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Extinct, Contemporary Nigerian Food Derivations and Recipes from Maize Grains

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Abstract:

Nigerian foods were essential aspect of Nigerian culture. Thus, they were central to Nigerian culture. They defined and presented a clear picture of Nigerian cultural groups. This paper discussed the major traditional food items derived from maize grain. It also analysed and discussed the traditional preparation methods, medicinal and health benefits, as well as nutritional values derived from all food items gotten from maize grain. It finally discussed and documented Nigerian traditional food items as well as their lexicography. This would go a long way to sustain them from going into moribund. The paper recommended and concluded that Nigerians should not neglect their cultural food items as they were part of their cultural identity which should be documented for future generation to come.

Keywords: Nigerian, Food, Derivations, Maize

1. Introduction

Nigerian foods are very essential to Nigerian culture. Thus, traditional foods are central to Nigerian culture. It defined and presented a clear picture of the Nigerian cultural groups. Nigeria people were always at home with their foods and they found them more satisfying and fulfilling than foreign dishes. This had been their practice before the advent of foreign food. Nigerian cuisines consisted of food items found among different ethnic groups that comprised Nigeria. The food recipes and cuisines varied across the different cultural groups or variety in Nigeria. Different ethnic communities had varied and rich culinary traditions. Some of the cuisines or dishes were peculiar to some people while some staple and culinary food items cut across communal borders.

However, there were some staple food items that acted as bases for different cuisines and dishes. These include corn, guinea-corn, and millet. Our main focus will be on the grains related food items that were peculiar to Nigeria. They were the basic foodstuff and raw materials for deriving different food items or cuisines. The following food substances acted as raw materials for deriving the food items, dishes or cuisines – corn/maize: *ògì (ẹkọ)/àkàmù, túwó māsàr, ẹkpẹkẹ, mṣṣ/wṣin, kókó, gúgúrú, àkàrà àgbàd, ẹgb, sṣp* etc. Guinea-corn: *ògì (ẹkọ) ọkà bàbà, bṣnkú, ọtí ọkà, sògìdẹkọ, túwó ọkà bàbà* etc. Rice: White rice, coconut rice, jollof rice, *pṣte, túwó-shink, sinṣsir, dṣṣ-duk* etc. Millet: pearl millet, finger millet and kodo millet. Thus, this study intends to examine the traditional preparations and uses of maize and guinea-corn in Nigeria only.

Àlādé (2007) grouped food into four categories. This food groupings were: the milk group-comprising all dairy products, such as powdered milk, fresh milk, buttermilk etc., the meat group included diverse food items such as beef, lamb, pork, eggs, fish, beans, groundnuts etc. The cereal and grain group included wheat, rice, maize, guinea-corn, millet and potatoes etc. and the fruit and vegetable groups including all fruits and vegetable commonly consumed. This grouping system did not contain several food items commonly consumed in Nigeria but included most foods consumed in the United States and Canada. In most parts of Nigeria, the poor economy, the socio-cultural factors, and the geographical location and distribution of food had combined to limit the food choices of families (Fleck, 1976:14-19).

Among these four groups, the third group which was the cereal and grain group with the examples of maize grains and guinea-corn, was the focus of this discourse. We selected the two food items in this study because they were plants produced locally in Nigeria.

1.1. Purpose of the Study

The purpose of this study was to identify the forgotten traditional food items derived from grains in Nigeria. It is the focus of this paper to do a thorough survey of the Nigerian societies to rediscover some of the traditional food items derived from grains such as maize and guinea-corn and their local names so as to revive and re-invigorate the language.

Expectedly, one of the contributions of this study was also to make a clarion call to the Nigerian people to rediscover the cultural food items derived from the grain related foods that have been displaced in favour of the western/foreign food essentially because it was not only more nutritional, but because it was also medicinal.

In addition, the purpose of this study was also to expunge the vocabularies and the lexical items used in the preparation of traditional food items derived from maize grain and guinea-corn plants, that have been forgotten. This

would be recalled and brought into the limelight. This will go a long way in revitalizing the languages and the lexicographical study of the Nigerian languages will receive an exciting impetus.

Finally, this study is also carried out in order to document Nigerian extinct and contemporary traditional food items derived from grains and their recipes for sustainable development. This would expose the forgotten food items derived from grains and recipes that had sustained earlier generations for years past and recommends same for this generation and their sustenance.

1.2. The Scope of the Study

The study was concerned with the extinct, contemporary Nigerian food derivations and recipes from grains. The scope of the study was limited to the definition of key terms: extinct, contemporary, food, recipes and grains. The main focus was on how various traditional food items are derived from maize grains plant, their local preparations, how to revive them, their local names, their health benefit/cultural nutritional and their medicinal values.

2. Methodology

Various methods were employed in collection and collation of data for this study. These include oral interview method as primary data which comprised of verbal interactions between the researcher and the local people of different ethnic backgrounds. The researcher also made some field trips to some areas where maize and guinea-corn were used in making porridges or dishes. Also, a theoretical review of some relevant available literatures as well as Internet surfing were employed for this study. Other methods employed for this study include observation, phone calls and photographic documentation of traditional food items and their derivations. This helped the researcher to analyse them with cultural theory approach with a view to reviving them, bring out their health benefits/cultural nutritional and medicinal values for the attention of the generality of the people of Nigerian society.

3. Theoretical Framework

The theoretical framework adopted for this study was the cultural materialism. This theory is the most relevant theory that explains the relationship between food production and work-related values. According to Morgan (1877), culture developed as humans extended and improved control over their environment, especially through the food supply. Similarly, Taylor (1916) declared that the first need of humans was to obtain daily food and this was the means by which culture develop. White (1943) expanded this idea by specifying three factors in any cultural situation: per capital energy put to work; technological means used to work; and the need-serving products after work. Later, Steward (1955) posited that behavioural patterns involved in the food-finding processes had to be taken into account in order to understand cultural types. Gathering of wild vegetables was usually done by women who worked alone in small groups while fishing, especially marine fishing was typically conducted by groups of men. This paper vied that women also engage in the production of other food items such as pap making, *túwó* making, *kankey* and *banku* preparation from maize and guinea-corn, the two major plants for discussion etc. apart from wild vegetables gathering alone. Apart from fishing, men also engage in the production of other food items like the planting of maize, guinea-corn, millet, wheat, rice and other food materials that are used in the preparation of local food items for human consumption.

Following the cultural materialism theory, we hypothesize that different societal work-related values were developed under each unique food production system. After the food supply and the population increased, social, economic, and political systems to regulate and sustain the food production system were further developed. What we can deduce from this idea is that, each society has its own unique traditional way of producing various items for the societal consumption. As the society increases in size as a result of socio-cultural development so also the modern systems of food production increased too. Thus, the traditional methods of food production and processes began to move towards technological advancement in food production and processing patterns.

Although, technological advancement had reduced the size of the labour force directly engaged in food production and preparation today i.e., from using manual labour to plant and harvest maize and guinea-corn, using of hand to grind maize grains and guinea-corn before preparing food items to the use of modern grinding machines. This paper posited that the culture of a society that had been passed from generation to generation originated from traditional way of producing food and various food items through intensive agriculture or farming.

Meanwhile, national cultural characteristics were determined by the dominant food production mode in a country (Tang, 2017). Also, food issues had been traditionally examined within the context of relatively closed local communities or ethnic groups until the 1980s when the global systems of food production, preparation, consumption, and sociality began to emerge (Philips, 2006). Nonetheless, work-related values in modern societies were inherited, learned, conserved, and passed from generation to generation. Thus, the paper applied the cultural materialism theory in anthropology and posited that values were formed when humans worked together to obtain food for subsistence. Also, this theory was adopted to show that most of the cultural practices of Yorùbá pertaining to food productions and preparations have not been totally eroded though, slightly changed as a result of technological advancement. This shows that culture was not static but dynamic in order to accommodate new ideas in doing things. Finally, maize grains and guinea-corn form raw materials in the preparation of traditional food items traceable to various ethnic groups in Nigeria.

4. Explanation of Terms

4.1. Food

Food was very important in the life of every living being. Everything that is breathing needs food for growth and development of body tissues. Nonetheless, food may be different from one type to the other but there is no living organism that should be denied of food. Without food, no living being will exist. Eating good food enables the various nutrients in it to function very well in the body. This made the flow of blood to run freely in the body tissues.

However, researchers have shown that foreign dishes were not good for the body systems, though may be sweet, consuming them are doing a lot of damages to our body. Today, people develop interest majorly in foreign prepared dishes and consume less of locally prepared foods. Researches showed further that consumption of too much of foreign dishes could cause cancer of the blood, diabetes, increase in high blood pressure and alike. Thus, consumption of traditional foods is more preferred to the eating of foreign dishes as they affect the body positively than the consumption of canned, tinned and frozen foods.

Moreover, food was any substance that people or animals ate for energy and growth. Food is a solid/liquid substance eaten for nourishment. Food was anything we eat, drink, or take into our body to give us energy and help our body to grow (Ogunwole, 2016). Food was any substance which when absorbed into the body cells yields energy and materials for growth, repairs of damaged tissues and regulation of the body processes without harming the living organism. On the other hand, food is any substance which when taken to the body, is capable of building up tissues, of yielding heat and energy and regulating body processes. Hence, food is one of our most important daily needs, and the kind of food people eat depend largely on the kind of plants they grow. Nutritionists have classified food into various classes but the most prominently mentioned are vegetables, fruits (whole), grains, protein and dairy. Other food groups identified include fibre, carbohydrates, minerals, water, fats and vitamins. This study only looks at grains (maize and guinea corn) aspect only.

4.2. Traditional Foods

Traditional foods were those whole and ancient foods that had been eaten for centuries and even millennia. They were the foods that our great-great-grandmother and grandfather would have eaten. They were simple, naturally grown or raised, nutrient-densed, thoughtfully prepared. They were not foods (in fact, they tend to go in direct opposition to most conventional nutritional advice these days). Traditional foods were foods in their original form, as they were created, not modernized, not processed, not packaged. They were foods that have a long history of supporting good health. They were foods that are whole and nutrient-densed.

4.3. Extinct

Extinct means something no longer in existence, that had ended or died out: an extinct species of something, no longer in use, obsolete; an extinct custom.

4.4. Contemporary

This means something existing, occurring or living at the same time, belonging to the same time or happening or coming into being during the same period of time, simultaneous or marked by characteristics of the present period: modern or current.

4.5. Recipe

Recipe is a set of directions with a list of ingredients for making or preparing something, especially a food dish. A set of instructions telling you how to prepare and cook food, including a list of what food is needed for this.

4.6. Grains

They are the seeds of plants (such as wheat, corn, and rice) that were used for food; also: a single seed of wheat, corn, rice, etc. A plant that produces grain: a small, hard piece of something.

4.7. Derivatives

It is a new product that resulted from modifying an existing product, and which has different properties than those of the product it is derived from.

5. Traditional and Contemporary Preparations of Maize, Guinea-Corn and Its Foods Derivatives

5.1. Maize

Maize or corn, *àgbàdo* according to Dáramólá & Jéjé (1995:203), can be prepared and cooked with its leaves, it can be roasted or boiled with its leaves or without its leaves at all. Maize can be eaten on the cob, as cereal, steamed, as a pudding or porridge and so on. It is a cereal plant that produces grains that can be cooked, fried, ground, pounded or crushed to prepare various food items like pap, *túwó*, *gwatedonkunu* and host of others (Abdulrahman and Kóláwólé (2006:1). Maize grains are used to prepare various food types and these are readily available in various parts of Nigeria among different ethnic groups, notably among which are Igbo, Hausas, Yorubas, Efiks, Urhobos, Tivs, Edos, Idomas, Ibiras, Ishans, Binis, Yalas, Ibibios, Igalas etc. Preparations and its local foods derivations varied from group to group, though at times with some similarities. Maize is not only prepared for human consumption alone but it was useful as medicines and

as raw materials for industries. Not less than 35 food items or dishes and 10 medicinal or health beneficial values are derived from maize grains.

Eka and Osagie (1998) and Purseglove (1992) opine that maize (Zea Mays L; Poaceae) is the most important cereal in the world after wheat and rice with regard to cultivation areas and total production. This view showed the importance of maize as one of the most food crops grown in the world. The name maize was derived from the South American Indian Arawak-Carib word mahiz. It is also known as Indian corn or corn in America Kochlar (1986) and Purseglove (1992) and it was introduced into Nigeria probably in the 16th century by the Portuguese Osagie and Eka (1998) and Abdulrahman and Kóláwólé (2006:1). In Nigeria, maize is called and known by different local names depending on locality like Igbo *ogbo* or *oka* (Ibo), *masaraordawarmasara* (Hausa), *àgbàdò*, *yéngbè* or *ìgbàdò* (Yorùbá), *ibokpot* or *ibokpot union* (Efik), *apaapa* (Ibira), *oka* (Bini and Ishan) and *igumapa* (Yala) etc. Vernacular names given to maize or corn is noticed among the cultural groups in Nigeria because of the locality and dialectical variations.

It is estimated that as at 2006, about 300 million tons of maize is produced annually an out of this, United States of America (USA) alone were producing 145 million (about 50 per cent). Ihelarouye and Ngoddy (1965) and Purseglove (1992). In Nigeria, Central bank of Nigeria in (1992) estimated that Nigeria produces 5-6 million tons of maize which covers about 1 million hectares out of 9 million hectares it occupied in Africa (Hertmans, 1985) cited in Abdulrahman and Kóláwólé (2006:2).

Thus, maize and its derivative food items were prepared in a different form and consumed in multitude ways which vary from geo-political zones to geo-political zone, region to region or from one cultural or ethnic group to the other. This research establishes that maize grains or corn for example, could be prepared by boiling or roasting as said earlier on as paste *èkò*, *àgbàdò*, and *elekute* in Nigeria. Ghana derives *kenké* from maize grains, while *gúgúrú* as it is called in Yorùbá is consumed all over West Africa. Hausa, Ibo, Yorùbá, Efik, Ibiobio, Binni, Iyala, Idoma, Tiv, Gwari, Urhobo, Edo etc. have the traditional methods of preparing different food items derived from maize grains. These traditional methods of preparations are restricted to definite localities or ethnic groups. The current study on the traditional preparations of various food items derived from maize grains by various ethnic groups in Nigeria, identification of their names, their nutritional benefits and their linguistic exploits will enable Nigeria to document and bring into the notice of Nigerians that consumption of local food items derived from maize is nutritional and have medicinal benefits in our body systems.

Hence, maize was an all-important crop which provides an avenue for making different types of local dishes. It also had cultural nutritional values as well as some medicinal values. Maize also serves as raw-materials for many industries. Thus, eating it had a lot of benefits for the people of Nigeria and it is high time we retrace our step and go back to our root and start consuming our own local food items. This will go a long way to reduce the various health challenges being faced by the Nigerian people.

5.1.1.Traditional Preparation of Pap

Pap was a local dish that is derived from maize or corn. In Nigeria, there are 2 types of palp and both of them are very popular indeed. First is hot-palp which is called *èkò gbígbóná* or *ògì* (Yorùbá), *àkàmù* (Ibo and Yala) and *Kòmè* (Ibira). The second type of palp is cold-palp which is called *èkò tútù* (Yorùbá), *Kamu* (Ishan), *Ẹgidi* (Ibo and Yala) and *Kɔ̀ɔ̀* (Hausa). Hot-palp and cold-palp are traditional meals made from fermented maize. They are usually eaten as breakfast meals, served with *móínmóín* (steamed bean pudding) or *àkàrà* (deep fried bean puree).



Figure 1: Picture of Hot Porridge Pap (*Èkò Gbígbóná*) and Maize Porridge (*Ògì Èkò*)

Besides, to prepare local palp generally, the maize grains are soaked in cold water inside earthen pot, *ìkòkò* (Yorùbá) clay pot or rubber bucket for 2 or 3 days. This will make it soft and fermented. In some cases, it might be soaked inside warm water for a while. Then the grains were poured into another container and washed with neat water thoroughly. After thorough and several washing, they were later ground to paste. Water was added later and left for some days and water was changed at interval. Reaching this stage of preparation, the amount desire to take is put inside container, stirred and poured inside boiling water and stirred until a semi-liquid porridge, that is hot-pap was obtained. The hot-pap might be taken hot or allow it to cool for some time. Then *àkàrà* (deep fried bean porridge), *móínmóín* (steamed bean pudding), *róbó* (deep ground fried melon) or *ẹfọ* (vegetable). This depends on the desire of individuals in different localities.

Besides, in some cases, little maize grains and guinea-corn (*sorghum bicolor* (L.) Moench, poaceae) might be added together before grinding. They were mixed together until the desired result was obtained. The same procedure was followed too before the final hot-palp was obtained for taking. Guinea-corn (*sorghum bicolor* (L.) Moench, poaceae) or millet (*pennisetum americanum* K. Schum, poaceae) alone can be used to prepare hot-pap (Banigo and Muller, 1972) just as described above. Another close food related to hot-pap is called *kókó*. This type of hot-palp is prepared hot in very watery manner. It is usually prepared from *ògì* (fresh or dried maize grains) after grinding. Just like hot-pap, it is taken in the morning or evening time. It depends on the time of interest for an individual. *Kókó* was a common traditional food item derived from maize grains among various ethnic groups in Nigeria. One important health benefit of *kókó* in the morning is that it refreshes the body, makes body sweat and aids easy digestion.

Other type of local food item derived from maize grain was called cold-palp, *ẹkọ tútù*. Preparation of cold-pap method is almost different among various ethnic groups in Nigeria. Preparation of cold-pap differs a little when comparing it with that hot-pap method of preparation. After the grinding of maize grains, the ground paste was sieved or filtered using a clean iron-container called *asẹ* or *kòhòkòsò* or white light cloth to get very smooth paste. The chaff or residue after filtration or sieve called *ẹrí-ògì* (Yorùbá), ... Hausa and ... Igbo is kept separate. This may be later sun-dried to make *pètẹ* by Yorùbá. *Pètẹ* was poured in boiling water, *omìgbígbóná* as preparatory step to prepare hot *àmàlà* (a food prepared by yam flour (*Discorea* spp. Like *D. rotundata* Poir., *D. cayenensis* Lam., *D. alata* L.; *Discoreaceae*). Thereafter, the remaining fine paste after filtration is given time to settle down at the bottom of the pot with water on top. The top water was called *omíkín*, *omi-ògì* or *omídùn*, which is later removed while the paste was poured in boiling water and stirred to get a semi-solid porridge. The semi-solid porridge was then enclosed in *ẹéran* leaves, clean cocoa leaves, *ewé kòkó*, banana leaves, *ewé ògèdè*, *gòdògbò* leaves, *ewé gòdògbò*, *ẹgbẹsì* leaves, *ewé ẹgbẹsì* or tick tree leaves, *ewé gẹdú*. Semi-solid porridge may also be prepared by arranging as *ìjòkìn* leaves, *ewé ìjòkìn*, porridge cold-palp leaves, *ewé ẹkọ* inside a local clay pot called *kólòbó*.



Figure 2: Porridge Cold Pap Prepared from Eéran Leaves (Ẹkọ Eléwé)

As a result of modernity and recent development, paper or nylon was being used nowadays to wrap the semi-solid porridge. Alternatively, the semi-solid porridge would be poured inside small bowl or plate for household consumption. The hot was allowed to cool down, *tútù* and solidified, *le*, and it becomes thick porridge-cold-palp, *ẹkọ tútù*. Porridge-cold-palp, *ẹkọ-tútù* is similar to *omídidi* which is popular among Ishan people. The method of preparing *omídidi* is a bit different because the half-cooked watery porridge is poured inside nylons at a desired amount and re-cooked inside a pot containing hot water. This method made it more solidified than Yorùbá porridge-cold-palp, *ẹkọ-tútù*.

At this juncture, we could now differentiate between hot-pap, *ẹkọ gbígbóná* and cold-palp, *ẹkọ-tútù*. The states they are taken or served indicates the major difference. After preparation, *ògì*, *kókó* and *ẹkọ gbígbóná* are served hot while *ẹkọ-tútù* (cold-palp) and *omídidi* among the Ishan are served or taken cold. Thus, palp is generally taken with *àkàrà* (bean cake) and *móínmóín* (bean porridge), *róbó* (melon cake) and *kúlíkúlí* (groundnut cake). Palp can also be taken with vegetable stew or draw soup like *ewédú* or okra called *obeila* among the Yorùbás. Palp aids digestion quickly and reduces constipation. A by-product or remnant hard palp that is burnt called *ẹha ikòkò* found at the bottom of the pot is usually eaten by man, both the young and the old including livestock.

Ẹgbó was one of the extinct Nigerian food items being derived from maize grains. Dry grains are washed thoroughly with little water and ashes to soften the testa or coat. The testa or coat is removed with the aid of mortar or modern machine. After, the maize grains were poured inside big pot with water, then put on the heavy fire and allowed it to boil very well. At time, it was done like this till day break. The grains were cooked intensively like until they become very soft and burst open. The burst open ones were whitish in outlook. *Ẹgbó* may be eaten with ample of salt or without salt in this form. *Ẹgbó* may also be eaten with little red palm-oil (*epo pẹpa*) or little groundnut-oil (*òróró ẹpà*) or with little melon grinding oil (*òróró ẹgúsí*). It may also be eaten with cooked beans or cooked ground-nut or with coconut. Alternatively, *ẹgbó* might also be eaten with stew or frying pepper (*ọbẹ ata*) or peanut butter, *òrí*. Yorùbá *ẹgbó* was not as hard as that of *isoké*. *Ẹgbó* is called *isoké* by the Ishan people. Their own *isoka* is harder in form. *Ẹgbó* is commonly eaten among the Èkìtì and Ìjèsà people of South-western Nigeria.



Figure 3: Picture of Egbo Prepared with Dried Maize and Cooked Beans

Sapala was another extinct Nigerian food item. *Sapala* is also called *àbàrí* (a.k.a) *àbàrí tepotiyò* (*Àbàrí* with oil and salt). *Sapala* was also a type of food derived from maize grain. Eating *sapala* is almost gone into extinction. It is only in the rural area alone that one can still see this type of food. In preparing this type of food, fresh maize grains are needed. Fresh maize grains were thoroughly washed with clean water and poured in a rubber or bucket container for grinding. After grinding machine, grinding stones called *ọlọ ata* or with mortar and pestle called *odó*, then it is poured in a wide bowl where onion, pepper, palm oil and salt are added to it. Today maggi cube could be added to give it a flavour or taste. This made it to turn red and to taste respectively. Then, it is therefore measured out in desired quantities and put inside empty milk tin, sizeable nylon, small empty sizeable rubber plastic, maize leaves or banana leaves, and cooked with heat of hot water inside a covered pot for about thirty to forty minutes to become solid porridge. *Sapala* is popularly called *àbàrí tepotiyò* or *Irè* among the Yorùbá people, Ibo people called it *elili-oka* and Ishan people called it *ekefi*. *Sapala* may be eaten alone. It may also be eaten with cold-pap or hot-pap.

Dònkunnu are another traditional food item in Nigeria. *Dònkunnu* are also called *kenkey*. They are fufu-like but are also made with maize grains and sometimes with the addition of plantain or cassava. They are popular food in Ghana but as a result of economic and trade contact, *dònkunnu* has become one of the popular local food eaten in Nigeria especially among the Yorùbá of South-west. *Dònkunnu*, now was an exotic food in Nigeria and it was introduced to Nigeria from Ghana by the emigrant Ghanaians or by Nigerian lived in Ghana. Ghanaian women are the major sellers of *dònkunnu*, but some Nigerian women too had learnt the methods of preparing it. Preparation of *dònkunnu* was not too difficult. To prepare it as food, dried soaked maize grains are ground wet paste. It is thus left in this state for about two days to ferment. Allowing it to ferment is to bring out the characteristic sour taste of the finished product. After this, a pestle was used to stir it together so as to make it smooth a little. Then, a desire amount or quantity of fermented paste was put inside maize leaves, plantain leaves, or banana husks for an added local flavour then cooked in part before being steamed inside pot until thick or solid porridge *dònkunnu* is obtained or derived.



Figure 4: Picture of Dònkunnu Prepared from Dried-soaked Maize Grains

Thus, *dònkunnu* were slightly grainy in texture and can be eaten with a pepper sauce or stew (i.e., soup made up of mainly coarsely ground pepper and small tomatoes) and, slice fresh onion and fried tilapia fish, or any soup of choice with fried fish. *Dònkunnu* is commonly eaten in Lagos, Ògùn, Òyó, and Òşun states respectively.

Bònkú was another derivative local food item derived from maize grains. As the name implied, is something prepared solid or hard. Among the Yorùbá, *bankú* is also made from maize grain. The maize grains used to prepare *bankú* may be fresh or dried ones. The maize grains are ground wet with grinding machine, *ẹrọ ilògì* or with mortar, *odó* and pestle, *ọmọ ọdó*. It is prepared the same way *maasa* (Hausa), *mòsà* (Yorùbá) was prepared. At this stage, a container called *Ẹşẹ* sieve is used to sieve or filter the wet-ground paste from the shaft or residue after filtration. The ground wet paste is then steamed and stirred vigorously inside pot until it is well-cooked. *Bankú*, after preparation is usually solid or hard and may be eaten with draw soups like okra soup, *ọbẹ ilá* or *ewédu* soup.

Làpátà is another derivative food item derived from maize grains. *Làpátà* is a thick fried porridge. It is prepared like beans cake, *àkàrà* but it is a common food found among Yorùbá Èkìtì people in South-western part of Nigeria. It was

by the Muslims on Friday as *sàráà* and it was spiritually attached to prayers. *Maasawas* also prepared and shared by the Muslims during the Eight Day Fidouh prayers organised by the Islamic faithfuls for their dead.



Figure 6: *Maasa Prepared with Coarsely Wet-ground Maize Grains*

Wainna was also a food item derived from maize grains and made with coarsely wet-ground maize grains. It was a thick porridge similar to *massa*. While *massa* was small in size, *wainna* is big in size. *Wainna* is a common local food eaten by Hausa people and it was eaten with pumpkin soup or with vegetable soups or with honey, *oyin*. In preparing *wainna*, put some quantities of ground paste inside saucer plates which is made of clay soil. The saucer plates are lubricated with groundnut oil at initial stage to enhance easy removal of *wainna* after cooking. The research carried out by Lancaster et al (1982) and that of Bhat (1985) added that *Wainna* can also be prepared with mixture of cassava flour and millet flour. *Wainna* is very good in human body.

Tutu was also prepared with dried maize grains already ground to powdery maize flour. Beans are cooked or heated with ingredients such as pepper, tomatoes, onions, etc. with oil palm. Dried fish and prawn or crayfish might be added to give it more flavour. It depended on how you want it to taste. After this, the ground powdery maize flour was therefore put inside the prepared beans as if you put garri. Note that every preparation was done on the fire. When this was done, it was ready for eating. It was a common food among the Yorùbá-Ànàgò in the Republic of Benin.

Donkwaw was also made from dried maize grains. In preparing *donkwa*, half a rubber dried maize grains were put inside saucer pan on the fire and roasted. After this, the grains coat or testa are gently removed before the grains are ground into powdery maize flour. Also, one rubber of fried groundnut is needed. Groundnut's coat is also removed and put inside powdery grain flour and were ground together again. Then, required amount of dried pepper, ginger and sugar are mixed with it. All are ground together without water to become *donkwa*. The mixture is moulded into small ball shapes called *donkwaordodonkwa*. *Donkwa* may be eaten or licked. It was a common food found among the Hausa people of Northern Nigeria. *Donkwa* is called *emumu* by the Ishan people of Nigeria.



Figure 7: *Picture of Donkwa Seller*

Couscous was also a type of food got from maize grains. Grain's testa or coat is removed before the maize grains are ground into powdery maize flour which can be preserved inside bag and may be stored or preserved in a dry place until time to use it. Occasionally, a required quantity could be measured out and mixed with ingredients like sliced onion, pepper and tomato (Abdulraham and Kóláwólé (2006:4-5). Then, allow it to be thoroughly cooked until the mixture is solidified and ready for eating.

Kókóró was another food got from maize grains. *Kókóró* is also prepared in a similar way like *àádùn*. Maize grains are roasted, kneading, spicing and frying with groundnut oil. Preparation of *kókóró* may be in rounded or pointed stick-like shapes. This preparation method is in line with Adégòkè and Adébáyò (1994)'s view when discussing *kókóró* as one of the two corn products. It could be eaten as road-street snack or snack at home.



Figure 8: Round Kókóró Prepared with Roasted, Kneading, Spicing and Frying with Groundnut Oil

UpkoOka is also a food item derived from maize grains. This was a steamed corn pudding which was famous in the Niger-Delta region of Nigeria. *Upko Oka* is a locally produced food item derived from maize grains. Maize grains are ground with water in a softer texture. It was cooked and usually wrapped in leaves to give it a sturdy yet soft texture and earthy flavour. In some parts of Nigeria, it was eaten as porridge, complete with its own spices, and vegetables added to the pot. It can also be accompanied with yam, a tuber crop or garri (fried cassava grain).

Àdàlú was a mixture of fresh maize grains and beans with palm oil and other ingredients. Beans are thoroughly separated from particles and washed neatly, then poured inside clay or iron pot and put on the fire. Fresh maize grains were added to it and heated for hours. Then, required amount of salt, onion, pepper and palm oil are added and stirred. Thus, a mixture of fresh maize grains and beans with ingredients were called *àdàlú*. After cooking, it is ready to be served as food. It is a common local food among the Yorùbá of south-western part of Nigeria.



Figure 9: A Mixture of Fresh Maize Grains and Beans with Palm Oil

Àkplé, was a common food item prepared from maize grains among the Ibo people of Eastern part of Nigeria. In preparing *akple*, Ibo people mix cassava flour with maize powder together with onion chips, chilies and palm oil. It was then moulded into small balls and palm oil. It is then moulded into small balls that are deep in red palm oil. This food item is described as *akple* by Etejere and Bhat (1985), Abdulrahman & Kóláwólé (2006:5).

Dámhú Àlùbòsà is a common local food eaten by the Hausa people in the Northern part of Nigeria. In preparing *Dámhú Àlùbòsà*, dried maize grains were ground, then allow it to dry, coarse particles that resemble garri, a foodstuff prepared and made from cassava tuber. The coarse particles are mixed with oil and vegetable leaves and cooked thoroughly. It was commonly and mostly eaten by the Hausa people of the Northern part of Nigeria.

Àgbàdòsìsè was a food on its own. *Àgbàdòsìsè* means cooked or boiled maize. Cooked maize is a general food that is common to all the ethnic groups in Nigeria. Maize grains may be dehulled from the cob and cooked as *èwà òsòsò* in Yorùbá with salt or without salt, with palm oil or without it. It can be eaten like that. Besides, whole freshly harvested maize fruit may be cooked or boiled until the seeds are soft and eaten on the cob. It is a common food for almost everybody in Nigerian society.

Àgbàdòsìsun is also regarded as a food on its own.

Àgbàdòsìsun was called roasted maize. Roasted maize and boiled maize fruits are street-side food that is predominantly eaten in Nigeria. Virtually all states and various communities in Nigeria are engaged in this technique of roasted or boiled maize preparation. The white or yellow corn was usually grilled by the roadside or steamed and often accompanied with grilled or boiled or raw African bush pear or butter fruit or coconut. In preparing roasted maize, whole freshly harvested maize fruit with the leaves cover it or without the leaves is roasted with hot-charcoal over a wire-gauze or with firewood especially when it is prepared in the farm. This was done until the seeds become brown. It is eaten in this

form on the cob. Typical local farmers in Nigeria find this method easier and they enjoy eating maize like this most. Eating 2 to 3 pieces of roasted maize are enough food for a person after taking water with it. Virtually, every Nigerian liked eating *àgbàdòsún*, roasted maize.



Figure 10: Roasted Maize

Ajep was also a local food item prepared from maize grains. Maize grains were ground with water to moistened paste. Then, it is moulded into ripples. It is called *àkàrà àgbàdò* in Yorùbá language. After moulding into ripples, it was fried with palm oil or groundnut oil. Thus, fried ribbons are maize cakes called *àkàrà* among the Yorùbá and *ajepasi* among ... tribe in Nigeria.

Gwate was also a local food item prepared from maize grains. *Gwate* preparation was similar to couscous. *Gwate* was prepared semi-solid porridge with maize grains. While the couscous is prepared solid, *gwate* was prepared semi-solid porridge. In preparing *gwate* to taste, ingredients like *efinrin* leaf, amaranth or bitter leaf (*ewúro*), meat and pieces of soft-bones are mixed with the grains powered flour and steamed or cooked. *Gwate* is very rich local food derived from maize grains and it is very nutritious.

Ukejuk was a local food derived from maize grains. It was commonly produced and popular food among Ibira people of Nigeria. *Ukejuk* is very similar and prepared like *túwó*. The cassava flour called *ejuka* and maize flour called *apaapa* flour are combined and mixed to prepare *ukejuka* meal. In preparing this local food, the combined flours of *ejuka* and *apaapa* are poured inside boiling water and stirred until it becomes semi-solid porridge. Vegetable stew like water leaf, ugu, fluted pumpkin leaves, bitter leaf etc. may be eaten with it.

Nkiki is also one of the Nigerian local food items prepared from maize grain. Dried maize grains are ground into moistened flour and it was moulded into small round objects which are fried with vegetable oil or groundnut oil. To enjoy eating *nakia*, honey or granulated sugar was needed to eat it.

Thus, maize was a food crop which is grown on a wide variety of soil ranging from fairly coarse sand to the heaviest of clay (Kochhar, 1986), and thus it is found in all parts of Nigeria. Therefore, maize, as a plant, was very useful as it produces various food items for the consumption of different ethnic groups in Nigeria. Its local preparation methods and uses of maize that were not known to some people and localities in Nigeria have been explained in this research. This will now be an eye-opener to various ethnic groups in Nigeria that food items derived from maize grains are not restricted to only one side of the country. It is nationwide.

This study shows that Nigerians love maize too much since it is one of the most common food staples that is eaten quite similar across different countries of the African continent. Maize, which is also referred to as corn, is a cereal grain that is not only widespread in Nigeria, West Africa but in the world. It was full of fibre and highly nutritious.

5.1.2. Contemporary Food Items Derived from Maize Grains

Golden morn was a contemporary food item derived from maize grains. It was introduced in Nigeria more than 24 years ago by Nestle Nigeria Plc. It contains added vitamins such as vitamin A and minerals like calcium. It provided energy and nourishment from the natural goodness of whole grains or soya. In preparing Golden Morn, maize grains are ground or milled to get the grain flour. Then, mixed it together with water and other ingredients, then turned up the temperature and cook the mixed into a dough vacuum blender to create dough, and bake it with an oven. To take Golden Morn, you just add clean water, milk and granulated sugar if so desired.

Cornflakes was another contemporary food item derived from maize grains. It is contemporary because it was introduced in Nigeria not too long ago probably 1963, that is 56 years ago by NASCO Cereals Range. In preparing cornflakes, just spray or sprinkle with an even distribution of water, making sure to soak cornmeal. If one wants sweetened cornflakes, sprinkle a small dusting of sugar over top. Cook until most of the water has evaporated. Then take a metal spatula and scrape the bottom of the pan until the flakes started coming off the bottom. Flip flakes over and continue cooking until they dry out. Break apart chunks with your hands. To eat it as food, just pour the cereals straight into a bowl, then add a sprinkling of sugar and milk, it was ready to eat.



Figure 11: Picture of Cornflakes Produced by NASCO

Golden Morn and Cornflakes were now popular in Nigeria as breakfast meals. It was recorded in the history of the food in the world that Dr. John Harvey Kellogg in 1894 in the United States by toasting flakes of corn. Now a lot of cereals which were made from corn can be found in the markets. Golden Morn and Cornflakes are high fibres content and their easy preparation makes them common favourite for breakfast.

Pop-corn was also a contemporary food item derived from maize grains. In Nigeria, we have two types of locally prepared popcorn – hard and soft. The former was simply called *gúgúrú* while the latter is termed *gúgúrú aláákùkò* by the Yorùbá people. In preparing popcorn locally, maize grains were put inside a saucer-shaped earthen pot, *ìkòkòamò* containing sand, and heated with firewood. The heat generated by the hot sand roasted and changed the colour of the whitish grains to brownish *gúgúrú*. Further heating burst the grains to reflect the internal whitish parts, this makes it called *gúgúrú aláákùkò* by the Yorùbá. It is called *gúgúrú aláákùkò* because its shape resembles cock's comb, *ogbeàkùkò* by the Yorùbá. Popcorn might be eaten alone or with roasted groundnut.



Figure 12: Picture of Pop-corn (*Gúgúrú*)

On the other hand, the contemporary method was also used in preparing it. In preparing perfect popcorn for example for two people was done for at least ten minutes. A quart of maize grain was used in its preparation. In the modern preparation of popcorn, the inside of the pot was completely dried before heating the oil in it, or else the oil will sputter. Popcorn was therefore prepared with the combination of coconut or peanut oil, high quality popcorn kernels, butter (optional) and salt to taste. Then, the solid oil was heated to allow it melt. Three or four popcorn kernels were put into the oil. In few minutes, the popcorn kernels started popping. When the popcorn kernels popped, then, the remaining one third of the popcorn kernels was added in an even layer. After this, the pot was covered, then removed from heat and counted 30 seconds. The popcorn kernels were expanded when heated in the oven, hence the “pop” in popcorn.

The above method first heated the oil to the right temperature, then waited for about 30 seconds. This brought all of the other kernels to a near-popping temperature so that when they were put back on the heat, they all popped at about the same time. After this process, the pan was returned to the heat. The popcorn began popping, and all at once. Once the popping started, the pan was gently shaken by moving it back and forth over the burner. As the popcorn popped, the lid was slightly ajar to allow the steam from the popcorn released, the popcorn became dried and crispened. Once the popping showed to several seconds between pops, then the pan was removed from the heat. The lid was also removed and dumped the popcorn immediately into a wide bowl. With this method, nearly all the popcorn kernels would be popped and nothing burnt. Butter was easily melted and placed in an empty but hot pan if it was butter that was used or needed. Doing this would add more intense, buttery flavour to the popcorn. Salt was also needed. Popcorn could be sprinkled with salt to taste (simplyrecipes.com, 2003-2019). Popcorn was now a favourite snack today in Nigeria. Although, the modern popcorn snack did not originate in Nigeria, it was quite common here. Popcorn could be eaten as a roadside snack, sometimes with peanuts or groundnuts as is common on some streets in Nigeria, most especially in big cities.

5.2. Guinea-Corn

Guinea-corn was a grain and it belongs to grass family. It was called *ọkà bàbà* among the Yorùbá people. Guinea-corn serves as food and drink, but the food aspect of it is the concern of this paper. It was also known as sorghum. It was a cereal grain that originated in Africa and was eaten throughout Nigeria, Africa and the world, especially valuable terrain because of its resistance to drought. Guinea-corn is a nutrient rich grain that is often ground into flour to make bread, porridge, pancakes and kunnu drink. It offered a number of nutritional and therapeutic benefits (www.livestrong.com). Guinea-corn contains about the same and some times more protein than many other grains. Akinsoyinu and Mba(1978); Odunfa and Adeyeye(1985); Amusa and Odumbuka (2009) affirmed that guinea-corn is used for food, fodder and the production of alcoholic beverages. It was drought resistant and heat tolerant, and is especially important food crop in Africa, Central America, and South Asia and is the fifth most important cereal crop grown in the world. Two types of guinea-corn are grown in Nigeria – white and red types.

5.2.1. Guinea-corn Food Preparation

Guinea-corn, *ọkà bàbà* had less food items derivation in Nigeria, especially among the Yorùbá. It is the family of maize. Just like maize grains, guinea-corn can also be used to prepare local porridge like *ògì* or *àkàmù* and *túwó*, bread and kunnu.



Figure 13: Picture of Guinea-corn (*Ọkà bàbà*)

5.2.2. Traditional Preparation of Guinea-corn Pap

Guinea-corn palp called *ògì/àkàmù ọkà bàbà* is a meal made from fermented guinea-corn just like maize grains. In preparing guinea-corn palp, required amount of guinea-corn grains were washed thoroughly, the particles are well-removed and poured inside warm water and allowed to ferment for a day or two days. This made it to be soft and aids easy grinding to paste with grinding machine. Clay pot or iron pot is put on the fire with water and allow the water to boil. The grinding paste was poured inside the hot water in the pot, stirred until semi-liquid porridge was obtained. The hot guinea-corn palp may be taken hot or allow it to cool for some minutes. It was usually eaten as breakfast meal, served with *mọ́ínmọ́ín* (steamed bean, porridge) or *àkàrà* (deep fried bean puree) just like *ẹkọ gbígboná* hot-maize pap.

The second type of traditional food item derived from guinea-corn whether white or red (*ọkà bàbà funfun* or *ọkà bàbà pẹpa*) was cold palp derived from guinea-corn. Just like the preparation of thick porridge-cold pap derived from the maize grains, the semi-solid porridge could be poured inside small bowl or rubber plate for household consumption. The hot semi-solid porridge was allowed to cool down (*tutù*) and solidified (*le*), and it became thick porridge-cold palp (*ẹkọ ọkà bàbà tutù*). The one that was thicker more than that can be turned to *bankú*, a food item produced from maize grains. The thick porridge can be wrapped with *ewéẹkọ* (*lẹ̀jòkùn* leaves), *ewékòkó* (cocoa leaves), *ewé ọ̀gèdẹ* (plantain leaves) or nylons at a desired amount. Generally, *ẹkọ ọkà bàbà* semi-solid or thick porridge may be taken with vegetable stew or draw soup like okra or *ewédú*. *Róbó* (melon cake), *àkàrà* (bean cake) and *mọ́ínmọ́ín* (bean porridge) can also be used to take *ẹkọ ọkà bàbà* (guinea-corn palp). Guinea-corn was one of the nutritional high light, its mineral content in $\frac{1}{4}$ cup serving contains phosphorus essential minerals needed for bone health and strength.



Figure 14: Picture of Guinea-corn Porridge (*Ògì Ọkà bàbà*)

Túwó Ọkà Bàbà was a contemporary food item derived from guinea-corn. Just like *túwó àgbàdò* made of maize grains *túwó ọkà bàbà* is also derived from guinea-corn. This type of *túwó* was not popular like *túwó àgbàdò*. Only few communities among the ethnic groups in Nigeria prepare it. Just like preparation of *túwó àgbàdò*, *túwó ọkà bàbà*, that *túwó* food item derived from guinea-corn, guinea-corn seeds are firstly removed from the bunch of the guinea-corn seeds called *siiriọkà* and then hit with heavy stick called *òdòlù*. After, the hard testa of the guinea-corn is removed by grinding gently inside mortar with pestle or on a neat flat rock and blow the shaft away. Later, small ordinary or warm water is added to enhance testa removal or and sieve. Dried guinea-corn were then ground with local grinding stone called *ọlọ* or with modern grinding machine to obtain a smooth yellow or whitish paste clay-pot iron-pot called *Ẹpẹ* or *ìkòkò* containing water was put on a local stove called *ààrò* which is made of three stones and fueled with firewood. Then, water was allowed to be hot enough while the paste is poured in it and stirred with stirring-stick called *orógùn*. Just like *túwó àgbàdò* made of maize grains to make thick porridge food, *túwó ọkà bàbà*. *Túwó ọkà bàbà* may be eaten with bean soup, *gbẹ̀Ẹ̀rì*, with *lúrú* soup, with vegetable soups like okra or draw soup, *ọbẹ̀lálá* and *ewédú*. Meat, fish or *pò̀mó* hide and skin might also go with it.

Kùnún was regarded as beverages. It is also considered as food. In Nigeria, people depend mostly on indigenous method for food preparations especially food of plant origin. Some of the food that originate from plant include beverages such as zobo and *kùnún* drinks. Amusa and Odunbaku (2009) say that *kùnún* is the non-alcoholic fermented beverages widely consumed in the Northern part of Nigeria. The non-alcoholic beverage is however becoming more widely accepted in several other parts of Nigeria, owing to its refreshing qualities. Besthart (1982) observes that *kùnún* the fact that the two dominants religious group, Christians and Muslims used it as a substitute for alcoholic ones and the fact that it is very nutritious and medicinal. Thus, *kùnún* was consumed anytime of the day by both adult and children as breakfast drink food complement. It is a refreshing drink usually used to entertain visitor's appetizer and it is commonly served at social gathering. Apart from being served as refreshing drink after meal, it was also taken in place of food, thus, *kùnún* was meal on its own, though called beverage.

However, there were various types of *kùnún* processed and consumed in Nigeria which include *kùnúnz̀kì*, *kùnúngeid̀/gỳd̀*, *kùnúnàkàmù*, *kùnúnz̀mìỳ*, *kùnúnb̀nle*, *kùnúnjiko*, *kùnúnz̀msh̀* and *kùnúnz̀ỳmb̀*. All are processed and prepared in the Hausa communities but they have been spread to the various ethnic groups in Nigeria.

Kùnún was processed from guinea-corn, sorghum grains contain 11.69% protein, 3.3% fat, 1.9% ash and 78.8% carbohydrate and arrays of amino acid (Lichtenwalner et al, 1979). *Kùnún* is mostly processed by women using simple household equipment and utensil. (Ask people). *Kùnúngeid̀/orỳd̀* was a baby food derived from guinea-corn.

5.2.3. Lexicography of Maize Grain and Guinea-Corn Derived Food Items

English	Local Nigerian Names
Maize	Àgbàdò/Ìgbàdò/yangan (Yorùbá), dawarmasara or masara (Hausa), Ọkà (Bini and Isha), Ibokpot Union or Ibokpot (Efik) and Igumapa (Yala)
Maize Grains	Kóró àgbàdò (Yorùbá)
Pap	Ẹkọ (Yorùbá)
Hot-pap	Ẹkọ gbígbóná or ògì (Yorùbá), àkàmù (Ibo and Yala), Kamun (Ibira)
Cold-pap	Ẹkọ tútù, kamu (Isha), agidi (Ibo and Yala), kafa (Hausa)
Clay-pot	Ìkòkò-amò
Semi-liquid porridge	Kókó (Yorùbá)
Residue/filtration	Èrí (Yorùbá)
Sun-dried residue	Pètè (Yorùbá)
Yam flour	Àmàlà (Yorùbá)
The top water on the paste	Omi ògì/omíkan/omídùn (Yorùbá)
Banana leaf/cocoa leaf/ Ẹgbèsì leaf	Ewé-ẹkọ
Polythene/nylon paper	Lálíńńù (Yorùbá)
Small clay-pot	Kólòbó (Yorùbá)
Cold-pap	Ẹkọ tútù (Yorùbá), omadidi (Isha)
Fried bean cake	Àkàrà
Steamed bean cake	Móínmóín (Yorùbá)
Sugar	Iyò sùgà (Yorùbá)
Vegetable stew	Qbẹ̀ ẹ̀fọ̀ (Yorùbá)
Groundnut cake	Kúlíkúlí (Yorùbá)
Melon cake	Róbó (Yorùbá)
By-product of pap/burnt porridge at the bottom of the pot	Ẹha/ẹha ìkòkò (Yorùbá)
Grinding stone	Ọlọ/omọlọ (Yorùbá)
Local stove	Ààrò (Yorùbá)
Stirring-stick	Orógùn/omorógùn
	Túwó (Yorùbá), túwó-masara (Hausa), ọkà (Egun),

Thick porridge food	inioka (Ibo), Ukaapaapa (Ibira)
Bean soup	Gbègìrì (Yorùbá)
Lúró leaf	Ewé lúró (Yorùbá)
Okra	Ilá (Yorùbá)
Solid maize porridge	Dònkunnu
Pumpkin soup	Ọbẹ elégédé
Frying-pan	Páànù ìdín-nhkan
Palm-oil	Epo pupa
Scent leaf	Efinrin
Cassava flour	Gààrí
Salt	Iyò
Soft and burst open maize grains	Ègbo
Popcorn	Gúgúrú
Flour	Fúláwà
Honey	Oyin
Honey popcorn	Gúgúrú olóyin
Maize cake	Àkàrà àgbàdo
Sweet maize cake	Àádùn
Solid maize cake	Kókóró
Cooked or boiled maize	Àgbàdosísè
Roasted maize	Àgbàdosísun
Fried maize	Àgbàdoyíyan
Maize fruit	Èsoàgbàdo
Guinea corn	Ọkà bàbà
Guinea corn paste	Ògì ọkà bàbà
White guinea-corn	Ọkà bàbà funfun
Yellow guinea-corn	Ọkà bàbà pupa
Guinea corn porridge	Èkọ ọkà bàbà
Hot guinea corn pap	Èkọ ọkà bàbà gbígbóná
Cold guinea corn pap	Èkọ ọkà bàbà tútù
Semi-solid guinea corn porridge	Túwó ọkà bàbà
Non-alcoholic fermented beverage	Kùnún

Table 1

5.2.4. Nutritional Value and Health Benefits of Maize Grains and Guinea-corn

One of the main reasons why maize was a staple food across the world especially in Nigeria where this research was conducted was its high nutritional value, with high levels of starch and also valuable protein and oils. Depending on the variety, maize may contain a number of important B vitamins, folic acid, vitamin A, which was very important to human health, most especially for vision and as an antioxidant. Thus, it protected lung from cancer related diseases. Maize was also rich in phosphorus, magnesium, manganese, zinc, copper, iron and selenium, and has small amounts of potassium and calcium. Maize was also a good source of dietary fibre and protein, while being very low in fat and sodium. It also built energy. It also has thiamin which assists the brain to function. Therefore, maize could be especially important for people who cannot get fresh vegetables year-round.

Moreover, different maize types vary in their nutritional content. For example, sweet corn types had more sugar which was needed in the body for body energy. Darker yellow varieties may have more vitamin A. Thus, maize grain related food items promote eye health. They were also rich source of many vitamins and minerals. For this reason, moderate consumption of whole-grain corn, such as popcorn, sweet corn, pap, túwó (*ọka, inioka, uka, apaapa*), *dònkunnu, ègbo, àbàrí, sapala, masa and wainna, kókóró, àádùn* etc. are well fit into health diet. Taking them instead of canned or foreign processed food can lower the risk of diabetes, cancer of blood and hypertension. Maize grain helped to fight stomach disturbance. It hadfoliate which assists the free flow of foetus out of the female's vagina. It fights against certain bacteria that contaminate with the blood which can cause paralysis.

For guinea-corn, or sorghum, as it was known in many parts of the world, was one of the most valuable edible plants grown today in Nigeria. Besides its excellent farming qualities, guinea-corn is also great for anyone's diet. It can be eaten whole, but usually, sorghum was dried and turned into flour, which is then used in cooking.

Jiji.ng (2017) summarizes the health benefits of guinea-corn to both adults and babies. For adults, guinea-corn was valued not only for its delicate and distinctive taste, but also for its many health benefits. Guinea-corn was one of the most nutritionally dense foods and is filled with vitamins and minerals needed for bone health and strength (www.livestrong.com), B-vitamins, calcium, potassium, magnesium, copper, and iron were only few of the nutrients you can find in sorghum.

It is also incredibly rich in protein, which was the primary building material for human body. It also contains huge amounts of dietary fiber, which helped you feel fuller without overeating. The high content of dietary fiber in guinea-corn soothes various digestive problems like constipation, diarrhea, and bloating.

The phytochemical contained in guinea-corn have proven to be quite affective at naturally lowering the LDL of bad cholesterol level in blood. Guinea-corn also helped in preventing diabetes which was one of the most common conditions of the 21st century.

For babies, many Nigerian mothers have already turned to guinea-corn as one of the first solid foods to give to their babies. As a true nutritional powerhouse, guinea-corn could supply your body with everything needed for health growth. Guinea-corn can also help baby to put on healthy weight and also helping in both physical and psychological development.

Brown pap which is called *èkọkọ bàbà* which is one of the most popular baby foods in Nigeria, was often made with guinea-corn, which maximizes its health benefits for babies and promotes healthy growths.

5.2.5. Medical Values of Maize Grains and Guinea-Corn

This study has revealed to us that maize grains and guinea-corn were highly edible and nutritious, and they have medicinal uses among the local people. Maize grain and guinea-corn were used to cure many diseases which it had over the years proved to be very effective. Some of the medicinal values of these two crops included:

- *Omi ògì* or *Ìmídùn* or *Ìmíkún* that was the water that was on top of *ògì èkọ* might be obtained during the preparation of pap was used to soak bark or root of some plants like *ewé dóńgọyárò*, *dókítà igrbó*, and prepared as concoction. This medicinal preparation might be used to treat fever and malaria.
- *Èkọ tútù*, cold-pap was used more often in traditional medicines. It was mixed with herbal roots or some preparations usually granulated, or black particles made of ground leaves and roots to cure some spiritual attacks. At times, this medicine might be used as anti-body prescribed to provide protection against enemies, bad occurrences or to foster breakthrough and posterities.
- Guinea-corn and maize grains might be used as spiritual meals served to the birds or as sacrifice to avert evils or to foster posterities.
- Water filtered through charcoal obtained from maize stalk can be used as a treatment to cure gonorrhea (AbdulRahaman, 1997) cited in AbdulRahaman and Kóláwọlé (2006:1).
- Holes were created or made in some maize grains to make rosary. This rosary was put on the hand (wrist) of a child to prevent him or her from becoming slim.
- *Áádùn* that was prepared from maize grain was used as one of the bride price materials paid by the groom's family to the bride's family. Symbolically, it was meant for fruitful, prosperous and blessed marriage among the Yorùbá.

6. Recommendations

After an in-depth look at the extinct, contemporary Nigerian food derivations and recipes from maize grains and guinea-corn, the following recommendations were made to further enhance the production, preparation, and consumption of food items derived from traditional maize grains and guinea-corn.

- Incorporating maize grains into meals and all the restaurants in Nigeria should incorporate maize grains into their meals and food products. Hence, a return to maize grains means a return to food that is good for you, good for the country and good for the society.
- It was also advisable that mothers or nursing mothers breastfeed their baby exclusively for six months but after the six months, guinea-corn also known as sorghum recommended for babies because it had a lot of health benefits for adults and children. Nigerian women should use pap as food to wean their babies. For example, *kùnúńgeida* was of the baby food cooked from guinea-corn and dried nuts. Feeding a baby with guinea-corn, especially *kùnúńgeida* regularly enabled the baby to grow faster and gain weight. This food was rich in protein, fats and carbohydrate which was needed for child's growth.
- Government should also create awareness to Nigerian nutritional value which have been neglected by Nigerians.
- Nigerians should not neglect their cultural food items as they were part of our identity.
- The forgotten food items and contemporary ones derived from maize grain, guinea-corn and their recipes that had sustained our forefathers were also recommended for this generation and their sustenance.
- It was advisable for Nigerians to embrace the habit of consuming locally produced food items and develop interest in them and consume less of foreign prepared dishes as they were not good for our body system in Nigeria.

7. Conclusion

Maize and guinea-corn were plants grown on a wide variety of soil ranging from fairly coarse sand and clay. They were found in all parts of Nigeria. Maize and guinea-corn farmers must harness this opportunity to the maxima. Even though, maize and guinea-corn were rich in proteins, vitamins, minerals and carbohydrate, they were complete food for more local people in the rural areas than the urban dwellers in the cities. Maize especially was the most important cereal crop in Nigeria ranking behind sorghum in the number of people it feeds. Therefore, adequate and accurate information on this all-important plant was very relevant to our daily need and must not be localized. It was therefore an eye-opener to those traditional preparation method, health benefits/nutritional values and medicinal uses of maize and guinea-corn that were restricted to some localities which were not yet known to other cultural and ethnic groups of people in Nigeria.

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