



Agricultural Sustainability and Challenges of Food Production in Omor Town, Anambra State, Nigeria

¹Udemezue, J. C.* and ¹Eluagu, C.J.

¹National Root Crops Research Institute, Umudike, PMB7006 Umudike Abia State, Nigeria

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*Corresponding author: Udemezue, J. C.

National Root Crops Research Institute, Umudike, PMB7006 Umudike Abia State, Nigeria

Abstract

Agriculture remains a pillar upon which other sectors of economy depend on for their transformation. Conversion of materials from agriculture is just needed for actualization of other useful materials of human need and that has been the reasons for different faculties in the field of sciences like engineering, biochemistry, medicine among others for transformation of agricultural products to the benefit of mankind. What is different from millennium agriculture and BC agriculture is just innovations that characterize the life cycles of the 21st century. Hence, agriculture remains the discipline that generates massive employment among youths, income generation and food security in totality if it's potential could be harnessed. However, farmers cannot achieve these with their effort alone; they need government aids for these to be achieved. Agricultural sustainability is a sub-set of food security in general because two of them are parallel to each other. Whatever affects one, affects another. Sustainability of agriculture is the maintenance and improvement of agricultural development in order to sustain the livelihood in that nation and their future generation. The main objective of this paper is to assess agricultural sustainability and the challenges of achieving sustainable food security in Omor. To achieve this, paper used available literature to review the followings; food sustainability and food security, the need for food security and sustainable agriculture in Omor town, the challenges of food production in Omor town and the way forward. The major challenges of food production in Omor town are poverty, disease and pest infestation, high cost of inputs, bad road network, insufficient government aids to farmers, insufficient agricultural extension workers to educate farmers, inadequate storage facilities, reliance on rain fed farming, lack of access to credit, poor market institution, use of crude implements, environmental factors, inconsistent policy pronouncement, and underdeveloped infrastructural facilities. The paper recommends intensive promotion of research which will help to increase food production, environment friendliness as well as policy change in order to achieve sustainable food security in the town

Keywords: Agricultural sustainability, food production, challenges

INTRODUCTION

Agriculture is one of the socio-economic resources in any nation that is used to sustain life. The importance of sustainability of agricultural production is becoming a major concern of agricultural researchers and policy makers in both developed and developing countries. Implementation of sustainable development therefore requires integrated policy, planning and social learning process. Its political viability depends on the full support of the people it affects through their government, their social institutions and their private activities. In relation to agriculture, sustainability means changing agricultural system so that farmers are able to produce indefinitely^[8].

The issue of food sustainability should not be over looked because of its role to life through a sustainable agricultural development. The neglect of agriculture by the federal government also generated poverty and some social ills in our society. It was reported that half of the African population live below the extreme income poverty line of less than one dollar per day. However, Sub-Saharan Africa, average annual income is £1640 compared to &31,872 as it is observed in

U.S. Sub-saharan Africa has 10% the world population but nearly 25% of all are malnourished and one of every three African suffers malnutrition^[3].

According to Aibangbe^[2] from 1970 to date, Nigeria has been suffering from food insecurity and poverty. There has been a steady fluctuation in the prices of food over the years and deterioration in the living standard. This stems from the fact that the income of most people no longer sustains them in families. To achieve food security in Nigeria, the following indices must be observed; availability, affordability, accessibility and utilization of food. Teju and Tamirat^[9] is of the opinion that for sustainable agriculture to occur for food security in Nigeria, rural farmers must be encouraged by the government. Rural development will as well encourage agricultural sustainability such as provision of amenities, infrastructure, telecommunication, electricity, silo and irrigation. Farmers should not only adopt any available method of storage and processing measures, but should try to reduce value added produce from every part of plant and animal. Food processing industries should be provided and promoted in the rural areas to improve employment for the rural dwellers. It is equally important to give consideration to the composition of the farming system such as soil components, water availability, agro-climatic features, home needs and above all marketing facilities and opportunities will help to determine the choice of crops, farm animals and acquire culture systems. Crops such as cassava, maize, yarn, coco-yarn, potatoes, rice, vegetable and other food items can be improved. Farmers need to have media publicity on new method of farming and existence of new products, technology and other necessary information and assistance by the government^[2],^[3]. According to Idris^[6], agriculture sustainability may be attained through the following strategies;(a) increasing the aggregate area under cultivation; (b) increasing the productivity of cultivated land; (c) using high yielding varieties of seeds; d) using irrigation to bring more land under cultivation;(e) using more fertilizer;(f) increasing the use of plant and livestock protection arrangements;(g) adopting multiple cropping.

Agricultural sustainability is a sub-set of food security in totality because two of them are parallel to each other. Whatever affects each of them affects another, in the light of this agricultural sustainability can be defined as follows: Sustainability of agriculture is the maintenance and improvement of agricultural development in order to sustain the livelihood in that nation and their future generation^[5]. A sustainable development implies an active role for government in efficient and equitable management of natural and environmental resources. A sustainable agriculture is a sustainable economy. Sustainable agricultural development is the ability of present and future generation to meet their agricultural needs^[7]. Also sustainable socio-economic development as one which is directly concerned with increasing the natural standard of living of the poor at the grass roots level which include the increase in food, real income, educational services, health care, sanitation, water supply and the like^[7].

Ideas on food security came into to lime light in 1974 during the world food conference when it was noticed by the governments that nations all over the world needs to strategize on how best to improve agricultural production so as to match the individual needs of the population. Sequel to this, Ban Ki Moon, the UN Secretary General at a World food summit in Rome in 2009, warned that six million children die of hunger every year; 17,000 die of starvation every day and by 2050 the world will need to feed two million more mouths. This has rekindled the idea of achieving sustainable food security in all countries of the world including Nigerian^[4]. In the light of this, Sustainable food security is an access by all people at all times to enough food for an active healthy life at present plus the ability to provide enough for future generation. Sustainable food security is defined as an access to enough food for an active, healthy life at present as well as ability to provide enough in the future. Abudullahi^[1] defined sustainable food security as when people have physical and economic access to sufficient food to meet their dietary needs for a productive healthy life at present as well as in the future. This definition outlines some indices for measuring the extent or degree of food security to be achieved by any country and the indices are adequate national food supply, nutritional content, accessibility, affordability and environmental protection. This means that food must be available to the people so as to meet the basic nutritional standard needed by the body. But it should be noted that availability of food does not mean accessibility to food. Availability depends on production, consumer prices, information flows and the market dynamics. Therefore, Food security is the extent of the availability of food and individuals' capacity to access it. Affordability and access are the variables that qualified food security of a nation. Household food security exists when all members, at all times, have access to enough food for an active and healthy life. Individuals who are food secure do not live in **hunger** or fear of starvation. Food security can be measured by calorie intake per person per day and available on a household budget. In all, the objective of food security indicators and measurements is to capture some or all of the main components of food security in terms of food availability, accessibility, and utilization/adequacy.

Omor town is located in Ayamelum local government area of Anambra State Nigeria. The town is the centre of Ayamelum local government and is made up of four villages (Orenja, Akanator, Aturia and Amikwe). It is on the shores of the Omambala River. Omor is approximately the largest town in Anambra. It has a total population of 7,196 in 1952/53 Nigerian Census, 17,337 in 1963; in January 2019 it has an estimated population of 104,047 which rose above many towns in Anambra state and Nigeria. It has good vegetation, fertile lands for production of food crops such as rice, maize, yam, cassava, groundnut, okra and assorted fruits. Among these crops, rice and okra are produced as cash crop. To support the town as the food basket of the State, in 1980, Dr. Alex Ekwueme led teams under the leadership of

Alhaji Shehu shagari government laid the foundation of Anambra Imo River Basin Development Authority in Omor. In 1981, stumping of trees, road and irrigation construction, as well as other farming activities commenced in Omor communities. River Basin Development Authorities (RBDAs) in Nigeria are government agencies involved in management of water resources for agriculture and other uses. Each authority operates in an assigned geo-morphological and political boundary and work to improve agriculture and rural development through irrigation, control of river pollution and also to assist farmers in production and processing food crops. The River Basin Development Project specialized on rice production and infrastructural development of the town. Since the inception of AIRBD project, Farmers produced rice as cash crops and these have made the town a food basket of the State (Anambra State). However, about 80% rice produced, 52% other crops like yam, cassava, okoro, maize and 20% of fishery came from Omor communities. This stemmed from location of the Project in collaboration with the personal effort of the indigenes to develop the communities. Ten years after the project was established, its operation was influenced by Nigeria's economic and political changes, its impact became minimal and its irrigation facilities were not functioning. This was when rice production in Omor communities started decreasing gradually as a result of practicing one farming season by the farmers instead of double farming cycles practiced by them when the irrigation project was alive. In the light of the above, this work assessed agricultural sustainability and the challenges of food production in Omor. To achieve this, the paper used available literature to review the followings; food sustainability and food security, the need for food security and sustainable agriculture in Omor town, the challenges of food production in Omor town and suggestion for the way forward.

Food Security and Agricultural Sustainability in Omor Town

One of the targets of Nigerian agricultural development policy is to provide enough food reserve at household, state and federal government levels as to curb any threat to the level of food security. Because of the domestic agricultural production has failed to meet up with the increasing demand for food, the government had to spend on importation to feed her teeming population^[4]. Based on this, food import increased from 19.9% in 2000 to 30.6% and 22.7% in 2011 and 2012 respectively while food export is at about 5.3% of merchandise^[12]. Another sustainable development goal of zero hunger incorporates the need to achieve food security and improved nutrition, promote sustainable agriculture, ending rural hunger, empowering small scale farmers especially women and ensuring healthy lifestyle by 2030^[11]. However, the Nigerian government is working assiduously to achieve these goals provided that the plans are not hijacked and eroded by the avaricious politicians and top government officials. As a matter of this, it is palpable clear that a country with abundant food tends to live a happier way of life, improves the living standard of people, reduces social ills and improves health condition of people especially the children and vulnerable ones in the society. Sustainable agriculture projects the image of people and community positively to the international community, creates a conducive atmosphere for healthy governance and arrests youth restiveness because a hungry man is an angry man^[10].

A sustainable agricultural development gives hope for a better living for the future generation and creates enabling environment for good governance. It gives room for consumers to make choice of the type of food to consume. Food security reduces spread of diseases and problems in the society and increase cooperation, love and understanding among people. The sustainable agriculture helps to boost the morale of the leaders, creates opportunities for employment and gives room for rural development especially, in the area of social amenities and infrastructural development in agricultural centered environment^[9]. It increases a country's foreign exchange and provides avenue for the supply of raw materials to the local industries. It gives opportunity to countries to increase their production capacity to the goods they have a comparative advantage over other nation. It sustains livelihood of many in any living nation, improves people mental faculty and makes a way for free and fair election in a democratic system. It makes a nation to be self-reliance and depend less on importation of foreign products^[3].

Some youths in Omor community are yearly engaged themselves in various forms of farming activities like land preparations, planting, weeding, harvesting, processing and marketing of the produce. Since agriculture is the pillar upon which most people in the community rely on for their livelihood, making agriculture sustainable will not only boost food security in the community but also will add values to the already created employment by the youths in the community. Agricultural sustainability which is an offshoot of job opportunity and livelihood empowerment is a seniquanon to rural development once its potentials are fully harnessed. In the community, youths are seriously engaged in rice processing and marketing, but if government could help the youths in collaboration with their effort to mechanize the processing method used, this will not only reduce crop failure but can as well expose the community to international market as well as making the community food exporters of the nation. Once agriculture is sustainable in community, this brings a linkage between international bodies and indigenes for exchange of goods and services. However, about 60% of farmers in the community engaged in farming and rice processing activities and they earned their living through farming and rice processing. This implies that agriculture still has the capacity to create employment and income provided that its potential is used judiciously. Therefore, sustainability of agriculture in Omor town will not only create job opportunity, sustainable life and income generations to people but will also make the community a food basket and a food trade centre of the south east zone of the country, Nigeria.

Challenges of Food Production in Omor Town

Human being needs food not just for consumption but to sustain life in general. Agriculture was the major source of the Nigeria's economy and source of foreign exchange before the era of oil discovery in the country. It was after the arrival of oil that the agricultural production gradually declined and neglected by the federal government and the likes of the youths who are the source of labour force migrated to the commercial cities to earn their living. This brought about the challenge of food security, employment and hunger among people ^[3]. Rural development relates not only to a sustained increase in the level of production and productivity of all rural dwellers, including farmers, and a sustained improvement in their wellbeing, manifested by increasing per capita income and standard of living, but also leads to a sustained physical, social and economic improvement of rural communities. In order to achieve the broad goals of agricultural and rural development, the Nigerian government usually focuses on specific objectives. However; attainment of specific agricultural goals encompasses the provision of adequate food, fibers and industrial raw materials, employment and foreign exchange generation.

Long before the advent of Nigeria's colonization, our ancestors were sustained primarily on farming as the major occupation with the use of crude implements compared to what is obtained today. Yet, they produced enough food crops to feed themselves like most other Africans and also produced cash crops which used for trade across the Trans Saharan trade to the end of the Atlantic trade. They responded accordingly to the demands of their time and the limitations therein. Today at this computer age, Nigeria with her overgrowing population cannot feed her teeming population simply because we have many chiefs and not enough Indians in agricultural terrains including other limitations to agricultural production. Based on this, a lot of constraints beset food production in Omor communities. They are disease and pest infestation, high cost of inputs, bad road network, insufficient government aids to farmers, insufficient agricultural extension workers to educate farmers, inadequate storage facilities, reliance on rain fed farming, lack of access to credit, poor market institution and use of crude implements. Other constraints includes; youths' perception on agriculture, government attitude to agriculture (inadequate provision of agricultural inputs/subsidies to farmers), farmers' low knowledge in accepting improved technologies, technical know-how (lack of training man power), severe flooding, weak agro-business linkages, environmental factors and rapid population growth.

Way Forward To Sustainable Food Security in Omor Town

An approach to achieving sustainable food security should include reduction in the level of poverty because income must be improved to enable people meet the basic necessities of life. However, to reduce poverty and increase the livelihood of the people, the following procedures should be used: There should be an improvement in agricultural Productivity, different projects/schemes have been established by different governments in Omor community (Anambra Imo River Basin, Rice Mills, Sugar Cane industry and International Market for rice) in order to improve agricultural productivity, but they have failed because of poor policy implementation and use of unprofessional to pilot the affairs. These agricultural projects can be revitalized and improved through application of professional researchers.

Agricultural research Institutes should be funded and monitored in order to encourage innovation and participatory research. National cereal research institute badagdi that has mandate for rice breeding and improvement should extend its tentacles through the establishment of sub-station in Omor community to revive the river basin development authority that is almost moribund. Through research, foreign technology can be modified and applied by local farmers. The knowledge of organic farming should be indoctrinated and inculcated in the minds of the farmers. For instance, inorganic fertilizers and chemicals can be replaced with alternatives such as cow waste and composite manure which are environmentally friendly. Extensions services should be encouraged and strengthened because through the extension services new technology can be transferred to the farmers. Rural farmers should be involved in decision making stages of agriculture productivity. The inability of government to involve these sets of people in defining and designing projects has led to the failure of some of these projects. Agricultural Biodiversity should be encouraged; improved agricultural biodiversity through improved agricultural practices will increase food supply. Mono-cropping also exposes crops to both pests and diseases and also increases the use of organic fertilizers and pesticides that erode soil biodiversity. In order to achieve sustainable food security, Nigeria farmers as well as government should embrace this modern food production technique that comes in form of agricultural biodiversity aimed at increasing livestock and crop production.

There should be storage facilities to enable farmers store their post-harvest crops. Farm products are perishables; farmers are forced to sell their products so quickly thereby making revenues that do not meet their daily need. The storage facilities can help them preserve their products before taking them to the market for sale. The storage facility will also help provide enough food reserve for the country. In a nut shell, agriculture sustainability can also be attained in omor town through the following strategies; increasing the aggregate area under cultivation, using high yielding varieties of seeds, using irrigation to bring more land under cultivation, using more fertilize, increasing the use of plant and livestock protection arrangements and adopting multiple cropping. Federal government in collaboration with state and local should put hands together to rehabilitate the entire existing farm road in the community. In view of this, the people

of Omor community have cried out to State and federal government to rehabilitate Otu-ocha – Omor – Adani federal road and other farm roads for easy transportation of goods and services.

CONCLUSION

Nigeria's new investment destination for agriculture cannot be sustained through traditional agricultural practice. Achieving sustainable food security means ensuring continuous access to food both quantity and quality for the present generation as well as the future generations. The major challenge of food production in Omor town is poverty, disease and pest infestation, high cost of inputs, bad road network, insufficient government aids to farmers, insufficient agricultural extension workers to educate farmers, inadequate storage facilities, reliance on rain fed farming, lack of access to credit, poor market institution, use of crude implements, environmental factors, inconsistent policy pronouncement, and underdeveloped infrastructural facilities. Based on these, there is need for intensive promotion of research which will help to increase food production, as well as policy change in order to achieve sustainable food security in the town. Hence, there is need for the promotion of research and extension responses to the challenges of climate change and other constraints, this call for strengthening of capacities of the agricultural development projects like Anambra Imo River Basin Development authority, international rice market and sugar cane industry in Omor. In view of this, it takes pride and pressure to gently remind government that eliminating these constraints aforesaid will channel Omorian agriculture in the path of sustainable development required to eliminate hunger and poverty in the land as well as making the town a food basket of the State Anambra in particular and Nigeria at large. More so, the major policy reform that will set Omor in the path of agricultural transformation is for the government to make conscious development efforts to revive the Anambra Imo River Development Rice Project, sugar cane industry and international rice market located in Omor. Revitalization of the agricultural projects in the community will not only make the town a food basket of Anambra State but also a source of employment generation among the nation.

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