THE ROLE OF EXTENSION AGENTS IN AGRICULTURAL DEVELOPMENT (A CASE STUDY OF AFCOTT NIGERIA PLC) IN YOLA NORTH LOCAL GOVERNMENT AREA OF ADAMAWA STATE

BY

ALEKE BEATRICE OBIAGELI
PGDTE/06/0237

DEPARTMENT OF TECHNOLOGY EDUCATION
SCHOOL OF TECHNOLOGY AND SCIENCE EDUCATION
FEDERAL UNIVERSITY OF TECHNOLOGY, YOLA

THE ROLE OF EXTENSION AGENTS IN AGRICULTURAL DEVELOPMENT (A CASE STUDY OF AFCOTT NIGERIA PLC) IN YOLA NORTH LOCAL GOVERNMENT AREA OF ADAMAWA STATE

BY

ALEKE BEATRICE OBIAGELI
PGDTE/06/0237

A PROJECT REPORT PRESENTED TO DEPARTMENT OF TECHNOLOGY EDUCATION, FEDERAL UNIVERSITY OF TECHNOLOGY, YOLA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF POSTGRADUATE DEGREE IN TECHNOLOGY EDUCATION

FEBRUARY, 2008

APPROVAL PAGE

The Role of Extension Agents in Agricultural Development, a case study of Afcott Nig. Plc. A research project submitted to the Department of Technology Education, School of Science and Technology Education, Federal University of Technology, Yola, in Partial fulfillment of the requirement for the award of Postgraduate Degree of Technology (PGD) in Technology Education.

By
Aleke Beatrice Obiageli
PGDTE/06/0237

This thesis submitted to the Department of Technology Education, Federal University of Technology, Yola was approved by:

Dr. J. B. Abakura	……..	……..
(Supervisor)	Signature	Date
Dr. C.A John	……..	……..
(Head of Department)	Signature	Date
……	……..	……..
Internal Examiner	Signature	Date
……	……..	……..
External Examiner	Signature	Date
……	……..	……..
Dean School of Postgraduate Studies	Signature	Date

CERTIFICATION

This is to certify that this project titled: The Role of Extension Agents in Agricultural Development, a case study of Afcott Nigeria Public Liability Company was carried out by Aleke Beatrice Obiageli under the supervision of Dr. J. B. Abakura Department of Technology Education, Federal University of Technology, Yola Adamawa State. The work is the original and has not been submitted in part or full for any other diploma, degree or professional qualification of this or any other institution.

…… ……

Dr. J. B. Abakura Date

(Project Supervisor)

DEDICATION

This project is dedicated to my beloved father Aleke Ogbu of blessed memory for giving me the best gift any father can give to his child and to my beloved mother Mrs. Josephine Aleke.

ACKNOWLEDGMENTs

Firstly, I give thanks to Almighty God without whom this study would not been possible. My profound gratitude and appreciation go to Dr. J. B. Abakura, my supervisor whose assistance and encouragement help me to reduce this project can never be forgotten. Also, I sincerely thank Dr. L. C. Ezeugu of his advice in all my activities in the department. My sincere thanks also go to Dr. D.K. Diraso for giving me all the initiatives to study in the University. My sincere thanks also go to Mr. M. C. Okonkwo, Mr. Mother, brothers and sisters for all the support giving to me during the course of my postgraduate studies.

Finally I wish to thank all the lecturers who contributed in one way or the other to make my stay in the university a success and my friend Miss. Fatima Ibrahim who made my stay in the university enjoyable.

ABSTRACT

This study examined the role of extension agents in the support of agricultural development in Afcott Nigeria P LC particularly as it affects the planting of cotton seed among farmers in Yola. The study was a descriptive survey research. The objective of the study was to examine the extent to which of extension agent education provided by Afcott extension agents has enhanced cotton seed farming among farmers in Yola. The study was also aimed at determining the extent to which extension agent education offered to cotton seed farmers in Yola by Afcott extension agents has improved their socio-economic development. The total target population for the study was 110 (which included farmers and extension agents in Yola only).A total number fifty (50) respondents were randomly sampled for the study. The result of the study was analysed using mean and t-test statistics to test the formulated hypotheses .the result revealed that the Extension agent education provided by Afcott extension agents has not significantly enhanced cotton seed farming among farmers in Yola. It was also discovered that The extension agent education offered to cotton seed farmers in Yola by Afcott extension agents has not significantly improved their socio-economic development and that the agricultural techniques offered to cotton seed farmers in Yola by Afcott extension agents have not significantly been adopted by these farmers.It was therefore recommended that Afcott Nig. Plc should provide incentive such as in service training for the extension agents as this will go along way in motivating them, thereby leading to the delivery of their services to farmers. This is because the quality of the extension staff will determine the rate of adoption of new techniques in seed cotton production and that the study be replicated taken into consideration extension agent education provided to farmers in other area of agricultural production

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURE

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

One of the major concerns in the last three (3) decades in Afcott has been how to develop the agricultural sector for self sufficiency in cotton production. The most important reason for this concern is perhaps the realization that despite the huge investment in agricultural development no substantial progress has been recorded in agricultural technology transfer mechanisms (Chikwendu et al., 1997).

The strong desire to strengthen the cotton production system in Afcott has led to the introduction of numerous agricultural development programmes with technology transfer as their main focus.

Recently increased attention in agricultural programme has resulted in the study of the indigenous peasant farming systems, which has subsequently led to the establishment of advisory services to explain to farmers what they should do in order to increase the out-put from their holding farming activities. These farming activities are predominantly performed by small-scale farmers who use traditional method of farming (Teresa 1985).

Agriculture consists of three major sub-systems, and they are research, extension and farmer. In order to have substantial and sustainable performance of agricultural knowledge system, there is need for effective linkages in Nigeria (William 1990). This has resulted in the current National Zeal to advance extension strategies of agricultural technology adoption among the rural farmers of various crops for use as recognition of the rapid rise in the population of the country and the relegation of farmers' sub-systems.

Production in the agricultural sector has not been high enough to satisfy the national requirements for cotton. Therefore, there is need to work on its

improvement through modernization by enlightening the client (farms) of the impact of extension in cotton production.

According to Mahelia (1994) Afcott Nigeria public liability company was founded as subsidiary of Afprint Nigeria Public Liability Company in 1986 essentially to source for raw materials for use. The types of raw materials they use were cotton-seed, Groundnut and Soya bean. Groundnut and Soya beans are purchase at the neighboring states, Adamawa State, Benue State, Borno State, Gombe State and Tarraba State, while cotton seed is also purchased at the neighboring countries Cameroon and Chad respectively.

Cottonseed is the major raw material for Afcott Hence Afcott was founded in cotton belt region of the North-Eastern State of Nigeria principally for cotton production. Essentially, Afcott operated fully mechanized system of farming and has between 30 to 40 hectares of farm land back by Agricultural Extension service with the extension officers and extension managers' co-ordination.

Afcott provides cottonseed, fertilizer, chemical and technical know-how to over 1000 farmers through their extension agents in various localities and also procure seed cotton at harvest periods.

The objectives of Afcott extension agents in cotton production are to:

- Identify the problems of farmers and to suggest solutions to their problem.
- Assess the level of adoption of new techniques in farm.
- Promote the use of modern inputs such as improved seeds, fertilizer and agro-chemicals.
- To change the farmers old beliefs and attitude to farming for instance the farmers' attitude of planting seed, application of fertilizer and spray of chemical have remarkably changed through the extension agents teaching and practical guidance to crop production farmer.

- To conduct regular trainings for the farmers by imparting new and better skills in cotton production.
- To improve the standard of living of the farmers by their efforts using their local resources with little or no assistance from the government.

1.2 Statement of the Problem

Extension agents' education, an out of school education when directed to rural farmers will enhance their rate of adoption of agricultural technology which is an embodiment of inputs that are educational and capital expensive (Obibuaku, 1983). Therefore the objective of all extension agents is to change people's outlook towards their difficulties. For the success of this objective all extension agents lies in the method of approach to the problems of these farmers, given priority to their wishes, teaching them how to overcome their difficulties and developing in them the sense of pride in their achievement.

The set-back of Nigerian agriculture is not the problem of inadequate extension agents' education but the adoption strategies among rural farmers. Over the year's policy makers in the country have been pre-occupied with the problems of how to accelerate agricultural development and raise the living standard of the rural people yet in the rural areas agriculture is still predominantly small and peasant in nature.

Extension agents' education to cotton farmers by Afcott extension agents' is aimed at enlightening farmers on the method of agricultural production, to boost their cotton production, with a view of improving their standard of living. To what end has this aim been achieved among cotton seed farmers in Yola?

A study conducted by Mahelia (1994) revealed that the problems of extension ranges from lack of hybrid materials, new techniques, availability and application of fertilizer, application of chemical as well as inadequate

mode of transportation and motivation. Can this be said to be the case in Afcott Yola? Against this backdrop a study of the Role of Extension Agents in Agricultural Development: a Case Study of Afcott Nigeria Plc Yola becomes imperative.

1.3 Purpose of the Study

This study aimed at examine the role of extension agents in the promotion of agricultural development in Afcott Nigeria P LC especially as affect the planting of cotton seed among farmers in Yola .

The specific purposes were to:

- Examine the extent to which of extension agent education provided by Afcott extension agents has enhanced cotton seed farming among farmers in Yola.
- Determine the extent to which extension agent education offered to cotton seed farmers in Yola by Afcott extension agents has improved their socio-economic development.
- Determine the extent to which agricultural techniques offered to cotton seed farmers by Afcott extension agents has been adopted by cotton seed farmers in Yola.

1.4 Research Questions

- To what extent has the extension agent education provided by Afcott extension agents has enhanced cotton seed farming among farmers in Yola?
- To what extent has the extension agent education offered to cotton seed farmers in Yola by Afcott extension agents has improved their socio-economic development?

- To what extent has the agricultural techniques offered to cotton seed farmers in Yola by Afcott extension agents been adopted by these farmers?

1.5 Hypotheses

The following null hypotheses were tested at 0.05 level of significant:

Hypotheses1: There is no significant differences between farmers and extension agents on education provided by Afcott extension agents to enhance cotton seed farmers among farmers in Yola.

Hypotheses 2: There is no significant difference between farmers and extension agents on education offered to cotton seed farmers n improving their socio-economic development.

Hypotheses: 3 There is no significant difference between farmers and extension agents on agricultural techniques offered to cotton seed farmers in Yola.

.1.6 Significance of the Study

The study is significant because it will give extension agent education planners in Afcott Nigeria PLC the opportunity to understand the current problems of extension agents' education. With clear understanding of these problems there would be a need for effective planning, before sending extension agents out on the programme.

The study will also provide useful information about the problems affecting the application of modern method of planting cottonseed, such as fertilizer and chemical to the seeds so as to effectively forestall such problems. With the effective forestalling such problems the rural cotton seed farmers will be able to benefit from the application of these modern methods and improved technology of farming cotton there improving the yield and

subsequently improving their socio-economic development as well as standard of living.

Furthermore the findings will serve as bases for further research, and contribute to literary presentation in education, which is aimed at addressing the role of extension agents in the promotion of agricultural development not only in Afcott Nigeria P LC but in all other similar agricultural out-fits that provides extension agent education to farmers.

1.7 Delimitation

The research work is delimitated to extension agent services offered by Afcott Nig. Plc, to cotton seed farmers in Yola only.

1.8 Limitation of the Study

Although this was an intensive study directed towards studying the role of extension agents in the promotion of agricultural development in Afcott Nigeria P LC in yola, the study was not an in depth study as a result of time and financial constraint.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter reviews the various theories related to activities of extension agents in the promotion of agricultural development with emphasis on the production of seed cotton in the areas of study.

The review of literature for this study will be presented under the following subheadings:

- Conceptual Framework for the Study
- Concept of Extension
- The main characteristics of agricultural extension
- Functions of Extension Agents
- Methods of Disseminating Extension Information to Farmers
- Problems of Extension Agents
- Review of Empirical Studies
- Summary of Literature Reviewed

2.1 Conceptual framework for the Study

The conceptual framework for this study is based on the concept of Oakland and Garforth (1985) who describe agricultural extension as a programme that deals directly with improvement of agricultural procedures. They further observed that agricultural extension provide the indispensable elements that farmers need to improve their agricultural productivity.

Okoye (1988) supported this view and stated that farmers who practice modern agriculture stand a comparative advantage over his counterpart who will practice the ideas of his forefathers. Okoye (1988) that agricultural extension agent offers technical advice on agriculture to farmers and also

supplies them with the necessary inputs and services to support their agricultural production.

The principal ideas that govern and guide the conduct of extension agents are explained below:

i. Extension agents are essentially an educational process that aims at developing the knowledge, will power and the skill of the rural people.

ii. The development of the people depends on self discovery and acceptance of change rather than provision of wealth and material things.

iii. Extension agents are not a charitable body that engages in giving out gifts but is based on self help.

iv. It is a democratic process which is newer forced down on the people rather it used persuasion and appeal.

v. Rural people are capable of accepting change that will improve their standard of living. They are not too conservative as people generally think. (Lionberger and Chang 1981)

2.3 Concept of Extension

Extension is a dynamic concept in the sense that the interpretation of it is always changing. According to Ugochukwu (1999) he stated that extension may be examined by looking at a number of statements that have been written about it which help to change farmers' outlook towards their difficulties. He added that extension is a process of working with rural people in order to improve their livelihood and improve the productivity of their agriculture, develop their abilities to direct their own future development.

According to Ugochukwu (1999) "Extension is a process whereby modern farming techniques and research findings are taken to the farmers through extension agents and problems of the farmers are taken to the research

institutions for solution and to raise their productivity and standard of living. He stated that extension education involves the teaching and demonstration of modern skills and innovations to farmers, changing farmers' attitudes in order to bring about improvement. He is basically concerned with the dissemination of useful information on agricultural practices and getting the farmers to apply and adopt such knowledge to improve their farms and homes

2.4 The main characteristics of agricultural extension

Mahelia (1994) in his paper entitled farming operation as they relate to extension "stated that the aim of all extension agents is to teach people living in rural areas how to raise their standard of living by their own efforts, using their own resources of manpower and materials with assistance from government. He stated further that to achieve a laudable objective of extension services extension agents must be familiar with the local farming system, the cultural operation and should have a thorough knowledge of the theoretical and practical aspect of farming. He added that extension agents can improve the farming operation of a local farmers through the use of new or improved crops such as high yielding varieties, fertilizer application, weed control by the use of herbicides, pest and disease control, improved method of cultivation, better tools for operation, soil and moistures conservation, animal breeding, nutrition and health.

He also outlined the main characteristics of agricultural extension highlighted below:

i. A system of education: an informal system of education with adult farmers.
ii. Geared to changing the farmers for the better.
iii. Based on the felt needs and interests of the farmers.

Von (1994) in his paper on his paper on orientation induction courses for headmen on extension activities of Afcott Nig. plc entitled "farmer behaviour"

outlined obstacles to changing farmer behaviour into two classes. Those within the farmers and those within the farmers' environment are;

i. Traditional values and beliefs.
ii. Illiteracy
iii. Lack of moderation for achievement.
iv. Insufficient resources that take advantages of opportunities and low level skill and limited aspiration and for farmers' environment: Inadequate and lack of inputs necessary for getting agriculture moving were highlighted.

The federal governments of Nigeria in order to increase agricultural productivity introduce the following agricultural programmes which were implemented by agricultural extension agent**s.**

2.4.1 Fertilizer promotion programme (FPP)

This programme which started in (1964) is aimed at increasing the use of fertilizers by farmers. Under this programme, Fertilizers were sold to farmers at a highly subsidized price. This programme has a big success as many farmers have now adopted the use of fertilizers. The major problem is however, that poor distribution system and insufficient supply makes it difficult for farmers.

2.4.2 River Basin Development Authorities (RBDA)

Under this project, the whole country was divided into eleven river basin each with its own development authority was responsible for the development of irrigation facilities and supplying water to farmers. They provide irrigated land to farmers and taught farmers how to manage the land through the extension agents. They also provide other inputs to farmers such as credit, seeds and seedling. Farmers were encourages to form cooperatives society.

National Accelerated Food Production (NAFP) introduced by Gowon regime (1975). It was aimed at increasing food production through integrated application of research and extension. The intension was to develop a comprehensive package of technology to be adopted by farmers to ensure high yields. The programme led to the establishment of local demonstration plots called mini-kits which operated side by side by farmers' farms.

The programme did not succeed as expected because there was few extension agents/specialists needed for the programme. The inputs supplies to farmers were irregular, marketing and storage facilities were not adequately supplied. The change of government led to the discontinuation of the programme.

The next programme introduced was operation feed the nation (OFN), by the government of Obasanjo (1977). It was aimed at utilizing the entire work force of the nation in food production. Both federal and state government made use of extension agents in distributing farm inputs to farmers. Students from tertiary institutions were used in the farms to form labour units in all the farms (government/privates) during their long vacation. The programme could not yield the required results, because of improper planning; money budgeted for the programme went onto wrong hands. Consequently the actual farmers could not benefit much from the programme, hence the failure of the programme

National green revolution (NGR) was introduced during Shagari regime (1980). The aim was to bring massive revolution in agricultural sector, by changing traditional and crude practices to modern system of farming with hope of a substantial increase in yield. The federal government budgeted huge sum of money to purchase fertilizers could not reach the farmers at the right time because of transportation problems, extension agents were in short supply. There was in appropriate technology and the land tenure problems

added to the above handicap which made it difficult for the farmers to benefit from the programme.

2.5 Functions of Extension Agents

Lionberger and Chang (1981) stated that in order to provide a continuous supply of updated information that is essential for modernizing agricultural, two functions must be performed.

i. The innovative functions provided by agricultural research.
ii. The integrative function (fitting the new into old farm situation provided by research extension).

The function of extension agents is to persuade the farmers towards the value of change vis-à-vis to:

- Transmit the results of research to the farmers and equally transmit the problems to the farmers to the researchers.
- Introduce to farmers about new methods of farming techniques and insecticides and fertilizer application and also to find out solution to agricultural problems.
- Implementation of auxiliary program help in planning, organizing and implementing auxiliary programme e.g. young farmers club.
- Teaches land management techniques, it introduce and teaches farmers land management techniques which increase land fertility and productivity
- Assistance to foreign expert: enable extension officers to give necessary assistance to foreign expert visiting state on the invitation of government in order to carry out various feasibility studies in various field of agriculture.

Extension education is generally the main stay if not the only agents for farmers' education in developing country and is a specialized form of the broader concepts of adult education.

F.A.O (1984) defines agricultural extension service as an out of school education services for trading and influencing farmers to adopt improved practices, crops and livestock producing management, conservation and marketing. Concern is not only with teaching and securing adoption of a particular improved practices, that also which changing the outlook of the farmers to the point where he will be receptive to and his own initial continuous means of improving his farm business.

Kavoor (1990) stated that extension agents are ambassador of agricultural programme who bring the message and technological advice to farmers in a manner which is most acceptable to them. They also give feed back to the agricultural ministries and research institute on the achievement of the farmers. Aribisala (1982), also said that educating the farmers would make the work of extension workers easier in transforming peasant farmers. Therefore, the nature of extension work changes from traditional to progressive and success depending on the social economic and educational circumstances of the countries concern.

Obibuaku (1983) stated that the needs for extension training programme to be designed to stimulate and arm extension agents with the necessary skills and attitude which will help to identify the need and aspiration of the rural people. Arnon (1987) state that extension programme is supposed not to take research result to the farmers but also to attempt to substitute new values for olds, overcome constraint imposed by old tradition and stimulate the development of auxiliary service. He also observed that new technology involves new input and management practi nces that are extremely complex for the traditional farmers and their successful adoption is therefore dependent on effective extension education agent.

The importance of extension education to rural development therefore lies in various set of processes which concern the rural people involved. They have to recognize and define problems, accept, understand and use new information, perceive new opportunities for improvement and learn new skills. Extension education has an important role to play in the whole process of agricultural development, it commonly seek ways to increase the participation of farmers in planning their programme.

William, (1976) state that no extension programmes can be successfully carried out unless it has regular access to research findings that can be used to improve productivity. Therefore, an effective extension service must act as a connecting link between the research service of a department of agriculture and the farming community. This suggests that research finding must be connected, understood, acceptable and applied by the farmers.

Varden (1992) state that the main task of agricultural extension are to provide agricultural development, which is the increase in agricultural production, and that increase in productivity could come as a result of the adoption of modern varieties of crops, pesticides and herbicides**.**

2.6 Methods of Disseminating Extension Information to Farmers

Ugochukwu (1999) said that before a farmer adopts a new ideas, such idea must first of all diffuse to him, he must be made aware of the new idea. He further stated that there are various ways of giving information to farmers and keeping them aware of new practices in agriculture.

2.6.1 Individual Contact Method:

Otegbede (1999) stated that individual contact method is a face to face contact with individual farmers which enable the extension workers to deal directly with the farmers and to demonstrate new agricultural practices. Example of individual contact methods are home and farm visits, telephone, call, personal letter and office calls.

In home and farm visits, the extension workers visit the farmers in his farm. It helps the extension workers to gain an insight into the lives and problems of the farmer. Visit to farms enables the extension worker to demonstrate farm practice such as method of planting crops, method of application of fertilizers and spraying of insecticides. The extension agents also use this opportunity to supply the farmers with new varieties of seeds and seedlings. This contact method is very effective but also very costly in terms of money and time.

2.6.6 Group Contact Method:

Otegbede (1999) stated that group contact method involves the spreading of information to a group of farmers by the extension agent.This method affords the members an opportunity to ask questions, exchange ideas and stimulate each other to action. Examples of group contact method are field trip, seminar and workshop, lecture, group demonstration, excursion, debate, film shows, exhibition, and agricultural shows.

In the demonstration methods it help to convince the farmer of the better method, techniques or practice already tested through well supervised experiments.

2.6.7 Mass Media Method:

Okeke (1999) stated that large population of farmers taught new ideas and practices. This method is becoming more popular as the society becomes more literate and also with the increased use of transistor radio in the village areas. Examples of mass media are radio, television news paper, and agricultural show. Mass media organs are used in creating public awareness and interest in extension activities.

2.7 Problems of Extension Agents

Gordon (1970) in his study found out that extension agricultural agents lack consultancy from top to bottom among extension agents and some farmers.
Aloa and William (1972) pointed out that inadequate supportive facilities and farm inputs were among the problem facing agricultural production of farmers in Nigeria. Obibuaku (1975) identified the problem of extension agents as low education, dominant city influence high migration of young people. In the case of Anno (1987) extension programme is not welcome by rural farmers even if introduced by extension agents. This implies that old values are not easily substituted with new values. New technologies are not easily adopted by the traditional farmers hence affects modern farming practices. He further said that an inadequate resource for the extension agents such as money to travel and enough materials to supply their target farmers is a problem.

2.8 Review of Empirical Studies

Various empirical studies have been conducted on agricultural extension and these studies continue to give rationale for the need to examine The Role of Extension Agents in Agricultural Development in Afcott Nigeria Plc Yola. Ayele and Griffith (1984) examined the effects of government and the university organizational models and of performing regulatory functions on American and Canadian agricultural extension workers' role perception and role performance. Data were collected by mailed questionnaires from ninety – six (69) extension workers in Alberta and British Columbia and from eighty-four (84) in Idaho and Washington. Extension workers in both models perceived that their performance of regulatory duties had a negative influence on their effectiveness as extension educators. Statistically significant differences were found between the perceptions of extension workers employed in the two models regarding the importance of eight of fourteen role functions. In another study conducted by Nthogo (2002) Hermeneutic-

phenomenological interviews were conducted to explore community-based extension workers previous work and training experiences and how such experiences contributed to their present working relationships as partners in community development. Community-based extension workers responses foreshadowed challenges and problem of coordination that could have otherwise been addressed had they been considered integral elements of previous training curricula. The findings throw light on how government policies, though explicitly formulated to enhance conditions of service coordination, can be in variance with realities of coordination at the village level.

In a related development, a study was conducted by Adeola (2004) to assess the impact of training and visit (T and V) system of extension on professionalization of extension agents in Oyo State Agricultural Development Programme (ADP). One hundred and thirty (130) extension agents were interviewed and simple percentages and product moment correlation utilized for data analysis.

A positive impact of T and V system with respect to the profession skill of extension agents was observed. The caliber of manpower involved in extension activity under T and V system at the field level appears to be rising, an indication of brighter future for extension service in Nigeria. The system has remarkably improved the technical competence of the extension agents by providing a climate, under which extension agents develop favourable attitude toward their clientele through frequent interactions. The regular and continuous training of extension agents under T and V approach play a significant role on the job effectiveness of the agents. The T and V system should be retained.

However, the extension practitioner particularly those at the top management level should recognize the constraints facing the T and V system and adjust accordingly to enhance sustainability. All these studies are pointers to the effort towards finding solutions the numerous problems prevalent in extension agent education.

2.9 Summary of Literature Reviewed

The chapter started with the various theories related to extension agents. It highlighted what extension is and the various characteristics of agricultural extension. It went further to look at various authors view on extension agents.

The federal governments various programmes in increasing agricultural development 2000-2001 were mentioned and why the programmes could not achieve the desired results were also discussed.

The chapter discussed different authors' contributions on extension agents and why these are limited in accepting new ideas to agricultural development by the farmers.

The principles related to the study were outlined in the review by different authors. The findings were stated. The functions of extension agent were listed and the method of disseminating information to the farmers are also listed and explained.

The chapter concluded with problems identified by various authors on the extension agents. They also stated that farmers have not embraced new ideas that will develop productions thereby bringing limitations to agricultural development of farmers and decreasing their standard of living.

CHAPTER THREE
METHODOLOGY

A research methodology is an operational framework within which facts are placed so that their meaning may be seen more clearly. It is therefore the procedure or design fundamental in conducting or investigating a phenomenon. This chapter would be presented under the following sub headings:

- Research Design
- The Area of the Study
- Population of the Study
- Sample and Sampling Technique
- Instrument for Data Collection
- Validity and Reliability of the Instrument
- Method of Data Collection
- Method of Data Analysis

3.1 Research Design:

This research is a descriptive research that employed a survey design to enable the researcher to investigate the role of extension agents of Afcott Nig. Plc in agricultural development. Survey is one of the most important areas of measurement in applied social research. The broad area of survey encompasses any measurement procedures that involve asking questions of respondents (Trochim 2006)

3.2 Area of Study:

Afcott Nig. Plc is located along Ngurore-Numan road in Yola South local Government area of Adamawa State. It derived its name from two words Africa and Cotton. 10% of the working population is extension agents. The majority of the employees are Nigerians and Indians.

Yola South is located at latitude $9^0$41'' east and longitude at 12^0-8" north temperature of about 16^0C are require and also rich loamy soil is require.

3.3 Population of the Study

Usala (1982) defined population as the identifying characteristics, which will identify each unit as being member of a popular group. The population used in carrying out this study was made of all the local cotton seed farmers from various farm units in Yola as well as all the extension agents from Afcott Nigeria public liability company. The total population of study was 100, cotton seed farmers from various farms units in Ngorore, the only farming community where cotton seeds are farmed in Yola. Afcott Nig.plc has a population of 250 employees as shown by 2007 audit report. The extension agents were 10.

All the 10 extension agents from Afcott therefore formed the population for the study. The total target population for the study therefore was 110.

3.4 Sample and Sampling Techniques:

The sample size was forty (40) cotton seed farmers and (10) extension agents in Afcott PLC Yola which made up a total of fifty (50) respondents sampled for the study. This is about forty-five percent (45%) of the target population. The sample frame was the sample size for extension agents since all of the total population of extension agents were used. However 40 cotton seed farmers, which made up 80% of the total sample drawn, using the "hat draw" random sampling technique.

The cotton seed farmers sampled made up 80% of the total sample, while the sample of extension agents made up only 20% of the total sample population selected for the study (see Figure 1).

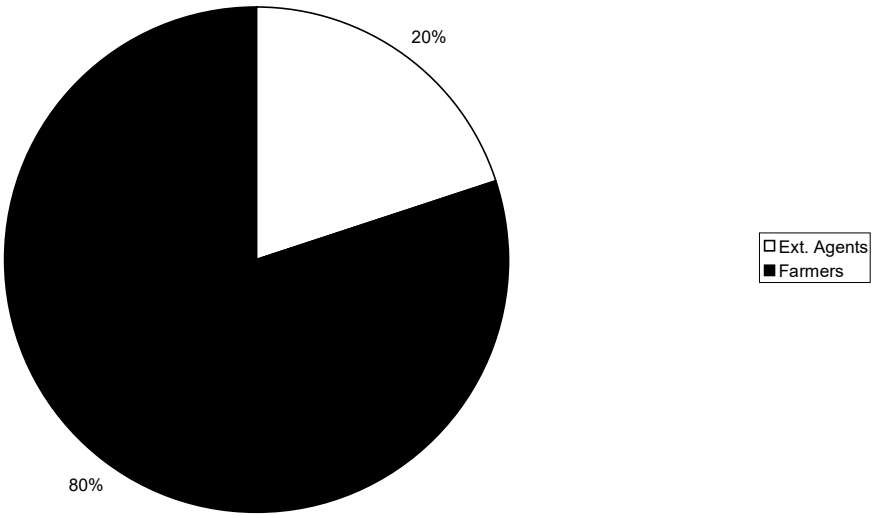

Figure 1: Percentage of Cotton Seed Farmers and Extention Agents Sampled for the Study

3.5 Instrument for Data Collection

A likert scale with strongly agree – 5, agree – 4, undecided – 3, disagree – 2 and strongly disagree – 1, was used for the study. A total number of 50 questionnaires were administered to the respondents. For the farmers who could not understand English language, oral interview based on the questionnaires were administered to them.

3.6 Validation of the Research Instruments

The research instrument was subjected to face and content validity. The initial draft was given to experts including the researcher's supervisor in other to ascertain its validity. Based on this, some of the questions was discarded or restructured before producing the final draft, which was eventually distributed to the respondents.

3.7 Method of Data Collection

To facilitate the administration of the instruments, a letter of introduction of the researcher was sent to the respondents accompanying the questionnaire. Adequate time was to the respondents to fill it. The researcher retrieved the

answered questionnaire on the same day. For those respondents who could not understand English and were not able to fill the questionnaire by themselves, an oral interview was used .the next day to collect the remaining questionnaire from the respondents for analysis. The researcher retrieved the answered questionnaire on the same day. Where respondents are not able to completely fill the questionnaire on the day it would be administered the researcher would do a follow up the next day to collect the remaining questionnaire from the respondents for analysis.

3.8 Method of Data Analysis

Osuala (2001) stated that whenever a number of categories are assigned a numerical value such as that of Likert scale to measure degrees of agreement with statement items, the research would likely report the mean scores on the scale. For the purpose this study, the data that was generated from the respondents was analysed by first given numerical scores to each degree of agreement. Respondents' total scores were computed by summarizing the scores from each item for easy reporting. The group frequency of the total scores obtained from each item was analysed using mean statistics. Further analysis was done by comparing mean response questionnaire item using student's t-test.

3.9 Decision Rule

The decision to categorize response to research questionnaire as agree or disagree was based on the mean response value of the statement items. The mean

as a 5-point scale is $\frac{5+4+3+2+1}{5} = \frac{15}{5} = 3$

The mean lies between two boundaries with 2.5 as lower boundary and 3.49 as the upper boundary. If the computed mean is therefore equal or greater than 3.49 then it is accepted.

Similarly for t-test, the null form of the hypotheses is accepted if the computed t-test value is less than the critical value of t (i.e. the table t) while the alternative hypotheses is rejected. Likewise the alternative hypothesis is accepted if the computed t-test value is greater than the critical value, while the alternative hypothesis is rejected (Osuala 2001).

CHAPTER FOUR
RESULT AND DISCUSSION

4.1 Introduction

This chapter deals with the presentation of data in the order in which research questions, summary of findings, description of finding and discussion of findings appear.

Research question 1

To what extent has the extension agent education provided by Afcott extension agents has enhanced cotton seed farming among farmers in Yola?

Table 1: Statement Items on the Extent to which Extension Agent Education provided by Afcott Extension Agents has enhanced Cotton Seed Farming Among Farmers in Yola.

S/No	Statement Items	Mean Response Value	
Provided Solution to the Problem related to low production of seed cotton through		Farmer	Extension Agents
1	Prompt access to fertilizer	2.1	2.3
2	Good soil fertility	2.9	2.0
3	Adequate finance	1.9	0.4
Provided Solution to the Problem of farmers in the production of seed cotton			
4	Access to modern farming tools/equipment	2.7	2.9
5	Good of technical know-how	2.0	1.1
6	adequate information on farming techniques	1.9	3.2
7	adequate finance resource to acquire them	1.4	2.0
8.	Interacting with the farmers	3.5	3.0
9	Written reports to the extension agents	2.0	2.3
10.	Through the quality of seed cotton obtained by farmers	1.0	2.4
11.	Through the existing problems observed by the extension agents	2.3	3.1

Table 1 presented the means score value of responses of respondents (Farmers and Extension Agents) to the statement Item on the extent to which extension agent education provided by Afcott extension agents has enhanced cotton seed farming among farmers in Yola. The value recorded revealed that all items (expect item 8 which recorded 3.5 and 3.0 for farmers and extension agents respectively and Item 6 which recorded 3.2 for extension

agents) had a mean rating raging between 2.9 and 0.4. The scores obtained strongly indicated a disagreement of the respondents with the statement that the extension agent education provided by Afcott extension agents has enhanced cotton seed farming among farmers in Yola.

Research question 2

To what extent has the extension agent education offered to cotton seed farmers in Yola by Afcott extension agents has improved their socio-economic development?

Table 2: **Statement Items on the extent to which the extension agent education offered to cotton seed farmers in Yola by Afcott extension agents has improved their socio-economic development**

S/No.	**Statement Items**	**Mean Response Value**	
	Ways extension agents help farmers to get loan	Farmers	Extension agents
12	Extension agents stand as guarantors for the farmers.	2.9	2.0
13	Collected loans on their behalf and give it to them.	1.0	2.9
14	Loan is secured through the use of Cooperative society.	3.5	4.3
	Income made from cotton seed farming		
15	₦10,000 and below	1.7	2.3
16	₦10,000 – ₦50,000	3.4	2.9
17	₦50,000 - ₦ 200,000	4.6	4.5
18	₦200,000 and above	2.8	3.0
	Cotton Farm capacity		
19	Very large scale	2.9	2.7
20	Medium scale	2.0	2.5
21	Small scale	4.5	4.4

In the same vain table presented the means score value of responses of respondents (Farmers and Extension Agents) to the statement Item on the extent has the extension agent education offered to cotton seed farmers in Yola by Afcott extension agents has improved their socio-economic development. The value recorded revealed that items 12, 13, 15 18 19 and 20 recorded a mean rating raging between 1.0 to2.9, while items 14, 16 17 19and 21 recorded mean ratings of 4.5 and 3.0 respectively. The scores obtained strongly indicated a disagreement of the respondents that the extension agent education offered to cotton seed farmers in Yola by Afcott extension agents has improved their socio-economic development.

Research question 3

To what extent has the agricultural techniques offered to cotton seed farmers in Yola by Afcott extension agents been adopted by these farmers?

Table 3: Statement Items on the extent to which the agricultural techniques offered to cotton seed farmers in Yola by Afcott extension agents been adopted by these farmers.

S/No.	Statement Items	Mean Response Value	
	Special materials equipment/service provided by Afcott Nigeria PLC to their extension agents to carry out their duties well	Farmers	Extension agents
22	Provision of tools/equipment	1.0	2.4
23	Provision of seed cotton, fertilizer & chemical	2.0	2.5
24	Provision of transport to farm land	3.0	3.5
	Ways extension agents educate the farmer at their research station		
25	Discussion	3.2	4.5
26	Use of hand bills	1.0	2.2
27	Use of radio and television	1.0	1.6
	Extension agents visit to the farmers to pass modern scientific technique in the production of seed cotton		
28.	Once a month	4.6	3.0
29	Twice a month	2.2	2.4
30.	Weekly	1.5	2,3

Similarly Table 3 presented the means score value of responses of respondents (Farmers and Extension Agents) to the statement Item on the extent has the agricultural techniques offered to cotton seed farmers in Yola by Afcott extension agents been adopted by these farmers. The value recorded revealed that items 22, 23, 26, 27, 29, and 30 recorded a mean rating raging between 1.0 and 2.4, while items 24, 25and 28 recorded mean ratings of 4.5 and 3.0 respectively. The scores obtained strongly indicated an agreement of the

respondents that the agricultural techniques offered to cotton seed farmers in Yola by Afcott extension agents have not been adopted by these farmers.

4.2 Testing Hypotheses

Hypotheses 1: There is no significant difference in the mean rating between the farmers and extension agents on the education provided to enhance cotton seed farming among farmers in Yola.

Hypothesis one was subjected to t-test statistics Table 4 gives the summary of the analysis.

Table: 4 t-Test between the Farmers and Extension Agents on the education provided to enhance cotton seed farming.

Response	Mean	Variance	df	t-cal	t-Critical
Extension Agents	0.3	1.1	10	-2.8	1.8
Farmers	1.8	0.6			

The summary of analysis presented in table 4 revealed that the t-calculated value was -2.8 .The values were observed to be lower than the t-critical value of 1.8 recorded for the Respondents. Hence based on the decision rule stated in section 3.7 of this work; the null form of hypotheses 1 (Ho1) is upheld while the alternative form of hypotheses is rejected. It can therefore be concluded that the extension agent education provided by Afcott extension agent has not significantly enhanced cotton seed faming among farmers in Yola.

Hypotheses 2: There is no significant difference in the mean rating between the farmers and extension agents on education offered improved their socio-economic development.

In the same way the mean and the variance of the responses of to the extent to which extent to which the extension agent education offered to cotton seed farmers in Yola by Afcott extension agents has improved their socio-economic development were subjected to analysis by t-test statistics to test the above hypothesis. Table 6 and 7 gives the summary of the analysis.

Table: 5 t-test between the farmer and extension agents on education offered to improved their socio-economic development.

Response	Mean	Variance	Df	t-cal	t-Critical
Extension agent	1.6	4.4	9	0.3	1.8
Farmers	1.3	1.7			

The summary of analysis presented in table 6 revealed that the t-calculated value was 0.3 .The value was observed to be lower than the t-critical value of 1.8 recorded for the Respondents. Hence based on the decision rule stated in section 3.7 of this work; the null form of hypotheses 2 (Ho2) is upheld while the alternative form of hypotheses is rejected. The extension agent education offered to cotton seed farmers in Yola by Afcott extension agents has not significantly improved their socio-economic development.

Hypotheses 3: There is no significant difference in the mean rating between the farmers and extension agents on techniques offered to cotton seed farmers Yola

Equally the mean and the variance of the responses of to the extent to which extent to which the extent to which the agricultural techniques offered to cotton seed farmers in Yola by Afcott extension agents have been adopted by these farmers.were subjected to analysis by t-test statistics to test the above hypothesis. Table 8 and 9 gives the summary of the analysis.

Table: 6 t-Test between the farmers extension agents on techniques offered cotton seed farmer in Yola.

Response	Mean	Variance	df	t-cal	t-Critical
Extension	1.2	3.4			
Agents			8	0.3	1.9
Farmers	0.10	0.71			

Furthermore the summary of analysis presented in table 8 revealed that the t-calculated value was 0.3 .The value was observed to be lower than the t-critical value of 1.9 recorded for the Respondents. Hence based on the decision rule stated in section 3.7 of this work; the null form of hypotheses 3 (Ho3) is upheld while the alternative form of hypotheses is rejected. The agricultural techniques offered to cotton seed farmers in Yola by Afcott extension agents have not significantly been adopted by these farmers.

4.6 Major Findings

The study revealed that:

- Although Affcot Yola PLC Provided Extension agent education to cotton seed farmers however the Extension agent education provided by Afcott extension agents has not significantly enhanced cotton seed farming among farmers in Yola.
- The extension agent education offered to cotton seed farmers in Yola by Afcott extension agents has not significantly improved their socio-economic development.
- Farmer were still using old tools and equipment and have no experience in farming, which means that the more experience they are, and modern tools and equipment they use, the more effective they become in their farming work..
- Lack of finance and transportation, late arrival of farm inputs, inadequate extension personnel and inadequate training of extension agents.

4.7 Discussion of the Findings

Hypotheses 1 were used to find out the Extent to which Agent Education Provided by Afcott Extension Agent has Enhanced Cotton Seed Farming Among Farmers in Yola. Findings revealed that the extension agent education provided by Afcott extension agents has not significantly enhanced cotton seed farming among farmers in Yola. Moreover the data in Table 1 for research question one strongly indicated a disagreement of the respondents with the statement that the extension agent education provided by Afcott extension agents has enhanced cotton seed farming among farmers in Yola.

Result of data from both hypothesis one (Ho1) and research question one both indicated that the Extension Agent Education Provided by Afcott

Extension Agent has not significantly Enhanced Cotton Seed Farming among Farmers in Yola.

Similarly of responses of extension agents to the extent to which the extension agent education offered to cotton seed farmers in Yola by Afcott extension agents has significantly improved the socio-economic development among farmers in Yola. Data revealed that the extension agent education provided by Afcott extension agent has not significantly enhanced their socio-economic development of farmers in Yola. Moreover the data in Table 2 for research question two strongly indicated a disagreement of the respondents that the extension agent education offered to cotton seed farmers in Yola by Afcott extension agents has improved their socio-economic development.

Both data were therefore indicative that the extension agent education offered to cotton seed farmers in Yola by Afcott extension agents has not significantly improved their socio-economic development.

Hypotheses 3 also wanted to find out if the agricultural techniques offered to cotton seed farmers in Yola by Afcott extension agents have significantly been adopted by these farmers. Summary of Analysis of responses of both Farmers and extension agents to hypothesis 3 revealed that the agricultural techniques offered to cotton seed farmers in Yola by Afcott extension agents have not significantly been adopted by these farmers.

Data from research question three were also indicative agreement of the respondents that the agricultural techniques offered to cotton seed farmers in Yola by Afcott extension agents have not been adopted by these farmers.

The result obtained is in consonance with Nthogo (2002) whose findings revealed how government policies, though explicitly formulated to enhance conditions of service coordination of farmers, can be at variance with realities of coordination at the village level.

4.8 **Implication of Findings**

Result of these findings has strong implication not only on cotton farmer but all farming activities requiring the use/services of extension agents. Findings of hypotheses 1 show that although Affcot Yola PLC Provided Extension agent education to cotton seed farmers however the Extension agent education provided by Afcott extension agents has not significantly enhanced cotton seed farming among farmers in Yola. Ugochukwu (1999) definition which see extension as a process whereby modern farming techniques and research findings are taken to the farmers through extension agents and problems of the farmers are taken to the research institutions for solution and to raise their productivity and standard of living need to be highly considered. Indeed extension education should involve the teaching and demonstration of modern skills and innovations to farmers, changing farmers' attitudes in order to bring about improvement. If Nigeria is to become truly agrarian economy then the role of extension agents in to teaching farmers must become more assertive. Presently result obtained from this findings reveals conditions of service coordination which is supposed to be provided to farmers by the extension agents, is at variance with realities of coordination of farmers at the village level. As Mahelia (1994) have explained, the aim of extension agents is to teach farmers living in rural areas how to raise their standard of living by their own efforts, using their own resources of manpower and materials with assistance from government (see section 2.3).

Hypotheses 2 revealed that the extension agent education offered to cotton seed farmers in Yola by Afcott extension agents has not significantly improved their socio-economic development. What this implies is that farmers are not able to adequately assess funds for farming. If this is the case then farmers would not be able cultivate large farm lands. This equally implies that production of cotton seed would be low or insufficient for the industry. Moreover farmers themselves would be discouraged to

continue in the business since the motivation to continue is low or almost absent. The fact that there is a lack of funds to finance cotton seed farming, and that there is a poor assess to transportation as well as late arrival of farm inputs, inadequate extension personnel and inadequate training of extension agents, is not a good sign for cotton seed farming.

Furthermore hypotheses 3 revealed that Farmers were still using old tools and equipment and have no experience in farming, which means that the more experience they are, and modern tools and equipment they use, the more effective they become in their farming work. This has strong implication on output of the farmers. When new technologies are not easily adopted by the traditional farmers, the practice of modern farming practices would negatively affected.

CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

This study examined the role of extension agents in Agricultural development using (Afcott Nig, Plc) as a case study. Afcott Nig. Plc was chosen because the researcher assumed that for more than twenty years of operation Afcott Nig. Plc should have adopted many measures to increase Agricultural production of Cotton and many peasant farmers were expected to have been encouraged to increase production of seed cotton, using extension agents as go between to give advisory services, provision of seed cotton, fertilizer, chemicals and loans but the results were not felt in increased production of seed cotton.

5.2 Conclusion

The study has focus on the role of extension agents of Afcott in seed cotton productivity; the factors responsible for low production of seed cotton in the various farm units were also identified. In spite of the services rendered by Afcott Nig. Plc to the farmers through the extension agents increase in the supply of cotton seed yearly has not been documented.

Afcott financial book (2006) Afcott continue to have irregular production of oil/link in spite of huge sum of money spent on the farmers and extension agents. The cost of seed cotton has continued to raise yearly. The supply of cotton seed, fertilizers and chemicals to farmers increase yearly, cost of transportation of extension agents arise also yearly. Though the role of extension agents has been felt positively of the farmers have increased through the effort of extension agent, effective production is still a constrained

by a number of problems, which need to be ameliorated. To overcome these impediments, recommendations were made.

5.3 Recommendations

Base on the findings, the following recommendations are hereby made to increase the efficiency of the extension agents in the study area.

- Irrigation system should be introduced in the various farm units/states where seed cotton activities are carried out to reduce the disadvantage of climatic changes (late rain).
- Afcott Nig. Plc should provide incentive such as in service training for the extension agents as this will go along way in motivating them, thereby leading to the delivery of their services to farmers. This is because the quality of the extension staff will determine the rate of adoption of new techniques in seed cotton production.
- Afcott Nig. Plc should employ more extension agent s to meet the growing population of farmers.
- To combine the financial and transportation problems faced by extension agents, loans and improved packages should be provided, and mobility such as motorcycles should be provided to extension agents. This will motivate hem to change their attitude towards their jobs and hence the success of extension services. If the above recommendations are put into practice, there is a bright future for improving the effectiveness of extension in seed cotton production.

5.4 Recommendation for Further Study

The following recommendations were made for further research:

- This study should be replicated taken into consideration extension agent education provided to farmers in other area of agricultural production

- Further research efforts should be centred on discovering other factors that contributes to the achievement of extension agent education in agricultural development in Admawa state.

REFERENCES

Adeola R. G. (2004**)** ***The impact of training and visit system on professionalization of extension agents in Oyo State Agricultural Development Programme*** http://www.Krepublishers .com/02-Journals/JSS

Akinbode I. A (1976): ***The organization and the effectiveness of agricultural science in Nigeria. Agricultural administration*** (3): 9

Ayele Y and Griffith w.s **(**1984) Agricultural Extension Workers' Roles in Canada and the United States. ***Journal of Adult Education*** , Vol. 34, No. 4

Alao J. O and Williams S. K.T (1972): Increasing food production in the seventy's evaluation of maize/rice project USAID western State of Nigeria "***The case of farmers proceeding of agricultural Society of Nigeri***a. (9): page 30

Arnon I. (1987), ***Modernization of agriculture in developing country, Potentials and problems,*** New York: John Willey and Sons, chuchaster pages 322-329

Anibisala, S. B. (1982): Infrastructure for green revolution programmes. ***he Nigeria agriculture journal***. (I): page 25-28

Chantran P. (1974): ***The basic for efficient extension work. Research Farmers' motivation***. Paris: Frank, promotion Rural, (55) Page 13-18.

Chickened D. O. Zaria, M. B. Omotayo, A. M Yusuf, J. O and Omenese E. (1997): ***Evaluation of the effectiveness of extension Communication channels in disseminating information on improved farm practices to farmers in Nigeria.*** A research report Submitted to national agricultural research project (NARP) page 145

F. A. O (1984): ***Agricultural series*** Rome: United Nations, No Ib pg 21

Gordon J (1970): ***"Attitude and opinion of some small extension Workers in Ghana"*** Ghana journals of agricultural science area Page. 19.

Kavoor J. (1990): ***Role of Community Development***, Speech presented during the annual orientation course of Borno State ADP. Pages1-5.

Lionberger H. F. and Chang H. C.(1981***) Development and delivering of scientific farm information. The Taiwan system as an alternative land grand universities*** U. S style pages 155-183.

Monu A (1982): ***The diffusion of innovation model in action***. Paper Presented at funtua agricultural programme in Kaduna State. (13) Pages 3-6.

Mahelia S. I. (1994 ***Farming Operation as They Relate to Extension*** paper presented at orientation/induction course for extension activities at Afcott Training Centre

Nthogo R.(2002) ***An appraisal of Batswana Extension Agents' Work and Training ExperiencesTowards Enhanced Service Coordination.*** Pennyslvania: **http://www.dissertation.com/book**

Obibuaku L.O (1975): ***Education and training in Nigeria Extension Service Administration, Overse***a. . Nsukka: University of Nigeria Press Pages113-11

Obibueku L. O (1983): ***Agricultural extension as a strategy for Agricultural transformation***. Nsukka: University of Nigeria Press. Pages 1- 20.

Osuala E.G. (2001) ***Research Meyhodology.*** Onitsha: African Fep Publishers.

Oakley P. and Garforth C. (1983): ***Guide to extension training. Agriculture extension and rural development center, schools of Education,*** University Readings, UK, Pages 9-21

Ugochukwu O. C (1999) San ***Agricultural Science for Senior Scondary School***

Page 271-278.

Okoye I. A (1988): Factors affecting adoption process by farmers in Selected local government of Anambra State. ***The Nigerian journal Agriculture*** (124) Pages 1-4.

Savile A. H. (1965) ***Extension in rural Communities*** pages 56-60

Teresa H. (1985): ***Population growth and agricultural productivity in Sub Saharan Africa***. Proceeding of the fifth agricultural sector Symposium, Washington D.C page 92.

Trochim M.K. (2006) ***Research Methods Knowledge Base*** http://www.ocialresearchmethods.net/kb/survtype.php

Williams S.K.T (1990): ***Agricultural Extension Research linkage. An essential ingredient for increased agricultural production in Nigeria***" 2nd open lecture, college of agricultural science. Ogun State university, pages 5-7

.

Appendices

Letter to Respondents Asking for Assistance

Federal University of Technology,
Department of Technology Education.

Sir/Madam/Mrs/Mr/Miss/Alhaji,

I am a final year student of the above addressed institution carrying out a research project on The Role of Agricultural Extension Agents in Development of Agriculture production in Afcott Nigeria Public Liability Company Yola Adamawa State.

I kindly need your co-operation by providing correct information on the questions that follow to enable me accomplish my research work.

The information collected from you will be treated with confidentially and strictly for the purpose of this research only.

Your
sincerely,

Aleke Beatrice. Obiagli

Research Questionnaire for both Extension Agent and Cotton Seed Farmers in Yola

Please tick appropriately or state correct information in the space provided.

SECTION A: Extent to which has the extension agent education provided by Afcott extension agents has enhanced cotton seed farming among farmers in Yola.

S/No.	**Provided Solution to the Problem related to low production of seed cotton through**	**SA**	**A**	**U**	**D**	**SD**
1 2 3	Prompt access to fertilizer Good soil fertility adequate finance					
	Provided Solution to the Problem of farmers in the production of seed cotton					
1 2 3 4	Access to modern farming tools/equipment Good of technical know-how Adequate information on farming techniques Adequate finance resource to acquire them					
	Ways extension agents educate the farmer at their research					

	station					
1. 2. . 3. 4.	Interacting with the farmers Written reports to the extension agents Through the quality of seed cotton obtained by farmers Through the existing problems observed by the extension agents					

SECTION B: Extent to which the extension agent education offered to cotton seed farmers in Yola by Afcott extension agents has improved their socio-economic development

S/No.	Ways extension agents help farmers to get loan	SA	A	U	D	SD
1 2 3	Extension agents stand as guarantors for the farmers Collected loans on their behalf and give it to them Loan are secured through the use of Cooperative society					
	Income made from cotton seed farming					
1 2 3 4	₦10,000 and below ₦10,000 – ₦50,000 ₦50,000 – ₦ 200,000 ₦200,000 and above					
	Cotton Farm capacity					
1. 2. 3.	Very large scale Medium scale Small scale					

SECTION C: Extent to which the agricultural techniques offered to cotton seed farmers in Yola by Afcott extension agents has been adopted by these farmers

S/ No.	Special materials equipment/service provided by Afcott Nigeria PLC to their extension agents to carry out their duties well	SA	A	U	D	SD
1 2 3 4	Provision of tools/equipment Provision of seed cotton, fertilizer & chemical Provision of transport to farm land Motivating them through card motorcycle loan					
	Ways extension agents educate the farmer at their research station					
1 2 3	Discussion Use of hand bills Use of radio and television					
	Extension agents visit to the farmers to pass modern scientific technique in the production of seed cotton					
1. 2. 3.	Once a month Twice a month Weekly					