



Available online at [GSC Online Press Directory](https://www.gsconlinepress.com/)

GSC Biological and Pharmaceutical Sciences

e-ISSN: 2581-3250, CODEN (USA): GBPSC2

Journal homepage: <https://www.gsconlinepress.com/journals/gscbps>



(RESEARCH ARTICLE)



Inventory of the biodiversity of traditional vegetables consumed by the people of the Nyong and Kelle Division: Cameroon

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Publication history: Received on 27 February 2020; revised on 12 March 2020; accepted on 14 March 2020

Article DOI: <https://doi.org/10.30574/gscbps.2020.10.3.0052>

Abstract

The present work aims to show the biodiversity of traditional vegetables consumed by the people of the Nyong and Kelle division by an inventory. Traditional vegetables are those vegetables which originate from a locality or imported from another area, but are consumed by the people of the locality for many years (between twenty five and thirty) years. The consumption habit is transmitted from generation to generation. These vegetables become the heritage of the people consuming them. Some traditional vegetables are being abandoned nowadays in a way that if nothing is done they will disappear and this will lead to the loss of the food identity of this people. A systematic survey was carried out to identify the traditional vegetables found in the markets and crop farms in ten sub divisions of the Nyong and kelle division. In all 25 traditional vegetables were recorded and fell under 15 botanical families according to the Linear Angiosperm Phylogeny Group III classification. According to parts of vegetables consumed 76% leafy, 12% fruit, 4% seed, 4% stem and 4% root vegetables were recorded. 76% of the vegetables was cultivated and 14% was not cultivated. Some vegetables were used in folk medicine by the people to heal certain illnesses. The abandoned vegetables have to be encouraged for sustainable development and for the preservation of the food identity of the people of the Nyong and kelle division.

Keywords: Nyong and Kelle; Cameroon; Traditional vegetables; Biodiversity; Food identity

1. Introduction

Vegetables are those herbaceous plants which parts or entire plant are eaten as supporting food or main dishes and they may be aromatic, bitter, sweet or tasteless [1]. The utilization of leafy vegetable is part of Africa's cultural heritage and they play major roles in the customs, traditions and food culture of the African household. Vegetables are important sources of protective foods, which are highly beneficial for the maintenance of good health and prevention of diseases [2, 3]. Indigenous leafy vegetables are vegetables of a locality which originated from an area and may or may not be confined to that particular region [4]. They account for about 10% of the world higher plants often regarded as weeds. Some indigenous leafy vegetables grow in the wild and are readily available in the field as they do not require any formal cultivation. Many of them are resilient, adaptive, and tolerate adverse climatic conditions more than the exotic species [5].

The total production of vegetables in Africa is lagging far behind the world average: annual per capita production is approximately 50 kg; this production is less than half of all other regions of the world. The vegetable production area in sub-Saharan Africa (about 2.5 million ha) has not changed since 1990, while global vegetable area is increasing (more

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than 50 million ha in 2005, with about 20 million ha in India alone) [6] Per capita vegetable consumption in sub-Saharan Africa is lower than the rest of the global production, and is declining. In sub-Saharan Africa, Nigeria had the highest vegetable consumption at 61.3 kg/capita/year [7].

Leafy vegetables in Cameroon represent the third product of the gardening sector, after onion and tomato, in value of agricultural production [8]. The surveys of food consumption estimated their consumption at 6.5 kg per inhabitant / year, this extrapolation, allows to estimate the Cameroonian national production to 100,000 T [9]. Vegetables play a big role in agriculture, food and generate significant income both in rural and in urban areas [10, 11] They are important sources of vitamins (A, B, C), trace elements, protein, fiber and carbohydrate [10, 12, 13] and thereby contribute to the improvement of the nutritional status of populations in rural areas. According to [14] leafy vegetables such as amaranth have the same average proteins than seed legumes (peanut, soya bean, and cowpea), contain seven times more calcium, twice as much iron, 191 times more carotene and 78 times more vitamin C.

There exists in Cameroon a remarkable abundance of vegetables of all kind [15]. It is assumed that the total number of plants used as vegetables in Cameroon is approximately 150 species [12]. Both local and introduced vegetable plants are grown in Cameroon.

There is little solid information on the different kind of vegetables consumed in Cameroon and information on vegetables consumed by the people of the Nyong and kelle division is lacking. The food habit of the people of the Nyong and kelle division lies on tubers such as cassava, cocoyam, yam, sweet potatoes and leafy vegetables such as *Talinum triangulare*, *vernonia amygdalina*, *Amranthus hybridus*, *Gnetum africanum* and *Corchorus olitorius*. Some vegetables such as *Crassocephalum rubens* have been abandoned by the young generation and some varieties of *Amaranthus hybridus* and *Corchorus olitorius* are disappearing in this locality, and this has led to the loss of the food identity of the population of this area. The stake is that the next generation will know nothing about some of the vegetables consumed by their fore fathers if nothing is done, the first action we took was to survey all the vegetables consumed by this population and note their different uses. The main purpose of the present study is to survey all traditional vegetables consumed and encourage the cultivation of those ones which are on the way of disappearing for sustainable development and preservation of the food identity of the people of the locality which is their heritage.

2. Material and methods

2.1. Site Location

The Nyong and Kelle division (3°54' - 3°58' N and 10°47' - 10°49' E) is located in the Centre region among the ten regions that Cameroon has. The total surface area of the study site 6.362 Km² or 11% of the total surface area of the centre region. The division owes its name from two rivers the Nyong and Kelle rivers. The division comprises 10 sub divisions with Eséka headquarter of division and sub division (Figure 1).

2.2. Sampling

Sampling concerned different traditional vegetables Samples. These heritage vegetables were obtained by purchase, gathering and by harvesting in crop farms of villagers in the study area.

2.3. Cutting of the study area

With the aid of the administrative map the study area was divided into division, subdivisions and villages. The Nyong and kelle is made up of 10 sub divisions (Biyouha, Bondjock, Botmakak, Dibang, Eséka, Nguibassal, Makak, Ngog mapubi, Matomb and Messondo,) were the first unit for the inventory of traditional vegetables in different markets. The villages were the last inventory unit of heritage vegetables in crop farms and home gardens.

2.4. Survey preparation

The survey sheets were developed on the basis of criteria characterizing traditional vegetables (know-how, typicality, historicity, and environmental sustainability). The survey sheets were made up of open and closed questions. These questions range from the nature of the product to how the product was consumed. The purpose of survey sheet was the establishment of a product description sheet.



Figure 1 Study site.

2.5. Field work

2.5.1. Field work preparatory phase

During this preparatory phase a telephone directory was drawn up and appointments were made with the mayors of each sub division. A telephone directory was constituted with the help of the web site Cameroon united council.

2.5.2. Survey

Field trips to various markets took place during the period of April 4th to June 6th, 2018. During field trips when a heritage vegetable was met, in the market it was purchased and the owner of the product was interviewed. During the interview notes were taken on the local name of the product, its scientific name if possible and its uses. In the opposite case a herbarium was constituted for future identification at the national herbarium of the Institute of Agronomic Research and Development (IRAD). Photographic shots of inventoried products were made. The second phase of the field trips in the villages took place during the period of August to September of the same year. The village head of each locality was met and the purpose of my presence was notified to him. A member of the council of the wise men was entrusted to me; with him the inventory of heritage vegetable was done in crop farms and huts gardens.

3. Results and discussion

3.1. Biodiversity of traditional vegetables

The common vegetables available in crop farms, huts gardens and markets have been summarized (Table1). In all, 25 vegetables were inventoried in ten markets and twenty crops farm, of which 19 were leafy vegetables, 3 were fruits vegetables, 1 root vegetable, 1 stem vegetable and 1 seed vegetable. The highest diversity of species was found in the Amaranthaceae (*Amaranthus*) and Malvaceae (*Corchorus olitorius*) were the most commonly consumed indigenous vegetables. As it was observe by [16] two varieties of Amaranth (*hybridus* and *cruentus*) are widely eaten in the study area. The variety of *Amaranthus cruentus* (figure 3R) is disappearing and if nothing is done to protect this variety the next generation of people in the study area will know nothing about it. There is a wide range of *Corchorus olitorius* which are highly appreciated for their taste and scent (Figure 3H₁, I₁ and L₁). Some are not so much appreciated they are on the way of disappearing because of the rugged nature of their leaves (Figure 3G₁). The amaranths are easily obtained from home gardens backyards near the villages. They are easy to prepare, palatable, and first to appear during the rainy season [15] did a survey of traditional leafy vegetables consumed in the Adamaoua region of Cameroon, they obtained

24 leafy vegetables which is not very different from the number of traditional vegetables obtained in the present study, the difference lies on the variety of species because some leafy vegetables were trees in the Adamaoua region but in the Nyong and kelle division all the vegetables are herbaceous plants. Most of the vegetables in the present study are grown even though a few years ago plants like *Vernonia amygdalina* and *Gnetum africanum* were considered as wild plants but the native population now has farms of these vegetables because they are a source of income for them.

Table 1 Inventoried vegetables.

S/N	Scientific names	Status	Families	Traditional names	Common names
1	<i>Abelmoschus esculentus</i> L.	*	<i>Malvaceae</i>	Bikoyé	Common Okra
2	<i>Allium cepa</i>	*	<i>Liliaceae</i>	Malangma nkong	Traditional onion
3	<i>Amaranthus hybridus</i> L.	*	<i>Amaranthaceae</i>	pooga	Amaranth
4	<i>Asystasia gangetica</i> (Linn.)T,Anders	*	<i>Acanthaceae</i>	Ki njinnjori	
5	<i>Celosia argentea</i> L.	*	<i>Amaranthaceae</i>	Nsangan libii	Soko
6	<i>Colocasia esculenta</i> Schott.	*	<i>Araceae</i>	Libanga	Elephant ear
7	<i>Corchorus olitorius</i> L.	*	<i>Malvaceae</i>	Ndjango	Jute Mallow
8	<i>Crassocephalum rubens</i> (Juss .exJacq.)S.Moore	x	<i>Asteraceae</i>	Bikoundja	Yoruban bologi
9	<i>Cucurbita moschata</i>	*	<i>Cucurbitaceae</i>	Micha	Pumpkins
10	<i>Gnetum africaum</i> Welw.	x	<i>Gnetaceae</i>	Hikok	Eru
11	<i>Gnetum bucholzianum</i> Engl.	x	<i>Gnetaceae</i>	Hikok	Eru
12	<i>Ipomoea batatas</i> (Linn.)Lam	*	<i>Convolvulaceae</i>	Nkweré	Sweet potato
13	<i>Lycopersicon esculentum</i> MilVar.Cerasiforme	*	<i>Solanaceae</i>	Tomato nkong	Tomato
14	<i>Manihot esculenta</i> . Crantz	*	<i>Euphorbiaceae</i>	Mbong	Cassava
15	<i>Pennisetum purpureum</i> Schumach	x	<i>Poaceae</i>	Misongo	Elephant grass
16	<i>Solaneciobiafrae</i> (Oliv&Hiern)C.Jeffrey	*	<i>Asteraceae</i>	Nlot	
17	<i>Solanum aethiopicum</i> schum	*	<i>Solanaceae</i>	Misangar	Mock tomato
18	<i>Solanum macrocarpon</i> L.	*	<i>Solanaceae</i>	Bitoroo	African egg plant
19	<i>Solanum melongena</i> L.	*	<i>Solanaceae</i>	Hisingui	Egg plant
20	<i>Solanum nigrum</i> L	*	<i>Solanaceae</i>	Baam	Black night shade
21	<i>Solanum</i> Sp.	*	<i>Solanaceae</i>	Bouba hisingui	Garden egg
22	<i>Talinum triangulare</i> (Jacq) wild.	x	<i>Portulacaceae</i>	Saba saba	Water leaf
23	<i>Vernonia amygdalina</i> Del.	x	<i>Asteraceae</i>	Madowa	Bitter leaf
24	<i>Vigna subterranea</i> (L.)Verdc	*	<i>Fabaceae</i>	Matop	Bambara bean
25	<i>Xanthosoma sagittifolium</i> (L) Schott	*	<i>Araceae</i>	Macabo	Cocoyam

*: cultivated vegetable, X: not cultivated vegetable

3.2. Leafy vegetables

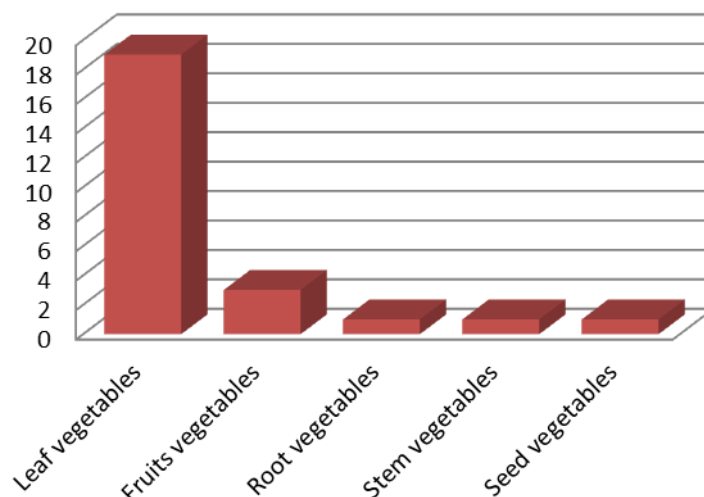


Figure 2 Number of vegetables inventoried according to parts consumed.

The largest part of vegetable consumed was leafy vegetables and the least were stem, seed and root vegetables (Figure 2). This can be explained by the climate of the locality which is an area of high rain fall. Most of these vegetables are available at all seasons but more available in the rainy season. It was also observed by [9] that among the 275 most important species of vegetables consumed in tropical Africa 207 are consumed for their leaves. More than 31 are used for other purposes as roots, fruits, seed and stem vegetables.

3.2.1. Presentation of the biodiversity of leafy vegetables

Acanthaceae

Asystasia gangetica is a herb that grows in old abandoned farms and near huts in the study area. This vegetable is sliced and prepared in ground nuts soup. People from a certain range of age greatly appreciate the vegetable but the problem today is that as the people of this generation have almost passed away, the way of cooking this heritage vegetable has not been transmitted to next generation (Figure 3 A). There is a need to take action to preserve this heritage vegetable before it disappears.

Araceae

In this family of Araceae the shoots of *Xanthosoma sagittifolia* (Figure. 3B) and *Colocasia esculentum* (Figure. 3C-E) varieties are consumed in the locality. The particularity of these vegetables is that they are not consumed the same day they are cooked. They pass the night on fire and are consumed the next day. The leaves are itching if they are not properly cooked. Today the young generation is abandoning this vegetable saying that cooking the vegetable is tedious.

Asteraceae

The Asteraceae family has a vegetable which has a national and an international renowned the famous "Ndolé" also called bitter leaf. *Vernonia amygdalina* (Figure. 3G -L.) is highly appreciated throughout the country and in the Nyong and Kelle division. This vegetable was occurring naturally but nowadays it is been grown because of its renown. The vegetable is cooked in many different recipes. It is bitter but after been swallowed it gives a sweet taste. There is another vegetable of this family which occurs naturally but is been abandoned and weeded by the population of the study area. It is said that *Crassocephalum rubens* (Figure.3F.) causes memory omission that is why it is abandoned by the population. This vegetable *Crassocephalum rubens* is consumed in Benin and is considered of national importance, it is placed in class C in the list of order of importance of vegetables in Benin [17] This shows that *Crassocephalum rubens* consumption has to be encourage and it might not cause memory omission as it is said in our area of study. *Vernonia amygdalina* has many varieties, thin leaves are generally bitterer than those with large leaves and the leaves need to be boil and washed thoroughly with lime been before cooking.

Solanecio biafrae (Figure. 3M.) is a herbaceous liana from the Asteraceae family which grows on humid soils and on rocks in the study area. The leaves are thick and rich in water. The leaves are sliced and cooked in groundnuts soup accompanied by tubers. This leafy vegetable nowadays is abandoned by the young generation but is highly appreciated

by the old generation for its taste. It is important to note here that among the people interviewed those who could say a word on the vegetable were people above sixty years of age.

Amaranthaceae

There is a high biodiversity of the Amaranthaceae family in the Nyong and Kelle division. All the amaranth varieties are grown but some varieties are disappearing. The amaranths are very appreciated for their taste and flavour. The (Figure.3 N-V) below shows the varieties of amaranth met in the markets, crop farms and huts gardens of the locality. The amaranths are annual herbaceous plants, more available in the rainy season, in farms and huts gardens. Amaranths can be cooked in many dishes and recipes in the study area. The leaves are sliced and cooked with groundnuts they can also be cooked without groundnuts. The amaranth (Figure 3R) is on the way of disappearing, it was met in none of the markets in the study area and the people of the study area said its brad was lacking.

Convolvulaceae

In this family the leaves of sweet potatoes (Figure. 3W-X) are those that are been consumed by the population of this area. The leaves are appreciated by the population even though the young generation is gradually abandoning the cooking of sweet potatoes leaves, they instead prefer their tubers.

Cucurbitaceae

The leaves of this vegetable (Figure.3Y) are very appreciated and cooked in many dishes of the locality. Mostly available during the rainy season and grown in home gardens and crop farms.

Euphorbiaceae

This is the most consumed leafy vegetable in the study area. The cassava leaves are found in the farms of each and every individual. It is difficult that a family makes one week without consuming this vegetable. It is cooked in many traditional dishes. Cassava leaves (Figure. 3 Z-C₁) make many people in the division not to suffer from hunger. It is said to be the dish or vegetable of the poor. The leaves of this vegetable are not sold in local markets except Eseka market where it was sold; this is because Eseka is the highest administrative unit and most developed area in terms of infrastructure and people from nearby villages bring the vegetable in the market.

Gnetaceae

There exist two varieties of this family in the studied area which are *Gnetum africanum* and *Gnetum bucholzianum*. *Gnetum africanum* (Figure.3.D₁- F₁) is more abundant in the locality than *Gnetum bucholzianum*. This leafy vegetable is among the most appreciated in the Nyong and Kelle division. This vegetable is appreciated by the young and old generation. It is one of the sources of income for the councils of this locality. Business men from neighbouring countries such as Gabon, Equatorial Guinea and Nigeria afford this vegetable in local markets. *Gnetum africanum* is a liana that climbs on other plants, it is an under growth plant more available during the dry season. There is a high pressure on *Gnetum africanum* in the way that it has been domesticated; presently some farms of *Gnetum africanum* exist in Matomb subdivision. Some youths take the dry leaves of this vegetable as a drug. They smoke it as Indian hem. In Nigeria the leaves of *Gnetum africanum* are used to treat haemorrhoids, high blood pressure and throat problems [18, 19]

Malvaceae

Mallow is an annual plant with an erect stem (Figure. 3G₁-T₁). The leaves of mallow are alternate. The fruit is an elongated capsule. Mallow is one of the principal leafy vegetable consumed in the study area. It is cooked in groundnuts soup in the Nyong and kelle division. The leaves are gummy and are cooked fresh or dried.

The leaves of okra (Figure. 3U₁) are consumed and are appreciated. Before the fruits get mature the people start by consuming the leaves which are mucilaginous plants in nature. The leaves are sliced and put in hot oil and grounded groundnut is added. The leaves can be accompanied with tubers

Portulacaceae

This is a vegetable that occurs naturally and is available at all seasons of the year. This vegetable is also called water leaf (FigureV₁). It is slightly gummy and has a sweet taste. This vegetable is used in the treatment of measles; it is good for pregnant women during delivery [17].

Solanaceae

The solanaceae (Figure.W₁-Z₁) is a family of leafy vegetable very appreciated in the Nyong and Kelle division even though they are slightly bitter. People appreciate them for their tonic properties such as *Solanum aethiopicum schum* (Figure3. X₁) fruits of this vegetable are boiled and the water is drunk as tea at day break, it is said to be the secret of vigour and longevity of the “bantous” [20]. *Solanum aethiopicum schum* has pharmaceuticals properties which are used by the African people to heal the Acquired immune deficiency syndrome [21] parasites infections [22] and the metabolic syndrome [23, 24] People who consumed this vegetable said they could spend many hours in the farm working without getting tired.



A) *Asystasia gangetica*



B) *Xanthosoma sagittifolium*



C) *Colocasia esculenta*



D) *Colocasia esculenta*



E) *Colocasia esculenta*



F) *Crassocephalum rubens*



G) *Vernonia amygdalina*



H) *Vernonia amygdalina*



I) *Vernonia amygdalina*



J) *Vernonia amygdalina*



K) *Vernonia amygdalina*



L) *Vernonia amygdalina*



M) *Solanecio biafrae*



N) *Amaranthus hybridus* L. subsp. *cruentus* (L.)Thell.



O) *Amaranthus hybridus* L. subsp. *cruentus* (L.)Thell.



P) *Amaranthus hybridus* L. subsp. *cruentus* (L.)Thell.



Q) *Amaranthus lividus*



R) *Amaranthus hybridus* L. subsp. *cruentus* (L.)Thell



S) *Celosia argentea*



T) *Amaranthus hybridus* L. subsp. *cruentus* (L.)Thell.



U) *Amaranthus retroflexus*



V) *Amaranthus hybridus* L. subsp. hybridus



W) *Ipomoea batatas*



X) *Ipomoea batatas*



Y) *Cucurbita moschata*



Z) *Manihot esculenta*



A₁) *Manihot esculenta*



B₁) *Manihot esculenta*



C₁) *Manihot esculenta*



D₁) *Gnetum africanum*



E₁) *Gnetum africanum* sliced in market



F₁) *Gnetum bucholzianum*



G₁) *Corchorus olitorius*



H₁) Corchorus olitorius



I₁) Corchorus olitorius



J₁) Corchorus olitorius



K₁) Corchorus olitorius



L₁) Corchorus olitorius



M₁) Corchorus olitorius



N₁) Corchorus olitorius



O₁) Corchorus olitorius



P₁) Corchorus olitorius



Q₁) Corchorus olitorius



R₁) Corchorus olitorius



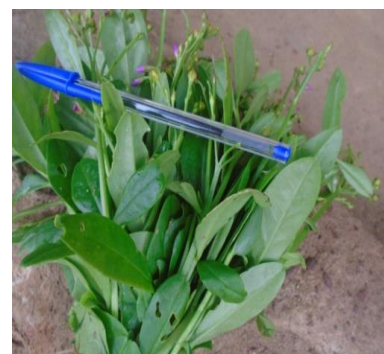
S₁) Corchorus olitorius



T₁) *Corchorus olitorius*



U₁) *Abelmoschus esculentus*



V₁) *Talinum triangulare*



W₁) *Solanum nigrum*



X₁) *Solanum aethiopicum schum*



Y₁) *Solanum nodiflorum*



Z₁) *Solanum macrocarpon*

Figure 3 Photograph of leafy vegetables inventoried

3.2.2. Seeds vegetable

The family of seeds vegetables (Figure.4 A₁-C₂) encountered was the family of Fabaceae which included *Vigna subterranea*.

Fabaceae (*Vigna subterranea*)

This seed vegetable produces underground pods. These seeds vegetable are cooked to welcome very important personalities in the tradition of the people of this locality. The month of April carries the name of this seed vegetable in mother tongue of the people of this area. There is a traditional feast dedicated to this seed vegetable in the culture of the population of this area.



A₂) Plant of *Vigna subterranea*



B₂)Pods of *Vigna subterranea*



C₂) Seeds of *Vigna subterranea*

Figure 4 Photographs of seeds vegetables inventoried.

3.2.3. Fruits vegetables

The fruit vegetable encountered were the families of Malvaceae and Solanaceae.

Solanaceae

The fruits are the eggplant (Figure.5D₂-G₂). These fruits are eaten raw ok cooked. Some fruits are eaten raw while drinking palm wine. The palm wine drinkers said the fruit vegetable increased the taste of the palm wine.

The tradional tomato (Figure.5 H₂) is muchly appreciated. The people met said it naturally increased the flavour of soup.The tomato is naturally resistant to weeds but the tomato is no more cultivated by many people and it tends to dissappear. People prefer concentrated tomatoes produced by industries for fast and easy cooking.

Malvaceae (Abelmonchus esculentus)

This fruit vegetable is okra (Figure.5I₂-O₂) and is very appreciated in the locality. The fruits of okra are cooked fresh or dried. The fruits are cooked in different traditional recipes. There is a high diversity of the fruits of okra of in the form, colour and size.



D₂) *Solanum aethiopicum*



E₂)*Solanum melongena*



E₂) *Solanum* sp.



F₂) *Solanum* sp.



G₂) *Solanum* sp.



H₂) *Lycopersicon esculentum*
MilVar.Cerasiforme



I₂) *Abelmoschus esculentus*



J₂) *Abelmoschus esculentus*



K₂) *Abelmoschus esculentus*



L₂) *Abelmoschus esculentus*



M₂) *Abelmoschus esculentus*



O₂) *Abelmoschus esculentus*

Figure 5 Photographs of fruit vegetables inventoried.

3.2.4. Stem vegetable

Poaceae

It is the inner part of the stem of this plant (Figure.6 P₂-Q₂) that is consumed in this locality. The population have abandoned the consumption of this stem vegetable that was much appreciated as we got from the old people interviewed during field trips.



P₂) *Pennisetum purpureum*

Q₂) Inner stem of *Pennisetum purpureum*

Figure 6 Photograph of stem vegetable

3.2.5. Root Vegetable

Liliaceae

This family has the traditional onion which is a bulb that is much appreciated for its high flavour and scent. The onion when sliced is put into a bottle filled with water, this water is used for cooking rather than the onion itself. The onion is sold in the market at high prices and it is a source of income for the people growing this traditional onion.



R₂) Harvested plant of *Allium cepa*

S₂) Bulb of *Allium cepa* sold in the market

Figure 7 Photograph of root vegetable

Table 2 Medicinal uses of some vegetables consumed in the Nyong and kelle division

S/N	Plant	Medicinal uses
1	<i>Allium cepa</i>	Eye worm, high blood pressure
2	<i>Amaranthus hybridus</i>	Fever, anaemia, nursing mothers
3	<i>Colocasia esculenta</i>	<i>Amoebic dysentary</i>
4	<i>Corchorus olitorius</i>	Tooth problems, constipation, tonic decoction
5	<i>Crassocephalum rubens</i>	antibiotics
6	<i>Gnetum africanum</i>	Constipation, haemorrhoids, reduces alcohol level in blood
7	<i>Ipomoea batatas</i>	Makes abscess break through easily
8	<i>Manihot esculenta</i>	Anaemia
9	<i>Solanecio biafrae</i>	Eye infections
10	<i>Solanum aethiopicum Schum</i>	High blood pressure, Increases sexual strength in males,
11	<i>Talinum triangulare</i>	Facilitates delivery
12	<i>Vernonia amygdalina</i>	Constipation, diabetes

4. Conclusion

The present study records the largest part of the biodiversity of indigenous vegetables consumed by the people in the Nyong and Kelle division. The present work reveals that some vegetables are being abandoned nowadays and there is a need to preserve the vegetable heritage of the people of the study area because these vegetables are sources of good health, income and environmental sustainability. This heritage needs to be transmitted to future generations..

Compliance with ethical standards

Acknowledgments

My acknowledgement goes to the Food Biochemistry and Technology Laboratory (LABTA) of the National School of Agro Industrial Science (ENSAI) of the University of Ngaoundere and to the Groupe de Recherche en AgrUnit under Food-Processing Contract for Pro Products and Processes (GRAPPE).

Disclosure of conflict of interest

There exists no conflict of interest in connection among authors in this research article

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How to cite this article

BAYI J, NGAH E and MEGUENI E. (2020). Inventory of the biodiversity of traditional vegetables consumed by the people of the Nyong and Kelle Division: Cameroon. *GSC Biological and Pharmaceutical Sciences*, 10(3), 53-68.
