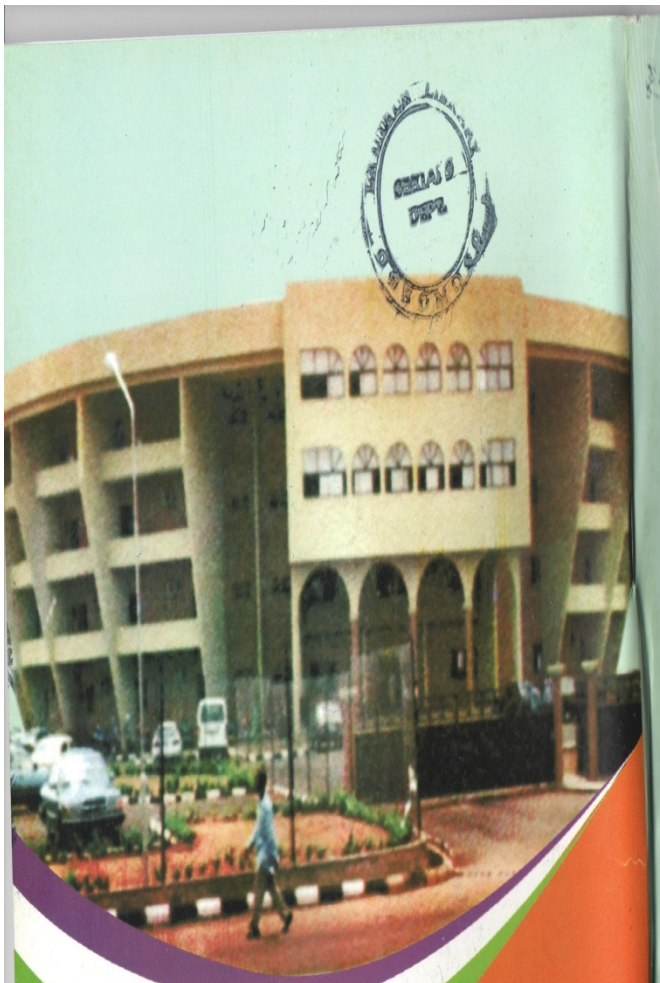

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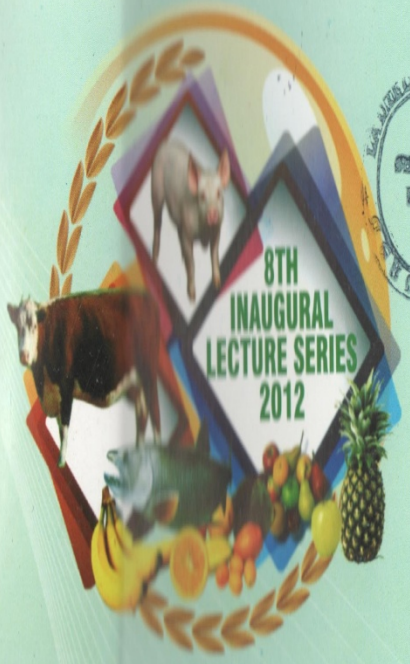

Titled:

REPOSITIONING AGRICULTURAL EXTENSION: THE UMBILICAL CORD OF SUSTAINABLE LOCAL FOOD PRODUCTION

By

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Repositioning Agricultural Extension: The Umbilical Cord of Sustainable Local Food Production

by

Prof. Abel Babalola Ogunwale

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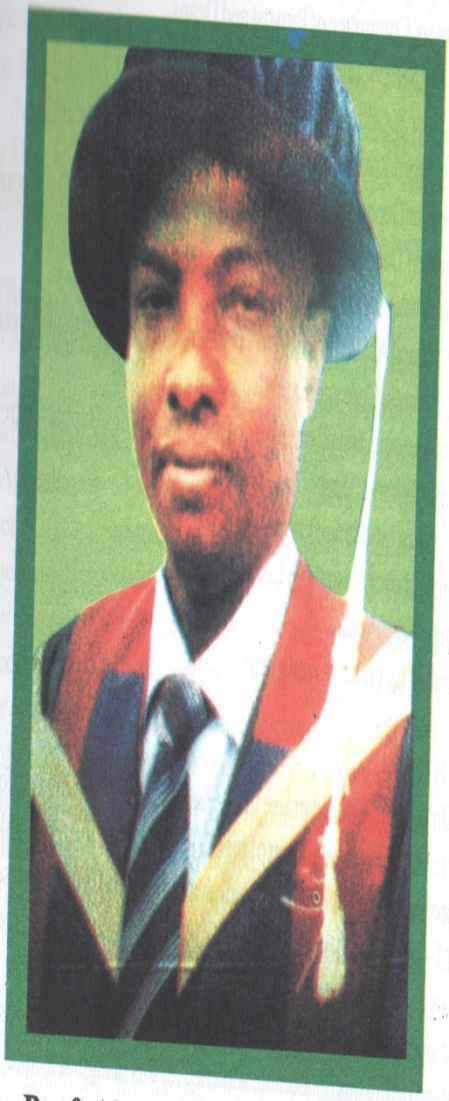

Prof. Abel Babalola Ogunwale
(B.Agric; M.Phil; Ph.D.)

The Ag. Vice-Chancellor,
The Ag. Registrar,
Other Principal Officers of the University,
The Chairman, Committee of Provost and Deans,
Dean, Faculty of Agricultural Sciences,
Other Deans of Faculties,
All Distinguished Professors here present,
My Ag. Head of Department of Agricultural Extension and Rural Development
Other Heads of Department,
All Directors of Programmes and Units,
Highly Esteemed Academic and non - Teaching Colleagues in the University,
My Wife, Parents, Core and Extended Family members,
My Pastor, Deacons and all members of the Glad Tidings Baptist Church,
All other Pastors and Clergy Dignitaries,
Eminent invited Guests and Friends
Reputable and ever reasonable LADOKITES,
Gentlemen of the Press,
Distinguished Ladies and Gentlemen

PROLOGUE

"Oh that men would praise the LORD for His goodness and for His wonderful works to the children of men" (Ps. 107:21). I want to thank God and appreciate Him for helping me in all areas of my life. God has sent several men and women who had contributed and impacted positively on me to be what I am today by divine providence. I thank you Sir and Ma. I also thank God for sparing my life from untimely death recently, and who also assisted me to stand before this honourable audience for this inaugural lecture.

I am rather humbled for seeing this day come true in my life. My academic career started when I gained admission into the then University of Ife, now Obafemi Awolowo University to read Agricultural Extension and Rural

Sociology in 1983. I was in the University for a period of fourteen years (i.e. 1983-1997) for B. Agric, (1988); M.Phil (1992) and Ph.D. (1997) Degrees in Agricultural Extension and Rural Sociology. I joined the service of Ladoke Akintola University of Technology (LAUTECH) in 1995 while I was a Ph.D. student and the Farm Manager and Trainer in Farm Management and Agricultural Extension at the Leventis Foundation Agricultural School, Ilesa, Osun State. Today I am what I am by the grace of God (1 Cor. 5:10).

Mr. Chairman Sir, distinguished audience, my lecture is dedicated to God Almighty and all Nigerian small-scale farmers involved in the business of feeding the entire populace.

INTRODUCTION

Mr. Chairman Sir, with your permission, I wish to start this Lecture by making this affirmation that "every productive man, is a productive thinker, and when a man engages his mind productively, he cannot be trapped in life". The Agricultural production till date remains the mainstay of the Nigerian economy. It is the main source of food for most of the population. It provides the means of livelihood for over 70 per cent of the population, a major source of raw materials for the agro-allied industries and a potent source of the much needed foreign exchange. In the time past, Nigerian agriculture accounted for 60 per of the global supply of palm oil, 30 percent of groundnut oil and 15 per cent of global supply of cocoa, but our country has now regrettably become a consumer nation with a total food import bill between 2007 to 2010 amounting to N98 trillion or $628 million. (FMARD, 2012). Our agriculture is dominated by small scale farmers, who are having small landholdings for cultivation. Hence, the research and development focus needs to be reoriented in a way to develop and promote those technologies that will raise agricultural income and ensure employment opportunities in Nigeria. This s a very complex and serious problem where the share of agriculture in gross domestic product is declining.

The title of my lecture is **"Repositioning Agricultural Extension; The Umbilical cord of Sustainable Local Food Production"**. This title emanates from the current situations in Nigeria as they relate to my academic career experiences. It is a topical issue that affects rural and agricultural development in general and in particular food security in Nigeria.

I am quite aware that this is the eight series of this University inaugural Lecture and that I am the third Professor in the Faculty of Agricultural Sciences to participate in the series. As the immediate past Dean of the Faculty and the first Professor of Agricultural Extension in the University, it is imperative for me to inform this great audience how Agricultural Extension has been repositioned in the Faculty and the University at large.

The Faculty of Agricultural Sciences was created in 1990 when the University was established with only three Departments namely;

(i) Department of Agribusiness and Rural Development
(ii) Department of Agronomy, and
(iii) Department of Animal Production and Health.

In 1998 when I had the opportunity of leading the Department of Agribusiness and Rural Development as Acting Head, the nomenclature of the Department was changed to Department of Agricultural Economics and Extension. This was because Agribusiness is a field of specialization within Agricultural Economics while Rural Development is also an aspect of Agricultural Extension. Thus, our first set of graduates had to contend with other University graduates who were more grounded in other areas of Agricultural Economics and Extension in the labour market.

In 2008 when I became the Dean, the Faculty of Agricultural Sciences, the Faculty incorporated additional programmes leading to the award of six undergraduate degrees as approved by the University Senate in November, 2008. The programmes are in the following six departments

(i) Department of Agricultural Economics
(ii) Department of Agricultural Extension and Rural Development
(iii) Department of Crop Production and Soil Sciences

(iv) Department of Crop and Environmental Protection,
(v) Department of Animal Production and Health, and
(vi) Department of Animal Nutrition and Biotechnology

This is to improve employability of our graduates and promote entrepreneurship among them to reduce the rate of graduate underemployment and unemployment in the country.

Mr. Chairman and distinguished audience, it is gratifying to note that the Department of Agricultural Extension and Rural Development now has a University based Extension Outreach programme for rural extension and on-farm research activities after 21 years of the existence of the University. The Rural Development Project is to ensure that the University is better positioned to fulfill its three cardinal functions of teaching, research and community services.

The primary objectives of the University Extension Outreach Programme known as Ladoke Akintola University of Technology (LAUTECH) Rural Development Project include the following among others:

(i) To create a research centre for testing and applying methods of community development and extension methods.
(ii) To field-test and demonstrate innovations developed most especially by LAUTEACH researchers and scientists on farmers' farms and
(iii) To serve as catalysts for community members' participation in projects that will enhance and improve their standards of living.

Furthermore, the Faculty of Agricultural Sciences since establishment in 1990, has made the 400 level internship training compulsory and more practical oriented. The Teaching and Research (T & R) Farm in the Faculty has introduced more programmes in addition to various research activities in the areas of Crops and livestock. The improved Seed Production Programme of the T & R Farm which is in collaboration with National Agricultural Seed Council (NASC) South-West Zone is a success story. The Faculty secured

400kg foundation seed of SUWAN and DMR maize varieties from the Council in 2011 and produced a total of 16.5tons of certified maize seeds for planting by farmers within the same year. The results of the three consecutive seed germination tests carried out by the Council after harvesting and processing the dried certified maize seeds were 98%; 98% and 100% for the three consecutive times.

Mr. Chairman Sir, the need to reposition Agricultural Extension has become imperative in view of the fact that Nigeria has become a net importer of food in spite of abundant agricultural resources available in the country. A stable agricultural industry ensures food security which is considered a primary requirement of any nation. Food security prevents starvation and mitigates excessive food importation which are typical of most developing countries including Nigeria. Food security is not a citizen of any nation but a product of adequate planning and right investments in agriculture in general and in particular agricultural extension services of any nation. That Nigeria must achieve food sufficiency is a policy objective that must be pursued with vigor and high sense of commitment. Nigeria must be food self sufficient and cannot be at the mercy of the global market for domestic food requirement. There is the need for Nigeria to translate the country's huge agricultural potential into reality by encouraging local production and strengthening the value addition process so as to make Nigeria food self-sufficient and generate income and wealth for the Nigerian farmers.

In Nigeria today, the greater proportion of the labour force in agriculture is smallholder farmers who reside in rural communities. Nwanze (2010) asserts that there is a growing recognition that smallholder farmers and rural communities are crucial elements of the solution to the challenges posed by food insecurity and poverty. Therefore, the rural farmers must be helped to produce quality food in sufficient quantity. The use of improved technologies will help boost agricultural productivity. Bokor (2005) opines that unless agriculture succeeds, a nation cannot succeed. This shows how crucial agriculture is to any nation.

In this lecture, I would like to take advantage of my academic career experiences in teaching, research and community service to drive home the whole essence of what I profess. My research interest has been on Agricultural Extension, with a focus on four major areas relating to the following:

(i) Agricultural Extension Organization, Administration and Management,
(ii) Agricultural Extension Communication and teaching methods.
(iii) Adoption of farm innovations by small-scale farmers, and
(iv) Farmers' participation in Agricultural and Rural Community development progammes.

I have organized my lecture in the following manner. The first section examines the concept, roles, principles, models and development of Agricultural Extension Programmes and Policies in Nigeria. The second section reviews food insecurity scenario and food importation expenditure for food security in the country. The third section deals with my contributions to knowledge and community services in the field of Agricultural Extension, and how the knowledge and experiences gained can be utilized to develop strategies for repositioning agricultural extension for sustainable local food production in Nigeria. The final section deals with conclusion and recommendations for policy formulation in Nigeria and other developing countries with similar background with Nigeria.

The concept, roles, principles, models and development of Agricultural Extension Programmes and Policies in Nigeria.

Agricultural extension refers to a set of activities which involves communication, information, demonstration and technical training geared towards disseminating improved farm technologies to farmers and transforming their skills, knowledge and attitude towards improved farm production and standard of living. (Ogunwale 1998).

Van den Ban and Samata (2006) pointed out that in the United Kingdom, Germany and the Scandinavian Countries, the focus is on advisory work i.e. solving specific problems, while in the American tradition, the term "extension education" is used to emphasize that they are dealing with an educational

activity which seeks to teach people to solve problems by extending information. In the Netherlands, the word "Voorlichting" which means keeping a light in front of someone to allow him/her to find the way is used for extension. In France, the term "Vulganization" which indicates that extension is a process of simplifying information so that the "vulgus" or "ordinary" people can understand, is used for extension. Extension, as art of extending and educating, is usually defined as a voluntary, informal out-of-school educational process which aims at teaching rural people how to improve their level of living by their own efforts, through making wise use of the resources at their disposal for better system of farming and home making for the benefit of the individual, the family, the community and the nation as a whole (Akinbode, 1989) Extension needs to go beyond technology transfer to developing skills and knowledge of farm families for sustainable agriculture and rural development.

Agricultural extension brings about changes, through education and communication in farmers' attitude, knowledge and skills. The role of agricultural extension involves dissemination of information, building capacity of farmers through the use of a variety of communication methods and help farmers to make informed decisions. Sinkaye (2005) equates help in extension to empowering all members of the farm households to ensure holistic development.

Maunder (1973) further defines Agricultural Extension as a service which assists farm people through educational procedure in improving farming methods and living standards of rural life. Bardsley (1982) also affirms that extension is a service or system which assists farm people through educational procedure in improving farming methods and techniques, increasing production efficiency and farm income, improving their levels of living, and lifting the social and educational standards of rural life.

Also, Daramola (1999) noted that agricultural extension is a method of extending new ideas in farming to the farmers and that, its services include services that provide farmers with materials like seeds, fertilizers, insecticides and equipment required to assist in better farming. Therefore, from all the various definitions, agricultural extension, in scope, involves the extension of

knowledge, skills, experiences, improved technologies, and farm practices from where they originated to where they are eventually accepted and widely utilized for improved farm production and standard of living of the target groups.

Extension service is usually conceptualized as a link between the research system and farmers' systems for the benefits of all the stockholders involved in agriculture.

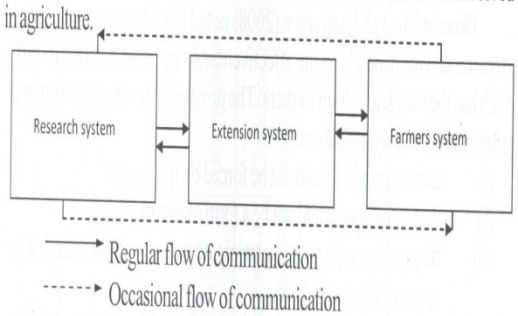

Figure I: Three primary systems involved in farm technology generation, transfer and utilization in agriculture.

In term of objective, the central objective of extension services is that of providing rural people with raw knowledge and skill in developing them as individuals, leaders and cooperative members of the community. Maintaining the linkage between research and the users of innovations is the work of extension services.

Ejike (1989) affirms that extension agents have a big responsibility to re-orientate the village people's attitude towards economic goals; although this will definitely take much time and conscious effort, as attitudes are difficult to change. An extension organization is a knowledge intensive organization, which is involved in the production and dissemination of knowledge (Van den Ban and Awkins, 1995). Hence, the success of this organization depends to a large extent on knowledge "management". The major roles of its managers are to ensure that

(i) it gets relevant knowledge where ever this is produced
(ii) the staff members use their creativity to acquire and develop new knowledge
(iii) all staff members have access to all knowledge which is available in the organization

(iv) one learns from experience on how to develop more effective extension methods and

(v) there is a social climate which stimulates sharing of knowledge and a critical analysis of the knowledge developed or used by colleagues.

Ekumankama and Anyanwu (2008) noted that effective agricultural extension service depends on the effectiveness of frontline extension staff, which has the mandate to train farmers. The principles of extension as stated by Semana (1999) are as follows:

(i) that extension should not be forced on the people,

(ii) that extension should not be a form of charity,

(iii) that rural people should participate in every effort intended to improve their way of life,

(iv) that the extension workers should do one thing at a time,

(v) that the extension staff should utilize local leadership, and

(vi) that the extension workers should study the job thoroughly.

In term of models, there are four major extension models that are being used in African countries. These are (a) technology transfer model, (b) Farmer first model, (c) Participatory approach model, and (d) sustainable development extension model. (Norton and Brough, 1995). The first model contains top-down technology transfer from researchers to farmers through the extension agents. The second is the farmer first approach. It considers the importance of the role of farmers in research and extension from the bottom up. The third model is a participatory approach which in some ways integrates and extends the first two models. The participatory approach relies on the involvement of researchers and farmers, as well as other stakeholders in the extension process. The sustainable development extension model involves the provision of socio-infrastructures such as roads, dams, irrigation facilities, electricity, maternity centers and other relevant professionals apart from extension personnel in the provision of extension services. While these models are by definition idealized abstractions of reality, they provide guidance on the development and use of more specific extension techniques to solve identified farm constraints in specific locations.

TABLE 1: CENTRAL ISSUES IN FOUR EXTENSION MODELS

Attributes	Technology transfer	Farmer first	Participatory Approach	Sustainable development extension
Strategy	Top-down	Bottom-up	Interactive	Inter-dependent
Aim	Technology adoption	Empower Farmers	Cooperative action	Sustainable development
Pre-cursors	Research and development	Experienced farmers	Participatory of key stakeholders	Collaboration of stakeholders
Key-players	Scientist Extension agents	Farmers	Stakeholdrs/ Facilitatiors	Farmers, Extension agents/Scientist/ Professional

Sources – Geoff Norton and Elaine Brough (1995)

Table 1 shows the four models of Extension as different strategies with aims and the key players in each strategy. This reveals that research system, extension system and farmers system are all partners in progress for meaningful agricultural extension services in any country.

It is important to show how extension is linked to development institutions such as producer groups, research institutions, agricultural higher education and input and product markets. The paradigm of Agricultural Knowledge and Information System (AKIS) stresses the importance of developing a system of institutions (e.g. research, extension and education) that cooperate and communicate with each other to achieve an overall goal of increasing agricultural productivity (Figure 2).

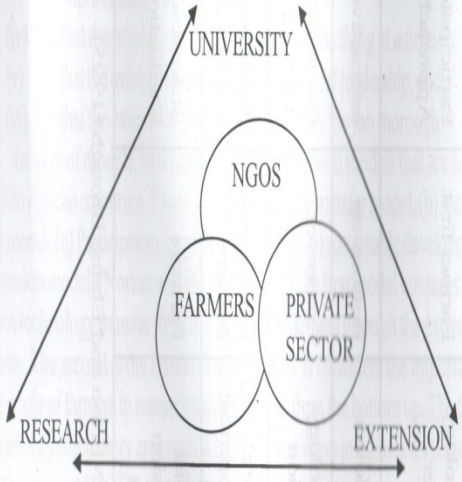

Figure 2: Agricultural knowledge and Information System
Source: FAO, (2007) and the World Bank (2000)

However, the AKIS paradigm has been criticized because of its linear vision on delivering technology to large farms while ignoring farmers with limited land and resources, and not listening to farmers in terms of their problems and priorities for government and university researchers. Despite this criticism, AKIS paradigm is still a useful concept in highlighting the importance of

developing a system of education, technology and extension institutions that are the drivers of transforming traditional agriculture (Bonnen, 1998).

The three core institutions in the AKIS paradigm need to be interlinked and largely developed with public funding. The challenge is for poor countries to invest in these core institutions to "buy their way into the growth process" up to a point where public-private partnerships and private investors, including farmers contribute the lion's share of the investment necessary to drive the agricultural transformation process (Evenson, 2004).

In terms of development, the history of agricultural extension services dated back to when colonial agriculture was introduced in Nigeria. There was a need in 1921 to establish a unified Department of Agriculture to serve both the North and the South in Nigeria. The Department was charged with the responsibilities of:

(i) providing crops on experimental and trial basis.
(ii) Improving and maintaining soil fertility,
(iii) Marketing of agricultural produce, and
(iv) Training Nigerians through organized agricultural education programmes.

Thereafter the country has adopted several extension approaches to ensure food security in Nigeria. Ogunwale (2004), reports that Nigerian government has adopted several public sector extension approaches to achieve sustainable agricultural development. The decade of the 1970's which witnessed the virtual collapse of the Nigerian agricultural economy was also the decade which witnessed the formulation of new agricultural policies, the launching of new agricultural programmes and the creation of new agricultural institutions at a speed which could hardly be matched anywhere else in the world (Oyemakinde, 2000). The following are examples.

1. Conventional Agricultural Extension Approach

Before the 1970's agricultural extension services were solely the affair of the State government, using the Conventional Extension services model. This classical model was attached to the State Ministry of Agriculture and

Natural Resources (MANR) in Nigeria. Essentially, the system was designed to promote National agricultural production through increased food crops, export crops and annual crops production. The Federal Government started to get involved in agricultural extension from about 1972 with the creation of special extension-oriented projects where were jointly administered by Federal and State Governments with the assistance of the World Bank.

2. The Commodity Focused Approach

The principal aim of this approach was to facilitate the production of optimum quantities and qualities of raw material. The Commodity Boards (such as for Cotton, Groundnut and Cocoa) came under this approach. These Boards were concerned with the production of cash crops for export and were primarily interested in the improvement of agricultural production for export and as a result their extension approaches were geared towards this goal.

3. The Community Type Extension Approach.

The community type system of extension is participatory "self help" system. It is a broad spectrum approach whereby the scope of the extension agent is broad and encompass responsibilities other than those focused on Agriculture alone. Example of this approach was the Directorate of Food, Road, and Rural Infrastructure (DFRRI). Essentially, the philosophy behind community extension consists of work based on felt-needs on the assumption that people want to be free from poverty and pains of absence of social infrastructure, and are ready to participate in their own community development.

The main objectives of commodity extension are to improve community life especially at the grass roots, reduce poverty and to foster social development, by improving the general standard of living in the rural areas by using their own human and material resources. In addition, community extension was designed to spread useful and practical information to farmers and their families on subject relating especially to agriculture and home engagement.

4. The Integrated Agricultural Development Approach

The integrated Agricultural Development Programme which includes agricultural extension as an integrated function became more pronounced in the 70s as a result of the realization that there can be no agricultural development without the coordinating and harmonizing of all components that are relevant to agricultural development process. These include dams, good rural roads, provision of credit facilities and the strengthening of agricultural extension services. All of these must be brought together and applied to agriculture in order to achieve maximum production and raise the level of living of rural dwellers.

In Nigeria, the integrated agricultural development programme which could also be described as Agricultural Development Project (ADP) started in 1975 as enclave project. Today, the programme has become state wide, covering all the States in the Federation including Federal Capital Territory (FCT). The programmes were financed by the Federal Government, the State Governments concerned and the World Bank.

5. Integrated Rural Development Extension Approach

The integrated rural development approach is a participatory rural development progamme in which there is a high level of people's participation in planning, implementing and evaluating programmes. Thus, it is an important approach to improving agricultural extension system. The Nigeria integrated rural development programme was borne out of the recognition of the fact that the concurrent development of Nigeria's rural sector, where the majority live, holds the key to balance national development.

6. The Farming System Research and Extension Approach.

The farming system research and extension approach combines the efforts of research, development, extension and production agencies to investigate the whole farm as a system. It focuses on the interdependencies of the components under the control of the farm household and how the

component interacts with the physical, biological and socio-economic factors outside the control of the household. This approach is mostly used by the National Research Centres in Nigeria. By implication, the farming system Research and Extension approach combines two types of applied agricultural research i.e. upstream and down stream to generate technologies for removing identified constraints to "small-scale" farmers' production systems.

7. National Accelerated Food Production Programme (NAFPP)

This programme was initiated in 1971 by the Federal Government with the main objective of increasing domestic food production of the following crops cassava, maize, rice, sorghum and millet. It was a cooperative venture between Federal and State Governments as well as the farmers at the grass root. The NAFPP operated through three components Research, Extension and Agro-Services.

The extension agents were purposely employed by the programme mainly to spread adoption of improved seed varieties of mandated crops. The programme has demonstrated the usefulness of on-farm research and agro-service centres for effective agricultural extension service in Nigeria. However, the success was checkmated by many factors which include the following:

(i) lack of financial support from some State governments to implement the programme objective

(ii) inadequate credit facilities to the participants especially farmers, and

(iii) inadequate information to create necessary awareness among others (Atimo and Akinyele, 1986)

8. Operation Feed the Nation Programme (OFN)

This was designed to facilitate the achievement of the objectives stipulated in the NAFPP. The OFN programme launched in 1976, was aimed at creating awareness among Nigerians of different socio-economic status of the need to produce at least part of their own food and, at mobilizing the nation's resources towards increasing food production. The Federal Government playing its part embarked on a large scale importation of fertilizers

and other vital agricultural inputs for distribution to farmers to boost food production. State governments also made significant contributions in the form of food projects. However, OFN operations were not properly supervised and also farm implements and inputs such as tractors and fertilizers arrived too late and were therefore, not useful to the farmers. The change in government to civilian administration in 1979 terminated the OFN programme.

9. Green Revolution

This was the brainchild of Shagari administration launched in 1980. The green revolution programme, like the past programmes, aimed at increasing agricultural production in the country. However, it did not increase food supply (Ogunwale, 2004b).

10. University Organized Extension System

University organized extension system incorporates adult education, nutrition, home economics and management, agricultural extension, mass communication, rural health care, community development, vocational training and, on-farm research and development. It was established with the sole aim of organizing and providing link between the researchers and the farmers. The target audience is the entire farm families, and in order to meet the need of these farm families, different programmes were for adult, youth, rural children and women, within the University organized system. Almost all extension services are planned and implemented by the University concerned. The system became pronounced in Nigeria in 1970s when it was used for the promotion of National Accelerated Food Production Programmes (NAFPP). The system, however, suffered a setback in this country due in part to

(i) inadequate number of trained extension personnel

(ii) complicated extension personnel due to lack of committed and trained personnel.

(iii) Lack of coordination among various agencies offering extension services in the country, and

(iv) At the university level, it was mainly lack of fund and logistic supports. (Agbamu, 2005)

Examples of the implementation of this system in Nigeria are in University of Ibadan (Badeku Project), Federal University of Agriculture, Abeokuta (FUNAB), Federal University of Agriculture, Makurdi, Obafemi Awolowo University (Isoya Project) and Ahmadu Bello University, Zaria.

11. River Basin Development Authorities

This programme spent a combined budget of N895 million in 1983 (Daramola, 1999). This figure was larger than the budgets of some State Government then. The Extension Component of this programme suffered setback as a result of lack of fund, and logistic supports for extension service. Huge sums of money were pumped into the River Basin Development Authorities for direct agricultural production. Massive agricultural inputs importation as well as increased agricultural loan facilities also characterized the programme.

12. Agricultural Development Programmes

In 1975, the Agricultural Development Projects (ADPs) were introduced to correct the weaknesses inherent in the earlier extension approaches. At present, there are as many distinct ministries of Agriculture as there are 36 states in the country. The organization of each state Ministry is a reflection of the agricultural problems in the state. All the State Ministries are, however related to the Centre-the Federal Ministry of Agriculture and Rural Development. The State Agricultural Development Programmes (ADPs), under the supervision of each state Ministry of Agriculture are now primarily responsible for Public Agricultural Extension Services in Nigeria today. The first three enclave ADPs introduced in 1975 were in Funtua (Kastina State), Gusua (Zamfara State) and Gombe (Gombe State). However, by 1989, all States in the Federation including the Federal Capital Territory (FCT), Abuja had State-wide Agricultural Development programmes.

In 1980, Nigeria adopted the "orthodox" Training and Visit (T & V) extension system. Training and Visit system of Extension provides an organizational structures and detailed mode of operation that ensures that well-

informed extension agents visit farmers regularly and transmit messages relevant to production needs. Problems faced by farmers are quickly fed back to research scientists for solution. Relevant extension staff receives regular training to upgrade their professional competence and serve the technological needs of farmers.

According to Benor and Baxter (1984) the basic features of the training and visit system extension are

(i) Professionalism
(ii) Single line of command
(iii) Concentration of efforts on purely extension activities
(iv) Time bound work
(v) Field and farmer's orientation
(vi) Regular and continuous training
(vii) Linkage between research and extension

The T & V Extension system differs from earlier approaches to agricultural extension in Nigeria mainly in the responsibilities that were assigned to the front-line extension agents in the villages, and in the organizational structure of the state's extension workers. The T & V system seeks the full-time commitment of village Extension Workers (VEWs), with no responsibilities other than disseminating technology to farmers. Organizationally, the institution of a single line of command provided that VEWs would be both technically and administratively supervised through a chain of command under the extension headquarters. (Cernea, Coulter and Russell, 1983).

The common characteristics of the T & V system in Nigeria Agricultural Development Programmes as revealed by (Benor and Baxter 1984) are as follows:

(i) appointment of full-time village extension worker (VEWs) to work exclusively on extension;
(ii) selection of contact farmers (CF) to disseminate information;
(iii) establishment of a fixed, regular cycle of fortnightly visits by VEWs
(iv) regular- in-service training to extension staff at a fortnightly training meeting by subject matter specialists,

(v) the use of simple, practical, production recommendations concentrated on the most important crops.

The Training and Visit system has been criticized as a result of failure of ADPs to maintain effective agricultural extension services at the farm levels. Critics claim that the T & V system is difficult to adopt in areas where budgets are tight and funds are not enough. This has been confirmed in Nigeria where many state ADPs suffered setback when the World Bank finally withdrew its financial support (Oladele, 2004).

The implementation of the T & V extension system in Nigeria has led to the practice of the Unified Agricultural Extension Service (UAES) in Nigeria. The UAES refers to the organization and management of the Federal and State Ministries of Agriculture and Natural Resources/Rural Development in such a way that those duplicating extension activities of the components (Livestock, Fisheries, agro-forestry, crops, off-farm activities e.g. processing) and related resources are transferred to the body responsible for extension service, the Agricultural development programmes.

The review of recent agricultural programmes in which agricultural extension was embedded in Nigeria by Okunneye (2010) reveals the following among others.

1. The National Special Programme for food security (2002-2005 and 2006-2010). The objective was to raise agricultural productivity and production to eliminate rural poverty and attain food security;
2. National Fadama Development Project; (2004-2009) for Fadama II and (2009 -2014) for Fadama III. The objective is to increase the income of Fadama users by empowering them and reducing conflict among them. The project aims at building the capacity of Fadama users and providing rural infrastructure, asset acquisition support and project management services.
3. Community-Based Agricultural and Rural Development Programme (2004-2009). It involves rural communities and the poor in project design and implementation of field activities. The programme is designed to stimulate rapid expansion of investment in sustainable growth in

agricultural output and productivity. This is combined with non-agricultural activities, natural resources management, rural infrastructure and social services, and
4. Community-Based Natural Resources Management Programme (2003-2010). It aims at improving the living conditions of the poor in rural communities in the nine Niger Delta States of Nigeria. It adopts the community driven development and participatory approaches in identifying and prioritizing the communities' needs and plans to address those needs. It focuses on individual capacity building, increasing productivity of agriculture and artisanal fisheries, diversifying sustainable livelihoods, improving access to markets and social infrastructure and environmental management.

The Nigeria Agricultural Policy

The Nigeria Agricultural Policy provides the framework for implementation of programmes and guidelines for Agricultural development. The broad objective was to attain self sustaining growth in all the sub-sectors of agriculture and realization of the structural transformation relevant for overall socio-economic development of rural areas (FMARD, 1988)

This was expanded in the revised policy to include promoting farmer friendly Agricultural Policy that achieves food security, eradicates poverty, develops the rural economy and protects the environment (FMARD, 2000). The objectives and strategies to achieve them as spelt out in the policy documents which emphasize the importance of agricultural extension to the goal attainment of the agricultural sector stated that, To achieve increased production and improved processing in all the sub-sectors of agriculture (crop, livestock, and fisheries), improvement of quality of life and promotion of environment friendly practices and other objectives require extension effort (Koyenikan, 2008).

Past Agricultural Support Service policies in Nigeria which have implications on agricultural extension services include the following among others:

1. Agricultural commodity marketing and pricing policy (1977)
2. Input supply, distribution and subsidy (1972) which led to the establishment of National Seed Service in 1972 and the launching of National Accelerated Food Production Project (NAFPP) in 1973
3. Agricultural Extension Policy in 1975 which led to the adoption of World Bank assisted Agricultural Development Projects and 1985-1995 continuation of the World Bank Assisted Agricultural Development programmes in all the States and eventual withdrawal of the World Bank loan.
4. Agricultural Cooperative Policy in 1979 which led to the creation of Department of Agricultural cooperative within the Federal Ministry of Agriculture and Rural Development.
5. Agricultural Credit Policy: To give effect to government policy on agricultural credit, the Nigerian Agricultural and Cooperative Bank (NACB) was created in 1973. Other measures included on Agricultural Credit Quarantee Scheme launched in 1977 and a Rural Banking Scheme designed to make banking facilities available to more rural dwellers, including farmers.
6. Food Production Policy in 1976 which led to Operation Feed the Nation in 1976 and Green Revolution in 1980 and Back to Land programme in Nigeria.
7. Agricultural Mechanization Policy:- The perceived route to Agricultural Mechanization in the policy was through the massive importation and distribution of tractors and other farm machinery rather than through the development of local mechanical skill and technology.
8. Rural Development policy in 1986 which led to the establishment of Directorate for Food Roads and Rural Infrastructure (DFRRI).
9. National Fertilizer Policy for Nigeria in 2006. This was to facilitate farmers' timely access to adequate quantity of fertilizers at competitive but affordable prices through, among others the

promotion of research and extension activities, and facilitating adequate financing of fertilizer production.

10. 7-point Agenda in 2007, with emphasis on agriculture and its development to achieve food security and the Millennium development Goals objectives during the late President Umar Musa Yaradua-led administration.
11. Agricultural Transformation Agenda:- The Transformation Agenda is a Blueprint for economic and social transformation developed by the administration of President Dr. Goodluck E. Jonathan to provide direction for the administration for the period 2011 – 2015. According to the Transformation Agenda, policies and objectives for developing the Agriculture and food security sector include to (a) secure food and feed needs of the nation; (b) enhance generation of national and social wealth through greater export and import substitution; (c) enhance capacity for value addition leading to industrialization and employment opportunity; (d) efficient exploitation and utilization of available agricultural resources; (e) enhance the development and dissemination of appropriate and efficient technology for rapid adoption; (f) achieve self-sufficiency in rice production, and fertilizer production. These policies are built on on-going development programmes in the sector such as Special Programme for Food security, FADAMA III Programme, Fertilizer Revolving Fund, Presidential Initiative on Cassava, Rice, Vegetable Oil, Tree Crops and Livestock as well as many other programme[NANTS-Agric/Budget,2012]. What is noteworthy is that tying and connecting the policies of the Transformation Agenda with on-going programmes shows continuity in government's programming and this is hereby commended.
12. Growth Enhancement Support Scheme (GES):- The GES programme is the federal Government's initiative aimed at subsidizing the cost of major agricultural inputs such as fertilizer and seeds. Under the initiative the direct procurement and distribution of farm

inputs to farmers is discontinued and supplies are expected to be done through an electronic distribution channel known as the e-wallet. The e-wallet scheme stipulates that farmers registered under the GES are expected to pay 50 per cent of the cost inputs, while the Federal and State governments pay 25 per cent each.

The above extension approaches embedded in many of the programmes and policies had major weaknesses, and hence made little impact on the small- scale farmers in Nigeria. Some of the weaknesses include (i) poor and erratic funding, (ii) ineffective extension supervision, (iii) over emphasis on export crops to the neglect of food crops, (iv) duplication of organizations and services which resulted in extension agents performing non-extension duties; (v) agricultural policy and programme instability as reflected in the rapid turnover of agricultural polices and programes, (vi) inconsistency in policies and programmes and, (vii) lack of sustained agricultural modernization strategy based on the development of an indigenous agricultural technology and modern agricultural entrepreneurship. The consequence is that Nigeria's huge economic growth potential evidenced in the vast unexploited productive capacities is held down by institutional and infrastructural rigidities as well as high cost of capital associated with many of these programmes. (Okunneye, 2010).

In setting up an extension system with considerable government investment the whole gamut of public sector programmes that provide technical extension and complementary services to farmers should be reviewed and rationalized to avoid waste of resources and unnecessary duplication of efforts or services in the country. To make effective use of extension investments, operational budgets must be big enough to support salaries and allowances of field workers. This requires a clear commitment to the extension programmes by the responsible implementing and funding institutions. There must be political will on the part of government functionaries to invest in agricultural extension service in Nigeria.

Fod insecurity scenario and food importation expenditures for food security in Nigeria.

According to Aworh (1999), National food insecurity is indicated by the following:

(i) Very low level of average food consumption
(ii) Large fluctuation and low level of food consumption; and
(iii) Large population of absolute poor

Factors militating against food security in Nigeria and other West African countries as identified by Aworh (1999) include the following among others;

(i) Low food production
(ii) High post-harvest food losses
(iii) Seasonal food shortages,
(iv) High food prices,
(v) High poverty levels,
(vi) High rate of unemployment,
(vii) Poor health facilities,
(viii) Low level of nutrition education,
(ix) Cultural factors and taboos that reduce access to food,
(x) Policy failure,
(xi) Corruption and lack of foresight on the part of government functionaries.

Mr. Chairman Sir, and honourable audience, please permit me to expose you to these shocking revelations on Nigeria food import bills. Nigeria spent a total of ₦98 trillion (about US $628 million) on food imports between 2007 and 2010 (Federal Ministry of Agriculture and Rural Development, 2012) as I stated earlier in this lecture. In 2010 alone, the country spent ₦635 billion on importation of wheat, ₦356 billion on Rice which amounts to spending about ₦1 billon per day; ₦217 billon on sugar imports as well as ₦97 billion on fish importation in spite of all the marine resources, rivers, lakes and creeks, that the nation is blessed with (Adesina, 2012).

The Nigerian Minister of Agriculture and Rural Development openly lamented that the food importation trend poses a huge problem which is fiscally

unsustainable, and that the Nigerian rice farmers are crying as the imports undermine domestic production. The Minister concluded that Nigeria must accelerate domestic rice production and improve on processing to meet quality standards by tapping all the resources of our farmers across the nation, and deliver a green revolution for rice that will make Nigeria self-sufficient in rice production (Business Day, Monday 18, July, 2011).

Rice, the leading imported food can be cultivated successfully in Benue, Kogi, Kano, Sokoto, Niger, Ebonyi, Enugu, Ogun, Osun, Ekiti and Lagos States of Nigeria. Root crops like cassava, yam and potatoes are in abundance in most States across the country while cereals crops such as maize, millet, and sorghum as well as leguminous crops are cultivated chiefly across the Northern States. Livestock, fruits, vegetables and aquatic foods are readily available in Nigeria in addition to a very rich forest belt in the Southern parts of the country. Nigeria is therefore, actually importing what it can produce locally in abundance. This trend is hurting Nigerian farmers and displacing local production. The over ₦1.1 trillion being spent on the importation of wheat, rice, fish and sugar yearly could have been better invested in local food production.

It has been observed that general increase in food importation in Nigeria is due to many factors among which are low labour productivity, lack of adequate incentive for farmers, low returns on investment in Agriculture, ineffective extension service and low foreign investment in Agriculture. The perusal of Table 2 on value of imports of selected food items reveals alarming food importation rate in Nigeria.

Items	2000	2001	2002	2003	2004	2005	Amount spent on each item on 5 years US $'000**
(i) Animal Fats and Oils	18	22.4	1.56	4.48	1.49	-	47.93
(ii) Animal or Vegetable fats and oils hydrogenated	392	452.48	1503	2185.12	717.92	2069.76	7320.28
Maize grain	0	78.4	2527.12	239.68	17.92	1658.72	4521.84
Maize flour	115.36	654.51	24.77	1249.92	478.4	280	2802.8
Meal meat	303	.65	-	-	-	57.12	360.77
Meat cattle boneless (beaf and Veal)	-	377.28	141	738.08	931.82	540.96	2729.14
Rice milled	-	366027.2	22691.4	-	375427.4	319030.9	1083176.9
Vegetable fats and oil	-	344.96	594	517.59	103.23	63.84	1623.62
Wheat	25184.4	319207.8	342013	362734.6	479448.7	654337	2182925.5

Sources: FASOSTAT/C FAO Statistics Division 2008/29 June 2008
** Note- Not included in the original table on FAOSTAT.

Table 2 shows that the bulk of the import bill was spent on rice, and wheat. The table also shows that Nigeria has been importing maize grains and maize flour for many years now. What a shameful development. A total of US $47,930.00 was spent on animal fats and oils; for five years while total sums of US $4,521,840.00; US$2,802,800.00; US$1,083,176,900.00; US$1,623,520.00 and US $2,182,925,500.00 were spent for maize grain, maize flour, rice milled, vegetable fats and oils, and wheat importation respectively within the period between 2000 -2005. This money could have been invested in Agriculture and probably used for improving incentives and agricultural extension services for farmers to boost local food production in Nigeria.

Mr. Chairman Sir, and distinguished audience, permit me here to inform this gathering that lack of foresight and inadequate planning on the part of our leaders have not helped this nation on the issue of food importation. In between 1982 and 1983, a young school leaver, employed as a clerical officer, and working in the Director's office at National Cereal Research Institute (NCRI) Headquarters Moor plantation Ibadan, Oyo State, shared the agony of a bitter experience with his Director and the Institute's scientists. As at that time, the NCRI had successfully developed more than six improved varieties of rice (both long and short grain rice varieties) for mass production by farmers in major rice producing areas in Niger, Kogi, Benue, Kano, Sokoto, Ebonyi, Ekiti and Ogun States in Nigeria. The NCRI secured a Philippines based company that was ready to enter into Public-Private partnership arrangement with the institute to engage in commercial rice production and processing in Nigeria. The foreign partners were ready to assist in providing effective extension services to boost commercial rice production by small-scale farmers through

contract farming arrangement in Nigeria just like the case of tobacco production by the British America Tobacco Company.

The clerical officer was responsible for carrying about the files and other documents relevant to the proposed partnership for commercial rice production in 1983. The arrangement was concluded at the Institute level and only awaiting the approval of the then Minister of Science and Technology in Lagos. The Director and some of the scientists involved in the proposed arrangement were invited to Lagos for official meeting on the issue by the Minister whose ministry supervised the activities of the Institute; and were directed to stop further deliberations on the well intended proposal, and terminate the proposed arrangement. This was because a Presidential Task Force on Rice Importation had just been set up by the then President in 1983. The Director, the concerned scientists and the foreign partners from Philippines were all disappointed and frustrated on the issue. Only God knows the amount of money in billions of Naira that had gone into private purses from food importation in Nigeria. Today the then Clerical Officer in 1982/83 in the Institute is the one presenting this lecture.

Mr. Chairman Sir, I want to submit that lack of foresight and inadequate planning on the part of our leaders among other factors had been responsible for food importation in Nigeria. While I agree that the increasing decline in agricultural productivity has forced successive governments to embark on food importation as earlier mentioned, lack of foresight and inadequate planning among other factors have sustained food importation in the country.

I want to humbly, but boldly commend President Dr. Goodluck Jonathan for taking a positive and well intended decision on stoppage of rice importation in Nigeria by 2015. Except for wheat, we have no business in importing rice, maize, turkey, frozen meat, and other livestock products into Nigeria. Stop food importation now and let us reposition our agricultural extension service to enhance sustainable food production in our fatherland. It must be emphasized that the Nigerian agricultural production scenario is dominated by resource poor small scale, subsistence farmers who represent over 70% of the total

food production population (CBN, 2005). The small scale, some time called the peasant farmers, are the voiceless majority in almost all African countries particularly in Nigeria. Furthermore, agriculture is expected to provide substitutes for the highly expensive imports of food and live animals which totaled N174.23 billion in 2006. (CBN, 2007).

With a rapidly expanding population, environmental degradation, climate change effect on agriculture, political instability, insecurity as a result of high rate of unemployment in the country, economic failure and the declining budget for agriculture, re-positioning the way agricultural technology is delivered to farmers has become necessary. This repositioning will require adequate consideration by all stakeholders in agriculture as they change the ways agricultural technologies and improved farm practices are taken to farmers to ensure sustainable local food production in Nigeria.

My contributions to knowledge and Community Services in the field of Agricultural Extension.

Mr. Chairman Sir, and distinguished audience you will recall in this lecture I stated that my four major areas of research interest are related to

(i) Agricultural Extension Organization, Administration and Management.
(ii) Agricultural Extension Communication and teaching methods.
(iii) Adoption of farm innovations by small-scale farmers, and
(iv) Farmers' participation in Agricultural and Rural Community Development Programmes.

Sir, the essence of social science and applied research to which agricultural extension belongs, is to identify social problems militating against the effectiveness of a social system, and provide solutions to identified problems so as to improve socio-economic welfare of people through better understanding of their social systems, and improvement in their productivities and standards of living. I have gathered a quantum of empirical evidences from my various research activities on the farmer fields and in rural communities. I have also served several organizations such as National Fadama Coordinating

office, Abuja; the FGN/UNDP Community Based-Action Programme and the World Bank, as a Consultant in my field while I have also designed and implemented many agricultural extension programmes in many rural communities in Oyo, Osun, Kwara and Ondo States of Nigeria. Presently, I am serving as External Examiner in many Nigerian Universities with Department of Agricultural Extension and Rural Development/Sociology as the case may be.

(a) Studies on Agricultural Extension Organization, Administration and Management.

One of the critical areas in my field is the organization, administration and management of agricultural extension services. Several of my publications (Ogunwale et al (1997); Ogunwale (2004); Ogunwale (2002), Ogunwale (2005) and Ogunwale et al (2005) on the research subject have revealed many problems militating against effectiveness of agricultural extension services in Nigeria. On the part of extension workers these include the following:

(i) Poor rural roads and inadequate transport facilities for extension staff;
(ii) Non-availability of teaching materials and visual aids for extension agents;
(iii) High extension agent to farmers ratio due to inadequate number of extension staff
(iv) Late arrival of farm inputs and inadequate farm support services;
(v) Lack of credit facilities for farmers;
(vi) Farmers unwillingness to accept new technologies being introduced by extension service,
(vii) Lack of extension facilities such as rain boots, rain coat and farm diaries
(viii) Inconsistent government policy on agro-input supplies
(ix) Lack of cooperation of local people in programme implementation and demonstration
(x) Settlement pattern of the farming populace, and

(xi) Lack of incentive like payment of field allowances for extension staff.

The farmers on their own part in several of the studies mentioned the following:

(i) Extension agents short time of visitation;
(ii) Extension agents living outside their areas of jurisdiction,
(iii) Late arrival and distribution of improved farm inputs
(iv) Infrequent and irregular visits by the extension agents,
(v) Promises not being fulfilled by the extension agents, and
(vi) Lack of public address systems during public meetings.

For these reasons, farmers need to be encouraged to have interest in agricultural extension service and also be assisted on provision of credit facilities to facilitate extension service in Nigerian Agricultural Development programmes. Also these findings showed that there were problems militating against effectiveness of agricultural extension service in Nigeria. An Investigative Research Design (IRD) (Ogunwale 2005) used in determining the organizational structure and administration of extension service revealed that village extension agents are responsible for day-to-day contacts and field activities with farmers. The field extension staff established contacts with farmers at village level through the following five major points of contacts.

(i) Fortnightly Training (FNT) meetings,
(ii) Demonstration plots,
(iii) Farmers' village,
(iv) Farmers' farm sites, and
(v) Contact farmers' farms.

In essence, the extension agents were working through visits to farmer's fields and homes in carrying out their extension activities in line with Training and Visit (T & V) system generally adopted by the ADPs as earlier stated in this lecture.

Therefore, the arrangement for agricultural extension in terms of activities, organizational types and available manpower have been embedded in

Agricultural Development Programmes (ADPs) under the supervision of State Ministry of Agriculture, Natural Resources and Rural Development. The state Ministry of Agriculture relates with Federal Ministry of Agriculture and Rural Development on Agricultural issues including extension service. As public sector extension, the ADPs continue to be the most important source of information and extension services for majority of farmers in Nigeria (Ogunwale, 2004 and Ogunwale et al, 2005).

However, Mr. Chairman, the changing needs of farmers for support from extension service, the shrinking financial base of the ADPs, change in the farming systems orientation from subsistence to commercial agriculture in line with present government Agricultural Transformation Agenda and declining public investments in agriculture are posing challenges to effective performance of public sector extension in Nigeria.

My research studies have further revealed that Federal and Stage governments were responsible for finance, recruitment and training of extension personnel through Agricultural Development Programmes (ADPs) and Ministries of Agriculture in Nigeria (Ogunwale, 2004a, Ogunwale 2004d and Ogunwale 2004e). The Local Government Councils have contributed little or nothing in some States to the management of Agricultural Extension Service in Nigeria. This is contrary to what is operating in United States of America (U.S.A.) where the Federal, State and Local governments provide financial support for extension service (Patel, 1983). The USA extension service is considered as "cooperative" because it operates with a combination of financial support from all the three tiers of governments. Because the local governments pay part of the expenses, the extension agents are more responsive to local needs of farmers unlike what is presently happening in Nigeria.

Also Kuponiyi, Ogunwale and Oladosu (1998); Ogunwale and Kuponiyi (1998) and Ogunwale and Kuponiyi (2002) revealed that organized private sector and non-governmental organizations, were involved in organization, administration and management of agricultural extension service in Nigeria. These organizations include Leventis Foundation of Nigeria (LFN); and British-

American Tobacco Company (BATC) just to mention a few. However, their interest in extension service has been geared towards profit making in case of private sector and social services in case of non-governmental organizations (NGOs) that usually provide specific needs for rural communities in Nigeria. It is imperative to say here that there was no synergy between the public, private and non-governmental organizations in the management of extension services in Nigeria until recent times. This situation should be critically considered in the process of repositioning agricultural extension service to ensure continuous extension supports for small scale farmers to increase their farm productivities and incomes in the country.

(b) Studies on Agricultural Extension Communication and teaching methods

My M.Phil thesis in 1992 revealed the Extension Communication Patterns in Oyo-State Agricultural Development programme. The findings showed that there was a single line of communication between various categories of extension personnel i.e. Extension Zonal Manager, Block Extension Supervisors and Village Extension Agents in the programme. It was further revealed that extension workers were using various communication channels to maintain contacts with farmers in the programme.

Several of my research publications including Ogunwale (1997), Ogunwale and Laogun (1998); Ogunwale (1998), Ogunwale (1999); Ogunwale and Kuponyi (2000) and Ogunwale (2004) have established that more emphasis was placed on individual channels of communication than mass media methods in Nigerian extension services. The frequency of use of various communication channels in disseminating improved farm technologies to farmers revealed that face-to-face personal contacts, small-plot adoption trials (SPATs); methods and result demonstrations, and farmers' group meetings were frequently used means of communication with farmers under the public extension service in Nigeria.

Table 3: Frequency and Percentages Distributions of Communication channels with Farmers used by Extension Agents in Oyo State Agricultural Development Programme – (n-150).

S/N	COMMUNCIATION CHANNEL	FREQUENCY	PERCENTAGE
1	Visit to Farmers' farms and homes	146	97.33
2	Face-to-face personal contact	123	82.00
3	Group meetings of farmers	129	86.00
4	Small Plot Adoption Trials (SPATs)	147	98.00
5	Fortnightly Training(FNT) meetings	136	90.67
6	Extension drama playlet	27	18.00
7	Farmers field days and exhibitions	39	26.00
8	Field trips and field visits	78	52.00
9	Publications e.g. Posters Bultletins and Pamphlets	29	19.33
10	Radio Broadcast	98	65.33
11	Television Broadcast	75	50.00
12	Blackboard News	36	24.00
13	Agricultural Film shows	0	0.00
14	Mobile Open Broadcast	0	0.00

Source-Ogunwale A. B. (1998) Journal of Extension Systems Vol.14 pp 72-83

The Table 3 reveals that extension drama and playlets, tours, field trips, and field visits, farmer's field days and exhibitions were also being used as means of communication with farmers. However, their frequency of use was low in the programme. Also, there was little use of the following media; magazines, news papers, agricultural film shows and mobile open broadcasts, by the extension service in Nigeria. Radio and television broadcasts has become institutionalized in Nigerian Agricultural Extension Service, however the paucity of funds has affected their frequency of use and impact on farmers. Therefore in Nigeria today, the most frequently used extension methods by public extension service are: (i) visit to farms and homes; (ii) Farmers' training meetings; (iii) small plot adoption trials (SPATs) (iv) face-to-face personal contacts and (v) mass media, such as radio and television broadcasts.

This shows that emphasis has been on the use of personal face-to-face contacts with farmers in public extension service. The implications are that the emphasis on personal contacts, though professionally good, may limit the extent of coverage, if not supported with other extension methods, and farmers may be dissatisfied with extension agents if they do not see them frequently as a result of poor transport facilities for extension workers. Extension agents should therefore, be empowered with modern communication facilities like Global Mobile Telecommunication (GSM) phones, internet modem and lap-tops computers, and adequate transport facilities to maintain effective communication with farmers. In a nutshell, the use of combination of extension methods that are appropriately selected for specific target groups and production recommendations is recommended.

Ogunwale (1998), and Ogunwale and Laogun (1999) identified problems militating against effective communication between extension workers and farmers in Nigeria. These include (i) inability of many farmers to write or read instructional materials, and (ii) low level of educational background of many

farmers. The studies further established that the most important five essential conditions for improving communication and contacts between extension workers and farmers were as follows:

(i) Establishing farm service centres within rural areas,
(ii) Increasing the frequency and regularity of extension workers visits to farmers
(iii) Using a combination of appropriately selected extension methods for disseminating farm information
(iv) Providing better transport and communication facilities for extension agents, and
(v) Providing accommodation for extension workers within farmers' settlements in rural communities.

Ogunwale (2004) investigating socio-economic factors that influence communication process between extension agents and farmers established that farmers' years of farming experience, level of education attained, change pronessness, cosmopoliteness, and knowledge of extension agents' name by farmers had significant relationship with the frequency of communication and contacts between farmers and extension agents in Nigeria. Therefore, the extension workers need to familiarize themselves with their farmers so as to develop good rapport with them in order to serve them better. Also, the extension staff recruitment and placement process for field-level workers should be mindful of these social economic factors so as not to widen the gap between farmers and extension workers in the country.

The major recommendations towards improving extension communication and contacts with farmers from the various studies include the following (i) strengthening the extension service at the farmers levels by provision of improved transport facilities for village extension workers (ii) establishment of more Agro-service centres to ease availability of farm inputs (iii) provision of visual aids, modern communication facilities and teaching materials for field extension agents and (iv) employment of more village extension workers to facilitate effective communication with farmers at farm levels to boost food

production in Nigeria. Therefore, a new generation of young and committed extension workers should be brought up through a widespread programme of training in Universities and Colleges of Agriculture for young men and women who want to pursuer a career in agricultural extension.

(c) Studies on adoption of farm innovations by small-scale farmers. Mr. Chairman Sir, while my M.Phil. thesis in 1992 investigated the extension communication pattern in public extension service, my Ph.D thesis in 1997 investigated socio-economic factors associated with adoption of Alley farming technology by small-Scale farmers in Osun-State, Nigeria. Several of my publications, Ogunwale (2002a), Ogunwale (2002c), Ogunwale (2003), Ogunwale (2004a) and Ogunwale (2004b) revealed that several socio-economic factors have significant relationship with adoption of farm innovations, and technologies by small-scale farmers in Nigeria. It was also revealed by several of these studies that extension agents had significant influence on small-farmers adoption behaviour at different stages of adoption process of improved crops varieties in Nigeria.

TABLE 4: FREQUENCY AND PERCENTAGE DISTRIBUTION OF SOURCES OF SELECTED IMPROVED CROP VARIETIES ADOPTED BY SMALL-SCALE FARMERS N=165

S/N	Sources of crop varieties improved	IMPROVED CROP VARIETIES											
		Rice maize		Yellow		White Maize		Soybean		Cowpea		Cassava Potatoes		Sweet	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%
1	Mass Media e.g. Radio and Television	8	10.81	82	48.70	120	72.73	125	76.76	110	66.67	45	27.27	35	21.21
2	Friends & Neighbours	24	14.65	85	51.62	98	58.59	85	51.62	120	72.73	80	48.48	85	51.62
3	Children	28	16.87	69	51.82	95	57.68	125	75.76	120	72.73	70	42.42	85	51.62
4	Housewives	35	21.21	75	46.45	105	63.64	145	87.88	115	68.70	85	51.62	115	58.70
5	Extension	38	23.30	145	87.88	113	68.70	125	75.76	155	93.94	135	81.82	12	72.73
6	Produce buyers	29	17.56	135	81.87	81	49.09	125	75.76	35	21021	25	15.15	25	15.15
7	Input sellers	29	17.56	135	81.82	140	84.85								

Source: Ogunwale A. B. (2000c). Journal of Rural Development and Administration Vol. XXXIV, No.1-4 (Jan-Dec, 2002) Pakistan Academy for Rural Development pp75.

Table 4 reveals that extension agents played noticeable role on farmers' adoption process of improved crop varieties at different stages of adoption in a study on sources of improved crop varieties of rice, yellow maize, white maize, soybean, cowpea, cassava and sweet potatoes. Other major sources were farm children and housewives. This shows that Nigerian small-scale farmers are actively engaged in production of stable food the nation needs for survival.

Ogunwale (2002c) further revealed that extension agents influenced small scale farmers adoption behaviour in Nigeria. Data on Table 5 reveals that extension agents played noticeable roles on farmers' adoption process of improved crop varieties at different stage of adoption process.

TABLE 5: INFLUENCE OF EXTENSION AGENTS ON SMALL FARMERS' ADOPTION BEHAVIOUR AT DIFFERENT STAGES OF ADOPTION PROCESS OF SELECTED IMPROVED CROP VARIETIES IN OYO STATE AGRICULTURAL DEVELOPMENT PROGRAMME. N = 165

S/N	Sources of crop varieties improved	IMPROVED CROP VARIETIES											
		Rice maize		Yellow		White Maize		Soybean		Cowpea		Cassava		Sweet Potatoes	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%
1	Awareness	55	38.83	145	87.88	152	92.12	140	84.45	135	81.82	115	68.70	65	39.89
2	Interest	45	27.27	140	84.85	145	87.88	120	72.73	85	51.62	90	45.65	70	42.42
3	Evaluation	30	18.18	130	78.79	140	84.85	85	51.62	70	42.42	70	42.42	45	27.27
4	Trial	25	15.15	115	68.70	125	75.76	72	48.64	85	51.62	85	51.62	25	15.15
5	Adoption	38	23.03	145	87.88	155	93.84	135	81.32	125	75.76	125	75.76	18	47.47

Source- Ogunwale A. B. (2002c) Journal of Rural Development and Administration Vol. XXXIV No.1-4; pp.77

Table 5 shows that about 92.12%; 87.88%; 84. 85%; 81.82% and 68.70% of farmers reported extension agents as being instrumental for their awareness of improved varieties of white maize, yellow maize, soybean, cowpea and cassava respectively. Also 84.85%, 87.88%; 72.73%; 51.62% and 45.65% of farmers mentioned extension agents in developing interest in the cultivation of improved varieties of yellow maize, white maize, soybean, cowpea and cassava respectively. The influence of extension agents was also noticeable at the evaluation to trial stages of adoption process. At the adoption stage, about 93.48%; 87.88%; 81.32%; 75.76%; 51.62%; 47.47% and 23.03% of sampled farmers reported extension agents as being involved in the adoption of various improved crop varieties under investigation. These findings were in line with Obibuaku (1993) who remarks that personal contact of extension workers accounted for greatest influence in securing the desired change among farmers. The extension agents should therefore, maintain regular schedule visits to farmers' groups and encourage them to adopt improved crop varieties and better farm practices to increase local food production in Nigeria.

Ogunwale (2002c) further established that there was significant relationship between the frequency of contact between extension agent and farmer, and the number of farmers reached. Age of farmers and their years of farming experience had significant relationships with the frequency of contacts with extension agents by small-farmers, on one hand, and the number of improved crop varieties adopted by the farmers on the other hand. It was statistically established that, the more the number of contacts between extension agent and farmers, the higher the potential for farmers to adopt improved crop varieties. This also means that the older the individual, which may directly relate to his years of farming experience, the more such an individual will seek assistance from extension agents in the adoption process.

Ogunwale (2003) established that adopters of farm innovations were within their productive years (40-50 years), literates, Christians and took farming as their primary occupation. It was also established statistically that

the rate of adoption of farm innovations was significantly related to age, level of annual income, size of farmland and level of contact with extension agents among rural women. Problems militating against adoption of farm innovations as identified by Ogunwale (2002b) were inadequate supply of innovations, and lack of access to land for tenants and strangers in rural communities.

Ogunwale et al (2006) investigating the effects of extension service and areas of impacts on farmers' agricultural production activities, revealed that 100% of the extension workers identified decision-making and problem-solving as the two major areas where effects of extension services were felt by farmers. Other areas include management of resources (92.3%); adoption of innovation (92.3%); linking farmers with relevant organizations (84.6%), allocation of resources (61.5%) and creation of awareness of innovations (53.8%). This shows that extension workers actually had impacts on farmers in many important areas of agricultural production. It was statistically established that all the services farmers received from extension workers had significant impact on their production activities.

The farmers further indicated that the three major impacts of extension services were (i) increased adoption of farm innovations (100%); (ii) increase in yield and productivity (100%) and increase in farm income (98.3%). Very few farmers indicated reduction in cost of production (30.0%) and reduction in pests and diseases of crops (25.0%) as impact of extension service on their agricultural production. It was concluded that extension service had positive impact on raising the standard of living of the farmers as a result of increase in farm incomes.

It was statistically established that there was significant relationship between the impact of extension workers on farmer's production activities and the services farmer received from extension workers. Therefore, there is the need for availability of a variety of tools and methods to disseminate farm information and improved technologies to farmers, while extension workers should be trained on when and how to use various extension methods for maximum impact on farmers.

(d) Farmers' participation in Agricultural and Rural Community Development programmes.

Clientele participation is a major pre-requisite to the success of any agricultural and rural development programme. Some of my research publications Ogunwale (2002a); Ogunwale (2002b); Ogunwale (2002c); Ogunwale (2004c); Ogunwale (2005); Adebayo and Ogunwale (2004); showed that majority of women in rural communities participated in rural training centre activities and contributed money towards specific rural projects, such as community water scheme/well drilling and construction of market. However, women participation in building of Schools, hospital/Clinic/Maternity centre and road construction was very low because these projects were usually executed by government agencies either state or local government. It was further revealed that major problems being faced by women in participating in community development programmes were lack of finance, poor attendance at meetings, inability to reach consensus on project and project location decision.

Ogunwale (2002b) established that marital status, age, educational status, family size, employment status and contact with community development officers had significant relationship with women's participation in community development programmes. Ogunwale (2004a) and (2004c) revealed that there was significant relationship between the mobilization methods and participation in community project. It was concluded that the methods through which the rural people were mobilized for community development projects and their socio-economic characteristics are important for the success of the project. It was then proposed that modalities for mobilizing the rural people to participate in community development programmes will require a combination of different methods as well as the use of audio-visuals to effectively carry them along. Farmers' training and field trips to specific locations should also be incorporated for effective participation of people in rural development programmes.

Ogunwale (2005) revealed that the reasons for farmers' participation in agricultural development programmes were many. These include procurement of fertilizers at cheaper rate, easy accessibility to farm information and new crop varieties, access to new methods of farming, hiring of tractors and farm implements. Therefore, farmers participated in Agricultural Development programmes in order to secure farm inputs and services required for increasing farm productivity and income, and to take maximum advantage of the benefits of the Agricultural development programmes. Thus, there is the need to adequately fund the agricultural development programmes and provide necessary support services for small-scale farmers to boost local food production in Nigeria.

Community services in the field of Agricultural Extension and Rural Development

Mr. Chairman Sir, I have taken considerable time in this lecture, I therefore summarize my services to various rural communities in Oyo, Osun, Ondo and Kwara States of Nigeria on Table 6.





1. Training of Farmers on Honey production and processing methods for income generation among small scale farmers in rural communities in kwara.
2. Training of Farmers on improved cashew plantation management practices in kwara state.
3. Training of farmers on step-by-step techniques for honey production in Ilorin East L.G.A, Kwara State.
4. Training of farmers on Honey production management practices in Babanla Community in Kwara State.
5. Training of farmers on Honey production management practices in a rural community in kwara state.





6. Training of farmers on establishment and development of community woodlots and fuelwood plantation in Akure L.G.A., Ondo-State.
7. Training of farmers on Animal production and farm management practices in Oyo-West L.G.A., Oyo-State.
8. Training of Small-holders farmers on production recommendations for crops with high nutritional contents in Oyo-East L.G.A., Oyo-State.
9. Training of Irewolede Fadama users group on cassava processing technique in Oyo-State L.G.A, Oyo-State.
10 Training of Fadama users Group on Bee keeping practices in Olorunsogo L.G.A, Oyo-State.

Table 6 Summary of Community Services Rendered in Oyo, Osun, Ondo and Kwara States of Nigeria.

S/N	Year	Agricultural Extension Programmes	Target Beneficiaries	Sponsors
1	2000	Training of small-holder farmers On production recommendations for production of crops with high Nutritional contents.	12 rural communities in selected 12 local government areas in Oyo State	Sustainable Agriculture, Environment and Rural Development, UNDP Community Based Action Programme, Ibadan, Oyo State
2	2000	Training of small-holder farmers on Animal Husbandry and Farm Management Techniques	12 rural communities in selected 12 local government area in Oyo State	Same as above
3	2000	Training of small-holder farmers on Establishment and Development of Communities woodlots and fuelwood plantation on Ondo State	Six rural communities in 6 local government area of Ondo-State	UNDP Community Based action Programme, Akare Ondo state
4	2001	Training of Farmers on cashew plantation establishment and Development.	Two rural communities in 2 local government areas of Kwara State	F G N / U N D P community Base-Action Programme, Ilorin, Kwara State.
5	2002	Training of farmers on Establishment and Development of Community woodlots and fuelwood plantation in Oyo State	Six rural Communities in 2 Local Government Areas of Oyo State	F G N / U N D P community Base-Action Programme, Ibadan, Oyo State

6	2002	Training of farmers on step-by-step production Techniques for Honey production for small-scale farmers in rural communities of Kwara State	Two rural Communities in 2 Local Government areas of Kwara State	F G N / U N D P community Base-Action Programme, Ilorin, Kwara State
7	2003	Training of farmers on Established of small-scale irrigation scheme for Dry season Fadama farming in rural communities in Oyo State	Five rural communities in 5 local government areas of Oyo State	F G N / U N D P community Base-Action Programme, Ibadan, Oyo State
8	2004	Training of Fadama farmers on Pest and Disease Management Practices for Arable and Vegetable crops in three local government areas.	Fadama Users Groups in three Local Government areas in Oyo State.	National Fadama coordinating office Abuja/Oyo State Fadama II Development Project.

Strategies for repositioning agricultural extension for sustainable local food production in Nigeria.

The extension models that are being used by the agricultural extension administrators in Nigeria are bottom-up models theoretically, but practically they are top-down model since the farmers are absent in designing the agricultural policies, and the research priorities are also determined by the scientists in line with technology transfer model. The Training and visit system in all the Sates Agricultural Development Programmes (ADPs) incorporates Technology-Transfer model which involves a top-down approach that delivers specific production recommendations to farmers about the practices they should adopt.(Ogunwale, 2005)

In Nigeria, there is the need for interdependency model of extension to agricultural extension service. The implementation phase of the Greer and Greer's (1996) model requires that those who are required to implement

change on the ground must have the capacity to take up the technologies or ideas for sustainable food production in their communities. Therefore, village extension workers (VEWs) and small-scale farmers are very crucial in repositioning agricultural extension in Nigeria. There should be an additional link between the implementation level of the extension programmes and the extension institutions regarding the perception of the farmers towards the new programmes in a form of a feedback process.

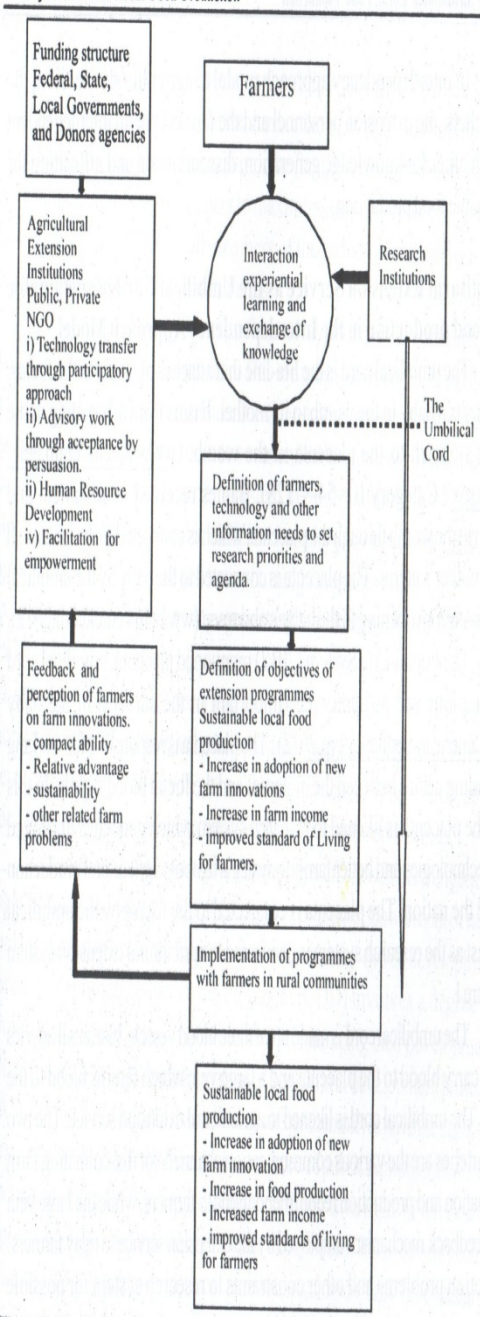

Figure 2. The Interdependency approach Model to Agricultural Extension.

In interdependency approach model to agricultural extension, the researchers, the extension personnel and the farmers are all interdependent on each other for knowledge generation, dissemination and utilization for sustainable food production.

Agricultural Extension Service as the Umbilical Cord of sustainable local food production in the Interdependency Approach Model

The umbilical cord is the life-line that attaches placenta to the foetus. It connects a baby in the womb to its mother. It runs from an opening in the baby's stomach to the placenta in the womb. (www.nhs.uk/chqpagae/2299.aspx? Category ID=54— 128). Babies received nourishment and oxygen in the womb through the placenta, which is connected to the inner wall of the mother's uterus. The placenta is connected to the baby by the umbilical cord through an opening in the baby's abdomen (ww.babycenter.com.2012).

The Foetal-Life System (2012) mentioned placenta, umbilical cord and Amniotic sac as being very important in the survival of the baby (www.americanpregnancy.org,2012) . The placenta is responsible for working as a trading centre between the maternal and the foetal blood supply. In this case, the placenta is likened to research system which generates improved farm technologies and better farming systems to boost agricultural production to feed the nation. The placenta is connected to the foetus by the umbilical cord just as the research system is connected to agricultural extension system in Figure I.

The umbilical cord is made up of three blood vessels, two small arteries which carry blood to the placenta and a large vein which returns blood to the foetus. The umbilical cord is likened to agricultural extension service. The two small arteries are the various communication channels for disseminating farm information and production recommendations to farmers, while the large vein is the feedback mechanism employed by the extension service to relay farmers' production problems and other constraints to research system for possible solutions.

The umbilical cord is long enough to allow the baby to move around safely without causing damage to the cord or the placenta. This implies that the agricultural extension services should be flexible enough and continue to be repositioned to allow the farmers to maximize available resources at their disposal, and also empower all members of the farm households to ensure holistic development in rural communities.

The amniotic sac is likened to farmers' system in rural communities. The sac is filled with the amniotic fluid. This sac is the baby's home, gymnasium and protects the baby from outside shock and other external pressures. It also allows the foetus ample room to swim and move around to build muscle tone. This implies that the farmer's system in rural communities should be helped to produce quality food in sufficient quantity and be encouraged to use improved farm technologies and better farming systems to boost agricultural productivity through repositioning agricultural extension service to meet their local needs and aspiration. This effort will increase social capital in the community. Social capital describes the pattern and intensity of networks among people and the shared values which arise from those networks. Greater interaction between people will generate a greater sense of community spirit which invariably initiate sustainable food production in the community.

Apart from enhanced social capital, this effort will also engender people's participation in agricultural extension activities, empowerment of rural populace, demand-driven development and a community-driven development approach. Community-driven development (CDD) involves a degree of devolution of responsibility to communities for managing their development including the design and implementation of agricultural development projects (IFAD, 2007). This requires that the communities themselves have the capacity to assume responsibility. It also requires a culture of public administration that views communities as development partners in their own right, rather than as simply recipients of benefits through public expenditure. Thus, efforts should be directed toward empowering local people to participate fully in sustainable

local food production rather than importing food from other countries to provide for their local needs.

The baby in the amniotic sac in this case is sustainable local food production. When the sac breaks, the fluid leaves the mother's body. The baby's life is still being supported by the umbilical cord, and one should expect to hear the cry of the baby soon. Cutting the umbilical cord too soon could be harmful to the baby at this moment, thus agricultural extension service should be supported with the required logistics and funds beyond the birth of the baby which in this case is sustainable local food production to ensure value-addition of agricultural products in Nigeria.

Providing necessary fund and logistic supports for agricultural extension will not only ensure, the safe delivery of the baby i.e. the sustainable local food production, but also ensure processing of agricultural produce to reduce post-harvest loss, encourage value-addition of raw farm products, create wealth for Nigeria farmers, and generate employment opportunities for the Nigerian youths. Therefore, as the umbilical cord strongly attaches the foetus to the placenta, so also is the agricultural extension service the only anchor for sustainable local food production and agro –industrial development in Nigeria.

Therefore, in repositioning agricultural extension the following should be critically considered.

(1) Feedback from the farmers regarding the applicability of the extension programmes in the fields and the farmers' changing social and economic situations needs to be regarded as basic in setting the objectives of, and policies for agricultural extension strategies. Finding a mechanism of feedback of farmers' perception to the extension activities are of great importance for the sustainability of the agricultural extension strategies.

(2) Prioritizing research agenda in line with farmers needs. Empowering the farmer's unions and associations to speak on behalf of generality of farmers will help the policy makers to know what problems the farmers are facing and their suggested solutions for their problems

base on their experiences. This will help scientists to concentrate their efforts and research process on products that will fulfill genuine needs of the farmers rather than coming up with technologies that may not be readily adopted by generality of farmers. This is the basis for demand-driven research anywhere.

(3) There should be a mechanism for rehabilitation of the extension management system in the country. Presently the extension agents are directly linked to the extension administration instead of the localities where they are working. The extension agent at any level should belong to the agricultural extension administration as well as being part of the rural societies where they work. As long as the extension agents are aware of the societies' habits and norms, the transfer of ideas and farm innovations will be easy.

(4) Provision of accommodation for extension agents in rural communities in the country should be incorporated into repositioning agricultural extension service in Nigeria. The relationship between the farmers and the extension agents will take an informal structure, and the cultural communication that now exist can play a vital role in the diffusion of innovations, assessing farmers attitudes and perceptions towards the new agricultural techniques. This will also require provision of good primary and secondary schools in rural areas and payment of inconvenience and field allowances for village extension agents in the country.

(5) The policy makers at the Local, State and Federal Government levels should take great consideration of farmers' needs and combine them with the local, state and national needs of the country. Involving the needs of the farmers in the major policies of the country can play a cornerstone for successful agricultural extension strategies to ensure sustainable local food production in Nigeria.

(6) The extension agents should have the opportunity to enjoy a participatory extension work. Extension agents should be empowered

through educational and participatory methods that involve experiential learning through extension agent to farmer exchange of knowledge.

(7) Adequate funding. Adequate and regular funding of extension service is of great importance. There should be tripartite funding pattern from Federal, State and Local Governments in a cooperative manner to reposition agricultural extension service in Nigeria. In addition the donor agencies, such as the World Bank, International Fund for Agricultural Development (IFAD), Food and Agriculture Organizations of the United Nations (FAO) and other private Foundations should assist Nigeria in funding agricultural extension services more than ever before.

(8) Human Resource Development – There should be regular training and human capacity development programmes for extension workers in the country. The University Extension Outreach programmes should collaborate with State governments and Agricultural Development Programmes (ADPs) for regular training of extension personnel in different areas of agricultural production such as (i) Crop and livestock production, and (ii) Agro-processing and agribusiness. The extension agents must have adequate technical knowledge to solve farmers' problems, and they must be able to obtain this knowledge when required.

(9) Management of extension Programmes: The extension administrators in Nigeria should be concerned with how to manage the planning of extension programmes in which decisions are taken about the following issues: the goals and the nature of the change the extension organization wishes to achieve, the target group, the contents of extension message, the communication methods and channels the organization will use and how they will be used. the structures, persons and other resources with which the extension organization expects to achieve its goals, and the time available for planning and implementing the extension programme.

(10) Effective farmers' participation in planning and implementation of extension programmes. Extension administrators need to be concerned with how farmers can effectively participate in planning and implementation of extension programmes, and adopting the farm technologies.

(11) Provision of technical support, logistics services and farm inputs. The need to back-stop agricultural extension service with adequate technical support, farm inputs and logistics such as transport facilities, rain coats and boots and educational materials needs not be over emphasized. Also, adequate farm inputs supplies, credit facilities and technical advisory services should be considered a major role by the extension providers in extension delivery.

(12) Proper re-orientation, motivation and reward of extension personnel. The extension personnel should be re-oriented to have interest of farmers they serve in mind, and to motivate and reward them accordingly when they perform satisfactorily.

(13) Organizing farmers' field days, Agricultural shows, field trips and tours, workshops and conferences. Farmers and extension agents alike will be more likely to change their behaviour if they discover for themselves that the knowledge and insight gained from past experiences are no longer adequate to deal with current problems of agriculture. Extension administrator should therefore organize different avenues through which extension personnel and farmers can interact and gain more knowledge on new development around the world.

(14) Public-Private Partnership Arrangement (PPPA) should be used for repositioning Agricultural Extension Services. There is urgent need for synergy between all the extension service providers in Nigeria i.e. Public, Private Not-for Profit and Private for profit, to come together on a platform that will ensure and sustain local food production in the country. This will encourage backward integration of Nigerian economy,

enhance value-chain addition, generation of wealth for Nigerian farmers, and creation of jobs for many youths in Nigeria.

CONCLUSION AND RECOMMENDATIONS

Mr. Chairman Sir, and the distinguished audience, I started this lecture with an affirmation. Please permit me to conclude this lecture with this affirmation that "the past is the key to the understanding of the present and the basis for accurate forecast of the future". They that do not learn from history will repeat it (McNamara Robert, Former Chief of the World Bank).

The following conclusions are made on the basis of my presentation in this lecture.

1. The Nigeria government at one time or the other has put in place various agricultural extension programmes in order to ensure food security in the country. However, these programmes failed due to several reasons among which are administrative, technical and financial problems.
2. There are many problems militating against the effectiveness of agricultural extension in Nigeria. These include lack of good roads in rural areas, inadequate transport facilities, inadequate fund, untimely release of budgetary allocations for extension service, inadequate farm inputs ,insufficient number of village extension workers and low morale of extension agents among others. Hence, there is need for repositioning agricultural extension to enhance its effectiveness in Nigeria.
3. Agricultural Extension programmes are not adequately funded by the government, hence the need for more private and non-governmental organization's participation in extension services in the country becomes imperative.
4. The lack of clarity of roles expected of Local, State and Federal government of Nigeria has resulted to duplication of efforts and responsibilities in the performance of roles. This has adversely affected the funding of extension service in the country.

5. Small-Scale farmers are responsible for food production in the country and are participating in the Agricultural Development Programmes (ADPs) in order to secure farm inputs and services required for increasing their farm productivity and income. Hence, ADPs need adequate funding to increase farmers participation to ensure sustainable local food production in the country.
6. Lack of foresight and inadequate planning among other factors had sustained excessive food importation in Nigeria. There is a need for adequate planning and employment of well-trained young Agricultural Extension workers to turn Nigeria huge agricultural potential into reality.
7. The low attainment of extension service in Nigeria can be turned around if targeting of particular groups within groups of farmers at the state, Local Government Areas (LGAs) and community level is pursued. At present, there is much work to do in this area.
8. Repositioning Agricultural Extension is the key to sustainable local food production and a way out of the excessive food importation in Nigeria. This will ensure food security, wealth creation for farmers and employment opportunities for the Nigerian youth.

RECOMMENDATIONS

The following recommendations are advanced on the basis of my presentation in this lecture.

1. The strategies for repositioning agricultural extension for sustainable local food production in Nigeria as earlier mentioned in this lecture should be critically considered and incorporated in revitalizing and repositioning Nigerian Agricultural Extension Services.
2. More Village-level Extension Agents should be employed and trained to strengthen the extension service in the country. This will reduce the present high extension agent-farm families ratio in the country.

3. Adult education should be extensively introduced at the village level so that the horizon of farmers' knowledge could be broadened, and therefore break the reluctance of farmers to accept agricultural innovations. This will also accelerate the Agricultural transformation agenda of the present government in Nigeria.
4. Extension services need to be revitalized and repositioned by improved funding, and streamlining the roles of Local, State and Federal government to achieve the goal of effective extension delivery by the public extension sector. A sustainable extension service must have the support of the administrative and funding authorities.
5. The Local, State and Federal government should collaborate in funding agricultural extension and make it more responsive to local farmers' needs in the country.Extension can still be publicly funded, but funds can flow through farmers' organizations that have a controlling interest in agricultural production and fund allocation.
6. There should be synergy between Public, Private Not for Profit and Private for Profit extension service providers in Nigeria. There should be a paradigm shift in the provision of agricultural extension service through Public-Private Partnership Arrangement to boost sustainable food production in Nigeria. A public sector extension service is not farmers' only source of technical information, advantage should be taken of complementary private sector technology and information resources.
7. Food importation should not be seen as a substitute for local food production to ensure food security in the country. Rather it should be seen as a way of economic slavery and calculated attempt to hinder our self-sufficiency in food production.
8. University Extension Outreach programmes should begin to play a prominent role in organizing capacity building and staff development programmes for extension personnel in Nigeria. This will improve staff competence and boost the morale of extension personnel.

9. Setting up a National Agricultural Extension Services Commission. Nigeria is ripe for Agricultural Extension Services Commission under Federal Ministry of Agriculture and Rural Development. Uganda has National Agricultural Advisory Services. This Commission will have a Governing Board, at national level and Committees at State and Local government levels for specific responsibilities such as Agricultural Technology Management, Farm Information and Advisory Service, and registration of Farmers Interest Groups and Organizations in each local government area. There will be regular flow of fund from the federal government through budgetary allocations to state and local government committees and the Governing Board will be responsible for approving work plans from state and local governments. Decentralization of extension to local committees will enhance sustainable food production throughout the country.The Village Extension Agents should carry out diagnostic analysis of farming systems, access farmers needs and analyze farmers' constraints in each local community and prioritize the activities in each community with the local farmers. Then all the activities in each local government area will be collated to develop priority list for the state for the approval of the Governing at the National Level.
10. Nigeria should adopt the Farmer Field School (FFS) extension model to reposition agricultural extension service in the country. The FFS model is a community learning model that has been adopted in some countries, with positive results on agricultural production of small-scale farmers.
11. Availability of other farm inputs and services must be ensured, since adoption of technology depends not only on farmers' knowledge of the technology, but on the availability of necessary farm inputs needed for adoption.
12. Formulation of National Agricultural Extension Policy (NAEP) to enhance sustainable local food production in Nigeria. This policy should

include the goals of agricultural extension, the responsible agencies and personnel, the clientele to be served, the broad programmatic areas to be addressed and other relevant guidelines. The goal of the proposed National Agricultural Extension Policy should be to achieve a well organized extension system for efficient and effective extension delivery in all aspects of sustainable agriculture and rural development towards the attainment of food security, poverty reduction, rural empowerment, employment generation, wealth creation and environment management.

13. The formulation of an extension organization methodology and programme should take into consideration the inherent production risk in different areas of Nigeria, and the cultural and socioeconomic characteristics of the communities to be served as both these factors have important influences on adoption process.

14 The vast majority of extension agents are male, and are not trained on how to work with women, nor do they recognize the contributions that women make to agriculture. Therefore, the inclusion of methodologies and approaches that address gender is critical for extension success. This should be considered in repositioning agricultural extension service in Nigeria.

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