

Perception of Farmers and Extension Agents on Extension Services in Bo city Kakua Chiefdom Southern Sierra Leone

^aSaffa B. Massaquoi*, ^bJoseph B.A Kandeh, ^cMohamed P. Ngegba

^aResearch and Innovation Unit, Department of Agriculture and Forestry, Eastern Polytechnic, Kenema, Sierra Leone.

^bDepartment of Agricultural Education and Home Economics, School of Education, Njala University, Sierra Leone.

^cDepartment of Extension and Rural Sociology, School of Agriculture, Njala University, Sierra Leone.

Abstract: Agricultural extension plays an important role in Agricultural and Rural Development of every nation. The success of Agricultural extension work depends on the performance of the extension agents. The purpose of this study is to examine the perception of farmers and extension agents on the status of Agricultural Extension in Bo City, Southern Sierra Leone. The design of the study is descriptive. The population is 160 subjects comprising four (4) communities. The sample size is 113 representing 25 samples from Nikibu, 26 from New London, 21 from Fullawahun and 31 from Kandeh town, Valid and reliable questionnaires were used for data collection and data analysis was done using frequencies and percentage. The findings of the study revealed that extension agents adopted demonstration, farm visitation, individual instruction, group meeting, workshops and the media to disseminate new technologies to farmers. The financial, materials and human support for extension programmes were provided by Non- governmental Organizations and the Sierra Leone Government. It is perceived by farmers that ineffective or inappropriate extension services contributed to the decline in agricultural production in Bo City. It is concluded that outdated technical training and inadequate teaching skills were adopted by some farmers. It was further concluded that insufficient funds and inadequate number of trained personnel were obstacles hindering agricultural development in the city. Recommendations made were: i) extension agents should adopt modern method of training farmers, ii) enough teaching equipment should be available to facilitated effective extension programmes. iii) Extension agents in Bo City and its environs should periodically engage the media to disseminate the latest information about farming activities in the country.

Keywords: Extension Agents, Rural Development, Perception, Extension Service, Farmers

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Introduction

Agricultural Extension refers to an education system that provides farmers with technical advice required to increase farm output and income including advice on credit, other inputs

and marketing. It also provides research institutes and credit institutions information about farmer's conditions (Bello, and Salau, 2009). Agricultural extension as a system aims to exchange information and transfer skills between farmers, extension workers and researchers to help identify farming problems. This is achievable through an informal, adult training, communicating with individual members of farmers community advice, an assistance with respect to knowledge and methods of technical agriculture, with due consideration of the economic and social circumstances of the individual and other people collectively (Bardsley, 1982). In a nutshell extension is an educational process that uses varieties of methods designed to help farmers improve living standard. Similarly, extension methods could be used for understanding the best ways to handle farmers so as to meet their need. As a result, Extension organization seeks for employees who are competent in at least five different areas. Namely, technical competency or level of knowledge and understanding related to the crops and livestock that farmer produces; economic competence, or the ability to weigh alternative productive input and output to determine whether the adoption of new idea is advantageous; science competency or an understanding of the philosophy of science and ability to conduct simple field experiment to test an innovation and assess result (Ifenkwe, 2012).

According to Ayesha, and Mohammad (2012), in most developing countries, wide adoption of research results by majority of farmers remain quite limited. This situation calls for smooth flow of information from farmers to researchers and from researcher to farmers this passage is provided by agricultural extension services. But, unfortunately extension services have failed in performing its role efficiently and effectively. Traditionally, extension was concentrating on training farmers, increasing production and transferring technology. Today's understanding of extension goes beyond technology transfer to facilitation, beyond training to learning and helping farmers to help themselves, in other words assisting farmers on how to think not on what to think. Therefore, agricultural extension service operates from the backdrop belief that increased agricultural productivity depends primarily upon the acceptance of improved cultural and technological change at the rural farm level and that peasant farmers can achieve higher farm yields only if they adopt recommended scientific farming techniques in place of their traditional practices. Therefore, the role played by extension service in every sector of agricultural production cannot be over emphasized; for the prominent role it plays in dissemination of vital agricultural information. The extension service providers are responsible for making farmers aware of research findings to increase their production. From government perspectives, whatever priority is given to agricultural production extension will remain a key policy tool for promoting ecologically and socially sustainable farming practices (Yusuf *et al.*, 2011).

In the past, Sierra Leone agricultural development programmes extension Strategy was based on the premise that a combination of essential factors comprising the right technology, effective extension, access to physical production enhancing inputs, adequate market and other infrastructural facilities are essential ingredients to get agriculture moving and to improve productivity in order to raise the living standards of rural dwellers. Furthermore, extension was conceptualized as knowledge transfer; while current perspectives circle more around multiple stakeholder process of cooperative, knowledge construction and participatory approaches in integrated rural development (Karbasion *et al.*, 2007). Currently, extension aims at transforming the traditional agriculture into modern one that combines scientific knowledge with indigenous knowledge not only in crop production, but also in other agriculture subsectors such as forestry, veterinary production, aquacultures, agro-tourism and environmental science that result to increased farm productivity. Traditionally, extension was concentrating on training farmers, increasing production and transferring technology.

Today's understanding of extension goes beyond training to learning and helping farmers to help themselves. In this case, extension agents do more than just 'traditional' extension and technical agricultural outreach. They play a much bigger role, brokering and facilitating links and relationships within the agricultural innovation system, and thus require new strategies and capacities to perform these roles (Sulaiman and Davis, 2012). Both Romero (2012) and Sulaiman and Davis (2012) see rural extension as part of an innovation system. In their model of extension services embedded in an agricultural innovation system. Sulaiman and Davis (2012) lay out three levels at which capacity is needed in extension (individual, organizational and system).

Nevertheless, the major challenges of Sierra Leone's agricultural extension services have been lack of legislated agricultural extension policy, inadequate and untimely funding, poor leadership and coordination, low private participation, very weak research-extension-farmer inputs linkage system driven by ineffective top-down, supply-driven extension approaches (Madukwe, 2010). According to Ayoade and Akintonde (2012), there is a positive and significant relationship between the constraints encountered and adoption level of Agricultural Innovation. The authors stated that late adoption of innovations are due to irregular visits of extension agent, while unstable market price, insufficient finance and inadequate supply of innovation are the most serious constraints encountered by farmers in rural areas. Oladele and Kareem (2003) also stated that farmers are sometimes unable to adopt an innovation even though they have mentally accepted it, due to economic and situational constraints. This literature obviously reveals that farmers are essential stakeholders in extension services innovations in their community.

However, most of the agricultural populations in rural Sierra Leone are illiterates who have not had the benefit of farmer education. These illiterate farmers put their trust on tradition, thus, maintaining strong family and kinship ties. For these people farming is more of life than an occupation. Therefore, there is every need to teach such illiterate farmers about improved technological skills and knowledge to improve their farming practices. Such teaching is only accomplished through extension services. Extension agents teach the skills of modern technologies discovered by scientists (researcher) in agriculture. They also transmit problem-solving information to farmers and information on farmers' problems back to the researcher. This makes extension agents more vital in ensuring researchers' awareness of problems that farmers face. Despite these, there is no existing empirical data on the perceptions of farmers and extension agents on the extension innovations adopted by farmers, nor is there any scientific information on the effect of the relationship between extension agents and their clientele (farmers) on the level of adoption of agricultural innovations in Kakua Chiefdom in Sierra Leone. Therefore there is a need to investigate the perception of farmers and extension agents on the extension services in Kakua Chiefdom Southern Sierra Leone. It is hoped that the findings of this research will be useful not only to the extension department of the Ministry of Agriculture, Forestry and Food Security (MAFSS), but also the entire Sub-Saharan Africa region for planning their extension programmes effectively.

Purpose and Objectives

The aim of the study was to examine and discuss the perception of farmers and extension agents on extension services in Bo City Kakua chiefdom, Southern Sierra Leone.

The specific research objectives were to:

- i. identify the extension teaching methods adopted by extension agents in Bo city.
- ii. identify the sources of support for extension services in Bo city kakua chiefdom Southern Sierra Leone.

- iii. determine the major obstacles hampering extension agents in the delivery of extension services in Bo city, kakua chiefdom.
- iv. examine the perception of farmers and extension agents on extension services/ programmes delivered in Bo city kakua chiefdom Southern Sierra Leone.

Methodology

This study was carried out in Bo City, Southern Sierra Leone between 15th January 2016 and 20th September, 2016. Bo is the second largest city of Sierra Leone located in the Southern part of the country. The municipality of Bo has a population of 306000 (national Population Census result 2015). The city is located 250 km (160 miles) from Freetown the capital city. The study was a mixed design based on qualitative and quantitative approaches to collect primary data from self-participant completed questionnaires and focus group discussion.

The population of the study included farmers and extension agents in four communities in Bo City where the study was conducted. The total population is estimated as hundred 160 subjects. The sample size 103 comprising 25 respondents from Nikibu, 26 from New-London, 21 from Fullawahun and 31 from Kandeh–Town. Simple random sampling technique was used to determine the sample size of 103 from a population of 160 extension agents and farmers residing in the four communities. The 160 extension agents and farmers were each represented by a number written on a piece of paper, folded and put in a bag. A sample of 103 extension agents and farmers were drawn from the bag as shown in the table below:

Farmers and Extension Agents		
Section	Population	Sample
Nikibu	40	25
New London	40	26
Fullawahun	30	21
Kandeh Town	50	31
Total	160	103

Thus, a simple random sampling technique was used as seen in the Table above. This method was used so as to involve total representation to address the issues of reliability and validity. The researcher developed the study instrument based on the objectives of the study and the related literature reviewed. The questionnaires were used to obtain relevant information from the study population of farmers and extension agents.

It was pre-tested in two villages in Moyamba District outside Bo City. The content validity of the questionnaires was established by a panel of experts in the social sciences at Njala University. The correlation coefficient yielded an alpha of 80%, thus, indicating that the instrument was adequate both in quality and in content to collect the data from the study population. Focus group discussion was conducted among homogenous sub-sample population which included extension agents and farmers in the four (4) communities. The data collected were analyzed by the use if the SPSSPC⁺ computer program. Descriptive statistics were used to report the study findings.

Results and Discussion

Obstacles hampering extension agents in the delivery of extension services /programmes in Bo City, Kakua Chiefdom Southern Sierra Leone.

As illustrated in Figure 1, 88% of the respondents indicated that outdated technical and inadequate teaching skills were obstacles hampering extension agents in adult education. Also 96% of the respondents claimed that lack of appropriate facilities for training farmers is another major obstacle. Seventy percent of the respondents indicated lack of teaching equipment and negative attitude of farmers towards new innovation while 82% of the respondents stated inadequate number of trained extension personnel as obstacles hampering extension agents in the delivery of adult education/extension programs in Bo City. The findings actually confirm the study of Christian (1997) who identified the following obstacles faced by tutors and extension agents in the delivery of adult education:

- i. Outdated technical training and inadequate teaching skills.
- ii. Negative attitude of farmers towards new innovation
- iii. Insufficient funds and lack of appropriate facilities and administrative support to extension programmes.

It is therefore perceived that unless and until there is local support for adult education/extension programmes, effort to develop and to implement extension programmes will likely result in failure. Refresher training is needed to upgrade the skills, knowledge and qualifications of extension personnels.

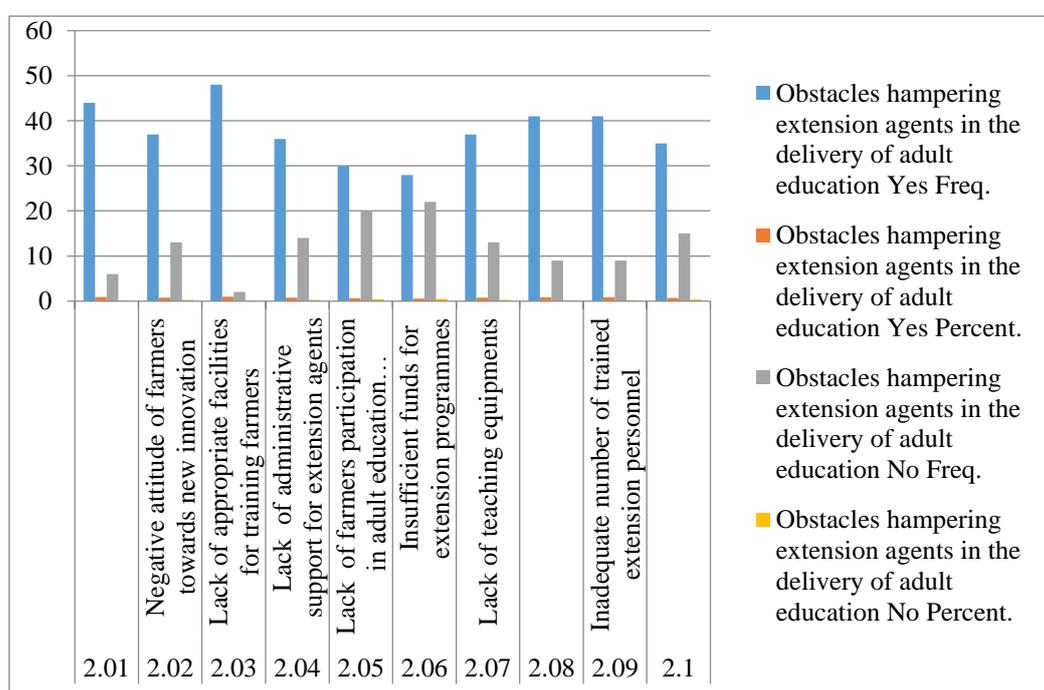


Figure 1. Percentages on the major obstacles hampering extension agents in the delivery of extension services/ programmes in Bo city

Perception of farmers and extension agents on extension services/ programmes in Bo City kakua Chiefdom Southern Sierra Leone

Figure two (2) depicts the frequencies and percentages on the perception of farmers and extension agents on extension services/ programmes in Bo City. The study reveals that 44.0% of the respondents very strongly agreed that training/seminars, farm field and demonstrations are effective approaches in technology transfer while 46% of the respondents strongly agreed with the statement. Furthermore, 46.0% of the respondents very strongly agreed that both extension and research personnel on average perceived mass media (publication, radios, TC), and farmer fields school as effective approaches to teaching transfer while 36.0% of the

respondents strongly agreed with the statement. Also 58.0% of the respondents very strongly agreed that ineffective or inappropriate extension service contribute to decline in Agricultural Production. The figure further shows that 60.0% of the respondents very strongly agreed that farmers should be involved in the planning and implementation of extension services to be effective in their communities.

The findings also revealed that 74.0% of the farmers in the study area (Bo City) preferred to learn by hands on activities. The findings of Gresh (1995) shows that most adult learners preferred hands-on-learning approach. The findings also indicated that farmers prefer learning through a variety of methods and individual projects. The perception of farmers according to the author is that they participate in educational programme mainly for economic reasons. This is in line with the findings of this study in which 72.0% of the farmers in Bo City supported the view of the author. Ibrahim *et al.*, (2014) stated that ineffective or inappropriate extension contributes to decline in Agricultural Production. The authors also indicated farm/home visit, demonstration plot, farmer training, workshops, mass media (publication, radios, TV) as effective means of transferring new technologies to farmers in West Africa. The findings of this study is in line with the findings of the authors as stated above.

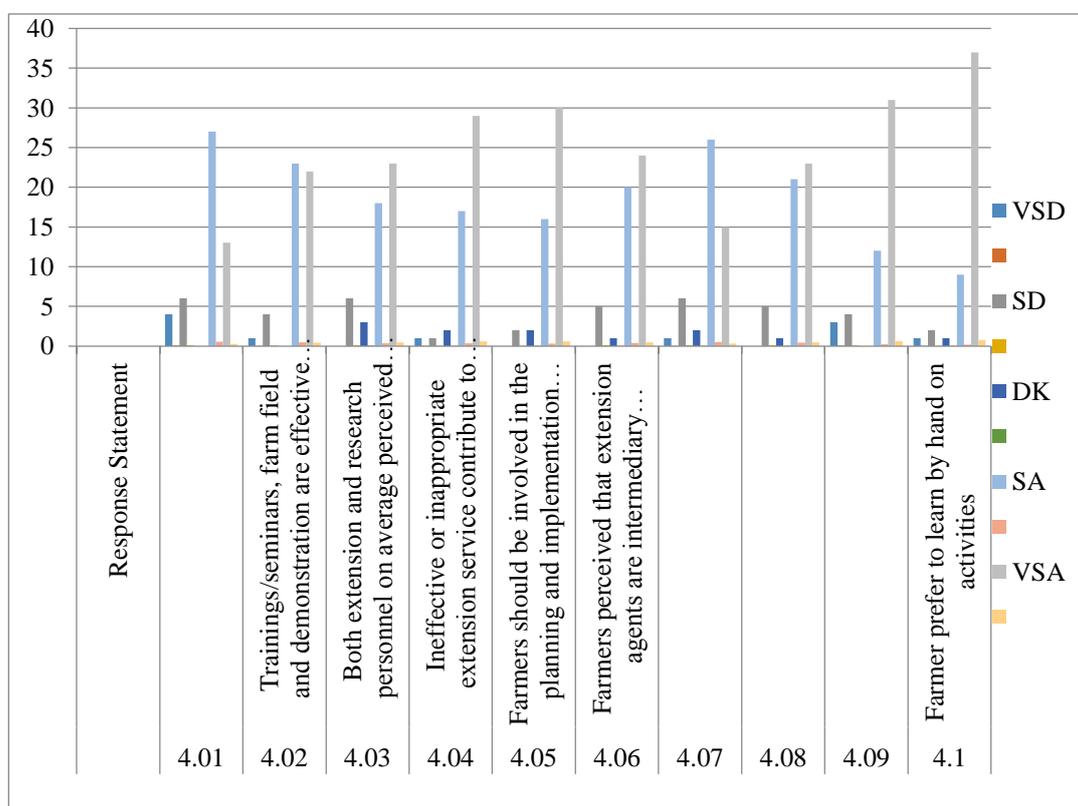


Figure 2. Percentages on the perception of farmers and extension agents on extension services/ programmes delivered in Bo city

Extension teaching methods adopted by extension agents in Bo City

Figure 3 illustrates the frequencies and percentages on the extension teaching methods adopted by farmers in Bo City. The study revealed that 98% of the respondents indicated demonstration method. Also 72% of the respondents declared farm visitation while 80% indicated group meetings as teaching methods adopted by farmers. Eighty six percent claimed discussion method while thirty eight percent of the respondents indicated seminars,

radio/television as teaching methods adopted by agents involved in extension education in Bo City. Seventy two percent of the farmers stated farm visitation as one of the popular methods used. This is in line with the findings of Saito and Weidemann (1990). According to Saito and Weidemann (1990) extension service can be organized in different ways; and various models have emerged. According to the authors much of the Bank investment has been in the training and visitation system. (T & V) system of extension originally used in Asia and now in thirty African countries.

One lesson to be learnt from Asia experience of “Training and Visitation” is that training of extension workers should focus not only on the technical message to be transferred but also on learning more about farmers and the farming systems especially about farmers’ behavior and the reasons why they do things in their own ways. Saito and Weidmann (1990) opined that farmers who experience farm visit and group meetings understood the recommendation better and are more likely to adopt them than those who only attend seminars and group meetings. Feeder *et al.*, (1987) showed that the training and visitation of agricultural extension agents in India resulted in a high productivity of at least an acceptable rate of return to intensified extension.

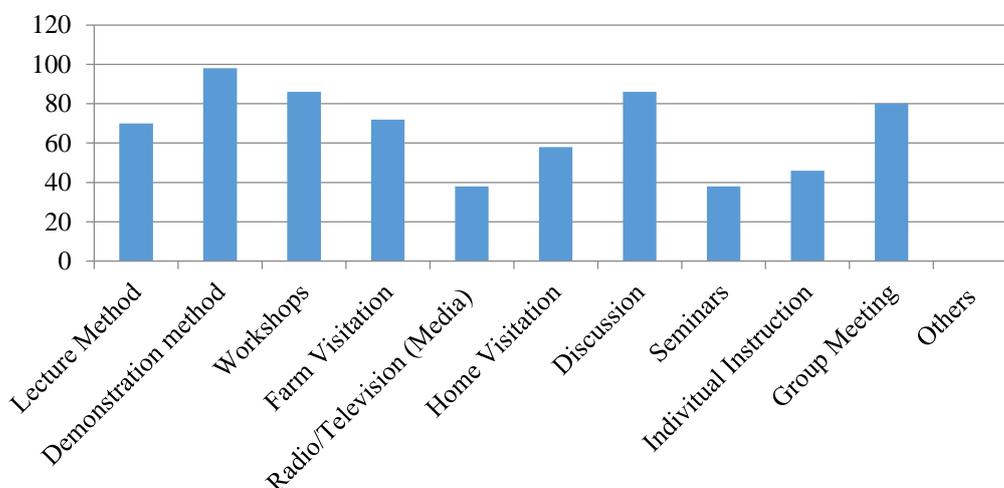


Figure 3. Percentages on the extension teaching methods adopted by farmers in Bo city

Sources of Support for Extension Programmes/Services in Bo City

Figure 4 below depicts the frequencies and percentages on the sources of support for extension programmes organized for farmers in Bo City. The study revealed that 38.0% of the respondents stated that human resource support for extension programmes comes from Non-Governmental Organizations (NGOs); 25% comes from Sierra Leone Government while 30% indicated that human resource support comes from farmers.

About 46.0% of the respondents indicated that materials support for extension programme in Bo City is received from NGOs while 38.0% claimed that material support comes from farmers; about 11.4% stated that material support for extension programmes comes from Sierra Leone government. The study further revealed that 56.8% of the respondents stated that financial support for extension and adult education programmes comes from NGOs while 31.0% claimed that financial support is received from the farmers themselves. About 10.34% of the respondents claimed that financial support is received from Sierra Leone Government.

The result of the study clearly revealed that Non-Governmental Organization (NGOs) provide most of the financial, material and human resources as support for extension programmes/ adult education programmes in Bo City. Fifty six (56.0%) percent of the farmers agreed that Non-government Organizations provide the largest support for extension programmes; followed by individual farmers (31.0%).

The government, non-governmental organizations and other educational organizations normally finance extension programmes (adult education programmes) all over the world. Reputable Organizations such as US Department for Agriculture (USDA) has a network of local and regional offices that are staffed by experts who provide information and training opportunities for farmers, ranchers and farm families interested in Agriculture.

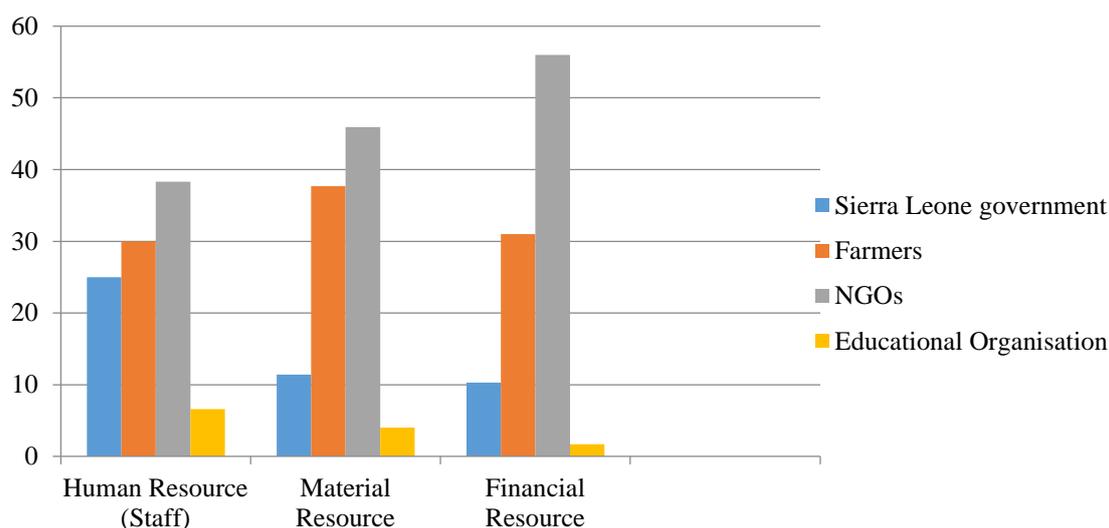


Figure 4. Percentages on the sources of support for extension programmes/ services in Bo city

Conclusion and Recommendations

Based on the findings of the study, and the literature reviewed; it was concluded that lack of appropriate training facilities, inadequate number of trained extension agents and insufficient funds for extension programmes were the major obstacle hampering extension training programmes in Bo City.

It is also perceived by the farmers that ineffective or inappropriate extension service contributed to the decline of agricultural production in the city. Demonstration, farm visitation, group meetings, seminars, workshop, media, television and discussion methods were teaching methods adopted by extension agents in Bo City. It is further concluded that bulk of the financial and materials supports for extension/adult education programmes were provided by Non-governmental Organizations (NGOs) operating in the region. Also the Sierra Leone Government and individual farmers provided human, maternal and financial support that enhanced the extension programmes in the city.

In order to improve on the quality of extensions programmes delivered in Bo city, and its environs the following recommendations were made:

1. Extension agents should adopt modern methods of training instead of outdated technical training of farmers.

2. Extension agents should be provided with the enabling environment, finance and adequate facilities needed for the promotion of extension programmes in the city.
3. Farmers should be motivated to participate in adult education programmes and must be willing to accept new innovations on modern agricultural practices.
4. Extension agents should organize regular seminars and workshops as means of teaching methods for farmers in Bo City and its environs.
5. Extension agents in Bo City should periodically engage the media as a means of disseminating the latest information about farming activities
6. Sufficient fund should be available to the agents to enhance adult education/extension programmes in the city.
7. Extension agents must be sufficiently trained to enable them carry out extension programmes effectively.
8. Farmers in Bo City and its environs should be involved in the planning and implementation of adult/extension programmes for effective extension service delivery.

References

1. Ayesha, K. and Mohammad, A. 2012. Farmer's Perception of Extension Methods Used by Extension Personnel for Dissemination of New Agricultural Technologies in Kyber Pekhtunkhwa, Pakistan. *Sarhad Journal of Agriculture*, 28: 511-520.
2. Ayoade, A.R. and Akintonde, J.O. 2012. Constraints to adoption of agricultural innovations among women farmers in Isokan Local Government Area, Osun State. *International Journal of Humanities and Social Science*, 2(8): 57-61.
3. Bardsley, J. 1982. Farmer's Assessment of Information and its Source. *School of Agriculture and Forestry, Melbourne*, 11-12 pp.
4. Bello, M. and Salau, E.S. 2009. A case for Participatory (cost sharing) Approach to Agricultural Extension in Nigeria. *Journal of Agricultural Extension*, 13(1): 84-89.
5. Christoplos, I. 2010. Mobilizing the potential of rural and agricultural extension. *FAO, Rome, Italy*.
6. Feder, G., Lawrence, L.J. and Slade, R.H. 1987. Does agricultural extension pay? The training and visit system in northwest India. *American Journal of Agricultural Economics*, 69(3): 688-686.
7. Gresh, D.K. 1995. The Perception of adult with learning disabilities regarding their learning Experiences. Thesis, *Pennsylvania State University*.
8. Ibrahim, H., Zhou, J., Li, M. and Chen, Q. 2014. Perception of Farmers on Extension Services in North Western Part of Nigeria: The Case of Farming Households in Kano State. *Journal of Service Science and Management*, 7(02): 57.
9. Ifenkwe, G. 2012. Agent-Related Factors Affecting the Performance of Agricultural Extension Staff in Abia State, Nigeria. *Journal of Agricultural Science*, 3: 45-48.

10. Karbasioun, M., Mulder, M. and Biemans, H. 2007. Towards a job competency profile for agricultural extension instructors: A survey of views of experts. *Human Resource Development International*, 10(2): 137-151.
11. Madukwe, M. 2010. Nigeria's Extension Service: Practice without Policy University of
12. Nigeria, Nsukka.
www.unn.edu.ng/files/inaugural%20lecture%20Documents/Agric%science/30th%lecture
13. Oladele, O.I. 1999. Analysis of the Institution Research–Extension Farmers Linkage System in South Western Nigeria. Unpublished Ph.D. Thesis in the Department of Agricultural Extension and Rural Development University of Ibadan, Nigeria.
14. Oladele, O.I. and Kareem, A.I. 2003. Adoption Rate and Continued Use of Selected Arable Crop Technologies among Farmers in Oyo State, Nigeria. *Journal of Food, Agriculture and Environment*, 1(3&4): 291-294.
15. Romero, L. 2012. Rural extension as part of an innovation. RELASER–Latin American Network for Rural Extension Services, January 2012.
16. Saito K.A. and Weidemann, C.J. 1990. Agricultural Extension for Women farmers in Africa, World Bank discussion paper No. 103. Washington DC.
17. Sulaiman, V. and Davis, K.E. 2012. The “New Extensionist”: Roles, Strategies, and Capacities to Strengthen Extension and Advisory Services. *Global Forum for Rural Advisory Services*, Lindau, Switzerland.
18. Yusuf, D.E., Omokore, D.F. and Musa, M.W. 2011. Socio-economic and Institutional Factors Influencing Farmers' Perception of Privatization of Agricultural Extension Services in Kaduna State, Nigeria. *Journal of Agricultural Extension*, 15(2): 90-99.