



# Newspaper Collection Veritable Research Source on Agricultural Products: Cassava as a Case in Michael Okpara University Library Abia State Nigeria

Joy C. Onyenachi<sup>1</sup>, Vivian C. Ukawuba<sup>2</sup>

<sup>1</sup>Deputy University Librarian, Michael Okpara University of Agriculture, Umudike, Nigeria

<sup>2</sup>Higher Library Office, National Root Crops Research Institution, Umudike, Umuahia, Nigeria

Email: Onyenachijoy@gmail.com, vindunita@yahoo.com

**How to cite this paper:** Onyenachi, J.C. and Ukawuba, V.C. (2020) Newspaper Collection Veritable Research Source on Agricultural Products: Cassava as a Case in Michael Okpara University Library Abia State Nigeria. *Open Access Library Journal*, 7: e5859. <https://doi.org/10.4236/oalib.1105859>

**Received:** October 16, 2019

**Accepted:** February 21, 2020

**Published:** February 24, 2020

Copyright © 2020 by author(s) and Open Access Library Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

## Abstract

Agricultural information source through Newspaper collection in libraries has become inevitable due to the need to strengthen the information disseminating capacity to reach researchers on agricultural information knowledge. Newspaper readers mostly go for interest areas like sports, governance, advertisement, stock market quotations etc. While many believe that information on agriculture is preferably sourced from research projects, of tertiary institution's faculty/department of agriculture as well as publications from specialized agricultural institutions, and agriculture ministries in federal and state government. Newspaper is quick source for consultation but unfortunately not remembered. The oversight is due to the popular belief that news of yesterday is stale so newspaper is seen relevant in daily news. However, libraries acquire newspapers for keeping as research materials they don't discard as most individuals do. Using cassava as example of agriculture publications in newspaper, the study has tried to bring to the knowledge of the populace that newspaper is not just for daily quick news but veritable research source.

## Subject Areas

Agricultural Science

## Keywords

Newspaper Collection, Research Source, Agricultural Products, Cassava

## 1. Background to the Study

Newspaper is vital source of information in enlightened society. It provides the most recent information to the populace as well as serves as research source. To the journalists and newspaper readers, newspaper presents current daily news by the next day, the news is considered stale. After the day of publication, most readers consider the value of the newspaper worthless hence it is discarded, torn, and the worst relegate use in Nigeria is as wrapping paper for sellers. The electronic newspaper providers provide for daily reading as well. The electronic copies are hardly preserved for future consultation. Print copy is more available for accessibility after the day the newspaper is published. The drive for knowing the news, the paper carries should go beyond one day information quest. The news is for permanent value worthy of future consultation and use for individual and society development. News on policy making and implementation, projects, industries, companies, manufacturing, science and technology, health, agriculture, wealth, education, religion, sports, music among others feature in Newspaper.

Newspaper is excellent source of information because it covers a wide variety of subject matters. Most information (news) in the paper is the original (primary) source, of that information. Oluyemisi (2015) [1], states that in every language, the newspaper is an irreplaceable primary resource not only for today's information needs but for posterity.

Quality agriculture information constantly appears on newspapers from Government, Agricultural institutions, Agricultural researchers, food manufacturers, Agricultural industries, interview reports from local farmers, large scale farm owners, Agricultural Export and import dealers others too many to mention. These are read as news which is quickly discarded and forgotten.

## 2. Statement of the Problem

Shelves of libraries in academic institutions, public libraries and research libraries are filled with newspapers. Most often the custodians see the newspapers as occupying valuable spaces that should be used for other regarded "valuable" information materials. At such, to create space Newspaper is weeded and discarded. Publications on cassava on the pages of newspapers fall into this regrettable fate of such a waste of knowledge. The researcher's observation shows that most libraries circulate daily Newspapers to readers at the serial unit of the library while the previous ones are preserved in separate rooms without much care. The newspapers stay there over the years and gradually deteriorate and are weeded off as the need for space arises. This research is aimed at using publications on cassava in library collection of Michael Okpara University of Agriculture Umudike as a case to prove the worth of Newspaper as valuable research source for individual and society development.

### Purpose of Study

The main purpose of this study is to present evidence that Newspaper is ve-

ritable source for research using cassava as a case.

**Objectives that guide the study are to:**

1. Identify publications on cassava in the Newspapers in Michael Okpara University library Abia State Nigeria.

2. Identify from users' interest profile in the serial department of Michael Okpara University library Abia State Nigeria those for publications on cassava.

### **3. Literature Review**

#### **3.1. Newspaper as Veritable Research Source**

Newspapers are veritable information resource materials in various subjects. Newspapers keep readers abreast of current development as well as educate the society. The information contained and the frequency of publication make newspaper a veritable source of information for researchers, teachers, students and other information seeking groups in the society. Owairu (2010) [2] observes that despite keen competitors from other sources of information, newspaper has exerted a major influence because of the inherent advantages of being relatively cheap, portable, readily available and frequently published. Newspaper serves as most up-to-date information for citizens for their various information need.

It is more cost effective for individuals to have access to newspaper in the library than daily purchase. Hence people visit libraries to read newspaper as to keep abreast with current information as well as research into government and individual publications on topics/subjects relevant to them.

Onwubiko (2005) [3] maintains that newspaper is regular source of primary and up-to-date information for students, scholars, administrators, researchers and other citizens not in the identified categories. Smith (2007) [4] sees newspaper as indispensable source of current information of which individuals who cannot afford to buy it regularly through the vendor stands to get a glimpse of major headlines. Though newspaper is usually printed with low quality paper type, it does not affect their usefulness in education, research, recreation, entertainment and any interest for which the citizens need the news/information.

Newspaper publication covers many subjects agriculture inclusive. Newspaper is indeed veritable research source for national development because Newspaper keeps readers abreast of current development as well as educates the society. The information contained and its frequency of publication make Newspaper indispensable source of information for research, academic and any other information need like current news within and outside the nation.

#### **3.2. Food Sustenance and Elimination of Hunger (SDG2)**

According to Njoku (2017) [5] "experts warning that Nigeria faces serious threat to famine if the issue of food provision is not given prime attention gave rise to the creation of three universities of Agriculture in 1992. The three specialized Agriculture Universities are: Abeokuta, Makurdi and Umudike. The concepts of

food self-sufficiency and food security have since 2000 been major planks in the policies of Government. The latest Agricultural policies include—National Food Security Programme (2008), Nigeria Vision 20:2020 Economic Transformation Blueprint (2009), Agricultural Transformation Agenda (ATA) of 2012 and the Green Alternative: The Agricultural Promotion Policy 2016-2020. (APA) of 2016 which is a major plank in the Economic Recovery and Growth plan (ERGP) (2016) of the Federal Government. The Fourth Republic Administration headed by President Mohamadu Buhari in 2017 queues into United Nation’s vision 2030 for zero hunger.

The effort of former presidents of Nigeria Olusegun Obasanjo and Goodluck Ebele Jonathan on use of cassava in baking is mile stone in achieving food sustenance checking hunger among Nigerians. The Newspaper publications on cassava stands as a wake-up call: School curricula should very much emphasize teaching of variety usage of agricultural products like cassava. Provision of agricultural equipments for schools should be taken serious; the rural farmers and large scale wealthy farmers should be galvanized as Research and Development (R&D) community; Agricultural investments should spur new discoveries for ultimate commercializing; with a transformative impact on the economy, concerted research and development campaign should give birth to entirely new business sectors within agriculture to feed the citizens and eradicate hunger (sustainable agriculture).

Cassava has much value as stable food, export and import commodity and company raw material for production. The following literature expatiates on them.

### **3.3. Importance of Cassava to Nigeria**

Cassava is an important annual food grown throughout Nigeria. Nigeria is the largest producer of cassava in the world, with about 34 million tons yearly. Cassava is botanically called *manihot esculenta* and called maniac or tapioca. Cassava is used in a variety of products, including being processed into flour for baking other confectioneries not only bread. It is also used for industrial starch production and also processed into garri flour, which is a staple food item in the country. Cassava chips are made as well as cassava being processed into feed for livestock. Cassava production, processing into chips and pellets, industrial starch, ethanol, garri flour and fufu is still a very lucrative agro-industrial project Adewunmi (2016) [6].

Adewunmi represents the importance of Cassava to Nigeria thus:

Cassava, no doubt is one of the most important stable food crops grown in Nigeria and other tropical Africa. Because of its efficiency for food energy, year-round availability, tolerance to extreme stress conditions and suitability to present farming and food system in Nigeria, it plays a major role in the provision of basic staple food for over half of Nigeria 170 million populations. Additionally, Cassava is an industrial crop from which Ethanol,

starch, Glucose syrup, sweetener etc are produced. These products incidentally are also raw materials to numerous utility products. Hence, Cassava can trigger a massive industrial revolution that will generate over twice the revenue of what Nigeria realized from oil at its peak and provide employment opportunities for millions of Nigeria in farming and industry (P. 40).

Uba, (2015) [7] points out that cassava is used mainly for producing animal feed. The dry roots chips and pellets are usually preferred by industrial animal feeds producers in America and Europe. Alcohol is also extracted from cassava. Textile industries and food industries need starch.

### **3.4. Cassava Intervention in Achieving the Nation's Drive for Small and Medium Scale Industry and Other Economic Diversification**

Cassava has the ability to thrive in poor soils and has considerable resistance to drought. Cassava is seen as readily available raw material for establishment of small and medium scale industries in Nigeria. Okechukwu (2015) [8] IITA project manager, cassava seeds systems says "cassava is a major cash crop that can help drive industrial development while delivering higher incomes to smaller farmers".

According to Adewunmi (2016), political will is the setback Nigeria is suffering. He presents as follows:

i. Ireland was an importer of food years ago but with determination she produces ten times of her food needs and now exports 90% of the food produced in the country.

ii. Malaysia took oil palm seeds from Nigeria, at present, the country makes two times of what Nigeria ever realized from oil at its peak.

iii. Thailand has a maximum of 5 months of rain in a year but she attains self sufficiency in rice production as well as export to other countries.

Ajayi, Amar and Adekoya (2016) [9] state that Nigeria being the largest producer of cassava in the world has comparative advantage over other countries. Why can't we use what we have?

It is undisputable that cassava can solve the problem of food security in Nigeria, trigger industrial revolution and provide more revenue than fossil oil ever provided. Adebayo (2015) [10] maintains that cassava production is capable of fueling economic growth and economic development. Prominent in its industrial applications is the use of cassava for glue, biscuits, pharmaceutical products, confectionery, noodles, magi cubes, paper-cartons, animal feed, pastries, mosquito coils, ethanol, textile industrial products, dry cell batteries, toothpaste, biodegradable products and most recently, the brewery industry is using it as alternative or complementary to sorghum, maize starch and barley. This implies a huge market where farmers can earn revenue.

It is worthy of note that in 21<sup>st</sup> February 2016, the African Cassava Agronomy Initiative (ACAI) kicked off with plans to improve the livelihoods and incomes

of cassava farmers in Nigeria, Ghana, Tanzania, Uganda, and DR Congo by researching and tapping into implementing best-bet agronomic practices. The ACAI is placed within the context of intensification of cassava based systems with a focus on the development of cassava agronomy recommendations to improve the productivity and quality of cassava roots in Nigeria, Tanzania, Ghana and Uganda (Ogbe, 2006 P. 51) [11].

Concerning the role agriculture can play in the drive to diversify the economy, Adewunmi (2016) [6] states:

Cassava has five major industrial products, namely, ethanol, industrial starch, cassava flour, glucose syrup and sweetener. Each of these is a raw material to numerous utility products with limitless domestic export market potentials. This is to say that cassava can trigger massive industrial revolution that will employ millions of Nigerians in farming and industry.

Adewunmi reports that Nigeria Cassava Growers Association (NCGA) which he is the National President “have requested for and got 6000 hectares of land for ethanol production from many states. They are starting with Ekiti State, where the Governor, Ayodele Fayose, has granted 6000 hectares of farmland for cultivation of cassava that will be used for the production of ethanol.

According to Adewunmi NCGA has over 100 graduate extension staff equipped with GPS and Laptops that ensure that every cassava farm, especially, for High Quality Cassava Flour (HQCF) is tracked and recorded in our database. In February 2016, Cassava Development Microfinance Bank was floated to benefit the famers. He assures that all beneficiaries of loans and grants are listed with their full identities in their website (<http://www.nigaonline.org/>) and can be reached on phone for confirmation.

### **3.5. Cassava as Export Crop**

Until 1996, cassava and its allied products were on the export prohibition list. From 1996, its ban was lifted. With the policy action, Nigeria exporters were given the opportunity to develop export markets for this product. Cassava for exports include dry cassava leaves chips, pellets, cassava meal, flour, starch and ethanol. Cassava garri and foo-foo when well processed and packaged can be sold on the shelves and as well exported to Europe and North America with European Union accounting for about 90 percent of the total buyers. About 30per cent of cassava production globally is used for starches and other industrial products and only less than one percent is processed into ethanol particularly in Brazil. It is a choice animal feed material because of its high carbohydrate content. It is however mixed with protein source such as soya beans (Uba, 2015).

According to Uba Europe is the major importer of cassava for animal production. Mordi (2016) [12] who signed Memorandum of Understanding (MOU) between Ebonyi State Government and his company Union Dicon states that “in the terms of agreement, government will contribute 15,000 hectares of land spread across the state for the union-Dicon salt to grow cassava and establish a

factory where cassava products would be processed into raw materials for export and domestic use (P. 9)".

Mordi ensures that his company is willing to invest in the state to take subsistence agriculture to industrial level. He said Dicon would engage in growing cassava in commercial quantity and process them into various products like sweeteners and industrial starch for export. He added that his company's target was to contribute to the industrialization of the state and reduce the importation of industrial starch and other products.

### 3.6. Cassava Value Chain and Job Creation

Insight from Nation (2015) [13] Sunday November 22<sup>nd</sup> reports that "Former President Obasanjo during his tenure initiated the idea of cassava bread in order to promote the cassava value-chain by not only creating demands for its consumables, but also provide job opportunities for thousands of Nigerian youths who are roaming about on the streets.

President Jonathan carried on same cassava initiative. It is expected that this high quality cassava inclusion with wheat in bread will assist the farmers to produce more cassava with a ready-made market and by and large it will create employment opportunities (Jaiyeola, 2015) [13]. Jaiyeola notes that though there are some challenges especially in the area of sourcing for raw materials however, he hopes that by the time all the value chains are operational such a problem will become a thing of the past. As long as people are more convinced about the policy and could see the turnover for those people that ventured into it, more investors will come in and the multiplier effect will solve the problem of unemployment. Jaiyeola further reveals that the government also took a bold step by giving flour millers the opportunity to acquire some of the processing machines in their custody and that Honey well benefited, with acquisition of about 500 hectares of land in the states where these machines were located. According to him, this will go a long way to have a dependable cassava farm and monitor the quality of the cassava flours that are being used in their daily operation.

Reacting to some of the window of opportunities said to have been provided by the Federal Government in terms of access to grants and loans from the Bank of Industry (BOI), Jaiyeola notes that this is another dimension that will go a long way to assist flour millers to achieve the inclusion of 10 per cent cassava flour in their daily operations. He states "we believe in this policy and the overall backup strategy. If this consistently can be maintained and all other value chains key in, it is a matter of time before cassava bread will flood the market".

Anazie (2016) [14] reports that British American Tobacco Nigeria Foundation (BATNF) in collaboration with the International Institute of Tropical Agriculture (IITA), initiated a program: Cassava Enterprise Value Chain Development project, aimed at empowering smallholder farmers in the rural communities across Nigeria. One of such communities is Otu in Itesiwaju Local Council of Oyo State. To support this, BATNF distributed agricultural support inputs in-

cluding improved varieties of cassava stem, fertilizer herbicides, pesticides, knapsack sprayers, among others.

The Guardian, during a tour of some of the farms in Oyo State, observed that the foundation, through one of its agricultural interventions, is currently enhancing the capacity of smallholder farmers in rural communities across Nigeria, by encouraging farmers to initiate cooperative and agro-innovative economic activities, whilst adopting renewable and energy-efficient technology and implement practices that are climate adaptive and protective of soil health through trainings.

It also provides periodic trainings on best agronomic practices to smallholder farmers through IITA and inputs were also provided. This is to drive a prospective increase in production and income of the farmers, especially the women, in order to improve the standard of living of beneficiaries and this has been achieved. The varieties of cassava stem given to the farmers are those that take between nine months and one year to be harvested. These include TMS 572, TMS 419, and TMS 581. These are treated stems unlike the untreated natural stems. These varieties of stems are good for consumption, rich in starch, and meet international market standards.

The foundation intervention through the cassava Enterprise Value-Chain Development project has made the farmers who operate at a subsistence level to now be owners of hectares of farmlands and employers of labour who work on the farmlands to enable them, meet the increasing market needs. The transformations farmers have witnessed would not been possible without the full technical support of IITA.

The farmers do not only rely on the sale of cassava they also sell starch from cassava to companies that require it in commercial quantities. The fruit of the root is also sold to companies for industrial use. The beneficiaries now have streams of income thereby getting more revenue at every given point across the value chain.

The Foundation helps the farmers in facilitating this process which is not only limited to the local market, but also enabling access to major commercial markets and processing companies that require cassava in large volumes. All that is required of the farmers is to have and sell their produce. The BATNEF and IITA project for farmers move the farmer from subsistence farming to commercial level given the training received.

Adewunmi (2016) reports that under President Buhari with Audu Ogbeh as Minister of Agriculture 20 per cent cassava flour inclusion in bread making is laid. Farmers are jubilant because it favors them.

In 2011, the successful production of bread with about 40 percent cassava and 60 per cent wheat content by the International Institute for Tropical Agriculture (IITA) led to President Goodluck Jonathan moving that the country would soon have a new policy on bread content. At the presentation of the bread to the Federal Executive council, the president directed the Ministers in the relevant min-



istries to come up with new policies that will encourage the production of cassava bread in Nigeria (Sun Editorial Saturday December 2011, 17, P. 8) [15].

The effort began during the era of former president, Olusegun Obasanjo; then was to inject 10 percent cassava content into bread production. The effort of IITA is commendable for achieving scientific breakthroughs. The cassava content in bread will help Nigeria save some foreign exchange in importation of wheat.

As at 2011 cassava flour equipment was duty-free. According to Guardian Editorial (2011, Thursday December 22 P. 14) [16] “cassava bread is not new in Nigeria. Cassava has been used in baking bread in the country for more than 30 years by some research institutes in the Old Western Region. The oil giant, Shell BP, also used to give cassava bread to its staff and customers”.

In the Insight from the Nation on Sunday (2012 July 1<sup>st</sup> P. 23) [17] “some Nigerian companies are using cassava flour to manufacture cassava bread; notable among them is UTC Nigeria and Food Concepts”. Olaniyan (2012) [18] CEO, UTC Nigeria recounted “after 92 trials and almost three months from the date of our initial trial, we were able to crack the nut, and in February 2012, we achieved a sustainable commercial recipe for White Bread and Wheat Grain Bread, with 20 percent high quality cassava bread”. Her company not only uses cassava flour for bread, but also for about 12 other products like beef rolls, doughnuts, cakes, apple pies, croissants, milk bread, cookies and burger rolls.

Sobo (2012) [19] reports that Deji Akinyanju, CEO of food Concepts also trumpets a similar success story with cassava flour. “We successfully added 20 per cent high quality cassava flour to our new cassava bread, which is nutritious and produced in a hygienic environment. Our research of this product has taken over nine months to get to this point of final formulation, which has been cassava flour is not ideally suited for bread making. Not all types of wheat are suitable for bread making. That is why certain types of wheat flour are used for biscuits, cakes etc. cassava flour without glutamine would yield a brittle kind of loaf which crumbles easily, cannot be sliced and certainly unfit for sandwiches. To achieve cassava bread Sobo points out that “we will either have to invest heavily in glutamine factories or import millions of tons of it”. He further reveals that giving someone cold cassava bread would almost amount to giving the child who asked for bread stone according to the Biblical story. It becomes that hard and solid and so cassava bread cannot be preserved for long without further additives.

From Insight in the Nation on Sunday July 1<sup>st</sup> 2012, “Nigerian companies that have embraced cassava flour want the Federal Government to give them import duty waiver on enzymes (Magic solutions) in high quality cassava flour recipes, which they presently import at high cost because they are not manufactured in Nigeria” (P. 26).

They are a necessity for success because of the absence of gluten in high quality cassava flour. The waiver enzymes is registered for, pending the time en-

zymes can be locally manufactured, tested and found to be acceptable to consumers. We have now commercialized the product in follow within the next three to six months.

Olarewaju (2015) notes that Honeywell flour mill has started with 2.5 percent cassava flour inclusions in production with a view to increasing it to 10 percent. The gradual process is necessary in order to have a solid back up plan for greater performance in the not too distant a future. Ajayi (2016) reports that Honeywell and Golden Penny which are the major players in the industry are currently adding 10 percent of high quality cassava flour to wheat and have advised bakers to add the remaining 10 percent to make the added quality of 20 percent. Salami explained that the composite flour with 20 percent high quality cassava yields better output and guarantees profitability apart from its nutritional value.

Ajayi, Anwar and Adekoya (2016) note that it is not only cassava that can be used for baking bread; yam, rice, potatoes and such carbohydrates can be used, but Nigeria has comparative advantage in cassava, that is why cassava is settled for.

## **4. Methodology**

### **4.1. Design of the Study**

The design for the study is survey. Survey study according to Bailey (1982) involves the use of data from direct observation, interview, questionnaire or extracting relevant information from available source. The survey method adopted is extracting relevant information from available source hence it is document study.

### **4.2. Area of Study**

Area of study is Michael Okpara University of Agriculture Umudike. It is situated in an axis along the road from Umuahia to Ikot Ekpene. Its location is 10 kilometers East of Umuahia, the Abia State Capital.

### **4.3. Population**

Document to be used for the study is Newspapers acquired by Michael Okpara University Agriculture Umudike Library. There are total eight (8) Newspaper titles.

### **4.4. Sample and Sampling Technique**

Census sampling is adopted because the entire population is used. According to Nwogu (2004) when the population for the study is small the entire population should be used.

### **4.5. Instrument for Data Collection**

Instrument for data collection is document.

#### 4.6. Method of Data Collection

Following the research design which is qualitative the study relied on already published works for its data. Information will be extracted from available source (document) which is Newspaper.

#### 4.7. Method of Data Analysis

Data obtained from document were analysed descriptively by use of narratives. According to Bailey (1982) document study is analysed verbally (written/narrative). The analysis is based on bibliography listed from Newspaper publications on cassava chronologically by year of publication: December 2011 to April 2019 (See **Appendix** after the References).

**Objective 1** Identified publications on cassava in the Newspapers (See **Appendix**).

**Objective 2** Identify from users interest profile in the serial department of Michael Okpara University of Umudike library those for publications on cassava.

The researcher joined the services of the university in July 2013 worked as the Head of Department for serials March 2015 to March 2019. Within the period the researcher did retrospective and current bibliographic listing and search of users interest profile none is on cassava however the researcher has done Bibliography on cassava from Newspaper publications in serials department of the university sensitizing researchers on availability of research materials on cassava in Newspaper publications.

### 5. Conclusion

Wise application of today's news tomorrow amounts to society development. Many literates that attach importance to getting news from newspapers quickly destroy the paper because to them it has no future value. This understanding has consigned wealth of knowledge to fire and waste bins which if the value is cherished could have been a rare gem permanently preserved for future application for development.

### Recommendation

It is more cost effective for individuals to have access to newspaper in the library than daily purchase.

Newspaper publication covers many subjects agriculture inclusive. Researchers, educators and students should not discard newspaper as other citizens that do not have much stake in knowledge acquisition and transfer do.

Newspaper is veritable research source for national development because information contained and its frequency of publication make Newspaper indispensable source of information for research.

### Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

## References

- [1] Oluyemisi, F.B. (2015) Newspaper Collections as Research Tools in the Nigerian Horticultural Research Library. *Jewel Journal of Librarianship*, **8**, 52-57
- [2] Owairu, P.C. (2010) A Survey of the Use of Newspaper in a Nigerian Academic Library. *Information Impact: Journal of Information and Knowledge Management*, **1**, 34-35.
- [3] Onwubiko, P.C (2005) Using Newspaper to Satisfy the Information Needs of Readers in Abia State University Library, Uturu. *African Journal of Education and Information Management*, **7**, 66-80.
- [4] Smith, A. (2007) *The Newspaper Communication and Society: A Historical Perspective*. Thomas and Hudson, London.
- [5] Njoku, P.C. (2017) Furthering Knowledge: Potentiating Food and Security for National Development. Convocation Lecture Michael Okpara University of Agriculture, p. 5, 11-12.
- [6] Adewumi, S. (2016) Nigeria Cassava Growers Association (NCGA). *The Guardian*, p. 40.
- [7] Uba, G. (2015) Making Millions of Naira from Cassava Opens to Investors. *The Nation*, p. 18.
- [8] Okechukwu (2015) Cassava: A Major Cash Crop That Can Help Drive Industrial Development While Delivering Higher Incomes to Smaller Farmers. *The Guardian*, p. 40.
- [9] Ajayi, I, Anwar, A, and Adekoya, F (2016). Unending Baking of Cassava Bread. *The Guardian*, p. 45.
- [10] Adebayo, K. (2015) How to Boost Cassava Yields. *The Nation*, p. 16.
- [11] Ogbe, A. (2016) Cassava Processing Plants in Ebedebiri. p. 19.
- [12] Mordi, C. (2016) Ebonyi, Union Dicon Sign Pact on Cassava Cultivation, Processing etc. *Daily Sun*, p. 9.
- [13] Jaoyeola, O. (2015) Much Noise, Little Success: Cassava Bread. *The Nation*, p. 40.
- [14] Anazia, D. (2016) BATNF: Enhancing Wealth Creation across the Cassava Value Chain in Rural Communities. *The Guardian*, p. 56.
- [15] Editorial (2011) The New Bread Policy. p. 8.
- [16] Editorial (2011) The Cassava Bread Campaign. *The Guardian*, p. 14.
- [17] Editorial/Opinion (2012) Commercializing Cassava. *The Nation*, p. 19.
- [18] Nwogu, B.G. (2004) *Educational Research: Basic Issues and Methodology*. Wisdom Publishers Limited, Owerri.
- [19] Bailey, D.K. (1978) *Methods of Social Research*. 2nd Edition, the Free Press, London.

## Appendix

### Bibliography on Cassava December 2011 to April 2019 from Newspapers In Serial Department of Michael Okpara University of Umudike Library

- Editorial (2011) The New Bread Policy. *Sun Saturday*, Dec. 17th, 8.
- Editorial (2011) The Cassava Bread Campaign. *The Guardian*, Thursday, Dec. 22nd, 14.
- Editor (2012) The Cassava Bread Initiative. *This Day*, Wednesday, May 9th, 15.
- Editorial/Opinion (2012) Commercializing Cassava. *The Nation*, Wednesday, May 9th, 19.
- Insight (2012) Now, You'll Eat Cassava Bread. *The Nation*, Sunday, July 1st, 23.
- Dele, S. (2012) Mistaken Notions about Food Policy Cassava Bread as Case Study 2. *Vanguard*, Monday, July 16th, 44.
- Christian, C. (2012) FG's Cassava Policy. *The Nation*, Tuesday, Aug. 21st, 22.
- Daniel, E. (2015) How to Boost Cassava Yields. *The Nation*, Friday, September 11th, 16.
- Okeke, J. (2015) Wither the Much-Publicised Cassava Bread Confectionaries? *The Nation*, Sunday, Oct. 11th, 55.
- Uba, G. (2015) Making Millions of Naira from in (2015) Cassava Opens to Investors. *The Nation*, Monday, Oct. 19th, 18.
- Sina, F. (2015) Cassava Bread: Lofty Dream, Much Noise, Little Success. *The Nation*, Sunday, Nov. 22nd, 31-34.
- Segun, A. (2015) Cassava Can Trigger Industrial Revolution Say Nigeria Cassava Grower Association (NCGA) President. *The Guardian*, Friday, Dec. 11th, 39.
- Segun, A. (2016) Nigeria Cassava Growers Association (NCGA): Memo of the (NCGA) to the 41st Regular Agriculture and Rural Development Holding from 8th-12th Feb. 2016. *The Guardian*, Tuesday, February 9th, 40.
- Business Agro (2016) Cassava Agronomy Initiative to Change Cassava Farmers' Economy. *The Guardian*, Sunday, February 21st, 51.
- Itunu, A., Abba, A. and Femi, A. (2016) Unending Baking of Cassava Bread. *The Guardian*, Sunday, Feb. 28th, 45 and 48.
- Alli, F. (2016) Why We're Investing in Commercial Production of Sorghum, Cassava. *Vanguard Monday*, May 23rd, 21.
- Obinna, C. (2016) Investments in Agriculture in Africa Rises to \$2.3bn: Cassava Tubers. *This Day*, Wednesday, May 18th, 50.
- Ebonyi State Government (2016) Ebonyi, Union Dicon Sign Pact on Cassava Cultivation. *Processing Sun*, Thursday, May 26th, 9.
- Fagbemi, A. (2016) How to Raise Africa's Cassava Yields. *The Guardian*, Monday, June 20th, 10.
- Anazia, D. (2016) BATNF: Enhancing Wealth Creation across the Cassava Value Chain in Rural Communities. *The Guardian*, Saturday, July 2nd, 56.
- Gbenga, A. (2016) IITA-CWMP Target 11,000 Cassava Farmers on Weed Control. *The Guardian*, Sunday, July 10th, 51.
- Addeh, E. (2016) Bayelsa Turns to Farming; e.g. Cassava. *This Day*, Tuesday, July 12th, 18.

- Audu, O. (2016) Nigeria Set to Bolster Cassava Industry. *The Guardian*, Friday, August 12th, 44.
- Uwaegbulam, C. (2016) Cassava Sector Targets N1.5tr Output by 2021. *The Guardian*, Friday, September 9th, 4.
- Daniel, E. (2016) Transforming Cassava Leaves into Livestock.
- Daniel, E. (2017) Transforming Agric via Local Technology (Cassava, etc.). *The Nation*, January 13th, 36.
- Daniel, E. (2017) Turning Cassava Waste to Wealth. *The Nation*, Wednesday February, 1st, 35.
- Yusuf, I.A. (2017) How Lawmakers Stalled Cassava Bread Initiative. *The Nation*, Sunday, April 23, 11.
- Agbola, S. (2017) How Bio-Fortified Cassava Can Develop Rural Economy... Saves Nigeria from Vitamin Deficiencies. *Daily Sun*, Monday, 8th, 24.
- Nnadi, C. (2017) Kalu Tasks UNN on Cassava, Palm Oil Production Technologies. *Saturday Sun*, May 13th, 54.
- Daniel, E. (2017) Transforming Lives through Nutrition-Sensitive Agric. *The Nation*, Friday, June 16th, 35.
- Daniel, E. (2017) Turning Cassava into Gold. *The Nation*, Wednesday, July 5th, 32.
- Oluwadare, T. (2017) Researchers Develop Technology to Increase Cassava Planting Materials.
- Akinfenwa, G. (2017) Cassava Bread Fund: Going Way of Failed Interventions. *The Guardian*, Sunday September 3rd, 41.
- Agbota, S. (2017) Absence of Cassava Processing Facilities Escalating By-Products Import Bill to 2tr. *Daily Sun*, Monday September 11th, 24.
- Oyamfi, C.C. (2017) AATF, Camp Begin Cassava Revamp. *The Guardian*, Sunday September 17th, 42 and 43.
- Uba, G. (2017) Cassava Export as Money Spinner. *Thisday*, Tuesday, September 12th, 25.
- Ogugbaja, C. (2017) Nigeria Records 2.7tr Post-Harvest Losses Yearly on Cassava. *The Guardian*, Sunday, October 22nd, 41.
- Omegoh, C. (2017) Ihiala Community Launches 100m Agric Project on Cassava. *Dailysun*, Monday, October 23rd, 18 and 19.
- Adams, J. (2017) Cassava Boom in Niger. *Daily Sun*, October, Friday 27th, 21.
- Okon, A. (2017) Cassava Glut: Farmers, Processors Squabble over Prices. *Punch*, October 30th, 29.
- Udoaja, G. (2017) UF, IITA Partner for Agric. Research. *The Guardian*, Sunday, November 19th, 45.
- Essiet, D. (2018) Tackling Low Cassava Yield. *The Nation*, Friday, April 20th, 36.
- Chinedu, A. (2018) Cassava Farming Business. *Leadership*, Friday, April 20th, 29.
- Adokoya, F. (2018) FG May Impose Levies on Imported Starch to Drive Cassava Processing. *The Guardian*, April 20th, 21.
- Godwin, U. (2018) Investing in Cassava Chips and Pellets for Exports. *Thisday*,

- Tuesday, May 1st, 25.
- Okeke, J. (2018) Many Challenges Stalling Production of Cassava Bread. *The Nation*, Sunday, May 13th, 43.
- Oporum, K. (2018) IITA Trains Farmers on Cassava Weed Management. *Leadership*, Wednesday, June 6th, 31.
- Akinfenwa, G. (2018) Repositioning Cassava Sector Will Save Africa \$1.2b. *The Guardian*, Sunday, June 17th, 46.
- Oporum, K. (2018) AFDB Pledges \$120m to Increase Cassava, Others. *Leadership*, Tuesday, June 19th, 32.
- Hassan, T. (2018) Cassava Breeding Could Impair Yield-Research. *New Telegraph*, Friday, June 29th, 24.
- Isa, A. (2018) Nigeria Incentive Based Risk Sharing System for Agricultural Lending PLC (NIRSAL) to African Countries: Upscale Cassava Production. *New Telegraph*, Friday, June 29th, 24.
- Agbota, S. (2018) How Value Addition Can Trigger Nigeria's Cassava Revolution. *Daily Sun*, Monday, July 9th, 24.
- Essiet, D. (2018) Boosting Cassava Production *The Nation*, Friday, July 13th, 14.
- Izuora, C. (2018) Researchers Move to Contain Cassava Disease in W/Africa. *Leadership*, Wednesday, July 18th, 28.
- Ibirogba, F. (2018) How to Get Optimum Yield from Cassava Cultivation. *The Guardian*, Thursday, July 19th, 28 & 29.
- Agbota, S. (2018) Death Knell on Cassava Value Chain as Farmers Groan. *Daily Sun*, Monday, July 30th, 24.
- Udoajah, D. (2018) Stake Holders Worry over Cassava Brown Streak Disease. *Guardian Sunday*, August 5th, 47.
- Ibirogba, F. (2018) Taking Advantage of Off-Taking, Taking, Anchor Borrowing Agric Schemes. *The Guardian*, Monday, August 27th, 36 & 37.
- Adebayo, K. (2018) How Value Chain Project Links Farmers to Industrial Processors (Cassava). *The Guardian*, Thursday, August 30th, 36 & 37.
- Omowumi, D. (2018) How Youths Can Make Millions of Naira in Cassava Farming. *The Guardian*, Thursday, September 13th, 36 & 37.
- Hassan, T. (2018) Curbing Aflatoxins in Nigeria's Agric Value Chains. *New Telegraph*, November, Friday 9th, 24.
- Ibirogba, F. (2018) Competition about Cassava Roots Raises Concern about Food Security. *The Guardian*, November 12th, 34 & 35.
- Ogbuokiri, P. (2018) Cassava: The Abandoned Goldmine, \$5bn Export Target. *Telegraph*, December, Sunday 2nd, 31.
- Onyebukwa, V. (2019) Surprising Health Benefits of Cassava. *Sun*, January, Sunday 19th, 30.
- Oman Nehinmi, G. (2019) Cassava Value Chain Has Broken Down in Shendam. *The Guardian*, February, Sunday 17th, 44.
- Hassan, T. (2019) X-Raying FG's \$30bn MINE Scheme Prospects: Cassava etc. *New Telegraph*, February, Thursday 21st, 23.
- O'Neil, S. and Otabor, O. (2019) PIND Foundation: Making Cassava Goldmine

- for Niger Delta Farmers. *The Nation*, February, Friday 22nd, 24.
- Essiet, D. (2019) How Food Processing Can Create Jobs: Cassava Example. *The Nation*, March, Friday 1st, 36.
- Ibirogba, F. (2019) How Cassava-Based Food Processors Endanger Health of Consumers. *The Guardian*, April, Monday 1st, 38 & 39.
- Hassan, T. (2019) Much Ado over Exit of Cassava Flour Bread in Circulation. *New Telegraph*, April Thursday, 4th, 27, 28 & 29.