

Indigenous Knowledge and Utilization of *Gongronema latifolia* Benth.: A case Study of Women in University of Nigeria, Nsukka

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Abstract

The study investigated indigenous knowledge and utilization of *G. latifolia* ("Utazi") among women from Southeastern Nigeria and the efforts of the users towards its conservation. One hundred and fifty respondents were sampled from University of Nigeria, Nsukka campus by the use of structured questionnaire. The results showed that the plant is of high premium to women of the study area as they use it for vast food preparations and as medicare for many diseases. The major source of supply of the plant to the end-users was the rural women who harvest from forests. It was noted that most of the users had individually attempted to propagate the plant but failed. The propagation attempts suggested domestication and conservation efforts, and values placed on the plant by the users. Data collected suggested existing indigenous knowledge in nutritional and medicinal values of 'Utazi' plant components (leaves, stem and roots). It was conclusive from the study that 'Utazi' is well known and highly useful to the people of study area. Research efforts should therefore, be made to develop a propagation model for the plant; also, establishment of germplasm garden will enhance clonal characterization and evaluation to determine variable medicinal and food values of existing accessions.

Keywords: *G. latifolia* ("Utazi"), utilization, domestication, conservation.

Introduction

Non-wood forest products (NWFPs) are natural resources that are mostly sourced from forests. They have been shown to be sustaining the rural poor in many developing countries by meeting their household food security need; and by being a dependable source of income (Osemeobo and Ujor, 1999; UN, 2002). Nweze and Igboke (2000) reported that in 1996, 35.7% of the rural population of southeastern Nigeria collected Non-timber forest products daily and it accounted for 94% of their total income from minor sources. Bisong and Ajake (2001) also found out that many women in southern Nigeria depend largely on NWFPs for their food, fibre and herbal medicines. Akunyili (2003) emphasized the reasonable and noticeable shift from orthodox to herbal medicine in Nigeria in recent times.

Non-wood forest products are depleted at an alarming rate in Nigeria due to increasing human population pressure, agricultural practices and demand. It has been reported that a great percentage of Nigeria's luxurious vegetation has been removed and some species have gone into extinction (UN, 2002). Sunderland (2001) emphasized that nothing much has been done to conserve NWFPs resource even though FEPA (1999) reported that Nigeria made plans to increase the area of her forest estate from 10% to 25% by 2010.

Gongronema latifolia Benth (Fig. 1) is a non-wood forest product that is of West African Origin, and distributed in some virgin forests of the area (Nielsen, 1965). It is called "Utazi" in southeastern Nigeria. Okafor (1989) reported that the plant is used in the treatment of loss of appetite, cough, worm and stomach ache and its use in treatment of diabetes mellitus is gaining acceptance among the populace (Gamaniel and Akah, 1996).

They also revealed that the stem extracts contain five bio-active compounds namely; alkaloids, saponins, tanins, flavonoides and glycosides and inferred that those could make the plant have varied pharmacological effects.



Fig. 1: Vines of *Gongronema latifolia* Benth, "Utazi" (Igbo), from stem cuttings planted in a soil less medium. The long vine has inflorescences and opposite leaf arrangement

Although, it has been noted that *Gongronema latifolia* serves some medicinal purposes, its availability is on the decline because it is sourced from the wild. Osemeobo and Ujor (1999) reported that "Utazi" is one of the major NWFPs found in Nigeria, harvested only from forests and has become scarce.

Indigenous knowledge about a thing is normally generated and transformed through the members of families and communities over time (Bouwers, 1993). It is therefore conserved and transformed within such circle. The need to have an

Table 1: Socio-economic variables of the respondents

Age (years)	20-30	31-40	41-50	51-60	
Respondent (%)	5.0	45.0	40.0	10.0	
Educational status	Primary	Secondary	Post secondary	No formal education	
Respondent (%)	15.0	35.0	50.0	0.0	
Employment status	Full time farmer	Part time farmer	Civil servant	Applicant	Petty trader
Respondent (%)	5.0	45.0	40.0	5.0	5.0

adequate documentation of the indigenous knowledge and utilization of "Utazi" was borne out of the observed gap in information about the plant. An adequate documentation of information will enhance research into its potentials as a nutritional and medicinal plant. The objectives of this study were to obtain and document an indebt indigenous knowledge and utilization of "Utazi" and to ascertain efforts of the users in its conservation.

Materials and Methods

The study area: Data were collected from women in University of Nigeria, Nsukka campus. The University community was chosen because it has an adequate representation of people from all the states of southeastern Nigeria. "Utazi" is commonly used in southeastern Nigeria as they are harvested from the virgin forests in the Zone. The women were chosen because they are the main users, as well as do the preparation for other members or users in the family.

Sampling procedure: A total of 150 copies of structured questionnaires were administered to women in the University community through different women groups. The questionnaires were administered at random to the women. Out of these, 10% were either not returned or unanalyzable. Data were collected during a period of about three months. In order to ascertain the personal and socio-economic characteristics of the women, relevant questions were asked in the areas of age, marital status, level of education and employment status.

Data analysis: Since this study is exploratory, simple descriptive statistics such as mean, coefficient of variation (C.V.%), percentages and ranking order were used in analyzing the data.

Results and Discussion

It was observed that most of the respondents are within the ages of 31 to 40 years, attained post secondary education and are part time farmers (Table 1). This implies that most of the women are within the age of childbearing group. Most of the respondents emphasized that the period of childbirth was the most important time of "Utazi" use in the past until now when it is being used for numerous ailments/diseases in southeastern Nigeria. The use of "Utazi" in making slurry for consumption of roasted yam had the highest number of respondents (Table 2).

Table 2: Relative uses of *Gongronema latifolia* ('Utazi') for food preparation.

Type of food	Percent respondents
Roasted yam	94.0
Pepper soup	92.0
Yam porridge	90.0
'Abacha' (Tapioca)	80.0
Preparation of soup	60.0
Flavouring	60.0
Vegetable	60.0
Appetizer	50.0
Spice	40.0
'Nsala'	40.0
Mean	66.6
C. V. %	31.0

Its use in preparation of pepper soup, yam porridge and "Abacha" had high percent of the respondents. The high coefficient of variation (31%) indicates high variability of use among the people in preparation of food.

The most common diseases of the tropical region were enumerated by the respondents as what they have used the plant to successfully cure or suppress (Table 3). Use of the plant leaves by women that just delivered a baby, in the treatment of stomach ache, Diabetes mellitus, worm, cough and malaria had the highest number of respondents. This suggests the highest level of use of the plant leaves by the respondents in handling those diseases. The high level of respondents on the use of the plant against diseases agrees with the reports of Okafor (1989) and Gamaniel and Akah (1996) on the uses of the plant by the people. The magnitude of response on the use of "Utazi" in controlling diseases also agrees with the emphasis of Akunyili (2003) on the noticeable shift of Nigerians from orthodox to herbal medicines and with Bisong and Ajake (2001) on the dependence of southern Nigerian women on NWFPs for their food and herbal medicine. It also goes to confirm the varied pharmacological effects of the plant as inferred by Gamaniel and Akah (1996). The respondents use "Utazi" leaves more frequently and it is primarily used for food and Medicare (Tables 4 and 5). The stem is mainly used for planting and as medicine during the off-season when the leaves have shed. The horticultural implications of these are that clones that are leafier with wider leaves should be selected; besides, clones that root and shoot easily should be identified.

Table 3: Medicinal uses of "Utazi" against diseases by the respondents

Type of disease/ailment	Percent respondents that used "Utazi" to cure it
Stimulant in women that delivered a baby	99.0
Stomach ache	99.0
Diabetes/Blood sugar reduction	99.0
Worm	99.0
Cough	93.0
Malaria	92.0
Constipation	88.0
High blood pressure/Hypertension	85.0
Throat pain	85.0
Reduction of mouth odour	85.0
Catarrh/cold	80.0
Typhoid	65.0
"Gadjadi"	60.0
"Nacha"	40.0
Alcohol neutralizer	40.0
Gonorrhoea	32.0
Cancerous cells	30.0
Staphilococcus	30.0
Syphilis	30.0
Candidiasis	30.0
Detoxicant of poison	30.0
Itching	28.0
Mean	65.0
C.V.%	44.0

Table 4: Frequency of use of "Utazi" by respondents

Frequency of use	Percent respondents		
	Roots	Stem	Leaves
Always	Nil	20.0	80.0
Sometimes	10.0	70.0	20.0
Seldom	90.0	10.0	Nil

Only 10% of the respondents obtain their "Utazi" for use from home gardens and none of them have enough to sell to others because of few numbers of stands they have. The major source of the plants to the users is buying from the market. Local women who sell it as a means of survival obtained the plants supplied in the market from forests. Incidentally, the forest is indirectly the main source from where *G. latifolia* is obtained. This agrees with Osemeobo and Ujor (1999) on the source of "Utazi" and Nweze and Igbokwe (2001) on the collection of non-timber forest product as a primary source of income for poor rural women in southeastern Nigeria. The respondents consume the stems (100%) and leave (80%) fresh (Table 7).

Table 5: Relative use of different parts of "Utazi" by respondents

Parts of "Utazi"	Primary use	Percent respondent
Roots	Propagation	30.0
Stem	Propagation	80.0
	Chewing stick	20.0
Leaves	Food + Medicare	100.0

Table 6: Sources of "Utazi" to the respondents

Sources	Percent respondents
Market	60.0
Forests	30.0
Home garden	10.0
Mean	33.3
C.V.%	75.5

Table 7: Forms of use of "Utazi" parts by respondents

'Utazi' parts	Forms of use	Percent respondents
Stem	Fresh	100.0
Leaves	Fresh	80.0
	Fresh + Dried	50.0
	Dried	20.0

Those that preserve the leaves to be consumed dry do so mainly because of the non-availability of fresh leaves during the dry season.

The main source of planting materials reported by the respondents was stem cuttings (Table 8). Only very few respondents know that the plant have seeds. This may be due to the pattern of lengthy growth of the plant, which makes the capsules to be high on top of trees. Greater percentage of respondents was eager to domesticate "Utazi" in their homes for easy access to use (Table 9). The unfortunate aspect was that majority of those that had tried to plant "Utazi" were disappointed because of poor survival counts they recorded. The implication of this observation from the study will be to organize training of propagation of the plant by seeds and stem cuttings.

Table 8: Sources of planting material and domestication of "Utazi" by respondents

Sources of planting material	Percent respondents
Stem	80.0
Seeds	15.0
Root	5.0

Table 9: Percent respondent involved in domestication of "Utazi"

Domestication	Percent respondent
Yes	56.0
No	44.0

The respondents observed leaf size (big and small) colour (dark and light green) and bitterness (very bitter and slightly bitter) as the differentiating characteristics of "Utazi" thereby giving evidence of clone differences in "Utazi". Clone variability might affect medicinal and food values thus, suggesting the need for germplasm collection, characterization, and evaluation.

This study have identified that "Utazi" plant is of high premium to people of the study area as they use it for vast food preparations and as Medicare for many diseases. The people have individually made efforts to domesticate the plant and thus conserve it but only a few had succeeded

because the plant is hard to root under the conditions they provided for it.

Horticultural policies derivable from the survey study include:

- Urgent need for establishment of germplasm/conservation garden
- Training targeted towards women/other users on methods of propagation.
- Detailed characterization of known clones for ease of identification.
- Clone evaluation to document Medicinal and food values of variants
- Post harvest management of leaves.

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