River Benue and Vegetable Farming Along the Banks in Makurdi, 1976-2023

## Henry Terna Ahom<sup>1</sup>

Department of History and Strategic Studies, Federal University Dutsin-Ma, Katsina State







## Abstract

The river Benue has been of immense importance in serving livelihoods especially agricultural production. It has served as an avenue for transportation, fishing, power generation and irrigation services. Settled communities along the river banks have since 1976 been engaged in vegetable farming during the wet and dry seasons. Vegetable farming began in earnest in 1976 near the old Makurdi Bridge. The core goal was to meet the vegetable requirements of the new State capital and since then, the business has expanded and serves the needs of communities beyond Makurdi. Vegetable farming is an economically viable source of employment for many men and women. It has also provided a steady source of income for those engaged in the business. Apart from increasing the revenue profile of both the State and Makurdi local governments, the production of vegetables in the dry season along the river banks has enabled an all year round boost in the micro-nutritional needs of the people and also contributed to economic improvements. With the aid of mainly primary sources obtained from the field, the paper contends that vegetable farming in Makurdi is an underexplored economic activity but the potentialities for employment generation and upping the revenue profile of the State are great. Suggestions are made drawing from the lessons since 1976.

Keywords: River Benue, vegetable Farming, Makurdi

# Introduction

Rivers have long been recognized as one of humanity's most important natural resources. They make huge contributions to human welfare and appear to be limitless sources of food.<sup>2</sup> The River Benue is the largest tributary of the river Niger. It runs through Nigeria's northern regions providing a source of water for irrigation, transportation and fishing.<sup>3</sup>The River Benue has contributed substantially to the development of agriculture. The banks of the river have been utilized for farming during the dry season. In Makurdi, Benue state, the river Benue is irrigated during the dry season for vegetable farming. Indeed

<sup>1</sup> E-mail: henryahom@gmail.com

Telephone No. 07031573090

<sup>&</sup>lt;sup>2</sup>.Ajene, A.A. and Ogenyi, P.O. River Front Utilization in Makurdi, Benue State in Journa\ of Engineering Research (AJER) e.ISSN:3220-0936, Volume 5, Issue5, pp.148-154 www.ajer.orgopenaccess

 $<sup>^3\</sup>text{Dosunmu}$ , O. (2003) The Economic Importance of the Navigability of River Niger and River Benue to Nigeria and West Africa, retrieved 3/5/24

most of the growth in crop production which had met the population increases of Nigeria over the past five decades had come from irrigated agriculture.<sup>4</sup>

Vegetable farming along the banks of the river Benue gained prominence as from 1976 following the creation of the State. It was started by two families along the river bank near the old bridge to supplement the dietary requirements of the residents of Makurdi at the time. It grew and expanded to three main farming sites which include behind the Wadata rice mills, at Nyongun village, water side and at Amina settlement along the Makurdi-Gboko road. Vegetable farming along the river banks in Makurdi therefore developed from that modest beginning and became a source of employment for many men and women. It had also been a good source of income for people engaged in the production of vegetables such as farmers, traders and many others who provided ancillary services such as commercial vehicles, motorcyclists, and cart and wheel barrow pushers involved in conveying vegetables from one point to another. Vegetable farming along the river banks in Makurdi is an economic gold mine whose potentials has not been fully explored. When fully exploited, it would boost the economy of Makurdi and Benue state in general.

#### The Context

Vegetables produced from irrigated vegetable farming are essential part of man's diet as they are an important source of micronutrients needed for healthier diets. Wegetable production offers a promising economic opportunity for reducing rural and urban poverty and unemployment, particularly in developing countries and constitutes a veritable component of farm and income diversification strategy. Apart from being highly affordable, vegetables provide substantial benefits to those on restricted dietary regimes.<sup>6</sup> Vegetables are parts of plants that are consumed by humans or other animals as food. The original meaning is still commonly used and applied to plants collectively to refer to all edible plant matter, including the flowers, fruits, stems, leaves, roots, and seeds. It may exclude foods derived from some plants that are fruits, flowers, nuts, and cereal grains, but include savoury fruits such as tomatoes and courgattes. Vegetables can be eaten either raw or cooked and play an important role in human nutrition.7

Fruits and vegetables are classified from both a botanical and culinary standpoint. Botanically, fruits and vegetables are classified depending on which

<sup>&</sup>lt;sup>4</sup>Nwokonobi, T.U. and Gwaza, T, (2011) Suitability Evaluation of Surface Water for Irrigation: A Case Study of River Mu in Makurdi, Benue State, Nigeria in Global Journal of Engineering Research, Volume 11, No.1, 2012:47-52 ISSN:1596-992x www.globaljournalseries.cominfo@globaljournalseries.com retrieved, 31 October, 2011, Revised, Accepted \* March, 2012

<sup>5.</sup> Shabu, T. (2018) Contributions of Vegetable Farming to Household Food Security among Vegetable Farmers in Benue State, Nigeria in Research gate

<sup>&</sup>lt;sup>6</sup>Oremi, E.O. (2023) perceived Effects of Vegetable farming on the Social Economic wellbeing of Urban Households in Calabar Metropolis, Cross River State, Nigeria in Global Journal of Pure and Applied Sciences, Volume 9,121-126, Copyright BACHUDO SCIENCE CO > LTD PRINTED IN NIGERIA ISSN;1118-0579,

www.globaljournalservices.com.ngD0I:http://dxdoi.org/10.431/gipas.v29i,2.2 7 Wikipedia, https://en.wikipedia.org>wiki>v

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part of the plant they come from. A fruit develops from the flower of a plant while the other parts of the plant are categorized as vegetables. Fruits contain seeds, while vegetables can consist of roots, stems and leaves. From a culinary perspective, fruits and vegetables are classified based on taste. Fruits generally have a sweet or tart flavor and can be used in desserts, snacks or juices. Vegetables have a more mild or savory taste and are usually eaten as part of a dish or main course.<sup>8</sup>

Nigeria is a treasure home of fresh vegetables that form the base of her hearty soups, colorful stews and delicious side dishes. There is the Okra known for its slimy texture when cooked. The African Spinach locally known as EfoTeTe, a nutrient rich green leafy vegetable. There is also the Ugwu known as Fluted pumpkin leaves. The bitter leaf or Onugbo in Igbo, water melon or Gbure, which is a succulent leafy vegetable in soups and stews. There is also the scent leaf (Nchanwu) used for its aromatic qualities in Nigeria cooking. In Makurdi, vegetables grown are mainly fluted pumpkin (Ugwu) spinach (green leaves) water leaf and bitter leaf among others. Vegetable farming is mostly done along the course of the river Benue. The farmers cultivate their farms at different locations along the banks of the river. The choice of the banks for the cultivation of the vegetables is deliberate due to its proximity to the river where water is sourced for their crops since the farming activity takes place in the dry season

# History of Vegetable Farming along the Banks in Makurdi and the Production Techniques

The origin of vegetable farming along the river banks in Makurdi gained prominence in the year 1976. It was when Benue state was created out of the defunct Benue Plateau State and Makurdi was named as its capital. Consequently, the population of the town began to swell due to the influx of civil servants deployed from the defunct Benue plateau state capital Jos and other towns. The town also attracted businessmen, various artisans and farmers who saw opportunities to be exploited in the new capital, Makurdi. The river Benue offered one such opportunity where its banks were used for the cultivation of vegetables in the dry season. The rise in population of the town led to a corresponding increase in food hotel outlets mostly patronized by workers during working hours. The decision to start vegetable farming along the banks was occasioned by the high demand for vegetables from these food hotel outlets. And the people who pioneered farming in vegetables along the river banks of Makurdi in 1976 were Mr. Boigyo and UgaJegere. These initial farms were located at the bank of the river Benue near the old bridge. 11 Corroborating further, Mrs Ngudoon Terseer stated that her father was one of the earliest vegetable farmers along the river banks in Makurdi. She added that the initial vegetable farms were at two locations namely, close to the old bridge and at the

<sup>&</sup>lt;sup>8</sup> R. Almera, R.Ms RD, (2023) What is the difference between Fruits and Vegetables in Healthlinehttps://www.healthline.com>fruits

<sup>&</sup>lt;sup>9</sup> A.B. Adeleke, Exploring the Rich Diversity of Nigeria Vegetables in MY sasunhttps://mysasun.com>blogs>esp

 $<sup>^{10}\</sup>mbox{Hir},$  S., (2024) Food Security, Benue Farmers seek Government help for Dry Season Farming, The Sun

 $<sup>^{\</sup>rm 11}$  Interviews, Hon. Polycarp, 52 years, Boigyo, Nyongun Village

old United Africa Company (UAC) stores located at the river bank near the old marine Police post.<sup>12</sup> Therefore from the vegetable farm owned by Boigyo his children Hon. Polycarp Boigyo and Mrs Ngudoon Terseer(nee) Boigyo inherited the farm business in 1980 and 1985 respectively.13

From two main locations where vegetable farming started along the river banks in Makurdi in 1976, more people were attracted to it and had expanded to other locations in Makurdi. Presently, vegetables are cultivated behind the Wadata rice mills.14Vegetables are also cultivated at Nyongun village by water side.15 Another area where vegetables are produced is at the Amina village along the Makurdi -Gboko road. The settlement is close to the river bank where a cluster of farmers produce vegetables of various types, most especially fluted Pumpkin (Ugwu). Vegetable farming was introduced at Amina village by a man called Dantsoho in 1998.16

The cultivation of vegetables along the river banks in Makurdi began initially as family business. It was started by a few individuals who used family members such as wives and children on a small scale in 1976. And due to the interest from some of the family members the farming activity was passed on from one of the originators, late Boigyo to his children.<sup>17</sup> Consequently, Hon. Polycarp Boigyo and Mrs Ngudoon Terseer inherited the production of vegetables from their parents. The transfer from the parents to the children was seamless due to the fact that right from childhood, they accompanied their parents to the farm. In the process, they were familiar with the farm tasks and it was therefore easy to adopt it as a source of gainful employment due to its economic value.18 Corroborating the above assertion, Barnabas Ukewase said, I helped my parents on the vegetables farm when I was young and came to appreciate the economic value in vegetable farming hence my decision to continue in it.<sup>19</sup> Apart from inheriting the farming business, other people have took to vegetable farming for various reasons. While some people took to vegetable farming to earn a living, others did to support their families. Some married women ventured into vegetable farming to either support their husbands or earn money to train their children in schools.<sup>20</sup> Other farmers especially the men went into vegetable farming due to the perceived economic benefits derivable from it. They saw other vegetable farmers doing well economically and felt it was a worthwhile venture. At the Amina village, when Dantsoho began to produce vegetables and it was profitable, people were attracted to it.21And from a modest beginning, vegetable farming expanded. More people have gone into vegetable farming even as late as the year 2020 due to its economic viability. Many people

<sup>12</sup> Interviews, MrsNgudoonTerwase, 30 years, Nyongun Village

<sup>&</sup>lt;sup>13</sup> Interviews, Hon. Polycarp Boigyo, Nyongun Village

<sup>&</sup>lt;sup>14</sup> Interviews, Mrs Eunice Awuna, 38 years, behind modern market, makurdi

<sup>&</sup>lt;sup>15</sup> Interviews, Hon. Polycarp Boigyo, Nyongun Village, Makurdi.

<sup>&</sup>lt;sup>16</sup>. Interviews, Francis Anongo, Amina settlement, Makurdi.

<sup>&</sup>lt;sup>17</sup>. Interviews, MrsngudoonTerwase, 30 years, Nyongun Village, Makurdi

<sup>&</sup>lt;sup>18</sup>. Interviews, Hon. Polycarp Boigyo, Nyongun Village

<sup>19.</sup> Interviews, Barnabas UkewaseNyam, 30 years, Nyongun Village, Makurdi

<sup>&</sup>lt;sup>20</sup>. Interviews, Mrs Rosemary Faga, 30 years, Beside N.K.S.T. central church WadataMakurdi, MrsMimidooTerwase, 34 years, No. 64 Igbo street, WadataMakurdi.

 $<sup>^{\</sup>rm 21}$  . Interviews, Mr. Francis Anongo, 56 years, Amina settlement, along Makurdi-Gboko

displaced from their ancestral homes by the current conflicts present themselves to work on the farms for wages.<sup>22</sup>

Vegetable farming along the banks of the river Benue in Makurdi is usually undertaken during the dry season when the water level in the river Benue has receded. This is because the areas are usually flooded during the rainy season. One of the farm sites behind the Wadata ricemills is flooded in the rainy season. Therefore farming activities begin after the water level must have gone down and the area can be easily accessed.<sup>23</sup>Farming activities also resume at the Nyongun village at river side in the dry season in the month of November when the water from the river Benue has receded.<sup>24</sup>At the Amina settlement along the makurdi -Gboko road, the farmlands cannot be accessed during the rainy season until the months of November and in some rare cases December.<sup>25</sup>

Preparations for farming in vegetables along the river banks in Makurdi begin with the clearing of the farmlands. The farm labour is usually undertaken in two ways. Those with fairly large vegetable farmlands and are financially capable, employ extra hands to help in the work. Others whose farmlands are smaller with little capital use family members on their farms. The farmlands are usually overgrown with tall bushes and shrubs due to their proximity to the river. Therefore people who own fairly large scale farms and do not have available household labour, employ about four farm assistants to help clear the land of the bushes.<sup>26</sup> Other farmers who have gone into vegetable farming newly with little capital make use of family members and other relatives to help us on the farm.<sup>27</sup> Vegetable seedlings are sourced from different areas. Anongo from the Amina settlement along Makurdi -Gboko road who deals mainly in fluted pumpkin (Ugwu) asserted that the seedling were usually brought in from either Enugu or Port-Harcourt. Other vegetable seedlings such as spinach, water leaf, okro, garden egg, bitter leaf and others were obtained from the market at Abinsi town, some from kilometers away along the Makurdi-Gboko road.<sup>28</sup> Vegetable farmers who inherited the business from their parents stated that some of the seedlings were part of what was bequeathed to them when they took over from their parents. In some instances, what was passed on to them were seedlings of one or two crops. But have over time expanded their farm holdings both in size and the vegetable types and sourced for other seedlings themselves. The seedlings for the added crops were bought from the various markets in Makurdi town and other neighbouring markets.29

Vegetable seedlings were planted after the lands were cleared of the bushes and ridges were made. Vegetables grown in the farms along the banks of the river Benue range from Pumpkin (Ugwu) Spinach (Alefo), Sorrel (Ashwe) Jute leaf

<sup>&</sup>lt;sup>22</sup>. Interviews, MrsMimidooTerwase,

<sup>&</sup>lt;sup>23</sup>. Interviews, Mrs Eunice Awuna, 38 years, behind modern market, makurdi

<sup>&</sup>lt;sup>24</sup> . Interviews, Barnabas UkewaseNyam, MrsNgudoonTerwase

 $<sup>^{25}</sup>$  . Interviews, Mr. Simon Ukor, 45 years, and KumapinenOrshior Amina settlement along Makurdi- Gboko road.

<sup>&</sup>lt;sup>26</sup>. Interviews, Mrs blessing Damatim, 28 years, No.32 Egumastreet, Wadata, makurdi.

<sup>&</sup>lt;sup>27</sup> . Interviews, Mr. Simon Ukor

<sup>&</sup>lt;sup>28</sup> . Interviews, Hon. Polycarp Boigyo and Barnabs U. Nyam

<sup>&</sup>lt;sup>29</sup> . Interviews, Mrs Rosemary Faga

(Atyever) water leaf, Okro, and others.<sup>30</sup>The practice of planting either a single crop or in multiples varies from farmer to farmer but a larger percentage preferred to cultivate more than one type of vegetable crop. At the Amina settlement along the Makurdi-Gboko road, many of the vegetable farmers concentrated on a single vegetable crop, mainly Pumpkin (Ugwu). Francis Anongo alludes, I cultivate other vegetables on a small scale, but have concentrated on the production of the fluted pumpkin leaves (Ugwu). And it was due to the interest and passion shown in Pumpkin vegetable (Ugwu) farming that I was appointed chairman of the Pumpkin growers association at the Amina settlement.31In pumpkin farming, after it has been planted, farm stakes (Daar) were constructed. The farm stakes enabled the pumpkin vegetable to climb up to it and not spread their branches on the ground. The advantages of the farm stakes was that when the vegetable was off the ground, it took in more fresh air and grew faster. Secondly, when it was raised on the farm stakes that made it easier to harvest.32At the vegetable farms behind the Wadata ricemills and at the Nyongun village most farmers engaged in the production of multiple vegetable crops. While some farmlands contained from three to as many as six vegetable crops namely Pumpkin leaves (Ugwu), spinach, (Alefo) bitter leaf, Ityuna) Okro, (Atuur) waterleaf, sorrel (Ashwe), Jute leaf (Atyever) (Mrs Ngudoon Terseer and Mrs Mimidoo Terwase) The advantage in cultivating multiple crops was that some mature for harvest earlier than others. Also, some vegetables attract higher prices than others. Therefore the farmer had the leverage at the time of harvest to sell at different periods.<sup>33</sup>

Farmers use different methods to irrigate their vegetable farmers in Makurdi. At the farm sites located behind the Wadata Rice mills and at water side in Nyongun village, pumping machines are used to draw water from the river Benue onto their farms. Those who cannot afford the water pumps hire them. Others fetch water manually in containers from the river to irrigate their crops.<sup>34</sup> At the Amina settlement along the Makurdi-Gboko road, farmers who cannot afford the water pumping machines to irrigate their farms hire them at the rate of N30,000 (Thirty thousand naira) only for three months depending on its size. Others dig wells. The wells are dug by the youths in the area at the rate of N15,000 (Fifteen Thousand naira) only per well.35The amount of funds spent to cultivate each vegetable farm in the dry season in Makurdi depends on its size and the number of vegetable crops grown. The amount of money spent on an average vegetable farm ranges from about N50,000-N250,000 (fifty Thousand to two hundred and Fifty Thousand naira) only.36However, Mrs Ngunan Chiakaan admitted that due to the fact that her farm is bigger than some of her neigbours, she spends not less than N500,000 (Five hundred thousand naira) only every farm season.<sup>37</sup>

<sup>30 .</sup> Interviews, Mr. Francis Anongo,

<sup>31.</sup> Interviews, Mr. Francis Anongo,

 $<sup>^{\</sup>rm 32}$  . Interviews, MrsNgudoonTerseer

 $<sup>^{\</sup>rm 33}$  . Interviews, Mrs Rosemary Faga

<sup>&</sup>lt;sup>34</sup>. Interviews, KumapinenOrshio, 56 years, Amina settlement along makurdi-Gboko road

<sup>35 .</sup> Interviews, MrsMimidooTerwase and BlessingDamatim

<sup>&</sup>lt;sup>36</sup>. Interviews, MrsNgunanChiakaan

<sup>&</sup>lt;sup>37</sup>. Interviews, Mr Barnabas UkewaseNyam

Farm inputs used on farms along the banks of the river Benue in Makurdi include water pumping machines, vegetable seedlings, fertilizers, pest control chemicals, hoes, machetes etc. Some of these inputs are purchased in the open markets or rented as in the case of water pumping machines.<sup>38</sup> What drives farmers to own water pumps is the fact that such farms are large and require a reliable source of water supply to the vegetable crops. According to Anongo, vegetable farming along the banks of the river Benue is done during the dry season when there are no rains. And the most critical input vegetable crops require to grow is water. Therefore if you want to really to be successful in the business, you need a very reliable water source. It is more pertinent for those of us with fairly large farms. I cannot afford to rely on some other person for the source of water because if that fails then my whole business has failed.<sup>39</sup>Apart from individual efforts, there are farmers' associations such as the Pumpkin growers' association, Amina settlement branch. It takes care of the welfare of its members through the procurement of vital inputs such as fertilizers which is sold at subsidized rates to members. 40 The gesture by the pumpkin growers association at Amina Settlement to sell some of the inputs to its members at subsidized rates attracted other people to vegetable farming especially those with little capital base.41 This means that vegetable farmers in Makurdi did not access to financial aid outside their associations.

Vegetables are an essential requirement in the human diet due to their nutritional content. This has led to the high demand for vegetables in Makurdi and even outside Benue state. Its importance to human nutrition has made vegetable farming very viable and profitable business. Therefore both its farmers and those who trade in them keep some of the vegetables for domestic consumption while the rest is sold out. The importance of vegetables can also be testified to the fact that a separate section is allotted for vegetable sales in all markets in Makurdi which include the modern market, Wadata, High Level, Wurukum, North Bank and at the Air force base. A greater percentage of the vegetables sold in these markets comes from the farms along the river banks in the dry season. The viability of vegetable farming is attested to by Mrs Ngunan Chiakaan who said, since I ventured into the cultivation of vegetables, I have never regretted my decision. I make not less than N800,000 (Eight hundred thousand naira) only every farming season. Out of this amount, about N300,000 (three hundred thousand naira) is profit.42

Vegetable farming on the banks of the river Benue in Makurdi during the drv season has proved to be a viable source of employment. Some people inherited this type of farming from their parents and have continued with it as their source of livelihood. Mrs Ngudoon Terseer stated that she used to help her parents on the farm when she was young. And it was with the proceeds from vegetable farming that our parents took care of us. It was due to the fact of its viability that had kept me in it.43 Other people saw the economic benefits

<sup>38.</sup> Interviews, Mr. Francis Anongo,

<sup>39.</sup> Interviews, Mr Francis Anongo

<sup>&</sup>lt;sup>40</sup>. Interviews, MrTerungwalgyough, 40 years, Amina settlement, Mrs Eunice Awuna

<sup>41.</sup> Interviews, MrsNgunanChiakaan and Barnabas UkewaseNyam

<sup>42.</sup> Interviews, MrsNgudoonTerwase

<sup>&</sup>lt;sup>43</sup>. Interviews, MrsNgudoonTerwase, 30 years, Nyongun Village

embedded in vegetable farming andwent into it. This assertion is corroborated by Mrs. Seember Nenger and Eunice Awuna who said, some of us are housewives and have found vegetable farming a steady source of employment. It fully engages us in the dry season and when the rains come, we go back to our normal farmlands for the cultivation of our food crops. Therefore we are engaged all year round on the farm.44The cultivation of vegetables along the river banks in Makurdi had been under-explored. Given the potentials available, current production capacity does not meet the demand due to lack of financial and technical capacity. Therefore if financially endowed individuals and corporate organizations venture into vegetable farming in Makurdi, fresh vegetables could be produced both for local consumption and export to neighbouring West African countries.45

#### The Impact of Vegetable Farming on the Economy of Makurdi

Vegetable farming along the banks of river Benue in Makurdi began on a modest scale in 1976 but had over the years grown into a much sought after economic venture. It attracted many people into it and provided the people with a source of employment. Persons involved in vegetable farming are fully engaged as the go to their farms on a daily basis to undertake farm tasks from the clearing of the land, making of ridges or mounds, planting, irrigation of the crops weeding, application of pest control chemicals and fertilizers, harvesting and sell of the crops.46It has also provided employment to people who buy and sell the vegetables. These men and women go to the farm sites on a daily basis to make purchases of the vegetable required to sell in the various markets in Makurdi. The employment opportunities provided the people has reduced the rate of unemployment and improved the living standards of the people of Makurdi, Benue state and Nigeria in general.

Vegetable farming along the river banks in Makurdi has also provided the both the farmers and traders with a steady source of income. This is because funds invested in vegetable farming have in many instances generated profits which have solved and continues to solve many of their financial problems. On the average, funds between N500,000 and N800,000 were invested each cropping season and between N250,000 and N300,000 was made as profit per farming season after some of the necessary inputs were acquired. The profits were used for sundry family commitments such as payment of children school fees, feeding and health care. 47 Vegetable farming along the river banks in Makurdi in the dry season had significantly boosted the economy of Makurdi. This is due to the fact that vegetable production from its cultivation to the point of the end user is an integrated business involving many people and funds in all its activities. The farming activities, from the clearing of the land, planting, acquisition and application of inputs to the harvest and sale of the vegetable crops was transacted with funds. There is equally large number of men and women who

<sup>44.</sup> Interviews, Eunice Awuna, Mrs Seember Nenger, 40 years, behind modern market,

<sup>45 .</sup> Interviews, Hon. Polycarp Boigyo, Ngunan Chiakaan and Rosemary Faga

<sup>46.</sup> Interviews, Mrs. Blessing Damatim, 28 years, no.32 Eguma Street, Wadata, Makurdi

<sup>&</sup>lt;sup>47</sup>. Interviews, Mr Francis Anongo

trade in vegetables and all the activities by both the farmers and traders in vegetables are transacted with funds. In fact none of the vegetable farmers spends less than N200,000 on their farms per farming season and makes less than N400,000 from it. Traders purchase vegetables from the farms to their various market outlets for retail to others retailers or end users. The traders also make profits from their transactions especially those who purchase in larger quantities for sale outside the state. Vegetable sales in the various markets in Makurdi generate revenue for both the state and Makurdi local governments. These transactions cumulatively have boosted the economy of Makurdi and Benue state in general.48

Vegetable farming on the river banks in Makurdi has also created income for other ancillary workers in the transport sector such as commercial motor vehicles and motorcyclists which convey vegetables from one point to another in Makurdi and outside the state. Other groups of workers who derive income from vegetable production in Makurdi are the hand cart and wheel barrow pushers who convey them for either the farmers, traders or consumers. Fresh vegetables produced along the river banks in the dry season season in Makurdi have also garnered revenue for both the state and Makurdi local governments. The state and Makurdi local government officials collect tax levies from vegetable traders on daily basis in all the major markets in Makurdi where the vegetables are sold. Vegetable farmers have formed associations such as the Pumpkin (Ugwu) growers association at the Amina settlement along Makurdi -Gboko road. The association was registered with the ministry of cooperatives. The income generated from all these activities have boosted the economy and revenue profile of both Makurdi and Benue state.<sup>49</sup>Vegetables from these farms have contributed to the dietary needs of the people of Makurdi and neigbouring states. All the major markets in Makurdi, namely Modern market, Wadata market, high Level market, Wurukum market, North bank and the Air Force markets have dedicated sections where traders display their vegetables for sale. A good percentage of vegetables sold in all the markets in Makurdi in the dry season are produced along the river banks. It is important to note that vegetable sales in all the above mentioned markets record high patronage from both other retail outlets and consumers. The daily restocking of vegetables by the traders is testament to its high demand by consumers.<sup>50</sup>

# Challenges faced by Vegetable Farmers along the River Banks in Makurdi

Vegetable farming along the river banks in Makurdi has had various challenges which have retarded its growth. A major challenge faced by vegetable farmers has been the lack of finances for effective farming. Farmers need adequate capital to go into vegetable farming. This is due to the fact that vegetables are a delicate specie of crops which require special attention during their production to have maximum yields. This is more so that their production along the banks of river Benue in Makurdi is done in the dry season. The river Benue contains water which the vegetables require for growth. Farmers therefore need water pumps to draw water from the river to their farms. They also the need other

<sup>48 .</sup> Interviews, Mr Francis Anongol

<sup>&</sup>lt;sup>49</sup> . Interviews, Mrs. Mimidoo Terwase and Blessing Damatim

<sup>50 .</sup> Interviews, Mrs. Rosemary Faga

inputs such as pest control chemicals, herbicides and fertilizers. However, new entrants into vegetable farming in Makurdi have lacked adequate finances to expand their farms. This is due to their inability to obtain credit facilities from commercial banks due to the high interest rates. The lack of capital also hindered many intending persons to venture into vegetable farming along the river banks in Makurdi.51

Another challenge faced by vegetable farmers in Makurdi had been the lack of security of their farms. The farms located behind Wadata rice mills, Nyongun village water side and at Amina settlement along Makurdi-Gboko road are not secured. Consequently, there has been incessant cases of theft of the vegetables. There had also been the menace of domestic animals such as cattle, goats, sheep which encroach on the farms and eat up the vegetables since the farms have not been secured.52Closely related is the fact that vegetable produced along the river banks in Makurdi hardly met the demand for it especially from outside Benue state. Although there exists enough land for farming along the river banks farmers are unable to expand the size of their farms for several reasons, but mainly due to inadequate capital. The demand for fresh vegetable had increased with every passing year. Demands from the hospitality sector in Abuja for regular supply of vegetables which the current production is unable to meet.53

#### Suggestions to Improve Vegetable Farming in Makurdi

Relevant agricultural departments from both the state and federal levels should come up with a well-structured programme to modernize and expand the scope of vegetable farming in the dry season in Makurdi. The same agencies can also organize training workshops on modern farming practices for vegetable farmers in Makurdi. The workshops will inculcate in the farmers the necessary knowledge on the use and application of modern technology in vegetable farming to meet up with the production for local consumption and export to other countries. Young people especially those with relevant training in agriculture from colleges of agriculture and universities can be encouraged to take to vegetable farming. The experience acquired from their educational institutions would be of greater advantage on the farms. The gesture would disabuse the misconception in certain quarters that farming is meant for the uneducated people. Vegetable farmers in Makurdi should be encouraged to organize themselves into relevant agricultural crop cooperative societies. Government institutions should make available agricultural inputs to them at subsidized rates. Financial institutions such as commercial and agricultural banks and related Non-Governmental Organizations (NGO) can advance bank facilities at affordable rates to encourage vegetable farming.

<sup>51.</sup> Interviews, Mrs. Eunice Awuna and Mr. Barnabas UkewaseNyam

<sup>&</sup>lt;sup>52</sup>Interviews, Mr. Francis Anongo

<sup>&</sup>lt;sup>53</sup>Interviews, MimidooTerwase, and Mr. Barnabas UkewaseNyam

#### Conclusion

The paper discussed the evolution and growth of vegetable farming along the river banks in Makurdi from 1976-2023. It noted that vegetable farming along the river banks was given prominence by a few individual families in 1976. The essence then was to meet the vegetable requirements of Makurdi which emerged at the time Makurdi became the administrative headquarters of Benue state. From that modest beginning, it expanded to three main farm clusters. These include behind the Wadata rice mills, at Nyongun village river side and at Amina village along Makurdi-Gboko road. Vegetable farming along the river banks became an employer of labour to both its producers, traders and others providing ancillary services such as commercial vehicles, motor cyclists, cart and wheel barrow pushers who move it from one point to another. The farming in vegetables has further boosted economic activities in Makurdi. It also generated revenue for both the state and Makurdi local governments and significantly supplemented the dietary requirements of the people of Makurdi and its retail outlets. The paper contends that vegetable farming along the river banks in Makurdi has been under explored. When fully exploited, could increase the revenue earning capacity of the farmers and the state. It would also put Makurdi in particular and Benue state on the global map of vegetable production.