Africanum* directly or indirectly in Cameroon. They consider it as an income bringer and also a tasty national or some times cultural staple depending on the area of focus. Over exploitation however may have caused the people to want what their forests can no longer supply. They have turned to salivate in face of growing scarcity, to unsustainable methods of harvesting etc making domestication of *Gnetum africanum* the best option to sustain vital livelihoods dependent on the plant. Without domestication scarcity will deepen, the people's saliva will droop and the plant will be extinct. For this not to happen partnerships between stakeholders, the establishment of gene banks nation wide and conservation education are unavoidable imperatives for Cameroon.

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See Relevant pictures below:



Gnetum africanum domesticated at the Limbe Botanic Garden. Programmes for domestication must be stepped up nation wide to sustain the specie. Picture is courtesy of Arrey Mbongaya Ivo.



Head of Administration at Limbe Botanic Garden Mr. Joseph Mbelle talks to Arrey Ivo and the African Centre for Community and Development about Eru scarcity, its conservation and domestication as well as many interesting issues about conservation and the environment in 2008. Picture is courtesy of this author.



Arrey Mbongaya Ivo (Director) of African Centre for Community and Development poses in front of Eru nursery at Limbe Botanic Garden in a consultative meeting with administration and coverage of the facility.



Block 1 indicating *Gnetum africana* from the Centre province at the Eru Gene Bank in the Limbe Botanic Garden.