

## **CHAPTER ONE**

### **1.0. INTRODUCTION**

Enugu State Agricultural Development Programme, (ENADEP) is one of the 37 Agricultural development programmes (ADPs), established Nationwide in the mid-80s by the Federal Government with the National Mandate to carry out Agricultural Extension work. The Agricultural Development Projects (ADPs) were first launched as viable projects in 1972 only two years after the end of civil war, when Nigeria was facing her first food and fibre shock. The project was launched against the background of a Nigerian Agriculture which in the 1950s and 1960s has attained prominent expertise through complete reliance on small scale farmers. The main and first feature of the ADP was its reliance on the small scale farmers as the central focus for increased food production. The projects were to be funded under a tripartite agreement involving World Bank 66%, Federal Government 20% and State Government 14%, in addition to payments of salaries of local staff.

#### **1.1. Background to the study**

In response to the resulting food shortages caused by the government negligence and the lack of appropriate and sustained policies in the agricultural sector, and in realizing the need to make the nation self-sufficient in the local food production, successive administration in the country have adopted and operated many approaches to rural and agricultural transformation programmes. Agricultural policies, strategies and programmes in Nigeria have

undergone many changes since independence in 1960. These changes were in the main, a reflection of changes in government philosophy on the best approach to agricultural development. The first from 1960 to about 1970, the second from about 1970 to 1975 and the third, from about 1975 to the present time.

Precisely, it was in the third National Development plan of 1975 – 1980 that the Federal Government started to emphasize the setting up of programmes that would benefit the rural dwellers. Several agricultural programmes have been introduced to reduce abject poverty among rural dwellers, mostly farmers, in sub-Saharan Africa (SSA). Some of these programmes include: United Nations Development Programme (UNDP), International Fund for Agricultural Development (IFAD), Agricultural Development Programmes (ADP), Food and Agricultural Organization (FAO), and National Economic Empowerment and Development (NEED), The Directorate of Food, Roads and Rural Infrastructure (DIFRRI), National Orientation Agency (NOA), National Accelerated Food Production Programme (NAFPP), Green Revolution (GR), Operation Feed the Nation (OFN), etc. (World Bank; 1993, 1995a, 1995b, 1996) (Hashmi and Sial 2007; IFAD 2001), but it seems that these efforts have yielded little or no impact on the rural population, as evident in the literature (Afolayan, 1997). Consequently, the rate of poverty in rural areas keeps increasing steadily (Diamond, 1999; Handley et al., 2009; Gate 2014).

However, this study limits its scope to Agricultural Development Programmes (ADP), which aims at increasing food production for rural dwellers and raising the income level of small scale farmers by

making provision for improved seeds, fertilizer, pesticides, credit facilities and infrastructural facilities (Ajayi and Ajala, 1997; Garba, 2000; Akpobo, 2007). Hunger and poor infrastructural facilities in rural areas have been associated with criminal activities and rural-urban migration (Asiabaka, 2010; Angus, 2010; Aworemi et al., 2011; BBC, 2012; International Monetary Fund, 2013; The Economist, 2014) in many societies. If the problem of food and infrastructural facilities are adequately addressed in rural areas, it could reduce the rate of stealing and rural-urban migration in Nigeria.

The Federal Government with the assistance of the World Bank, commissioned three pilots Agricultural Development Projects (ADP) in 1975 at Funtua, Gombe and Gusau. The main objective of these ADPs was to ensure increased agricultural productivity and the general improvement of the living standard of the rural dwellers. To date the Federal Government has extended these ADPs to cover the whole federation.

Following the creation of Enugu and Anambra states in August 1991, the Enugu State Agricultural Development Project (ENADEP) came into being and since then, it has been implementing the aims and objectives for which the parent agricultural development project was established (ENADEP Progress Review and Implementation Status, 1994). The interest in the topic could be traced to the prevailing concern for rural transformation as manifested in development of most developing nations all over the world. Most of these developing nations have of recent shifted their development emphasis from developing their urban sector to the development of

the rural areas. This is reflected by the huge increase in the number of rural development programmes being undertaken by national governments with the assistance of external donors.

## **1.2. Statement of problem**

Since inception of ENADEP in Enugu state, studies to assess the impact of these provisions on farm families have not been fully explored in literature. Thus, the probability of Agricultural Development Programmes resulting in increased foodstuff for rural dwellers is yet to be ascertained. Moreover, the likelihood of farmers having easy access to improved seeds, pesticides and fertilizer for farming has never been investigated. Equally, very essential and related to the foregoing but yet to be examined is the probability of ADP granting farmers adequate access to credit facilities.

According to the data obtained from the ENADEP office at Garden Avenue, Enugu, it was recorded that when the Programme Manager assumed the Headship in October 2015 things were in complete disarray.

- ❖ Enugu State was not participating in Research-Extension-Farmer-Inputs-Linkage System (REFILS) activities.
- ❖ Enugu State was not participating in National/Intervention projects/activities.
- ❖ Enugu State was not attending Zonal and National Workshops.
- ❖ Monthly Technology Review Meetings (MTRMs) and Fortnightly Training Meetings (FNTs) which are the bedrock for technology generation and dissemination were not holding etc.

Also the staff situation is grossly inadequate and needs urgent attention in order to meet up with the World Bank recommended ratio of 1EA:800 farm families.

### **1.3. Purpose of the study**

The overall purpose of this study is to evaluate the influence of ADP on agricultural development in Enugu North L.G.A. of Enugu State (ENADEP).

Specifically, the study intends to:

- i. Investigate the socioeconomic characteristics of rural farmers in Enugu North L.G.A.
- ii. Determine the level of influence of ADP on rural farmers.
- iii. Examine the relationship between extension officers and farmers in Enugu North L.G.A.
- iv. Determine the level of adoption of innovations by farmers in the area.

### **1.4. Significance of the study**

Apart from its academic worth to the body of knowledge, this study intends to discover if the existence of Agricultural Development Programmes has actually impacted on the rural population, in respect of food production and infrastructural facilities. The result of the research is expected to assist both the government and the educational institutions on ways and means of reaching out to rural farmers' with correct packages of information to enable them understand the true objective of ENADEP and how to benefit the farm families from ADP activities. The findings of this study would

also bring to light some challenges facing ENADEP such as the staff deficit, to effectively support our farmers. Furthermore, the research in this area is significant in that, the finding would bring to light issues that might be of interest not only to the state administrators or ministry, but also to some extent the administrators of similar agencies nation-wide.

### **1.5. Scope of the study**

This research work covers only the level of the influence of Agricultural development programme on Agricultural production in Enugu North LGA of Enugu State. This followed by review of some empirical evidence to analyzing the agricultural sector in Nigeria.

### **1.6. Research Questions**

1. What are the socio-economic characteristics of rural farmers in Enugu North L.G.A.?
2. To what extent has ADP influenced positively the rural farmers in Enugu State?
3. What is the level of relationship existing between farmers and ADP extension staff in Enugu North L.G.A.?
4. To what extent have farmers improved their production due to adoption of innovations?

## **CHAPTER TWO**

### **2.0. LITERATURE REVIEW**

#### **2.1. Conceptual frame work**

##### **2.1.1. Rural Population:**

According to World Bank Group, (2014) rural population means people living in rural areas as defined by national statistical offices. It is generally determined by calculating the difference between total population and urban population. Nigeria is predominantly rural and less than a quarter of Nigerians dwell in towns or urbanized settings (Abbass, 2010). Nigeria is the most populous nation in sub-Saharan Africa with a population of 140 million (National Population Census, 2007). As at 2013, the nation's population was estimated to be 158.4 million out of which the rural population is 78,528,437 (Olojede et al., 2013). According to the Census Bureau of the United States, the Nigeria's population is predicted to hit 264 million by 2030.

It is evident in literature that rural infrastructure has been neglected in Nigeria since the colonial era. According to Olojede, et al. (2013), this has negatively affected the profitability of agricultural production. For instance, lack of rural roads impedes the marketing of agricultural commodities, prevents farmers from selling their produce at reasonable prices, and leads to spoilage. Limited access of farmers to the above facilities, as noted above, cuts small-scale farmers off from sources of inputs, equipment and new technology. Attempts to solve the above problems have been

the concern of government over the years. This, among other reasons informed the creation of Agricultural Development Programmes (ADP) in rural areas in Nigeria. Ihimodu (1986:10) noted that among the important features of the ADPs, is the improvement of infrastructure within the project areas through construction of dams to provide water for crops, animals and man, provision of extension services and marketing services, provision of credit facilities to farmers and other social services in the project areas (CBN Statistical Bulletin and Annual Reports various issues, Yahaya, 2000). However, a downward trend was observed from 1991. This has persisted ever since, and following the democratic government headed by President Olusegun Obasanjo, there has been a lot of reorganization and restructuring of agricultural sector in the country. A lot of policies and projects have been embarked upon without a corresponding result. The food productions that supposed to boom and reduce food insecurity in the state keep on fluctuating. To this effect, the study aims to evaluate the influence of ADP on Agricultural Development in Enugu North of Enugu State.

### **2.1.2. Agricultural Development in Nigeria: An overview**

Before Nigeria's colonisation, ancestors were sustained primarily on farming as the major occupation with the use of crude implements. Nevertheless, they produced enough food crops to feed themselves like most other Africans and also produced cash crops used for trade by barter system. The colonial era in Nigeria (1861 to 1960) placed emphasis on research and extension services. One of the prominent steps of the era was the establishment of the



Department of Botanical Research in 1893 in the former Western Nigeria, with the responsibility of conducting research in agriculture. In 1905, the British Cotton Growers Association acquired land at the site now called Moor Plantation, Ibadan, now housing The Federal College of agriculture; the federal College of Animal Health and Production Technology and Institute Agricultural Research and Training (IAR&T), for growing cotton to feed the British Textile Mills. In 1910, Moor Plantation, Ibadan became the headquarters of the Department of Agriculture in Southern Nigeria, and a Department of Agriculture was established in the North in 1912.

A Federal Central Department of Agriculture was formed in Nigeria in 1921, after the amalgamation of the North and the South with a responsibility to increase production of export crops for the British market. The post-colonial period policies were formulated to actualize more equitable growth in agriculture which led to the demarcation of the country into the Western Region (cocoa), Northern Region (groundnut) and Eastern Region (oil palm), and sequel to this, there was cocoa production revolution in the western region which successes were well renown as the sources of revenue for the first television in Africa; University of Ife, the Cocoa House edifice in Ibadan, among other achievements associated with cocoa economy. Some of the specialized development schemes initiated or implemented during this period included Farm Settlement Schemes, Operation Feed the Nation, launched in 1976; River Basin and Rural Development Authorities, established in 1976; Green Revolution Programme, inaugurated in 1980; The World Bank-

funded Agricultural Development Projects (ADPs). National Accelerated Food Production Programme (NAFPP) was an agricultural extension programme initiated in 1972 by the Federal Department of Agriculture during General Yakubu Gowon's regime. It aimed at bringing about a significant increase in the production of maize, cassava, rice and wheat in the northern states through subsistent production within a short period of time. The programme was designed to spread to other states in the country after the pilot stage that was established in Anambra, Imo, Ondo, Oyo, Ogun, Benue, Plateau and Kano states. Operation Feed the Nation (OFN) evolved on May 21, 1976 under the military regime of General Olusegun Obasanjo. It was launched in order to bring about increased food production in the country through the active involvement and participation of everybody in every discipline, thereby making every person capable of partly or wholly feeding him/her self. Under this programme every available piece of land in urban, sub-urban and rural areas was meant to be planted while government provided inputs and subsidies. The River Basin Development Authority (RBDA): Decree 25 of 1976 established 11 River Basin Development Authorities (RBDAs). The initial aim of the authorities was to boost economic potentialities of the existing water bodies, particularly irrigation and fishery, with hydroelectric power generation and domestic water supply as secondary objectives. The objective of the programme was later extended to other areas, covering production and rural infrastructural development. The Green Revolution was a programme launched by former civilian President Shehu Shagari in April 1980, aimed at increasing production of food and raw materials in order to ensure

food security and self-sufficiency in basic staples. Secondly, it aspired to boost production of livestock and fish in order to meet home and export demands and to diversify the nation's foreign exchange earnings through production and processing of export crops. This was never achieved. National Fadama Development Project (NFDP): The first National Fadama Development Project (NFDP-1) was designed in the early 1990s to promote simple low-cost improved irrigation technology under World Bank financing. The main objective was to sustainably increase the incomes of the Fadama users through expansion of farm and non-farm activities with high value-added output. The programme covered 12 states of Adamawa, Bauchi, Gombe, Imo, Kaduna, Kebbi, Lagos, Niger, Ogun Oyo, Taraba, including the Federal Capital Territory (FCT). It adopted community driven development approach with extensive participation of the stakeholders at early stage of the project. Roots and Tuber Expansion Programme (RTEP) was launched on 16th April 2003 under Olusegun Obasanjo's administration. It covers 26 states and was designed to address the problem of food production and rural poverty. At the local farmer's level, the programme hopes to achieve economic growth, improve access of the poor to social services and carry out intervention measures to protect poor and vulnerable groups. At the national level, the programme is designed to achieve food security and stimulate demand for more affordable staple food. Small holder farmers with less than two hectares of land per household were the targets of the programme while special attention was paid to women who played a significant role in rural food production, processing and marketing. RTEP also targeted at multiplying and introducing improved root and tuber varieties to

about 350,000 farmers in order to increase productivity and income. Agricultural Transformation Agenda (ATA) was launched in 2011 by the Dr Goodluck Jonathan- led government with the aim of changing the perception about agriculture as a development issue instead of pure business. The vision in the transformation strategy is to achieve a hunger-free Nigeria through an agricultural sector that drives income growth, accelerates achievement of food and nutritional security, generates employment and transforms Nigeria into a leading player in global food markets to grow wealth for millions of farmers. To achieve this vision, the value chain approach was emphasized. Fertilizer procurement and distribution, marketing institutions, financial value chains and agricultural investment frameworks were proactively emplaced.

The ADP projects planned to achieve production increase largely through crop yield, increases by the use of improved technology and increased production inputs. The result of the trend analysis carried out on the area in recent years; shows yield data for Enugu North, Isiuzo and Enugu Ezike. Agricultural Development Programmes indicated that yields increased in cassava, yam and rice in Isiuzo, yam and cassava in Enugu North and oil palm, rice and cassava in Enugu Ezike (World Bank, 1993; ENADEP 2015).

### **2.1.3. Implication of Enugu State Agricultural Development Project (ENADEP) on Rural Population**

The principal policy position of Enugu State Agricultural Development Programme (ENADEP) is to increase food production and income of small scale farmers. The programme was fashioned

to revolutionize agricultural sector of Enugu State economy, however, extent literature and available evidence indicate that these objectives are yet to be met. Following the creation of Enugu and Anambra states in August 1991, the Enugu State Agricultural Development Project (ENADEP) came into being and since then, it has been implementing the aims and objectives for which the parent agricultural development project was established (ENADEP Progress Review and Implementation Status, 1994). Ihimodu (1986:10) noted that among the important features of the ADPs, is the improvement of infrastructure within the project areas.

ENADEP is one of the 37 Agricultural development programmes established Nationwide in the mid-80s by the Federal Government with the National Mandate to carry out Agricultural Extension work with its main objectives being to:

1. Facilitate increased Agricultural Production in the States
2. Increase the income of Farmers.
3. Raise the standard of living of the people, create jobs and reduce poverty.

The main strategies adopted by the ADP for the attainment of its objectives include:

- Generating, Adapting and Disseminating Improved Agricultural Technologies from Research Institutes and Universities to Farmers.
- Sourcing, multiplying and distributing high yielding seeds/seedlings, improved breeds of animals and other inputs like fertilizers and agro-chemicals to farmers.

- Providing regular training for staff and farmers.
- Providing processing and storage facilities for framers.
- Encouraging farmers to form commodity groups/co-operatives
- Linking farmers to sources of credit and markets.

With these objectives, ADPs thus became Vehicles for attraction of grants through the World Bank, other Donor Agencies and Federal Government Agricultural Projects. During the World Bank Funding days (mid-eighties to mid-nineties), ADPs flourished with remarkable achievements, but with the stoppage of funding from the World Bank, success rates slacked depending on individual states' ability to match activities with requisite funding.

Since inception of ENADEP in the state, studies to assess the impact of these provisions on farm families have not been fully explored in literature. Thus, the probability of Agricultural Development Programmes resulting in increased foodstuff for rural dwellers is yet to be ascertained. Moreover, the likelihood of farmers having easy access to improved seeds, pesticides and fertilizer for farming has never been investigated. Equally, very essential and related to the foregoing but yet to be examined is the probability of ADP granting farmers adequate access to credit facilities.

According to the comprehensive brief of ENADEP (2015), it was recorded that when the Programme Manager assumed the Headship in October 2015 things were in complete disarray.

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Although with the quick response from His Excellency, ENADEP now have two new World Bank assisted projects in the making- Agro-processing as intervention programmes; Productivity Enhancement and Livelihood Improvement Support Programme (APPEALSP) and FGN/IFAD Value Chain Development Programme (VCDP). There have been accusations that the implementation process has not been consultative enough; that it is heavy-handed, and little sensitivity to local realities (Emehelu, 1994). Following the recent complaints about ENADEP, Dr Matthias Onu, the Programme Manager, Enugu State Agricultural Development Programme (ENADEP), has on Thursday 26 August, 2021 decried the inadequate number of agriculture extension workers in the state.

Onu, who spoke with the News Agency of Nigeria (NAN) on Thursday in Enugu, said that the programme had not expanded due to insufficient workers. He said that the inadequate number of extension workers was affecting ENADEP from developing and promoting agriculture, especially in the rural communities. He said it was regrettable that out of 365 extension workers needed, the state had only 26 extension workers, which was grossly inadequate.

“The inadequacy has also created information gap between the agency and farmers in the area of information sharing on contemporary system of farming,” the programme manager said. Onu, however, noted that the agency had resorted to sending N-Power beneficiaries to various communities as there were no extension workers to interface with the farmers.

#### **2.1.4. Farmers’ Perception of ADP and Cooperative Societies:**

Basically, all Agricultural Development Programmes has one objective in common. It is to increase food production and farm incomes for the majority of the rural households in the defined project regions, thus improving the standard of living and welfare of the farming population, with the hope of reducing abject poverty. Government control of cooperative activities in Nigeria is clearly demonstrated in her insistence that the only way farmers can benefit from most agricultural development programmes promoted by government is for them to join cooperatives. Past agricultural development programmes including; the Operation Feed the Nation (OFN), the Green Revolution (GR), the Directorate for Food, Roads and Rural Infrastructure (DFRRI), the Better Life Programme (BLP), the Family Support Programme (FSP) and the Family Economic Advancement Programme (FEAP), all required farmers to join cooperatives controlled by the government to be able to access services provided by these programmes.

Some of the benefits farmers get from the cooperative societies include: getting loans for their farm operations, buying fertilizers and other inputs more cheaply, getting various sums of money as



credit through the cooperative, selling their farm produce through their cooperative societies etc. Although farmers are the major beneficiaries of cooperative activities in the State, a good number of them did not know about cooperative and what it stands for, Agbo, F.U. (2009). In his study, he stated that out of two thousand (2000) farmers he interviewed, only about 124 (6.2%) were members of cooperative societies. about five hundred (25%) indicated that they had heard about cooperatives but had not made up their minds to join. The rest (68%) of the respondents were neither a member of the cooperative societies nor had heard about them. In a country where national membership of cooperative societies is approximately between 2% and 3% (Abdallah, 2001), the survey result of 6.2% appears impressive. However, when this result is placed side by side with the array of cooperative educational institutions in Enugu State, it is very obvious that a lot is still to be done to bring cooperatives to the knowledge of citizens of the state. About 78% of those who knew about cooperatives did not join because they felt that cooperatives could not solve their farming problems while 24.8% did not join because they did not trust government programmes. Agbo F.U. (2009) summarized that, farmers who know about cooperatives saw cooperatives as an arm of government rather than business organizations. To change this wrong perception, a process of reeducation which should be grassroots oriented should be embarked upon. Cooperative training institutions in the state should establish outreach programmes or college-on wheels designed to take the correct cooperative training to farmers in their locations. This training should emphasize that cooperatives are essentially business organizations and not

tentacles of government. The overwhelming presence of government in cooperative activities in the state needs to be re-visited.

#### **2.1.5. Farmers adoption of agricultural innovation in Nigeria**

Innovation, according to Wikipedia.org, is the practical implementation of ideas that result in the introduction of new goods or services or improvement in offering goods or services. English Dictionary defined innovation as; a new method, idea, product, etc, designed to save energy. Others have different definitions, but a common element in the definitions is a focus on newness, improvement and spread of ideas or technology. In Nigeria, even though the earliest adoption studies were conducted around 1970 (Kidd, 1968; Patel and Anthonio, 1971), the advent and proliferation of Agricultural Development Programmes (ADPs), in the 1980s spurred off several adoption and diffusion studies.

Research on agricultural technology adoption has been premised on the assumption that if the factors influencing it are known, then the reactions of farmers to the introduction of technological packages could be determined. The farm and household characteristics tested in the adoption research, for their association with testing and continued use of a practice, included gender, level of formal education, household size, attitudes of the extension staff, bulkiness of the innovations, farm size and wealth level (Ladebo, 1999; Franzel et. al, 2000). Sail et. al.(2000) points to government policy as an important factor in farm-level adoption of improved technologies. Furthermore, Hays and Raheja (1977) and Sail et. al, (2000) have shown that farmers' perceptions of technology-specific

characteristics, significantly influence adoption decisions relating to improved farm practices. Collinson (2001) identifies the process of technology generation as the main cause of the low adoption by small farmers in developing countries. Sinclair (2001) reviewed a series of studies in process-based research and concluded that the involvement of farmers in the technology development process is central for successes in the adoption of farm technologies.

Generally, there are certain factors affecting farmer's adoption of agricultural innovation in Nigeria. In the work of Egwu, Emeka Williams, (2014), these factors are stated clearly; they include the education level of the farmers, age bracket of active farmers, attitudes of the extension staff, bulkiness of the innovations, lack of fund and government incentives were important problems. The result of his work shows that greater proportion of farmers above 45 years (56.7%) did not attend secondary education (57%) and were late adopters (51.7%). The farmers' levels of social relationship were low and affected their adoption. Furthermore, superiority, simplicity, compatibility and profitability of innovation triggered farmer's interest towards adoption and membership of co-operative group also affects adoption. This is in accordance with the testimony obtained from Dr Matthias Onu, the Programme Manager, Enugu State Agricultural Development Programme (ENADEP), who spoke with the News Agency of Nigeria (NAN) in Enugu on Thursday 26 August, 2021, following the recent complaints about ENADEP. Dr. Onu said that the programme had not expanded due to insufficient workers. He said that the inadequate number of extension workers was affecting ENADEP

from developing and promoting agriculture, especially in the rural communities. He said it was regrettable that out of 365 extension workers needed, the state had only 26 extension workers, which was grossly inadequate. In his words, “The inadequacy has also created information gap between the agency and farmers in the area of information sharing on contemporary system of farming.” Dr Onu, however, noted that the agency had resorted to sending N-Power beneficiaries to various communities as there were no extension workers to interface with the farmers.

Egwu (2014), emphasized that the level of education and training of farmers should be encouraged, producers organizations established upcoming youths educated on the importance of agriculture to economic development, change agents adequately supported, loans made available to farmer at zero interest by the government and support agencies. ADPs should ensure recent innovations are highly profitable, superior and simple to understand and should be compatible with the existing values, norms, past experience and needs of farmers.

## **2.2. Empirical Review**

The study adopted the John Holland's Theory of Career Choice (RIASEC), which maintains that people prefer jobs that will let them use their skills and abilities, and express their attitudes and values, while taking on enjoyable problems and roles. This is in accordance with the goals of technology education according to the National Policy on Education in Nigeria 2004; which is to give

training and impart the necessary skills to individual who shall be self-reliant economically.

In past years, agriculture holds a strategic position and the development of the overall Nigeria's economy greatly depend upon the improvement in agriculture. It contributes to economic development including providing more food, expanding of secondary and tertiary sector, earning of foreign exchange and generation of employment. Abe (1981) contested that in view of the importance of farming in Nigeria economy, it has become very necessary for government and even institution to continue to give agricultural development adequate finance, training and attention it deserves. Accordingly, the survey conducted by the National Agricultural Extension and Research Liaison Services (NAERLS) in collaboration with the National Food Reserve Agency (NFRA), representatives of the Federal Department of Agriculture (FDA), the Planning Research and Statistics Department (PRSD) and the five Zonal Coordinating Research Institutes, between 24 August and 10th September (2008), the data obtained when the funding of ADPs was scored by comparing the amount received and the amount budgeted, showed that current funding has not allowed for ADP to effectively perform its activities. Therefore, State and Local Government Councils should sustain and increase their financial support.

The interest development theory of Renninger & Hidi (2016), confirmed that people who discover their interests in time are better prepared for satisfying career, defining interest as a powerful motivational process that energizes learning and guides academic and career trajectories. The four-phase model of interest

development (Hidi & Renninger, 2006; Renninger & Hidi, 2016) integrates the development of situational interest into individual interest: Particular situations trigger interest, which can then develop across situations and over time to become more enduring. First, features of the environment (e.g., novelty, ambiguity, surprise) catch the person's attention. This situational interest can last longer, beyond a single situation, if tasks seem meaningful and involving (i.e., if a person perceives the task as valuable or enjoyable). Over time, repeated experiences of triggered and maintained situational interest can develop into an emerging individual interest, such that the individual seeks opportunities to reengage with the object, it means that if that situational interest develops into an individual interest, the person will more likely reengage with the material overtime and explore the topic further (Harackiewicz, Durik, Barron, Linnenbrink-Garcia, & Tauer, 2018). Interest, therefore, predicts traditional measures of educational success, including future course taking and performance.

Uguru (2003) concluded that the survival and success of most industries depended to an extent, on the regular support of good quality innovative ideas as well as agricultural products as raw materials. The adoption and availability of innovations or/and the reconstruction of an existing idea have been a great incentive to the development and mechanization of primary as well as secondary industries. To that Ijere (2003) said that: Agricultural production is the only sure foundation or successful industrialization at a subsequent stage in the development of an economy. This means

that before industrialization is thought, agriculture should be given a priority attention.

### **2.3. Summary of literature**

The impact of agricultural sector on the economic development is the systematic use of knowledge gained from research for the production of useful materials, devices, systems, practices, methods and processes, which results in increasing returns to the farmers in relation to the cost of inputs or labour expanded. It is evident in literature that rural infrastructure has been neglected in Nigeria since the colonial era. This has negatively affected the profitability of agricultural production. For instance, lack of rural roads impedes the marketing of agricultural commodities, prevents farmers from selling their produce at reasonable prices, and leads to spoilage. Limited educational background of farmers also cuts farmers off from sources of inputs, equipment and new technology. Attempts to solve the above problems have been the concern of government over the years. This, among other reasons informed the creation of Agricultural Development Programmes (ADP) in rural areas in Nigeria.

## **CHAPTER THREE**

### **3.0. RESEARCH METHOD**

#### **3.1. Research Design**

The study employed descriptive survey research design; this is a design which is aimed at finding out the opinion of different people on the topic of the study simply by asking questions. Thus, the opinion of a cross selection of 300 people in the area of study was sought after for the study.

#### **3.2. Area of study**

This study was carried out in Enugu North L.G.A. of Enugu State of Nigeria. It is located in the southeastern part of the Nigeria. Enugu State has about 17 local government areas with a population of about 2,123,968 people, NPC (2006), and with 85% of them living in the rural areas of the state. Ezike (1998) confirms that 75% of those residing in the rural areas of the state are farmers. Enugu state is located between latitudes 5°56'N – 7°06'N and longitudes 6°53'E – 7°55'E (Ezike, 1998). The state has six (6) agricultural zones, namely; Enugu zone, Enugu-Ezike zone, Agbani zone, Udi zone, Nsukka zone and Awgu zone. Enugu North LGA which is located under Enugu zone has about thirteen (13) circles and the arable crops cultivated in the area include rice, maize, groundnut, cowpea, melon, cassava, yam and vegetables while tree crops are oil palm, mango, cashew and citrus among others, with cassava being the predominant crop within the area. (ENADEP 2015 - 3<sup>rd</sup> Quarter 2019).



### **3.3. Population for the study**

The targeted population for this study was the entire farmers in Enugu North LGA of Enugu State. Enugu State has 246,400 farm families, with Enugu North LGA having about 762 (0.31%) of the farm families, (Brief of ENADEP 2015-3<sup>rd</sup> Quarter 2019). The accessible population of 300 respondents was randomly selected for the study.

### **3.4. Sample and sampling technique**

The researcher selected 300 respondents through simple random sampling comprising male and female using random sampling techniques.

### **3.5. Instrument for data collection**

In the course of the study, the researcher employed the use of research questionnaires. The researcher also conducted oral interview to some rural dwellers that could not read or write.

### **3.6. Validation of the instrument**

The questionnaire was conducted and validated by an expert in the field of project and evaluation and also face to face validity, which was approved by the project supervisor.

### **3.7. Reliability of the instrument**

Having approved an instrument, the researcher pilots it among the sampled subjects. The result was measured and evaluated which makes it reliable with the co- efficient of 0.6

### 3.8. Method of Data collection

The researcher administered the questionnaires by hand and collection was also made by hand, 300 properly filled questionnaires were used for analysis.

### 3.9. Method of Data analysis

Both descriptive and inferential statistics were used in the analysis of the data collected. The research questions were analyzed using frequency table and mean responses from the respondents were compared and classified according to the number of items in the questionnaire for each research question.

Formula for mean:  $\sum \frac{FX}{N}$

Where  $\sum$  = Sum of

F = frequency

X = Nominal value

N = Total number of respondent

The mean was calculated by adding the nominal value of response mode thus.

Scale	Nominal Value
Strongly Agree	4
Agreed	3
Disagree	2
Strongly Disagree	1
Total	10
Average Mean	$= \frac{10}{4} = 2.5$

### **3.9.1. Decision rule:**

The decision rule was based on the values of the calculated mean of the response options numerical values.

Therefore any item of mean score which is 2.5 and above were agreed by the researcher as positive influencing the questionnaire items, while any point that is below 2.5 were disagreed by the researcher as negative influencing them.

## CHAPTER FOUR

### 4.0. PRESENTATION AND ANALYSIS OF DATA

This chapter is devoted to the analysis and interpretation of data collected in the process of the study. In this section also, the researcher analyzed his data by calculating the answers got from his research questions using the descriptive statistics for the items. For each research question, the researcher calculated the cluster mean (Grand mean).

#### 4.1. Summary of findings:

##### Research Question One:

What are the socio-economic characteristics of rural farmers in Enugu North L.G.A.?

**Table 1:** Frequency Distribution of Farmers' Socio-Economic Characteristics

Items	Frequency	Relative frequency %
<b>1. Gender</b>		
Man	218	72.7%
Female	82	27.3%
<b>Total</b>	<b>300</b>	<b>100</b>
<b>2. Ages (years)</b>		
Below 25	10	3.3%
25 – 34	39	13%
35 – 44	76	25.3%
45 – 54	98	32.7%
Above 55	77	25.7%
<b>Total</b>	<b>300</b>	<b>100</b>

### 3. Level of Education

Non-formal	56	18.7%
Primary	82	27.3%
Junior Secondary	66	22%
Senior Secondary	49	16.3%
Tertiary	29	9.7%
Others	18	6%
<b>Total</b>	<b>300</b>	<b>100</b>

### 4. Marital Status

Single	76	25.3%
Married	137	45.7%
Divorced	54	18%
Widowed	33	11%
<b>Total</b>	<b>300</b>	<b>100</b>

### 5. Membership to Cooperatives

Yes	153	51%
No	147	49%
<b>Total</b>	<b>300</b>	<b>100</b>

### Research Question Two:

To what extent has ADP influenced the rural farmers in Enugu State?

**Table 2:** Respondents responses on Innovations Extended to Farmers in Enugu State by the ADPs

Option	SA	A	D	SD	FX	Mean	Remark
1. Improved seed varieties	118	113	57	12	937	3.12	Agree
2. Distribution of fertilizer	167	96	34	3	1027	3.42	Agree
3. Mgt of pest & disease control	98	141	45	16	921	3.07	Agree
0. Man power development	49	101	128	22	777	2.59	Agree

<b>Total mean -----</b>	12.20
<b>Grand mean =</b>	$\frac{12.20}{4} = 3.05$

Source: (Field survey, 2021)

### **Research Question Three:**

What is the level of relationship existing between farmers and ADP extension staff in Enugu North L.G.A.?

**Table 3:** Respondents responses on contact/communication with the ADP agents

Option	SA	A	D	SD	FX	Mean	Remark
1. Farm & home visit	28	60	115	109	631	2.10	Disagree
2. Proper supervision & telephone calls	03	09	108	180	435	1.45	Disagree
3. Method & result demonstration	68	85	87	60	761	2.54	Agree
4. Seminar, workshop & counseling	50	95	75	80	715	2.38	Disagree
<b>Total mean -----</b>							8.47
<b>Grand mean =</b>							$\frac{8.47}{4} = 2.12$

Source: (Field survey, 2021)

**Research Question Four:**

To what extent have farmers improved their production due to adoption of innovations?

**Table 4:** Respondents responses on benefits of adopted innovations

Option	SA	A	D	SD	FX	Mean	Remark
1. Surplus yield	120	170	10	0	1010	3.37	Agree
2. Low cost of production	58	140	57	45	811	2.70	Agree
3. Quality produce	128	109	50	13	952	3.17	Agree
4. Improved crop varieties	60	205	18	17	908	3.03	Agree
5. Agricultural credits & loan	45	63	114	78	675	2.25	Disagree
<b>Total mean -----</b>						14.52	
<b>Grand mean =</b>						$\frac{14.52}{4} = 3.63$	

Source: (Field survey, 2021)

## **CHAPTER FIVE**

### **5.0. DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

In this chapter, the researcher discussed the result of the findings, conclusion, implication of the study, recommendations of the study, limitations of the study, suggestion for further studies and summary.

#### **5.1. Discussion of the Findings:**

The discussion will be focused on the research questions analyzed in table 1, 2, 3 and 4 as presented in the chapter.

##### **Research Question 1**

What are the socio-economic characteristics of rural farmers in Enugu North L.G.A.?

Table 1 shows the farmers' socio-economic characteristics. Five different parameters such as; Gender Age, Education, Marital status, Membership of co-operative, were analyzed using frequency distribution. Analysis in Table 1 show that 72.7% of the farmers were male while 27.3% were female, indicating that even as female farming is often encouraged, in Enugu North more than 70% of the farmers are still male. In age categories, the respondents were grouped into five. The result show that the smallest proportion of the farmers were below 25years (3.3%) while the largest proportion were between 45-54years (32.7%) followed by age bracket above 55years (25.7%), and farmers between 35-44years were (25.3%) and lastly farmers between 25-34years (13%). It indicates that if care is not taken, most farmers with outgrow effective working stage.



It is also indicated in Table 1 that majority of farmers in Enugu North were able to attain either primary education (27.3%), or Junior Secondary (22%), while those without formal education were (18.7%), (9.7%) were able to advance to tertiary while others were (6%). It implied that farmers in Enugu State need to be encouraged to further their education. The table also revealed that majority of the farmers was married (45.7%), while (25.3%) were single, (11%) were divorced and (18%) widowed. It is equally on record that (51%) of the farmers belonged to one cooperative group or another while (49%) percent does not belong to any cooperative society. This affirmed the words of Dr Matthias Onu, the Programme Manager, Enugu State Agricultural Development Programme (ENADEP) on inadequate extension officers, and so farmers in Enugu State will find it difficult to get innovation information.

### **Research Question Two:**

To what extent has ADP influenced the rural farmers in Enugu State?

Table two shows the farmers agreed that agricultural development programmes has helped to improve seed varieties, fertilizer distribution, Management of pests and diseases as well as man power development. From the respondents mean score of 3.05 which is above the agreed cut-off point, the researcher accepted that to a very large extent, the ADP has positively influenced the rural farmers in Enugu State.

**Research Question Three:**

What is the level of relationship existing between farmers and ADP extension staff in Enugu North L.G.A.?

Table three shows that the extension agents do not observe farm & home visit, proper supervision & telephone calls, or conduct seminars, workshops & counseling; however, the farmers agreed that method & result demonstration were conducted. The rejected mean responses of 2.12 indicated that there were no close contact between the farmers and the extension agents, this may be due to the inadequacy of extension staff which has created information gap between the agency and farmers in the area of information sharing on contemporary system of farming and physical contact.

**Research Question Four:**

To what extent have farmers improved their production due to adoption of innovations?

Table four indicates that to a very large extent the adopted innovations have led to surplus yield, low cost of production, quality farm produce and improved varieties of crops. Regrettably, the response in the case of agricultural credit financing was negative. Although the mean score of 3.63 was accepted, the researcher observed that low funding of the ADP in addition to other factors, has led to the ADPs' inability to meet their required logistics and manpower development needs.

## **5.2. Conclusions**

Agricultural Development Programs in Enugu State are becoming shadows of their past. This is indeed a sad story for Nigerian Agriculture because the ADP system has been the most tested and most viable Agricultural Development initiative in Nigeria. Across the nation, less than ten ADPs have Chief Executives that have direct access to their Governors and therefore are actively supported to perform their functions. Poor funding and inadequate staffing are perennial problems. A decision has to be taken nationally on the fate of the ADP. The sorry state of the ADPs is a reflection of the erratic and frequent changes in the policies of Governments.

Funding of ADPs should be by direct deduction from source from the three tier of Government and at the level of not less than 15% of the annual budgets of Federal, State and Local Governments (15–15–15). It is important to note that countries such as Malaysia that currently use pipelines to transport palm oil at one time spent up to 20% of their budget on Agriculture to reach their present level of development. Also there should be massive recruitment of agricultural extension workers to meet up with the World Bank recommended ratio of 1EA:800 farm families. There also appears to be a growing consensus on solutions that, “a combination of increased supply of credit and improved biological and chemical technologies is a measure which has high potential for increasing farm productivity, income and employment”.

### **5.3. Implications of the study**

It is identified that the majorities of the farmers in Enugu State were afraid of adopting new innovations due to limited knowledge, their level of education and financial incapability, and cannot provide the required capital needed; this implies that majority of them operate subsistence farming. They need to be given aids in terms of agricultural credit, which they lack seriously. So if they are given enough agricultural credit facilities, they would contribute substantially to agricultural production in Nigeria by increasing agricultural products both food crops and raw materials which would help to enhance the economy.

### **5.4. Recommendation of the study**

Given the present level of development in the agricultural sector based on the proof of the improper management and inadequate farm tools and raw materials in small – scale industries with the accompanying high prices of foodstuff in the market, the researcher recommended that:

1. Since it is discovered that agriculture is a vehicle to national economic development all effort should be geared towards revitalizing it.
2. As the generality of the rural farmers are illiterate and semi-literate the government should embark on adult non formal education programme nationwide.
3. There should be agricultural education, which is capable of initiating students in the primary and post primary schools into stronger aquaculture.

### **5.5. Limitation of the study**

There are some factors, which have contributed in making this research not to be as comprehensive as it ought to be. For instance, time allotted for this study was so short that the researcher did not cover all the areas she supposes to cover.

Another problem was finance, inadequate finance constituted a hindrance to the project because a lot of money was required for transport to the various places.

### **5.6. Suggestion for further study**

It was suggested that similar research should be carried out in another Local Government Area throughout the federation and proper attention of government on the provision of credit facilities to farmers.

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## **APPENDIX I**

Department of Agricultural Education  
Institute of Ecumenical Education  
Thinkers Corner, Enugu.

Dear Respondent

### **QUESTIONNAIRE FOR FARMERS IN ENUGU NORTH L.G.A**

I am a student of the above institution conducting a research study on the influence of Agricultural development programme on agricultural production in Enugu North LGA of Enugu State.

Your co – operation is needed to complete this questionnaire. Kindly be as objective as you can. All information given will be treated with utmost confidentiality. Thanks for your co – operation.

Yours sincerely

Ugwu Rosemary.



## APPENDIX II

### Instruction:

Answer by ticking (✓) or (X)

1. Gender: M ( ) F ( )
2. Age(yrs):
  - i. below 25( )
  - ii. 35-44 ( )
  - iii. 45-54( )
  - iv. Above 55( )
3. Level education:
  - i. Non formal ( )
  - ii. Primary ( )
  - iii. Junior secondary ( )
  - iv. Senior secondary ( )
  - v. Tertiary ( )
  - vi. Others ( )
4. Marital Status
  - i. Single ( )
  - ii. Married ( )
  - iii. Divorced ( )
  - iv. Widowed ( )
5. Membership to Cooperatives  
Yes ( )  
No ( )

### Question 1

**What is the Innovations Extended by the ENADEP**

Option	SA	A	D	SD	FX	Mean	Remark
1. Improved seed varieties							
2. Distribution of fertilizer							
3. Mgt of pest & disease control							

4. Man power development							
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### Question 2:

What is the mode of contact/communication with the ADP agents

Option	SA	A	D	SD	FX	Mean	Remark
1. Farm & home visit							
2. Proper supervision & telephone calls							
3. Method & result demonstration							
4. Seminar, workshop & counseling							

### Question 3:

What are the benefits of adopted innovations

Option	SA	A	D	SD	FX	Mean	Remark
1. Surplus yield							
2. Low cost of production							
3. Quality produce							
4. Improved crop varieties							
5. Agricultural credits & loan							