

PJN

ISSN 1680-5194

PAKISTAN JOURNAL OF
NUTRITION

ANSI*net*

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Igbo Traditional Food System: Documentation, Uses and Research Needs

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Abstract: The Igbos live in southeastern Nigeria and number over 23 million with population densities ranging from 300 to over 1000 persons per kilometer, the highest in West Africa. As a first step towards solving the problems of stunting and micronutrient deficiency, this study sought to document traditional foods in terms of availability in seasons and their use in Igbo culture area. Eight communities selected from four States were used for the study. Key informant interviews, focus group discussions and questionnaires were used to document and ascertain use of local foods by households. About 294 species and over 400 varieties of foods were documented. The results show that, for the Igbos, maize and rice are the major cereals consumed. The foreign rice syndrome has in the recent past overtaken many households, especially in the urban areas. Twenty one (21) species of starchy roots and tubers, 20 legumes, 21 nuts/seeds, 116 vegetables, 12 mushrooms and 36 fruits were documented of which 9, 3, 7, 12, 0 and 11 respectively were found in food composition tables. Cereals, starchy roots and tubers are important food groups for the Igbo people. They are available all year round but are more abundant during the harvest season. They form the base of the diet of Igbo culture area. Most commonly consumed legume is the cowpea (*Vigna unguiculata*). Local varieties of cowpea and other species of legumes are also available but not produced in large quantities. The scientific names of most of the mushrooms have not been found. Fruits were not main parts of the diet but were eaten outside regular meals. Two types of oil (red palm oil and vegetable oil) were documented. A total of 21 condiments and spices were identified. Some of these condiments are soup thickeners and are high in dietary fiber. Animal foods were about 27 species for meat/poultry/eggs, 12 species of fish and 3 species of insect/larvae were documented. Milk and milk products were not mentioned. Availability and seasonality determined the consumption of these foods by the Igbo people. In all Igbo communities, foods are eaten not only for their nutritional values but also for their medicinal and socio-cultural significance.

Key words: Igbo culture area, traditional foods, uses and research needs

Introduction

The Igbo culture area may be defined as an area enclosed by an imaginary line running outside of the settlements of Agbor, Kwalle (West Niger Igbo), Ahoada, Diobu, Umuaboyi (Port Harcourt), Arochukwu, Afikpo, Isiagu (Abakaliki area), Enugu Ezike (Nsukka area) and Ebu (West Niger Igbo) (Onwuejiogwu, 1984) In this culture area, the Igbo live in patrilineages called "Umunna". The patrilineages which are of variable size and span, and of diverse origin federated to become villages. Groups of villages federated to form towns called "Obodo". Permanent Igbo settlements are widely distributed in six ecological areas within the Igbo culture area. These comprise: the southern half of the scarp lands of South Eastern Nigeria, the southern half of the lower Niger basin, the Midwest lowland, the Niger Delta, the Palm Belt of Southeastern Nigeria and the Cross River Basin. The Igbos number about 23 million (Ndiokwere, 1998). They have one of the highest population densities in West Africa, ranging from 300 to over 1000 persons per kilometer.

The diversities and variations that occur in the Igbo

culture area may derive to some extent from the differing ecologies of many Igbo people. Generally, the Igbo people share a common basic culture centered on a common language, common institutions and common religious and cosmological beliefs. This type of unity within a variable cultural complex had full expression in the area as in the kola-nut and white chalk customs, the vigor in Igbo music and dance movements, their highly developed arts of wall decoration and delicate body paintings, their pottery designs, weaving, folklore, oral literature, "mmuo" dances and drama and traditional games and pastimes such as wrestling, acrobatics, archery and fencing (Uchendu, 1965).

Agriculture is a heritage occupation of the Igbo people. Notwithstanding, stunting and micronutrient deficiency (vitamin A, iron, iodine and zinc) are prevalent. More recently, there has been an increased incidence of non communicable diseases among the Nigerian population. The long-term malnutrition problem of the poor nations cannot be solved by food aid or food trade with the affluent countries but rather by the adequate utilization of indigenous plant foods (Ihekoronye and

Ngoddy, 1985). This is because traditional food resources can make substantial contribution in meeting the nutritional needs of the population, especially the low income group and particularly in times of seasonal scarcity (Okigbo, 1986; FAO, 1987; Okeke *et al.*, 1993). Characterization of species is the first and most important step in understanding the entire traditional food system of indigenous peoples. Traditional food system has been defined as "all food from a particular culture available from local resources and culturally accepted. It includes, socio-cultural meaning of food, acquisition, processing techniques, use, composition and nutritional consequences for the people using the food" (Kulnlein *et al.*, 2004). This investigation therefore seeks to document these traditional foods, identify their uses and potentials with a view to reintroducing them into the fare of the population for health promotion.

Materials and Methods

Background of the communities studied

Ede-Oballa Town - Enugu State: Ede-Oballa community is located at the heart of Nsukka Local Government Area in Enugu State of Nigeria. It is not very far from the point of collaboration, that is, the University of Nigeria, Nsukka and it is within the deciduous forest area of Nigeria. Its soil is very rich for the cultivation of legumes and vegetables. Unlike the other communities studied, Ede-Oballa appears to be one of the most fertile areas in the South-East zone of Nigeria. It is also rich in bush meat and cereals. Ede-Oballa has an estimated population of 12, 447 (Federal Office of Statistics Lagos, 1992) and by 1996, it was projected to 14, 368. From the 1991 Census Figs., the males were 5760 in number and the females, 6687. These figures were projected to 9778 females in 2004.

Ezinifite town - Anambra state: Ezinifite is located at the Aguata Local Government Area in Anambra State of Nigeria. It is situated at the hinterland within the deciduous forest. This influences their production, consumption and preservation of foods. Ezinifite is located in a valley around the erosion disaster area. The risks of the erosion menace are a great problem to them.

The community has a population of 289, 049 (Federal Office of Statistics Lagos, 1992).

Ubulu - Uku town: Delta State Ubulu-Uku is an Igbo community in Delta State of Nigeria. It is located in the river basin/belt of the Niger River that gave Nigeria its name. This location explains why the members of the community are mainly farmers. They produce and consume a lot of cassava, yams, plantains and cocoyams like most other Igbo communities. Palm oil is produced in large quantities.

Umuahia town - Abia State: Ohiya community is located in Umuahia Local Government Area in Abia State of Nigeria. Umuahia town, of which Ohiya community is a part, has a population of about 213, 630 (Federal Office of Statistics Lagos, 1992). The vegetation and climate is deciduous in nature and the community is right inside the hinterland. There is a small river nearby and as such the people fish and grow vegetables around the river.

Entry into the communities: Contact persons were identified for each of the towns visited. They were intimated with aims and objectives of the project and their cooperation sought and obtained. The contact persons were then the links between the researchers and the chiefs and leaders of the communities. Preliminary visits were arranged by the contact persons for the researchers, chiefs and community leaders. These meetings enabled the researchers to explain in detail the purpose of the project and to solicit maximum support and cooperation. During these meetings, the research protocols were outlined.

Training of research assistants: Research assistants within each community were recruited and trained. This was done in order to overcome language barriers and non acceptance of a foreigner. The assistants were trained on how to fill the questionnaires and other research methods used.

Sampling size and sampling procedure: One hundred households were selected from each of the 8 communities. This gave a total of 800 households. Kindred households were randomly selected from each of the communities for the individual interviews. These households were purposively selected based on the presence of mother, children and/or infants.

Data Collection Methods

Key informants interviews: The chiefs of the communities and elders were the major informants. They gave the researchers information concerning the structure of each of the villages. They also guided the researchers on choosing knowledgeable people to be used for focus group discussions and all other information that the researchers required.

Focus group discussion: The focus group comprised a small group of people usually of common age and gender who are knowledgeable in a specific area. The chiefs of the communities helped the researchers gather groups of men and women (8-10 each) who were farmers and capable of giving accurate information to the researchers.

A focus group guide was developed for use during discussions with the different groups. Issues raised for discussion were based on the following topics: Foods

that are produced and consumed in the community; foods that are eaten and liked by season, by mothers and children; foods that are minimally used or currently not in use and reasons for their disuse; patterns of food harvest; social and medicinal uses of food crops etc.

Questionnaire: Questionnaires were distributed to hundred households in each community. Information was collected on the following:

1. free list record of community traditional foods, their local names, characteristics and frequency of use.
2. complete traditional food harvest calendar.
3. minimally used or unused expected micronutrient foods.
4. taste appreciation of some traditional foods by children and mothers etc.
5. attributes attached to traditional foods.

Market Survey: A market survey was conducted in each of the communities. This also helped to identify traditional foods available in the markets.

Data Analysis: Information from key informants and focus group discussants were recorded on the forms and also note books. In addition, the focus group sessions were taped in order to obtain verbatim responses. These were later transcribed and recorded. Information on the traditional foods was then tabulated.

Results

A total of 294 species and over 400 varieties of food items were documented in this study (Fig. 1). Of these, 174 were documented with their scientific names and 77 were found in the food composition tables (FCTs) currently in use in Nigeria. These Tables include the Tables of Representative values of foods commonly used in tropical countries (Platt, 1980) Food Composition Tables for Use in Africa (FAO, 1968) Nutrient composition of commonly eaten foods in Nigeria: Raw, Processed and Prepared (Oguntona and Akinyele, 1995). A total of 217 were missing in the FCTs. An attempt was made by the project to analyze about 50 samples (mainly vegetables). This result will be published in another paper.

The major cereals of the Igbo culture area are maize and rice. There are the white, yellow-red and variegated types. Rice is cultivated in swampy areas of the Igbo culture area. Some are also cultivated in the upland areas. Two major types were identified; *Oryza sativa* and *Oryza glaberrima*.

A total of about 21 starchy roots, tuber and fruits were documented by this project. These foods are available all year round but are more abundant during the harvest season. Apart from being sold for money, yams are used as gifts to relations, loved ones and in-laws during traditional marriage and other important celebrations. It

has a status symbol attached to it. It is a man's crop. "Diji" is a man who owns a certain number of yam barns and is also a symbol of strength because it is the most difficult crop to produce. Such a man commands respect in the society. Important festivals are linked to yam. For example the "New Yam Festival" is common to all Igbo communities and the "ahajioku festival/lecture of Imo State, Nigeria. Yams such as three leaf yam (*D. dumentorum*) and the aerial yam (*D. bulbifera*) as shown in Table 1 are almost extinct. Children and the younger generation do not know them or love them.

Local legumes as shown in Table 2 abound in the Igbo cultural food system. Unfortunately, many are becoming extinct. The most commonly consumed legume is the cowpea (*Vigna unguiculata*) black - eyed bean. It has both the white and brown varieties. However, there are local varieties of cowpea (*akidi ani* and *akidi enu/elu*) - *Vigna sinensis* which are not produced in large quantities. Next to cowpeas in popularity are the pigeon pea (*Cajanus cajan*), bambara groundnut (*Vigna subterranean*), the African yam bean (*Sphenostylis stencarpa*) and groundbean (*Kerstingeilla geocarpa*). Soyabean is a new addition to the diet of the Igbos. It is not indigenous to them but is now being consumed and especially used for complementary foods for infants and children. The cowpea, pigeon pea, bambara groundnuts are most in abundance and can be available all year round.

Oil seeds and nuts are very important in the diet of the Igbos as shown in Table 2.

Fruits abound in the Igbo culture area as shown in Table 3. Apart from conventional fruits, some traditional Igbo fruits grow in the wild/forest and need domestication. Fruits are generally regarded as food for children and do not form a major part of meals. They are consumed mainly as snacks.

One hundred and sixteen vegetables, including mushrooms were documented in this study. Table 4 shows the most commonly consumed vegetables in the Igbo culture area. However, some areas eat particular vegetables more than the others. For example, *Gnetum africanum* and *Pennisetum purpureum* are typical of Igbos from Imo and Abia States, while bitter leaf (*Vernonia amygdalina*) is most popular in Anambra State. Interestingly, Table 5 shows a list of uncommon, minimally used vegetables, some seeds and roots identified in this study. These vegetables were found to be consumed among the Delta Igbos. Some of the vegetables even grow as weeds. Most are ground and used in making soups and are said to have a variety of medicinal values.

The mushrooms identified in Table 4 are also common to all. They are eaten as delicacies or as meat substitutes in soups. Much of the mushrooms are obtained from the wild or homestead from tree trunks, farmlands, rotten wood and anthills. Some are soft, hard

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Table 1: Traditional cereals, starchy roots, tubers and fruits of the Igbo culture area

Foods	Local name(s)	Scientific name	Attributes: uses, socio-economic, cultural and medicinal values	Seasonality	
				R	D
Cereals;Corn/maize	Oka, azizi	<i>Zea mays</i>	White and yellow and variegated available. Eaten in fresh, dried forms in a variety of ways. Important in feed population group, especially infants	✓	✓
Rice	Osikapa	<i>Oryza sativa/</i>	Cream colour local variety. Taste better than exotic ones. Production low		✓
		<i>Oryza glaberrima</i>	Reddish in colour, milled and used for rice fufu		✓
Tuber/Root/Fruits	Jiocha, Ji igwe,	<i>Dioscorea</i>	Eaten frequently when in season; a prestige food used for festivals, given as gifts to in-laws and loved ones.	✓	✓
White yam	Ji abi	<i>rotundata</i>	A big yam farmer is called "Diji"		
Yellow yam	Ji oku/okwu	<i>Dioscorea cayenensis</i>	Not so common as white yam but also a special yam called "Oke ji". Can serve the same function as white yam.	✓	✓
Water yam	Ji mbo,	<i>Dioscorea alata</i>	Not produced in large quantities. Has higher moisture, lower sugar and starch and so recommended for diabetics.	✓	✓
	Ji abana, Ji mvula				
Three leaf yam	Ona, uno	<i>Dioscorea dumetorium</i>	Almost extinct. Used during the hungry season	✓	
Aerial yam	Adu, aduimu	<i>Dioscorea bulbifera</i>	Almost extinct, not loved by children		✓
Bitter yam	Ji abi, okpuru	<i>Dioscorea prachensis</i>	Said not to contain much starch. A wild type, almost extinct	✓	
Cocoyam	Ede ofe,	<i>Colocasia esculenta</i>	Used as soup thickener in some parts; can be made into chips for other food preparation.	✓	✓
	Ngbowa Akikara				
	Ede oku,	<i>Xanthosoma maffafa</i>	Boiled and eaten like yam	✓	✓
	edebuji, akpahuri				
	Akonoke	<i>Colocasia esculenta var</i>	Boiled and used to pound cassava	✓	
	Cocoindia	<i>Colocasia spp</i>	Introduced into Nigeria after the war. Boiled and eaten		✓
	Nkpongnambing	<i>Colocasia spp</i>	For pounding mixed with cassava		✓
	Okoroko ogoli	<i>Colocasia spp</i>	Big head; for pounding mixed with cassava. Inside soft "as egg". Used during hungry season. Cooks two very big head.		✓
	obosi				
	Cassava	Jigbo, alibo,	<i>Manihot esculenta</i>	A very important staple. Eaten almost on a daily basis in one form or the other. Nicknamed "man power";	✓
Bitter type	Akpunkola inu		6 to 6; No "1". Must be fermented before consumption. Can be used to produce dried or wet chips ("abacha").		
Sweet Potatoes	Ji nwanu	<i>Ipomoea batatas</i>	Love mainly by children. Not produced in large quantities.		✓
Banana	Unele, Ogedentiti	<i>Musa sapientum</i>	Said to have medicinal value		✓
Plantain	Osukwu, Ogede	<i>Musa paradisiaca</i>	Eaten by many. Unripe plantain recommended for diabetics. Believed to be high in iron. Eaten in different forms;		
	nba, obughunu		boiled, roasted, fried, made into flour etc.		✓
Bread fruit	Ukwa bekee	<i>Artocarpus communis</i>	Used as food.		

R = Rainy, D = Dry

or elastic and hard to chew. However, the scientific names of most of these mushrooms have not been identified.

Condiments and species are shown in Table 6. Most of them are seeds except *Obulumgbede* (*Hippocratea welwischii* - a root obtained from the wild and *ukpai* (scientific name not yet known) - a tree bark. Some spices are quite hot while others are very mild and flavourful. Most are said to have medicinal values and are used for treating such ailments as broken bones, loss of appetite and for pregnant and lactating mothers. The fermented products from *Prosopis africana*, *Ricinus communis*, *Parkia biglobosa* and *Citrullus vulgaris* are

important soup seasonings in different parts of Igbo land. A number of soup thickeners were identified in this group. They are typical of Igbos from Abia and Imo States of Nigeria, while cocoyams and yams are used by others.

Animal foods abound as shown in Table 7. Apart from cow, sheep, goat, chicken, turkey a lot of these are not being domesticated. They are still obtained from the wild. Unfortunately, they are consumed only when they are available. This is because of their high cost. Wild animals are also becoming scarce because of deforestation. Certain parts of meat like the liver, tongue, heart, lungs are generally regarded as special and may not be given to women

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Table 2: Traditional legumes, nuts and seed of the Igbo culture area

Foods	Local name (s)	Scientific name	Attributes: uses, socio-economic, cultural and medicinal values.	Seasonality	
				R	D
Cowpea	Agwa	<i>Vigna unguiculata</i>	Has a white and brown variety. Not produced in any appreciable quantity but the most commonly consumed legume		✓
Cowpea	Akidi ani/elu	<i>Vigna sinensis</i>	Akidi ani is obtained from the ground, while akidi elu is a climber. Eaten both as dried seed or fresh pods.		✓
Pigeon pea	Agbugbu, fiofo	<i>Cajanus cajan</i>	Not produced in commercial quantities. Comes in different colours. Dried seed can be boiled and eaten with cereals or starchy roots/tubers, or ground into powder and used to prepare sauce.		✓
Bambara groundnut	Okpa, Okpa abi	<i>Vigna subterranean</i>	Dried flour is used for a popular pudding "Okpa" eaten and enjoyed by many. Can also be boiled fresh and eaten or roasted.		✓
African yam	Okpodudu, Ijiriji, Azama	<i>Sphenostylis stenocarpa</i>	Boiled and eaten with starchy, roots, tubers and fruit. Can be roasted and eaten with palm kernel as a snack. Said to have medicinal value. Used during hungry season. Well cherished in areas of production.		✓
Ground bean	Akidi-ana, akidi ani	<i>Kerstingella geocarpa</i>	Cooked and eaten with other foods. Used as complementary food in areas produced.		✓
Lima bean	Okwe	<i>Nhaseolus spp</i>			✓
Jack bean	Akidi ofe	<i>Canavalia ensiformis</i>			✓
Winged bean	Agbara	<i>Mucuna pruriens</i>	A climber, grows wild, some cultivated. Has white and black cultivars. Eaten during periods of scarcity.		✓
Velvet bean			Usually ground, roasted and used for making sauce.		
Ground nut	Opapa/Apapa	<i>Arachis hypogea</i>	Used in a variety of ways; boiled, roasted and eaten as snacks with banana, popcorn etc. Roasted one used for peanut butter.	✓	✓
African oil bean	Ugba	<i>Pentaclethra macrophylla</i>	Boiled and sliced and fermented. Used for local salad and for other food preparations.		✓
Beniseed		<i>Sesamum indicum</i>	Not popular. Ground and used for making soup		✓
Soyabean		<i>Glycine max</i>	Use mainly as dried powder for infant feeding, soybean. Not produced much.		✓
Melon seed	Egusi	<i>Citrullus vulgaris</i>	Used as a major soup ingredient. Used to produce a meat substitute in some areas. Egusi soup is highly valued in some Igbo communities and used during major functions and festivals		✓
Dika nut seed	Ogbono/Agbono,	<i>Irvingia spp</i>	Used as a major soup ingredient. Highly viscous when mixed with hot water; recommended for diabetics.		✓
Bush mango	Ugiri		Important in some area of Igbo land.		
Pumpkin seed	Mkpuru ugu/ofe	<i>Telferia spp</i>	Boiled and eaten as snack	✓	
Pumpkin seed	Mkpuru anyu, Ugboguru/Ugbogulu	<i>Cucurbita spp</i>	Pulp used to eat yam or cocoyam	✓	
Cotton seed	Owo	<i>Gossypium arboreum</i>	Ground and used for soup		✓
Castor seed	Ogiri/ogili	<i>Ricinus communis</i>	Fermented and used for flavouring soups - ogiri		✓
African bread fruit	Ukwa	<i>Treculia africana</i>	A delicacy though becoming extinct due to deforestation. Boiled and eaten alone or with other foods. Roasted and eaten with palm kernel or coconut as a snack. Expensive and good source of income. Recommended for diabetics	✓	
Conophor	Ukpa	<i>Tetracarpedi mconophorum</i>	Boiled and eaten as a popular snack. Used for entertaining visitors	✓	
Coconut	Akuoyibo,	<i>Cocos nucifera</i>	Eaten with corn/maize, African bread fruit etc. Cocomilk is used in akubekee preparing dishes. Coconut water is used as an antidote and also for oral rehydration therapy.	✓	✓
Palm kernel	Aki	<i>Elaeis guineensis</i>	From palm fruit. Use to extract palm kernel oil used for cosmetics and traditional medicines.	✓	✓
Cashew nut	Mkpulu/Mkpuru cashew	<i>Anacardum occidentalia</i>	Roasted and eaten as snack; good source of income		✓
Kolanut	Oji Awusa Oji Igbo	<i>Cola nitida Cola acuminata</i>	Both are stimulants. Breaking of kola is an important part of any Igbo ceremony and ritual. Symbol of love, unity and welcome. <i>C. nitida</i> is preferred for these ceremonies. Chewed fresh alone or with alligator pepper or peanut butter. Has economic value.	✓	✓
Bitter kola	Ugoro, adu, akilu	<i>Garcinia kola</i>	Eaten for its medicinal value. Said to prevent malaria. Used to drive away snakes around compound. Good source of income.		✓

R = Rainy, D = Dry

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Table 3: Common fruits of the Igbo culture area

Fruits	Local name (s)	Scientific name	Attributes: uses, socio-economic, cultural and medicinal values.	Seasonality	
				R	D
Rubber plant	Utu npiwa	<i>Lan dolphia owerensis</i>	A wild fruit, can be eaten with the seed		✓
	Utu mmaeso	<i>Lan dolphia spp</i>	Larger in size. Has gummy exudates that traps birds		✓
	Utu mmaenyi	<i>Lan dolphia spp</i>	Children love it and refuse to eat lunch/food		✓
	Utu ubune	<i>Lan dolphia spp</i>	Very sweet, strong smell. Some white or red.		✓
Pear Avocado pear	Ube Igbo	<i>Dacryodes edulis</i>	Oily fruit. Soften by putting in very hot water and eaten with fresh corn	✓	
	Ube Oyibo	<i>Persia Americana</i>	Tree crop. Large in size and eaten when ripened.	✓	✓
	Ube Okpoko	<i>Canarium schweinfurthii</i>	Small size fruit with a hard inner seed. Soften with hot water only.	✓	
Monkey apple	Udala nwaenwe	<i>Pachystela brevipes</i>	Wild fruit from tree crop		✓
Bush apple	Udala nkiti	<i>Chrysophyllum albidum</i>	Forest tree specie, large berry with sweet taste when ripe. Loved by all age groups.		✓
Bush mango	Ugiri	<i>Irvingia spp</i>	Fleshy fruit eaten when ripe. Seed used for soup making.		✓
Pumpkin	Anyu, ugboguru	<i>Curcubita pepo</i>	Used to cook yam or cocoyam. Soften on cooking. High in B-carotene	✓	
Garden egg	Anara, afufa	<i>Solanum spp</i>	Popular fruit, used for entertaining guest. Eaten with spiced peanut butter. Other species are used for cooking.	✓	
Velvet tamarind	Icheku	<i>Dialium guinense</i>	Wild fruit obtain from tree plant. Velvet seed by a black velvet coat. Loved by all, especially children.		✓
Pepper fruit	Mmimi	<i>Dennettia tripetala</i>	Reddish when ripe, sweet pulp and hard peppery seed produces a very sweet taste when eaten with garden egg.		✓
Pawpaw	Okwuru ezi	<i>Carica papaya</i>	Unripe pawpaw cut into pieces and eaten with vegetable seed/leaf is used for treating malaria.		✓
Mango	Mangola	<i>Magnifera indica</i>	Edible sweet fruit; leaves cooked with other for the treatment of malaria		✓
Soursop		<i>Ananas muricata</i>	Very juicy fruit; drives away cough.		✓
Pineapple	Akwuolu, oku ocha	<i>Ananas comosus</i>	Grown little but a lot come from Delta State, Nigeria		✓
Orange	Oloma, olome/oroma	<i>Citrus aurantium</i>	Eaten when in season	✓	
Lime	Olome/oroma nkirisi	<i>Citrus aurantifolia</i>	Highly medicinal eg. For malaria treatment; Also for cassava preparation. Used to wash snails.	✓	
Cashew	Cashew	<i>Anacardium</i>	Juicy fruit. Seeds roasted and sold as snack. Revenue yielding		✓
Guava	Gova	<i>Psidium guajava</i>	Eaten when in season; loved by all	✓	
Ujuju fruit	Ujuju	<i>Myrianthus arboreus</i>	Not common	✓	✓
Kola	Oji ogodo	<i>Cola spp</i>		✓	
Rubber plant	Akwari	<i>Landoiphia spp</i>	Found in the wild; loved by children		✓
	Urumbia	<i>Icacinia spp</i>	Love by children. Also obtained in the wild		✓
Tomato	Tomato	<i>Lycopersicum esculentum</i>	For making stews, salads etc.		✓
Kola (wild)	Nkpuruamunwa ebunne	<i>Sterculia spp</i>	Not common		✓
	Osusu	<i>Yet to be identified</i>	Seasonal, brownish and wild		
	Utaba efi	<i>Yet to be identified</i>	Not common		
Bitter cola	Akiilu, adu	<i>Garcinia kola</i>	Fruit eaten seed. Has serious economic value.	✓	
Palm fruit	Aku	<i>Elaeis guineensis</i>	Major source of cooking oil (Red palm oil). Major source of B-carotene. Very useful fruit since every part is put to some use. Used for palm fruit soup – “Banga” soup.	✓	✓

R = Rainy, D = Dry

and children. In the past, eggs were also not commonly consumed by women and children.

A lot of fish as shown in Table 8 is eaten by Igbos especially those in the riverine areas. They are eaten both in the fresh and dry forms in soups. Those who do not produce fish buy them from the market. The most commonly

consumed fish is the crayfish which is ground and used in soups and contributes a lot to protein intake of the people. In the olden days, insects and larvae contributed much to the protein intake of the people. Although these are still available, they are mainly regarded as children's food and consumed as snacks as can be seen in Table 8.

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Table 4: Traditional vegetables and mushrooms in Igbo culture area

Vegetables	Local name (s)	Scientific name	Attributes: uses, socio-economic, cultural and medicinal values.	Seasonality	
				R	D
Bitter leaf	Onugbu	<i>Vernonia amygdalina</i>	Bitter, usually washed before use. Used in cooking soups and other dishes. Can be chewed raw after washing. Use for the treatment of malaria and recommended for diabetics	✓	✓
Fluted pumpkin	Ugu, akwukwo ofe	<i>Telferia occidentalis</i>	A climber, used for soup preparation. Washed extract is used in treating anemia.	✓	
Water leaf	Gbolidi	<i>Telinum triangulare</i>	Used mainly for soups. Contains a lot of water.		✓
Fever plant or Tea bush	Nchuanwu, Ashigbu, aluluishi	<i>Ocimum viridis</i>	Has a strong smell. Has a lot of medicinal value – for dysentery stomach upset.	✓	✓
Africana salad	Utazi, utazizi	<i>Gongronema latifolium</i>	Bitter leaf; Used for pregnant, lactating mothers and for sick people, used for making pepper soup.	✓	
Black pepper	Uziza	<i>Piper- giuneense</i>	Same as for <i>Grongronema latifollum</i>	✓	
Pumpkin	Ugboguru	<i>Cucurbita pepo</i>	Soft vegetable, cooked tenderly and used for soup	✓	
Green	Inine	<i>Amaranthus viridis</i>	Popular vegetable used for all type of food preparation especially vegetable yam “ji obi bio”	✓	
African salad	Okazi	<i>Gnetum africanum</i>	Not eaten by the Igbo from Delta. Cherished by those who eat it.	✓	✓
Indian Spinach			Foreign but grown and eaten and used for stew		
Curry leaf	Curry leaf		Used for stews as a flavouring	✓	
	Arira, Ahuhara	<i>Corchorus olitorius</i>	Used for soup and cooking yam pottage.	✓	
	Kerenkere	<i>Corchorus spp</i>	Viscous, used for soup and yam pottage	✓	
Cam wood	Oha, Ora	<i>Pterocarpus soyauxil</i>	Tender leaves used for making soups	✓	
cocoyam	Akanikwoede/Ogbora	<i>Colocasia spp</i>	Dried and used during the hungry season	✓	✓
Cocoyam (flower)	Opi-ede	<i>Colocasia spp</i>	Used for cooking soup	✓	
Okro	Okwulu npiene	<i>Abelmoschus esculenta</i>	Used for soup making		✓
	Atama	<i>Heinsia crinita</i>	Used for soup making like <i>Gnetum africanum</i>	✓	
Grain millet	Achara	<i>Pennisetum purpureum</i>	Tender shoots used for all types of soups. Highly fibrous loved by all.	✓	
	Nkanka	<i>Yet to be identified</i>	Used for soup like <i>Gnetum africanum</i>		
Mushroom	Ero/elo onyekamete	<i>Yet to be identified</i>	Used as meat substitutes in soups	✓	
White mushroom	Ero/elo ngbawa	<i>Yet to be identified</i>	Used as meat substitutes in soups	✓	
Blue mushroom	Ero nkpu	<i>Yet to be identified</i>	Used as meat substitutes in soups	✓	
Tough mushroom	Ero nku	<i>Yet to be identified</i>	Used as meat substitutes in soups	✓	
Smooth mushroom	Ero ubakiri	<i>Yet to be identified</i>	Used as meat substitutes in soups	✓	
Black mushroom	Ero nkwu	<i>Yet to be identified</i>	Used as meat substitutes in soups	✓	
Soft mushroom	Ero akuru	<i>Yet to be identified</i>	Used as meat substitutes in soups	✓	
Purple mushroom	Ero ububa	<i>Yet to be identified</i>	Used as meat substitutes in soups	✓	
Naked mushroom	Ero ikpikpa	<i>Yet to be identified</i>	Used as meat substitutes in soups	✓	
Marked mushroom	Ero chikirikwo	<i>Yet to be identified</i>	Used as meat substitutes in soups	✓	
Bright mushroom	Ero awagaa	<i>Yet to be identified</i>	Used as meat substitutes in soups	✓	
Sclerotium	Osu/Usu	<i>Pleurotus tiber regium</i>	Milled with melon seed and used in preparing soup. Can also be moulded into patties cooked and used as meat substitutes or snacks.	✓	✓

R = Rainy, D = Dry

Discussion

This study highlighted the existing gap in knowledge and the paucity of published data on the composition of Nigerian foods. This is a serious problem to Nutritionists, Dieticians and other health workers involved in the assessment of dietary intake of population groups. Another problem

contributing to the existing gap is the inadequate research facilities and trained personnel in our institutions of higher learning. It must be noted, however, that individual analyses have been conducted on some of these foods but these are all scattered in the literature. This calls for a compilation of such data that will lay the foundation for the “Food Composition Table of the Igbo Culture Area”.

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Table 5: Uncommon, little – used vegetables, seeds and roots identified in the Igbo cultural area

Vegetables	Local name (s)	Scientific name	Attributes: uses, socio-economic, cultural and medicinal values.	Seasonality	
				R	D
Water leaf	Nti oke	<i>Portulaca Oleracca</i>	Cooked with other vegetables for treatment of malaria; helps to increase appetite	✓	
	Agbolukwu	<i>Brillantansia nitens</i>	Used for soup. Good for stomach problem	✓	✓
	Ujuju	<i>Myranthus arboreus</i>	Becomes viscous when boiled and powdered. Used for soup (okro soup) or used alone. Cools the body.	✓	✓
	Obiogbome	<i>Leptadenia spp</i>	For soup. Used to cure malaria and dysentery.	✓	✓
	Anya-azu	<i>Psychotria spp</i>	Used for soup. Gives a very dark appearance to soup but delicious and cools the body.	✓	✓
Flame tree	Oboaka enwe	<i>Cissampelos spp</i>	Used for soup. Can be squeezed and extract mixed with chalk; cools the body and stomach when drunk.	✓	
	Ulumili	<i>Spathodea campamulata</i>	Wild and also cultivated. Use for soups (pepper or white soup and Banga (palm fruit soup)).	✓	✓
Awolowo weed	Kpugbum	<i>Chromolaena</i>	Wild vegetable. Very good for stomach pain. Used in small quantity to cook. Has a laxative effect.	✓	✓
	Alice mose	<i>Euphorbiaceae spp</i>	For soups. The leaves and seed are ground together seasoned and used to relieve after pain. Found in bush and homestead; cools the body	✓	
Senna plant	Ilenagbelde	<i>Polygalaceae spp</i>	A climber found in the wild. Used for soup, cools body and improve appetite. Can be used wet or dried.	✓	
	Upulutu	<i>Senna alata</i>	Used for soup. Also acts as a laxative for children	✓	
Bush marigold	Ubofuncha	<i>Monodora spp</i>	Liquid extra mixed with chalk is used for stomach. Also used for malaria treatment.	✓	
	Anwiliwa ani	<i>Aspilia spp</i>	For soup (ose-ani) use for eating new yam. Used for clearing worms.	✓	
Life plant	Mgbidimgbi	<i>Bryophyllum pinnatum</i>	Warm on the fire, squeeze and in reducing cough		
Hog weed	Azu-igwe	<i>Boerhavia diffusa</i>	Used for soup. Root can be chewed to relieve stomach upset.	✓	
	Agili-ezi	<i>Merremia spp</i>	A climber found in home and bush. For after birth pains. For soups also.	✓	
	Isi udele	<i>Heliotropicum indicum</i>	Used in combination with other vegetables for treatment of malaria.	✓	
	Onunu uluoyibo	<i>Jatropha curcas</i>	Used for the treatment of malaria and improve appetite	✓	
	lkpokpo	<i>Acanthaceae</i>	For soups; cools body and stomach		
Lemon grass	Achalla Oyibo	<i>Cymbogon citratus</i>	Used for white/pepper soup; Boil with sugar for malaria	✓	✓
Nigero plant	Akpakamo/sigbunmuo	<i>Senna accidentalis</i>	Used with other vegetables for malaria and to increase appetite.	✓	
Mint	Aluluisi nmo	<i>Husulandia opposita</i>	For malaria	✓	✓
	Olii	<i>Merrmia spp</i>	For soup; cut in pieces and use on rice. Also used for stomach ache.	✓	
	Isii osisi	<i>Diospyros mespiliformis</i>	For malaria treatment and improvement of appetite.	✓	
	Azia	<i>Acanthaceae spp</i>	For soups, malaria causes urination and removal of disease.	✓	
	Ogumakpe	<i>Acanthaceae spp</i>	Not used for soup. Mixed with palm kernel oil to treat convulsion. Given to infants to clear green feces (me conium)	✓	
Goat weed	Olulu ogwai	<i>Ageratum conyzoides</i>	For soups. Found in the homestead	✓	
Cassava leaf	Mpoto, ipoto	<i>Manihot esculenta</i>	Tender leaves steam, crushed and used for soup/	✓	✓
Sand pepper	Okpaokuko	<i>Uvaria chamae</i>	Wild vegetable for dry season use. Used for soup (white or pepper soup). Grows from an inedible tuber.	✓	✓
	Njanja	<i>Piper umbellata</i>	The tuber is used for insect bite	✓	
Seeded herb	Okpokokwo egu	<i>Euphorbia hirta</i>	Add nzu (white chalk) and used in treating worms and dysentery.	✓	
Jute plant	Ayauma	<i>Grewia spp</i>		✓	
	Ukpom	<i>Asystasia gangetica</i>		✓	
Seed/Roots	Ohima	<i>Fromomum danielli</i>	Used for cooking soup for nursing mothers. Has a cleansing effect. A wild plant.	✓	✓
	ukpai	<i>Net yet identified</i>	Used for white/pepper/Nsala soup to improve appetite. Found in the wild forest. scarce	✓	✓
Local onion	Obulumgbede	<i>Hippocratea welwischii</i>	Wild. It is a root that is scraped and used for cooking egusi and banga soups. Good for the stomach. Use for treating fracture because of its heating sensation. When mixed with chalk can be used to relieve itching. The leaf is used for malaria treatment.	✓	✓
	Ifulunkpiri	<i>Verbenaceae spp</i>	Used for soup for pregnant and lactating women.	✓	
	ogbankwu	<i>Elaeis guineensis</i>	From palm tree. Squeeze and grind. Used for nursing mother's cleansing. A wild plant		✓

R = Rainy, D = Dry

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Table 6: Igbo traditional condiments and spices of the Igbo cultural area

Traditional foods	Local name (s)	Scientific name	Attributes: uses, socio-economic, cultural and medicinal values.	Seasonality	
				R	D
Black pepper	Uda	<i>Xylopia aethiopica</i>	A hot spice used for lactating mother and also for sick people clears womb. Can also be use to boil meat.	✓	✓
	Uziza	<i>Piper guineense</i>	A hot spice used for soup for lactating mother to clear womb.	✓	✓
	Ehuru	<i>Monodora myristica</i>	Used in making soup for pregnant and lactating mothers. Flavourful used to flavour peanut butter and other traditional foods.	✓	✓
Alligator pepper/ grain of paradise	Efu	<i>Monodora spp</i>	Also used for pregnant and lactating women	✓	✓
	Ose oji	<i>Fromomum melegueta</i>	A small, roundish hot seed. Used for eating kola nuts.	✓	✓
Local onion	Obulumgbede	<i>Hippocratea welwischii</i>	A root obtained from a wild plant. The bark is scrapped and used for soup for all soups. Good for the stomach. Also used to treat fracture because of its hot sensation.	✓	✓
	Ushakirisha	<i>Vitex doniana</i>	Used in cooking white/pepper/Nsala soup. Impacts very good flavour to soups.	✓	✓
Pepper (Africana)	Olima	<i>Fromomum danielli</i>	Used for 'nsala' and 'banga' soups. A seed obtained from wild plant and used as a cleanser for lactating mothers.	✓	✓
	Ukpai	<i>Not yet identified</i>	A tree bark, used for pepper soup to improve appetite	✓	✓
	Ose – Igbo	<i>Capsicum frutescens</i>	Use for all preparation	✓	✓
	Africana magi	<i>Prosopis africana</i>	A fermented product for flavouring soups. Typical of the Nsukka area of Enugu State.	✓	✓
	Castor oil	<i>Ricinus communis</i>	A fermented product for soups and other preparations	✓	✓
Africana magi	Ogiri ugba	<i>Parkia biglobosa</i>	A fermented product for soups	✓	✓
Melon seed	Ogiri egusi	<i>Citrillus vulgaris</i>	A fermented product for soups	✓	✓
Velvet bean	Ukpo, ibaa	<i>Mucuna flagellipes</i>	Used for thickening soup either as a wet paste or dry powder. Some red oil added to flour	✓	✓
Black timber	Achi	<i>Brachystegia eurycoma</i>	Used for thickening soup.	✓	✓
Counter wood tree	Akparata; Ojawala	<i>Azelia Africana</i>	Soup thickener.	✓	✓
Tallow tree	Ofo	<i>Detarium macrocarpum</i>	Soup thickener.	✓	✓
Pumpkin seed	Nkpulu ugu/ofe Okoho	<i>Telferia occidentalis</i>	Used to thicken soup. Soup thickener – often used in place of ogbono (<i>Irvingia gabonensis</i>)	✓	

R = Rainy, D = Dry

Cereals, starchy roots, tubers and starchy fruits are important food group for the Igbo people.

Although these local species are still available and preferred by some, the foreign rice syndrome has in the recent past overtaken many households especially in the urban areas. Bags of foreign rice are sent to parents and loved ones as present. This will have a way of limiting the demand of local rice which is believed to be more nutritious. With the movement of able bodied young men into the cities and the quest for foreign jobs, there is a high possibility of low production of the local rice.

It is important to note that dishes are named after cereals and the starchy staples unlike in the western culture where dishes are named after the animal food that is used. For example nni ji (yam fufu), nni akpu (cassava fufu), nni oka (maize/corn fufu) and their accompanying soups/sauces (also named after the major leafy vegetable or ingredient used e.g. onugbu soup, okazi or egusi or

ogbono soup). Yams such as three leaf yam (*D. dumentorim*) and the aerial yam (*D. bulbifera*) are almost extinct. Children and the younger generation do not know or love them.

However, these (tubers) have been shown to be more nutritious and less sweet hence are recommended for diabetic patients and people with other health conditions. With the emergence of non-communicable diseases, their reintroduction in the fare of the people becomes absolutely necessary.

Legumes are usually preserved for use during the hungry/lean seasons. They are eaten as complementary foods with other foods and are highly seasonal. Oil seeds and nuts are very much in the diet of the Igbos. Our study of the contribution of traditional foods showed that they make a significant contribution to the nutrient intake of the people even though they may be consumed in small quantities. Most members of this group are used in traditional soups/sauces (e.g. melon seed, beniseed, groundnuts, dikanut/bush mango and castor

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Table 7: Meat/poultry/eggs, consumed in the Igbo culture area

Food Meat	Local name (s)	Scientific name	Attributes: uses, socio-economic, cultural and medicinal values.	Seasonality	
				R	D
Beef (cow)	Efi, ehi	<i>Bos spp</i>	Native cow are available but are not eaten often	✓	✓
Sheep/mutton	Atulu		Eaten just like goat meat	✓	✓
Goat meat	Ewu	<i>Capra cagagrus</i>	Eaten when available e.g. during festive occasions	✓	✓
Chicken meat	Okuku, okuko	<i>Gallus gallus</i>	Local and exotic breeds are available. Local breed are not so fleshy. Meat is tough.	✓	✓
Guinea fowl	Ogazi, Ogazu	<i>Mumida meleagris</i>	Scare, eaten when available.	✓	✓
Turkey	Tolotolo	<i>Meleagris gallopardo</i>	Very expensive. Rarely eaten	✓	✓
Chicken eggs	Akwa okuku		Eaten when available.	✓	✓
Guinea fowl eggs	Akwa-ogazi	<i>Mumida meleagris</i>	Seasonal, sold as snack/street food		✓
Turkey eggs	Akwa-tolotolo		Used mainly for commercial purposes	✓	✓
Snail eggs	Akwa ejuna	<i>Achatina spp</i>	Not a popular egg. Not always available, loved by children.	✓	
Local pigeon	Ndo		Eaten when available	✓	✓
Partridge wild pigeon	Apa, okwa		Tough meat	✓	✓
Intestine	Ngiliafor anu		Eaten when available	✓	✓
Liver	Imeju anu		Eaten when available	✓	✓
Lungs	Okukume anu		Eaten when available	✓	✓
Heart	Obi anu		Eaten when available	✓	✓
Tongue	Ile anu		Eaten when available	✓	✓
Tripe	Towel		Eaten when available	✓	✓
Cow skin	Kanda/kpomo		Eaten by many. Believed to be less fatty, low in cholesterol etc. relatively cheap.	✓	✓
Duck	Obogwu	<i>Anas spp</i>	Not a common meat and eaten by a few	✓	✓
Snail	Ejuna	<i>Achatina spp</i>	Now a delicacy for some. Increase demand due to avoidance of red meat. Some domesticated staffed. Snails are sacred in some places and so not eaten.	✓	
Rabbit	Ewi	<i>Oryctolagus cuniulus</i>	Hunted by children in rural areas. Eaten by adults also.		✓
Squirrel	Osa/Osia, Uze, Ukpepe	<i>Sciuridae spp</i>	Children set traps for it in rural areas.		✓
Lizard	Ngwele		Eaten during the Nigeria/Biafra war; some use it for marriage (Isiukwuato)	✓	✓
Dog	Nkita	<i>Canis familiars</i>	Not eaten by all	✓	✓
Bush dog	Nkita iku ofia/ohia	<i>Canis cupus</i>	Eaten by some when available		✓
Bush pig	Ezi ofia/ohia	<i>Susscrata</i>	Preferred to the domesticated pig. Less fatty		✓
Pork meat	Ezi	<i>Susscrata spp</i>	Eaten by some when available	✓	✓
Hyena	Edi	<i>Hyaenidae</i>	Forbidden in some places. Not commonly eaten. Wild animal		✓
Antelope	Ene	<i>Antilocarpa americana</i>	Forbidden by some – game meat		✓
Deer	Mgbada	<i>Duicker</i>	Eaten by some when available. – game meat	✓	
Porcupine	Ebinutu	<i>Erethizontidae</i>	Eaten by some when available		✓
Snake	Agwo	<i>Squamata spp</i>	Not eaten by all. “Eke ogba” is used for medicine. Some snakes are worshipped in some areas.	✓	✓
Aligator		<i>Crocodyles miussippiensis</i>	Eaten by some when available.	✓	
Grass cutter	Nchi		A lot still obtained from the wild. A popular meat in beer palours and food canteens. Tabooed for pregnant women		✓
Monkey	Enwe		Not popular – serves as game meat		✓

R = Rainy, D = Dry

seed), while others are consumed as snacks (pumpkin (*Telferia spp*), cashew nuts, coconut, conophor etc). “Ugba”, a fermented product from African oil bean seed (*Pentaclethra macrophylla*) and “Ukwa” prepared with the African bread fruit (*Treculia Africana*) are important delicacies of the Igbo people. Both are served at important ceremonies. However, the African bread fruit is expensive and is becoming extinct as a result of deforestation going on in rural areas. It is a very huge tree plant that posses a threat to buildings close to it. It is found more in forest areas or out field farms. Efforts have been made to produce dwarf varieties for use in home gardens (Okafor, 1979).

Also among the nuts and seeds, the kola nut (*Cola nitida*) occupies a prominent position in the Igbo culture. Breaking of kola is an important part of any Igbo ceremonies and rituals. Prayers are said over kola nuts during these ceremonies or functions. The kola nut in Igbo culture is a symbol of love, unity and is used to welcome visitors or guests. It is also believed that the kola nut does not understand any other language except the local one, Igbo. Although many fruits were documented, most have not also been domesticated. They are regarded as children’s food and may not form part of the diet.

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Table 8: Traditional fish, insects and larvae of the Igbo culture area

Food	Local name (s)	Scientific name	Attributes: uses, socio-economic, cultural and medicinal values.	Seasonality	
				R	D
Trunk fish	Asa/Asia	<i>Gymnarchus nilotia</i>	Very tasty fish, expensive. Eaten when available	✓	
Snake-like fish	Efi, azu agwo	<i>Chana obscurus</i>	Eaten when available	✓	
Grass eater	Ejo	<i>Distichodus rostratus</i>	Eaten when available	✓	
Cat fish	Ishi	<i>Teteratis niloticus</i>	Eaten when available	✓	
	Eilili		Eaten when available	✓	
	Okpo		Eaten when available	✓	
	Iboboalem		Eaten when available	✓	
	Bonga		Eaten when available	✓	
Crayfish	Isha/usha	<i>Astacus</i>	Eaten when available	✓	✓
	Pii (oshaasa)		Eaten when available		✓
Crab	Igbeni, nshiko	<i>Cudanonantas</i>	Eaten when available	✓	
	Oshisho manu		Eaten when available	✓	
Insect/larvae					
Beetle	Ebe	Coleopteran grylligaeae	Eaten by children		✓
Cricket	Abuzu		Eaten by children		✓
Termite	Aku-mkpu	Termitidae spp	Fried or roasted and eaten.	✓	✓
			Used to cook a type of corn pudding.		
Termite	Aku-mbe	Termitidae spp	Flies in the afternoon	✓	✓
Larvae (palm)	Akpa-nkwu	Larvae	Fried and eaten as a delicacy	✓	✓
Larvae (raffia palm)	Akpa-ngwo	Larvae	Fried and eaten as a delicacy	✓	✓
Larvae	Nzam	Larvae	Found on fallen palm tree	✓	✓
Grasshopper	Ukpana, owa/oshinaka		Not too popular now	✓	✓
Locust	Wewe, Igwuwe		Used for eating 'abacha'.	✓	✓

R = Rainy, D = Dry

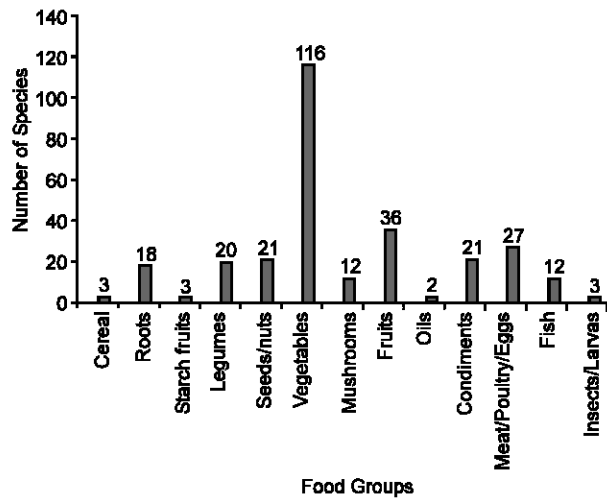


Fig 1: Number of indigenous food groups documented

This calls for programmes for the modification of people's behaviour and attitude towards the consumption of fruits. This is because of their important role in providing antioxidant nutrients needed to counteract free radicals chain formations and their provision of ascorbic acid, a good iron absorption enhancer. There is also need to exploit their use for product development. Majority of the vegetables identified or documented grow as weeds found in the farms or around homesteads.

Emphasis was given on their medicinal values for all sorts of ailments like malaria, dysentery, cough, stomach upset. Some are said to have laxative effect, ability to repel worms, improve appetite and act as a cleanser (particular, for lactating mothers). There is need for further studies on these vegetables and their exploitation of nutraceuticals. A good many vegetables are eaten fresh and are cultivated in homesteads; few are dried for preservation to be eaten during the dry season.

Unfortunately, not much has been done with mushrooms in this area in terms of their nutritional qualities. However, they are eaten as delicacies or meat substitutes in soups/sauces. Although most are not domesticated, there are efforts to domesticate their production and produce them in commercial quantities. The thickeners, *Mucuna flagellipes*, *Brachystegia eurycoma*, *Azelia africana* and *Detarium macrocarpum* have been found to be rich in dietary fiber (Ene-Obong and Carnovale, 1992). Because of their nutritional advantage, these foods need to be fully exploited for use by diabetics and people with other health conditions. Although a lot of animal foods were documented, their consumption was relatively low due to cost and availability. In the past, women and children were forbidden to eat certain parts of meat, egg and other animal products. Thanks to the awareness of the meat and meat products nutritional value being created by health professionals. Some of these foods if they are available can now be consumed by women and

children. There is still need to explore alternative and cheap sources of animal proteins. Milk and milk products do not form part of the food system of the Igbo culture area. They are consumed sparingly and only when they are available. This may pose a problem on calcium intake. However, this calls for increased consumption of green leafy vegetables, seeds and nuts.

Conclusion: The Igbo culture area is rich in nutritious food plants. In recent decades, however, social and economic changes have militated against their propagation and use. Some of these foods are currently very close to the point of extinction. Yet, these foods possess the potentials and evidence of strength, healthy living and long life. Hence, interventions are necessary to enhance the sustainability of the indigenous foods in Igbo culture area.

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