



**DAKAR REGIONAL OFFICE  
(BREDA)**

---

**THE CASE FOR INDIGENOUS  
WEST AFRICAN FOOD CULTURE**

---

by

**Ifeyironwa Francisca Smith (Ph.D)**

**BREDA SERIES N 9**

DAKAR, 1995

## **PREFACE**

This research-based publication is, necessarily, part of the gospel of cultural industries which, for decades, UNESCO has laboured to spread in the world in general and, since 1985 through BREDIA, in Africa in particular. Presented on 19 May 1994 as one of the events to celebrate World Culture Day in cooperation with the Government of the Republic of Senegal, its message is clear and heartening: West Africa could be self-sufficient in food production; traditional food is healthier and cheaper than imported products.

In the wider world (MONDIACULT in UNESCO's vocabulary) Mrs (Dr) Smith's research discovery illustrates a truth which UNESCO has never failed to reiterate time and again - the constance of cultural Self-Affirmation in ALL human endeavors. In clear terms neither globalisation of industrial production nor internalisation of exchange of goods should result in a uniformation or universalisation that would negate or neutralise the self-identity of peoples expressible through their distinct, unique creative and inventive genius.

Nearer home (AFRICULT) the gospel has reached the ears of African Heads of State and Governments who in their 1992 Summit in Senegal formally acknowledged the umbilical cord between Culture and Development and in particular the cultural industries to which a truly endogeneous the social, economic and cultural growth and development of the continent is inexorably linked. Hence their adoption of what is now known as the *Dakar Plan of Action* on cultural industries the Food Technology aspect of which is touched by Mrs (Dr) Smith.

It is with every hope that, on behalf of the Director-General, I invite ail African policy-makers and Afrophiles to pick up the gauntlet thrown down by this publication.

Pai OBANYA  
Director

---

## THE CASE FOR INDIGENOUS WEST AFRICAN FOOD CULTURE

---

In practically every country of the African continent and in the West African subregion in particular, there are a lot of radio and television jingles aimed at sensitizing as well as increasing public awareness of the need to patronize locally made and locally available products. Today in most African Countries, the consumer is bombarded over radio and television with the phrase "consume local products" which has become the catch word in these times of economic stress. All over the continent, families are experiencing daily reduction in their purchasing power with its concomitant effect on all aspects of family life - feeding being particularly affected. There seems to be a consensus amongst breadwinners and homemakers alike, social class notwithstanding, on the need to look inwards. Most people agree that Africans should patronize local food products. It makes economic sense to do so. However, few people know what foods are available even when willing to try. A short discourse on the origin and distribution of traditional African foods is thus appropriate although the discourse will be limited to foods available in the West African subregion.

Before the opening of its coastal borders to the world outside, between the 16th and 18th century, that is before the dividing lines were drawn, the basic food crops of West Africa were the cereals - millet, sorghum, rice and fonio (acha) in the northern parts of the subregion, while rootcrops and legumes - yams, fabourama (tumulku), rizga (Kaffir potato), cowpea, bambara groundnut, geocarpa bean, African breadfruit and the African yam bean dominated the southern zone. These food crops did not grow exclusively in the northern or southern zones because sorghum also grew a little bit further south in the north central belt of the subregion while cowpea was grown and consumed by the Wolofs in today's Senegal and the Gambia, as well as the Mandingoes of Southern

Mauritania. These are the major truly indigenous food crops of the West African subregion. I have used the word indigenous because these foods are truly native to the subregion, their wild forms can still be found in the West African subregion. They contrast with what could be called traditional foods, which initially were foreign to the subregion but were introduced and have been grown and consumed by early West Africans from one generation to another. This differentiation points to the fact that there are today in the subregion several foodcrops which many would be willing to bet are indigenous West African foods, but which are in truth exotic, that is, brought in from outside West Africa.

Arabic contacts particularly with the northern parts of West Africa had started as far back as the 10th century. These earlier contacts with the Arabs from the north of Africa resulted in the acquisition on the part of our forefathers, of the art of cultivation, as well as the introduction of food crops like wheat, barley, dates, some legumes notably broad beans chickpea, Egyptian kidney bean, and several fruit trees. These foods had by the end of the 16th century become part of the food culture of especially the Sahelian zone of West Africa although wheat and barley played only a minor role in the food habits of the local population. Between the 16th century and 18th century, more foods from east Asia and south America were introduced by Portuguese and other European explorers (Table 1). The exotic foods from south east Asia and south America found a more conducive environment in the southern and north central zones of the subregion. In the southern (Guinean) zone, the new food plants rapidly displaced the cultivation of many native edible plants although they were selectively adopted by the various tribal

---

groups. Some of these new foods diffused northwards and were adopted where the environment was conducive. Thus we have foods like cassava, Irish potato and sweet potato being cultivated in the northern cereal zone. Yam cultivation and consumption also diffused northwards, and so the Mandingoes of south west Mali grew several varieties of yams as well as the Wolofs, the Katabs and Nupes of the old Kanem-Bornu Empire. This yam culture still exists amongst these groups except perhaps the Wolofs of Senegal for whom yam no longer features in their dietary habits, Figures 1 & 2 show rough pictorial distributions of indigenous foods and the exotic varieties both of which today constitute what is commonly described today as West African traditional food crops. These incidentally, are just a sampling of available foods. Tables 2a-2d summarize the major food crops produced today in each of the countries of the West African subregion.

This rather cursory look at the origin and distribution of traditional or local foods is just to show that the subregion has a rich array of food crops. West Africa has sufficient amounts of food crops both indigenous and introduced to meet the requirements and demands of the population for nutritious foods. The Republics of Côte d'Ivoire, Ghana, Togo, Benin and Nigeria lie within the savana and Guinean zones of West Africa and so occupy positions of ecological importance, because within these countries are cultivated and consumed both the dominant foods of the northern parts as well as the dominant foods of the southern parts of the subregion. They can be described as the food basket of the subregion and therefore have a key role to play in ensuring food security in the subregion as well as fostering regional food culture through intraregional food exchanges,

### **Cultural Implications of Sustaining Consumption of the Divers Collection of Food Crops in the Subregion**

Sustaining the consumption of the divers collection of foods found in the subregion has cultural implications. The need for cultural awareness, mobilization and development amongst our youths and young adults in particular, should not only involve fostering individual national identity but should include all the social forms and material traits that constitute the true African culture. West African foods and food habits are part of the people's rich cultural heritage as Africans. Some of the indigenous foods like yam, millet, sorghum, fonio, and traditional foods like cassava

and cocoyams in their various cooked forms, evoke in the minds of the enlightened, the image of Africa just like the black skin, the fabric kente or the Senegalese Boubou does. The diversity of food habits within the subregion was recognized by our forefathers who even in pre-historic times fostered the existing food culture through exchange of foods and food habits, The Wolofs and Serers of Senegal were sorghum and millet eating peoples, but rice eating developed amongst these people and even increased in importance due to the influence of the rice eating Mandingoes from the south of Mauritania. This rice culture in turn was transported further south to Guinea Bissau, Sierra Leone and Liberia. As was mentioned earlier, the cultivation of yam spread to favorable locations on the north central portions of the region and so, yam cultivation and consumption was practiced amongst the Mandingoes who occupied lands south west of Mali, the Wolofs in the Gambia as well as the Katabs of northern Nigeria. This intraregional exchange of food culture still exists today but is being greatly impeded by the menacing dominance of imported rice and wheat products in food habits. The very strong maize culture of the Yorubas of Nigeria and Benin with its many food forms spread to communities in southern Ghana and even further north to the Akus of the Gambia. As communities moved north, south, east or west, they took with them food habits some of which became modified as they got integrated into existing food patterns of the receiving communities. Fried bean balls (akara), a typically Yoruba cowpea product which is usually served with maize gruel (eke; akamu) or cold maize pudding (eke, agidi), and an important breakfast item amongst the Yorubas is commonly consumed in several parts of the subregion. In Senegal where it is called "accra", it is a popular snack food most commonly consumed with an accompanying pepper, onion and tomato sauce. Several other different forms of akara are prepared and consumed all over the subregion. Although these modes of consuming akara is quite a contrast to that of the believed "originators" of modern akara - the Yorubas of Benin and Nigeria, it further points to the already operative intraregional food cultural exchange. Garri (pan-fried cassava grits) is also another food that has traversed the subregion. A popular cassava product commonly consumed in the south of the subregion, garri has found its way into homes in Niger, Chad and even Burkina Faso - countries in the sahelian north of the subregion where cassava production is minimal. I was reliably informed in Ouagadougou that anywhere I see «eba» (cooked garri) or «amala+ (yam flour fufu) with egusi soup, being sold by road side cooked food vendors, there are surely Nigerians around. Without

*The Case for Indigenous West African Food Culture*

**Table 1 Origin of Major West African Food Crops**

Foods Type	Origin			
	West Africa Africa	Southwest Asia (via Egypt)	Southeast Asia	South America
Cereals	Millet Sorghum Fonio Rice	Wheat Barley	Rice	Maize
Legumes	Cowpea Bambara g/nut Geocarpa bean African yam bean	Broad bean Chickpea Egyptian kidney bean	Pigeon pea Hyacinth bean Sword bean	Lima bean Kidney bean Peanut
Tubers	Guinea yams Three leaved yam Coleus potato Wild yam Rizga		Taro Chinese yam Water yam	Malanga Cassava Sweet potato Irish potato
Starchy Fruits			Plantain Banana	

**Table 2a West African Foods Today**

Foods Crops	Country		
	Chad	Niger	Burkina Faso
Cereals	Sorghum Millet Maize Rice Wheat	Sorghum Millet Maize Rice	Sorghum Millet Maize Rice Fonio
Legumes	Cowpea Peanuts	Cowpea Geocarpa bean	Cowpea Bambara g/nut Rice bean Sesame
Tubers	Irish potato Sweet potato	Cassava Irish potato	Cassava Fabourama Sweet potato
Traditional Staples	Millet Sorghum	Millet Sorghum	Millet Sorghum

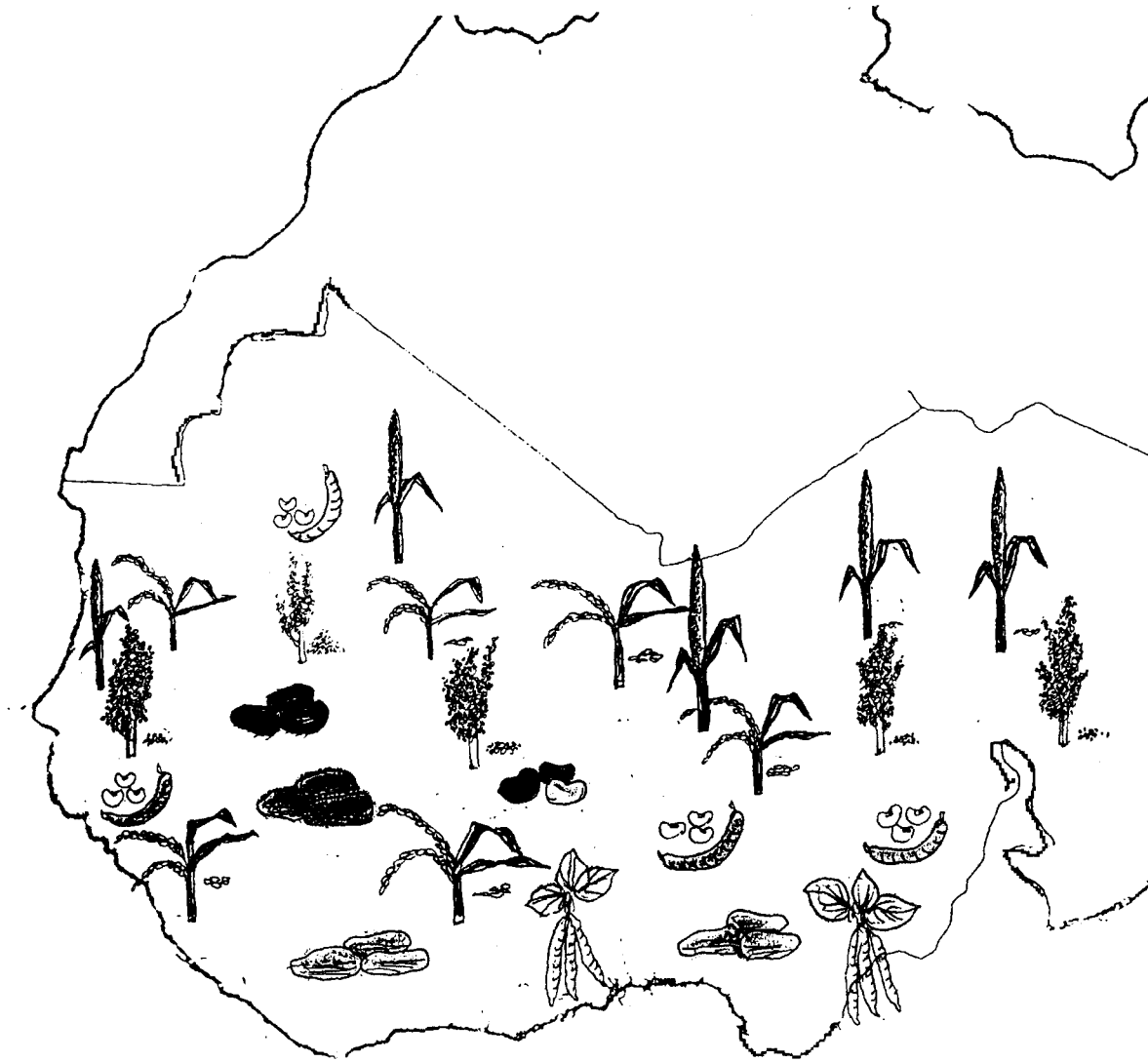


Fig 1. Distribution of Indigenous Food Crops in Prehistoric West Africa



Fig 2. Initial Distribution of Introduced Asian and South American Food Crops

*The Case for Indigenous West African Food Culture*

**Table 2b West African Foods Today**

Food Crops	Country			
	Mali	Mauritania	Senegal	Gambia
Cereals	Millet Sorghum Rice Fonio Maize Wheat	Millet Sorghum Rice Maize	Millet Sorghum Rice Maize Fonio	Rice Sorghum Rice Fonio Maize
Legumes	Cowpea Bambara g/nut Peanut	Broad bean Chickpea	Cowpea Peanut	Peanut Bambara g/nut
Tubers	Fabourama Irish potato Yam	Irish potato	Cassava Sweet potato Irish potato	Cassava Sweet potato Yam Wusu
Traditional Staples	Millet Sorghum	Millet Sorghum	Millet Rice	Rice

**Table 2c West African Foods Today**

Food Crops	Country				
	Guinea Bissau	Guinea	Sierra Leone	Liberia	Côte d'Ivoire
Cereals	Rice Millet Sorghum Maize Fonio	Rice Millet Sorghum Maize Fonio	Rice Maize Sorghum Fonio	Rice Maize	Rice Maize Sorghum
Legumes	Cowpea Yambean	Cowpea Yambean	Cowpea	Cowpea Geocarpa bean	Cowpea Pigeon pea
Tubers	Yam Cassava S/potato Cocoyam	Yam Cassava S/potato Cocoyam	Cassava S/potato Cocoyam	Yam Cassava S/potato	Yam Cassava S/potato Cocoyam
Starchy Fuits	Plantain	Plantain	Plantain	Plantain	Plantain Banana
Traditional Staples	Rice Cassava	Rice Cassava	Rice	Rice	Cassava Yam Plantain



*The Case for Indigenous West African Food Culture*

**Table 2d West African Foods today**

Food Crops	Country			
	Ghana	Togo	Benin	Nigeria
Cereals	Maize Rice Sorghum Millet	Maize Millet Sorghum Rice Acha	Sorghum Millet Maize Rice Acha	Sorghum Millet Rice Maize Acha
Legumes	Cowpea Bambara g/nut Soya bean Pigeon pea Lima bean Peanut Geocarpa bean	Cowpea Lima bean Bambara g/nut Yam bean Geocarpa bean	Cowpea Lima bean Peanut Geocarpa bean	Cowpea Lima bean Bambara g/nut Yam bean Soya bean Peanut
Tubers	Yam Cocoyam Cassava S/potato	Yam Cassava Cocoyam	Yam Cassava Cocoyam	Yam Cassava Cocoyam S/potato Irish potato
Starchy fruits	Plantain Banana	Plantain Banana	Plantain	Plantain Banana
Traditional Staples	Maize Cocoyam Cassava	Yam Cassava Maize	Yam Cassava Maize	Yam Cassava Maize

being aware of the cultural implications of their commercial activity, these agents of food cultural exchange are continuing what has been in existence since pre-historic times.

There is no gainsaying that food is a good vehicle for intraregional cultural exchange. Just as certain foods «spell» Africa, so also within the subregion some foods are true ambassadors of certain countries - talk of Tiebou Dienn and Senegal, attiéké and Côte d'Ivoire or moi-moi and Nigeria. How varied our diets will be if only we try out foods from other countries. Even from economic and nutritional points of view, these intraregional food exchanges ensure dietary variability at all socioeconomic levels within the subregion. Imagine millet or sorghum gruels with akara balls strongly competing with bread and kinkéliba (a herb drink) in Senegal as a breakfast item or fonio fufu as an alternative to eba, amala or pounded yam in the southern parts of the subregion. The cereal

gruei/akara breakfast combination is just an example of the several varieties of locally available inexpensive and nutritionally more adequate alternatives to the plain bread breakfast that is a common feature in the subregion. Tôt (fonio fufu) on the other hand being a cereal product is a more nutritious fufu compared to cassava and yam products like eba, amala or pounded yam and so constitutes a nutritious addition to the food list for fufu eating groups.

It is thus obvious that intraregional exchanges of traditional foods and dishes carry with them, cultural as well as nutritional dividends. Very feeble and half hearted attempts are often made by governmental institutions and organized groups at supporting and promoting programs aimed at fostering such exchanges of food culture, on the erroneous conviction that food habits are difficult to change. The process of change in any facet of human behaviour is dynamic. It stagnates when there is little or no impetus to propel

it. This is probably the situation with food habits in Africa, but then, considering the "triumphs" that rice and wheat products have scored with our food habits in the subregion over the years, who dares to say that with time and concerted efforts the desired goal of sustaining traditional food habits while improving them cannot be achieved. African foods and food products are only given their deserved places of honour in specialty stores and restaurants in Europe, America and the Caribbean. One can argue that most of these foods in their usual fresh forms are not suitable for long storage and transportation - a major handicap to intraregional and extraregional food trade. In this regard, the food industries in the subregion have an essentially prominent role to play in fostering West African food culture. In collaboration with the food research institutes, these food industries, through their processing and commercialization activities, are key agents in current attempts at preserving and promoting the subregion's diversely rich food culture. West Africa has a large number of indigenous food crops peculiar to it, well suited to local conditions and to the soil as it is, which have been largely ignored in agricultural development activities most probably because they are of little or no economic value in world markets. There is an urgent need today for these food industries to be actively involved in the process of selecting appropriate varieties of these traditional food crops in order to increase their production as well as ensuring their easy availability through proper processing, and commercialization of the processed products.

Here in Africa, the current quest for easy to prepare or fast foods has brought with it a progressive loss of important components of our food culture. Gone are the skill oriented cooking procedures - that «inate» skill, perfected through constant practice, of preparing tasty traditional dishes using indigenous condiments and spices. The subregion's richly enormous variety of food spices and condiments are today gradually being replaced by the large number of bouillon cubes in the market. Particularly affected is our celebrated age old dawadawa/soumbala/nététu, a formerly indispensable nutritious component of traditional soups/sauces is today easily dispensed with and replaced with bouillon cubes. Imported white and black peppers are replacing red hot peppers which impart the characteristic "punch" to traditional soups/sauces and stews. A large number of local dishes have been relegated to the rank of village foods not fit for the life styles and new tastes of city dwellers. Quite a significant percentage of African children today cannot survive without bread and rice because these are the more commonly consumed items in family

diets. The current generation of young parents are hideously ignorant of the large variety of local foods available. It is thus *not* surprising that their children know more about hamburgers, hot dogs, pizzas and pastas than they know of kenkes, akara or attiéké.

### **Economic Advantages of Conserving West African Indigenous Food Culture**

A discussion on the economic dividends of conserving the traditional food heritage of the subregion will be more convincing with data on family food consumption patterns as well as income expenditure on the various dietary components. There is a dearth of such information in the subregion. However, available data show that cereals constitute the bulk of both urban and rural diets especially in the northern (Sahelian) parts of the subregion. A recent consumer survey result showed that imported rice is consumed mainly in the urban centers, particularly by the poorest income group in contrast to wheat products (bread, noddles) which are far less popular than rice although they are primarily breakfast foods for families. These urban poor believe, and rightly so, that 1 kg of rice is cheaper and will feed more people compared to 1 kg of plantain, yam or any other available local tuber or tuber products. In the urban centers, cereals take between 40-86% of the food budget. This statistics is disheartening knowing that millet, sorghum, maize and fonio which in the past were very important sources of food energy in the subregion have lost their positions of importance to rice and wheat since the 1960s. This suggests that today, the best part of the family's food budgets go to the purchase of rice and wheat products. Because these foods are imported, particularly the wheat products, they are much more expensive than the local foodstuffs. Some years back, for the countries in the Guinean zone particularly from Côte d'Ivoire to Nigeria, a large part of the basic food supply was made up of non-cereal foods like cassava, yams, plantains, cocoyams etc. The situation is not the same today. All over the subregion, the consumption of imported rice, wheat and wheat products has considerably increased during the course of the years, It is also known that almost all of the increases in rice and wheat consumption in the subregion over the last decade is provided by imports. This is not an appropriate forum to delve into a discussion on the food policies of the different countries of the subregion, but it seems that in supplying the market with imported cereals, the various governments

*The Case for Indigenous West African Food Culture*

are encouraging their consumption to the eventual health and economic detriment of families.

So, what effect does consumption of local foods have on family budgets? There is no doubt that it is much cheaper to feed a family on our local foods than on the commonly consumed imported processed foods (like spaghetti and other pasta products, wheat based couscous, cold and hot cereals etc.) which the middle

**Table Average Market Prices for Selected Major Foodstuffs in Dakar, Senegal**

Foodstuff	Average price (Fcfa/kg)
Spaghetti	1700
Wheat couscous	1600
Couscous (local)	175
Parboiled rice	350
Polished rice	750
Irish potato	300
Sweet potato	125
Cassava	150
Millet	100
Sorghum	95
Maize	110
Cowpea	200
Haricot vert	275
*plantain	500
* Yam	350
*Cocoyam	175
*Garri	700
*Yam flour	500

class in particular indulge in. Table 6 shows comparative but not current market prices of major foodstuffs in Dakar, Senegal.

The prices of most locally grown and available foodstuffs, compared to those of the imported food items (including imports from within West Africa), does show, even if in a small degree, that it makes economic sense to consume local food products. I must however call attention to the asterisked items - plantains, yam and cocoyam etc. which as mentioned earlier are imported from other West African countries. With such prices, even the imported rice is an economically better alternative. This is a major constraint on consumer utilization of available foods which is discussed later in the paper. However, the known nutrient losses incurred by processing and the use of additives to preserve color and texture of foods during long storage further confounds the decision by individuals to consume imported processed foods as against locally

grown, fresh and nutritionally more adequate alternatives.

It is indeed an economic waste to consume imported processed foods in place of local alternatives but the reality of the situation is that countries in the subregion spend each year, millions of their respective foreign exchange equivalents in subsidizing rice and wheat imports in order to sustain the increasing tastes for rice, bread and other wheat products. This is why in Dakar, like in other capital cities in the subregion, average prices for cowpea is 200 Fcfa per kg, millet is 100 Fcfa/kg, millet couscous is 175 Fcfa/kg while imported polished rice is 145-750 Fcfa/kg depending on the processing technique. Similar price differentials between imported subsidized rice and the commonly consumed local food crops are found in the other capital cities in the subregion. Exchanges of food products within the subregion which should ensure diversity in family diets as well as probably breaking the monopoly of rice in food tastes is discouraged by the very high taxes on food imports which make such foods too exorbitant and out of the economic reach of a large section of the population. Thus one finds that in several parts of the subregion, it is economically impractical to indulge in the consumption of African foods because some are as expensive as the processed imported foods, Certainly with the high prices of food imports from within West Africa, food cultural exchange within the subregion will remain a dream.

**Nutritional and Health Dividends of Consuming Local Food Products**

To the average African man on the street, food is meant to allay hunger, and somehow by some little understood process, stop him from dying, Foodstuffs contain and supply the body when consumed, the food nutrients required by the body-carbohydrates, proteins, fats, minerals and vitamins. Consuming the right type of food nutrients in optimum amounts depends on food availability and individual food choices.

Throughout Africa and the West African subregion in particular, grow and are cultivated food crops that

- supply energy
  - roots and tubers
  - starchy fruits
  - fats and oils
  - cereals
  - legumes
- supply protein
  - legumes

BREDA SERIES n° 9

*The Case for Indigenous West African Food Culture*

	cereals		the subregion grows what food, it was shown that from Mauritania to Nigeria along the coast, Mali, Niger and Chad along the northern borders are cultivated a divers collection of cereals, legumes, tubers and starchy fruits. In principle, with such rich array of food crops in the subregion, providing inexpensive nutritionally adequate diets from these locally grown foods should not pose problems to the homemaker. A look at the nutrient content of these foods will buttress this point of view. Table 4 gives the nutrient content of commonly consumed cereals as well as that of some imported processed food for purposes of comparison. Cereals are energy suppliers but they also play the key role of providing supplemental protein to the diets as well as being important suppliers of B-vitamins, calcium and
	leafy vegetables		
- supply minerals	cereals legumes leafy vegetables		
- supply vitamins	vegetables legumes cereals tubers.		

These food groups are the major suppliers of the respective nutrients. In an earlier cursory look at the distribution of traditional foods, and which country in

**Table 4 Nutritive Value of Commonly consumed Cereals in West Africa (per 100g of edible portion)**

<b>Foods</b>	<b>Energy (Kcal)</b>	<b>Protein (g)</b>	<b>Thiamine (mg)</b>	<b>Niacin (mg)</b>	<b>Calcium (mg)</b>	<b>Iron (mg)</b>
Millet	341	10.4	0.3	1.7	22.0	20.7
Sorghum	340	9.4	0.25	3.7	45.0	8.8
Maize	357	9.4	0.33	2;2	16.6	3.6
Rice	346	7.0	0.17	5.4	6.0	2.4
Wheat Flour	332	12.7	0.35	3.6	30.0	7.6
Acha/Fonio	332	7.1	0.24	1.9	40.0	8.5
Macaroni/Spa.	356	11.0	0.12	1.0	22.0	1.2
Wheat noddles	357	10.2	0.18	2.6	42.0	1.9
Cornflakes	377	9.0	0.03	0.3	4.0	0.8
Millet Couscous (Raw)	226	5.7	0.2	0.9	19.0	5.0
Sorghum Cous. (Raw)	219	6.3	0.2	2.1	10.0	4.0

iron. In the international market, the indigenous cereals millet, sorghum and fonio are perceived as having low economic value, they are not important products in world markets, they thus have a low status and are often referred to as coarse grains.

Inspite of the recent moderate advances in food technology in the subregion, enough research efforts have not being directed to change the current perception of these cereals as low status grains inorder to increase and expand their uses in the rural areas as well as develop new products for urban markets and the increasing number of food industries. The progressive dominance of rice and wheat in food habits in the subregion notwithstanding, millet, sorghum and fonio

still constitute significant proportions of daily diets particularly in the sahelian north of the subregion. While fonio is a major foodcrop in a few countries like Mali, Guinea, G. Bissau, Sierra Leone and parts of north eastern Nigeria, sorghum is more generally substituted in diets for the upcoming maize throughout most of the central portions of the subregion. Research efforts at selecting more viable varieties and increasing yields, improving milling techniques and nutrient availabilities, as well as developing socially acceptable products are still at comparatively rudimental stages. However, it is encouraging to note that in their raw states, these cereals contain very appreciable amounts of nutrients that are often found lacking in today's rice

*The Case for Indigenous West African Food Culture*

and bread dominated diets in the subregion. Because of its uncereally amino acid composition, and its significant contents of calcium and iron, fonio is a potentially good cereal base for the manufacture of weaning foods and children's hot cereals. Millet and sorghum also are good candidates especially when complemented in food mixes by the rich array of legumes and pulses found all over the subregion. Bearing in mind the nutritional value of these locally available cereals, imported processed foods like macaroni, spaghetti, wheat noddles or cornflakes do not have any significant nutritional advantage over the

local grains or the processed products millet couscous and sorghum couscous except of course that they are five or more times more expensive.

Table 5 gives a whole array of bean varieties available locally as well as the imported lentille and mung bean which are commonly used in some countries by the middle class in meat stews served with rice. Just like the imported cereal products, these two imported varieties of beans do not have any nutritional advantage over the local bean varieties except the advantage of being imported and expensive. Over the years, legumes constituted subsidiary staple foods for indigenous West

**Table 5 Nutritive Value of Commonly consumed Legumes in West Africa (per 100g of edible portion)**

<b>Foods</b>	<b>Energy (Kcal)</b>	<b>Protein (g)</b>	<b>Thiamine (mg)</b>	<b>Niacin (mg)</b>	<b>Calcium (mg)</b>	<b>iron (mg)</b>
Cowpea	342	23.1	0.75	2.5	101	7.6
Peanut	549	23.2	0.79	15.5	49	3.9
Broadbean	344	26.2	0.38	2.1	104	6.7
Bambara nut	365	18.8	0.47	1.8	62	12.2
Kidney bean	336	21.6	0.37	2.4	120	8.2
Rice bean	327	20.9	0.49	2.4	200	10.9
Sesame	558	17.9	0.68	3.4	816	8.1
Yam bean	350	19.2	0.69	2.3	55	10.5
Pigeon pea	345	19.5	0.72	2.9	161	15.0
Lima bean	335	21.4	0.33	2.1	116	4.9
Soya bean	405	33.7	0.71	2.0	183	6.1
Lentille	345	24.9	0.41	2.2	64	7.0
Mung bean	341	22.9	0.53	2.5	105	7.1

Africans both in the north and southern parts of the subregion. Even in current West African traditional agricultural practices, legumes are commonly intercropped with either tubers or millet and sorghum, and are consumed as complements to the main staple, be it cereal or tuber based. In their role of ensuring year round availability of food products, the food industries have failed to tap on this traditional complementary role of legumes in local diets, they have not taken advantage of the large variety of legumes grown in the subregion. Legumes have more food forms than cereals, particularly in the south of the subregion. The cowpea, lima bean, bambara groundnut and pigeon pea lend themselves to a large variety of cooking methods and combinations tested and practiced for over a century. However, like the cereals, their potentials as food sources have not been fully tapped, Only the "newcomer" soya bean, out of the list of locally available

legumes, have been used in some countries in the manufacture of baby foods. Nigeria currently leads the continent in the manufacture of soya bean cereal baby foods and other soya products. The shift from the consumption of millet, sorghum and maize to rice and wheat products and the probable resultant reduction in legume consumption seem to have over the years affected the production and availability of local legumes. Although all of the legumes listed on Table 5 are still grown and consumed throughout the subregion, only cowpea and peanut are easily available all year round. In spite of their known role as main protein suppliers to a large segment of the population in the subregion, these legumes seem to have been neglected in governments' programs aimed at ensuring food sufficiency in the subregion.

The starchy tubers and fruits (Table 9) are major dietary energy suppliers. For the inhabitants in the



Guinean zone of the subregion in particular, tubers and starchy fruits ensure energy dense diets which are a necessity especially for growing children. Like cereals and legumes, the subregion has a good variety of these carbohydrate foods. For those countries in the south, these foodcrops are still considered indispensable dietary components particularly for rural dwellers. In contrast to cereals and legumes which can be stored for periods of one month and longer, and so can be transported outside production area, tubers and starchy fruits cannot be stored for such long periods. Furthermore, damages in texture most often occur during transportation resulting in transportation losses. For this major reason, these foods when available, are

very expensive outside production areas. There are to date only few transformation products from tubers and starchy fruits. The more commonly available ones from cassava and yam - flour and dried chips are also expensive outside production areas

In addition to showing their nutrient contents, tables 4-6 also show that for each of the food groups, that is cereals, legumes, starchy tubers and fruits, the individual foods provide approximately equivalent amounts of nutrients with a few exceptions, and so can be used interchangeably in family diets. It is however known that no matter how rich a food is in specific nutrients, no one food can meet all the nutritional needs of an individual, thus consuming one-cereal diets or

**Table 6 Nutritive Value of commonly Consumed Starchy Tubers and Fruits in West Africa (per 100g of edible portion)**

<b>Foods</b>	<b>Energy (Kcal)</b>	<b>Carbohydrate (g)</b>	<b>Protein (g)</b>	<b>Iron (mg)</b>
Yam	119	27.8	1.9	0.8
Cocoyam	102	23.8	1.8	1.2
Cassava	149	32.4	1.2	1.9
Sweet potato	121	28.5	1.6	2.0
Irish potato	82	18.9	1.7	1.1
Fabourama	94	21.9	1.3	6.0
Plantain (ripe)	135	32.1	1.2	1.3
Banana (unripe)	108	25.3	1.1	0.9
Transformed cassava Couscous de manioc				
Attiéké	217	53.8	0.5	0.6
Garri	351	84.2	1.0	1.6

one-tuber diets does not make nutritional sense. The key word here is variety. With the abundance of foods in the subregion and a rich heritage of food culture, the goal of optimal nutrition is affordable and achievable.

### **Nutritional Costs of Ensuring All-year-round Availability of Local Foods**

Having established the fact that populations can well nourish themselves in the subregion all year round and at affordable costs, there is need to take a closer look at the nutritive values of local raw foods presented on the tables, especially those of local cereals. Another look at Table 4, and comparing raw millet and sorghum with the processed form, shows a significant drop in the protein, vitamin and mineral

contents. All locally available cereals, indigenous and exotic, are subjected to primary and secondary processing both for immediate human consumption and for storage to ensure year round availability. Primary processing consists of dehulling the grain usually by wet or dry attrition. Both methods are commonly practised in the subregion although the wet attrition method is more widely used in the south of the subregion. With the probable exception of fonio, the other cereals are dehulled first before being used, even when cooked whole as is done with rice. It is estimated that the mean extraction rate using the traditional methods of dehulling is approximately 80%. There are thus obvious losses using traditional and even mechanized methods of dehulling, and so the nutrient content of the final ready-to-eat product depends on the processing technique be it traditional or mechanized, and the rate of extraction of the cereal grain. Significant fractions of the water

---

*The Case for Indigenous West African Food Culture*

---

soluble vitamins and some minerals are removed during both traditional and mechanized processing. Available data on sorghum show that 9% of total protein, 18% of calcium, 3% of iron, 39% of thiamine and 16% of niacine are lost during traditional processing, although some nutrients particularly iron was found more available after dehulling. We lack adequate information on nutrients losses incurred during traditional cereal processing and preparation, nevertheless, the same degree of losses are envisaged during the processing and transformation of other local cereals. Such nutritional losses are perhaps inevitable if these local cereals and other foods are to be available in the market all year round. It is however known that such processing losses in food nutrients can be compensated for by the consumption of diets containing a mixture of cereals, legumes, tubers and vegetables. It is because of these nutrient losses during processing that most imported foods are enriched with vitamins and iron, and so a nutritional comparison of such products with the local fresh varieties, at face value would probably present such imported products as nutritionally better. We however know that the enrichment programs consider more the effects of the supplements used for enrichment on the final product, than the availability to the body of such supplements. Also, not well understood are the harmful side effects of these food supplement with their carriers to the human physiology as well as their availability after ingestion. We are therefore better off sticking to fresh local foods, like populations in the developed economies are beginning to realize. Also, considering the role these cereal grains play in traditional diets-most times they are the main nutrient sources in daily diets, the observed benefits of dehulling the grain (that is, increases in bio-availability of some nutrients and longer shelf lives), need to be carefully weighed against existing dietary deficits as well as losses of energy and other nutrients during processing. If these grains need to be processed, as they need to be for consumer acceptability, an assessment of the processing methods should include nutritional considerations.

---

**Some Constraints on Consumer Utilization of Available Foods**

---

Having proffered these arguments in support of the immense cultural, economic and health dividends of consuming local food products, it seems to me that breadwinners and homemakers alike in this subregion

know pretty well that it is "cheaper" to consume local foods. They also know in a rather vague way that legumes supply proteins while tubers as well as cereals supply energy to our diets. They would also like their children and grandchildren to be practically knowledgeable on traditional foods and be proud to serve them to visitors outside the subregion. However, there are constraints on individuals achieving the noble objective of consuming local foods. The established trend today in both rural and urban dietary patterns, not only in the subregion but all over the continent, is the preference for convenience foods. Because of their changing roles, women today favour less time consuming semi-processed foods, and so those foods requiring longer cooking are less frequently consumed resulting in the disappearance in diets of those traditional recipes that require elaborate or tedious processing.

A major constraint on consumer utilization of local foods is believed to be urbanization and changing lifestyles amongst Africans.

The traditional foods require one form of processing or the other before final cooking, especially the cereals. Although the consumption of local cereals (millet, sorghum, fonio and maize) is relatively widespread, the technology for their processing is far from adequate. Traditional processing methods are time consuming and tedious, while several traditional meals involve lengthy pre-preparation and final cooking time. The processing and cooking of sorghum, millet or fonio for example take more time than rice and so more and more African women who in their bid to increase family income take employment outside the home, have less time available for food processing and cooking, they thus often resort to the easy to cook rice. Consumer survey results suggest that the increase in rice consumption in the subregion in relation to total cereal consumption is not so much the low price of rice and its easy availability but the effect of urbanization. With urbanization comes changes in employment patterns particularly of women, increasing the opportunity cost of women's time due to increasing involvement in hired labour or self employment away from home. This increasing absence of women (homemakers) away from homes for a large proportion of the day leads to substitution towards "convenience" foods - the most popular being easy-to-prepare cereals like rice and wheat products. The scarcity of local food products in acceptable pre-cooked forms like pounded yam flour, bean flour for akara or moi-moi, or pre-cooked fonio, which will lessen cooking time impels tired homemakers to head for the sac of rice at the end of a hard day's work. Obviously any measures aimed at stemming the ever rising trend in the consumption of rice and wheat

products should take a serious look at ways of providing at affordable prices to the consumers, local food products which conform to the needs of the consumers.

Even when willing to try out those not so easily prepared foods, the consumer is faced with their unavailability all year round and the high cost of some of these local foods outside production areas. Movement of fresh food produce across borders within the subregion is currently restricted by high excise and custom regulations. This notwithstanding, a significant volume of intraregional food trade occurs at the informal level. Until there is a freer movement of foods across borders, food sufficiency at the family level, dietary variability within each socioeconomic class as well as sustainance of traditional food culture will be difficult to achieve. Thus easy availability all year round of local foods in their fresh and socially acceptable processed forms, and at affordable prices seem to be the key to overcoming the major constraints towards consumer utilization of locally available foods. In order to achieve this seemingly gigantic objective, the active participation of the food industries in the subregion in establishing viable rural and urban markets for local food products is imperative.

I dare say however, that all-year round food availability on its own will not ensure dietary variability with its concomitant nutritional dividends. There is a dire need for well planned and executed popularization campaigns of foods produced both within countries and the subregion. The many food technology institutes and food industries have roles to play in ensuring easy availability of our local foods in nutritionally adequate and culturally acceptable forms. Their roles must not end with the production of such foods, there is need for continuous research aimed at evolving better, versatile and more acceptable products. These new products should in turn be subjected to intense recipe development, be aggressively popularized through their use in the preparation of locally acceptable and nutritionally adequate meals. Finally, there is a need for continued research into newer and better ways of utilizing the partly processed foods and popularizing new recipes evolved.

### **Bibliography**

*Adandé A.* Le maïs et ses usages dans le Bas-Dahomey. Bull.de l'Institut français d'Afrique noire Vol.15pp 220-282954  
*Annegers, J. F.* Ecology of Dietary Patterns and

Nutritional Status in West Africa. 1. Distribution of Starchy Staples. Ecology of Food & Nutrition 2, 107-119, 1973.

*Barth, Heinrich.* Travels and discoveries in north and central Africa. Vol 1 1849-1855. London, Cass & Co. 1965.

*Boscom, W.E.* Yoruba Food. Africa, XXI, 41-53,1951

*Boscom, W.E.* Yoruba Cooking. Africa, XXI, 125-137, 1951.

*Bosman, G.* Description nouvelle de la Côte de la Guinée (Voyage de Guinée). Autrecht, Chès Antoine Schouten, Marchand Libraire, 1705.

*Caillé F.* Journal d'un voyage à Tombouctou et à Jenné dans l'Afrique centrale. Paris, 1830.

*Curtin, P.D.* (ed). Africa Rembered. Narratives by West Africans from the Era of Slave Trade. Ibadan University Press, 1967.

*Dahniya, M. T. & Tucker, M.J.* Traditional Roots and Tuber Crops in Sierra Leone. National Workshop - Freetown, Sierra Leone, 1989.

*Dalziel, T.M.* The useful plants of West Africa. Crown Agents for the Colonies, London, 1937

*Delgado, C.L. & Reardon, T.A.* Problèmes pour les politiques alimentaires posés par la modification des habitudes alimentaires dans le Sahel. Conference on the Dynamics of cereal consumption and production patterns in West Africa. Dakar, Senegal, 1987.

*Delgado, C.L.* Le rôle des prix dans l'augmentation de la consommation de riz et de blé en Afrique de l'Ouest francophone. Conference on the Dynamics of cereal consumption and production patterns in West Africa. Dakar, Senegal 1987.

*Delisle, H.;Alladoumgué, M.;Begin,F.;Nandjingar, K; & Lasorsa, C.* Household Food Consumption and Nutritional Adequacy in Wadi Zones of Chad. IDRC-3 p 86-1035, 1986.

*Diagayete, M.* State of maize processing and utilization in Senegal (Miasverarbeitung und-verwendung in Senegal). Entwicklung und laendlicher Raum 19, 21-23, 1985.

*Duyiboe-Alagbo, H.* Soja: Viande Végétale peu exploitée. Famille et Développement 67 pp 26-38 1994.

*Gamble, D.P.* The Wolof of Senegambia. Western Africa Part XIV, International African Institute, London 1967.

*Harlan J,R.* (ed).Crops and Man 2nd. Edition American Society for Agronomy Inc.; Crop Science Society of America Inc. Madison, Wis. 1992.

*Irvine, F.R* West African Crops. Oxford University Press, 1969.

*Jideani, I.A.* Acha - Digitaria exilis - the neglected



---

*The Case for Indigenous West African Food Culture*

---

- cereal. Agric. Intern. 42, 132-134, 1990.
- Lappia, J.N.L.* Maize as a priority in Sierra Leone: Competitiveness of production with imports and trade-offs with rice. Conference on the Dynamics of cereal consumption and production patterns in West Africa. Dakar, Senegal, 1987.
- Lewicki, T.* West African Food in the Middle Ages: according to Arabic sources. Cambridge University Press, 1974.
- Mabbet, T.* Local Strains make Good. African Farming, Jan.-Feb. 1991 pp 25-26.
- Maiduguri Mill Project: Grain Milling and Utilization in West Africa. IDRC-TS2E, 1976.
- McCrae, J.E. & Paul, A.A.* Foods of Rural Gambia. Medical Research Council, Dunn Nutrition Unit, Cambridge, UK 1979.
- Monde, S.S. & Jusu, M.S.* Under-exploited Traditional cereal plants in Sierra Leone. National Workshop on Promotion of Under-exploited Traditional Food Crops in Sierra Leone. Min. of Agric., Natural Res. & Forestry, Freetown, Sierra Leone, 1989.
- Muller, H.G.* Traditional Cereal Processing in Nigeria and Ghana. Ghana J. Agric. Sci. 3, 187-195 1970. *Murdock, QP.* Africa. Its Peoples and their Cultural History. McGraw-Hill Book Co. 1959.
- Murdock, G. P.* Africa. Its Peoples and their Culture History. McGraw-Hill Book Co. 1959.
- Nnanyelugo, D. O.; King, J.; Ene-Obong, H; M & Ngodcfy P.* Seasonal Variation and the Contribution of Cowpea and other Legumes to Nutrient intakes in Anambra State, Nigeria. Ecology of Food 8 Nutrition 17,271-287,1985.
- Parmentier, M. & Foua-bi, K(eds)* Céréales en régions chaudes: conservation et transformation. Colloque International de Technologie, Centre universitaire de N'Gaoundéré, Cameroun, 1988.
- Rachie, KO.* The Millets and Minor Cereals. The Scarecrow Press Inc. New Jersey 1974.
- Reardon, T.* Cereal demand in the Sahel and the potential impacts of regional cereal protection. World Development Vol 21, pp. 17-35,1993.
- Robson, J.R.K* Changing Food Habits in Developing Countries. Ecology of Food & Nutrition 4, 251-256, 1976.
- Russel, M & Dowswell, C.R.* (eds) Policy Options for Agricultural Development in Sub-Sahara Africa. Proc. of a Workshop, Virginia, USA Aug. 1992.
- Thiam, Serigne A.; Ka, Aminata; Fall, F.* Etude des valeurs nutritionnelles et organoleptiques des mils et sorghos en Afrique de l'Ouest. IDRC-77-0004, 1983.
- Thiombiano T.* Analyses des politiques alimentaires et céréalières non traditionnelles au Burkina Faso: définition des hypothèses a tester. Conference on the Dynamics of Cereal Consumption and Production Patterns in West Africa. Dakar, Senegal, 1987.
- Turay, S.* Traditional Processing Possibilities of Traditional Food Plants in Sierra Leone. National Workshop - Freetown Sierra Leone, 1989.
- Vogel, S. & Graham, M.* Sorghum and Millet: Food Production and Use. IDRC-123E, 1979.
- Whitby, P.* Foods of Ghana. Food Research Institute, Ghana Academy of Sciences, Accra, Ghana 1974.

## GLOSSARY

English	French	Botanical Name
African yam bean	Haricot igname	Sphenostylis stenocarpa
Acha (Hausa name)	Fonio	
Bambara groundnut	Voandzou ou haricot pistache	Voandzeia subterranean
Broad bean	fève	Vicia faba
Chickpea	Pois chiche	Cicer arietinum
Chinese yam	Igname des blancs	Dioscorea esculenta
Hausa potato	Pomme de terre du Soudan	Solenostenum Rotundifolius
Cowpea	Haricot indigene	Vigna inguiculata
Egyptian kidney bean	Lab lab	Dolichos lablab
Fabourama (bambara name)	See Hausa potato	Solenostenum rotundifolius
Geocarpa bean	Lentille de terre	Kerstingella geocarpa
Guinea yam	Igname jaune ou blanc	Dioscorea rotundata
Hyacinth bean	Lablab	Dolichos lablab
Hungry rice	Fonio	Digitaria exilis
Kaffir potato	Pomme de terre de Kaffir	Plectranthus esculentus
Lima bean	Haricot de lima	Phaseolus lunatus
Pigeon pea	Pois d'Angole	Cajanus cajan
Rice bean	Haricot grain de riz	Vigna calcurata
Rizga (hausan name)	Kaffir potato	Plectranthus esculentus
Three leaved yam	Igname amère	Dioscorea dumetorum
Wusu (Mandinka)	See fabourama	Solenostenum rotundifolius
Water yam	Igname de Chine	Dioscorea alata
Wild yam	Igname sauvage	Dioscorea cayenensis

---

*Written by Ifeyronwa Francisca Smith (Ph.D)  
Typesetting and lay out: Oumy Sarr, Publications Unit*

*Published in 1995 by UNESCO-BREDA and printed by BREDA Press,  
12 Avenue Roume BP 3311, Dakar, Senegal*

---

© UNESCO/BREDA 1995