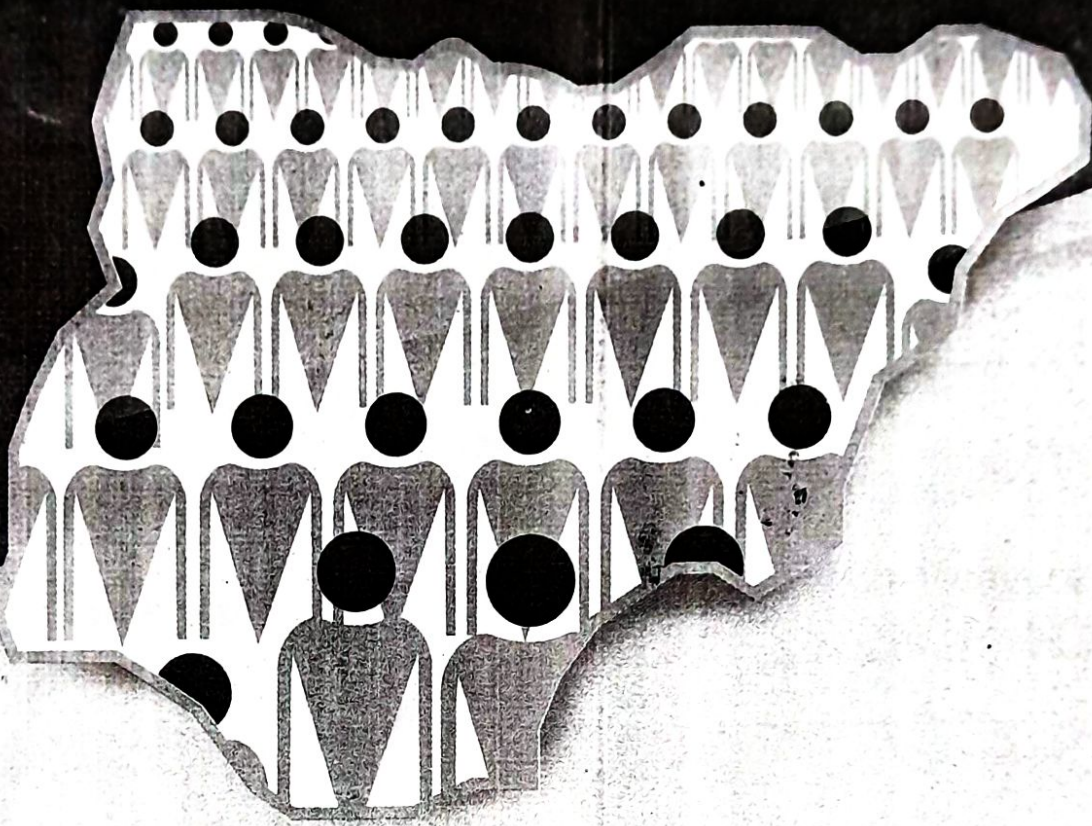


Contemporary Issues in the Nigerian Society



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Table of Contents

Section A: Introduction

Chapter One: Introduction

Jimoh, A.

3

Section B: Economic Development

Chapter Two: Economic Development and the Nigerian State

Jimoh, A.

9

Chapter Three: Looking Backward and Thinking Forward: A Discussion of Fifty Years Economic Performance of Nigeria

Kilishi, A.A.

25

Chapter Four: Economic Planning, Reforms and Inclusive Growth in Nigeria

Yaru, A.A.

43

Chapter Five: Empowerment and Its Outcomes in Nigeria: The Missing Link

Ijaiya, G.T. and Ojuolape, M.A.

59

Section C: Transport and Development

Chapter Six: Weather and Safety Issues in Aviation: The Need for Action in Nigeria

Usman, B.A; Ifabiyi, I.P. and Kekere, A.A.

81

Chapter Seven: Planning for Non-motorised Transport in Nigerian Cities: Rights, Challenges and Prospects

Arosanyin, Godwin Tunde

97

Section D: Health, Agriculture, Climate Change and the Environment

Chapter Eight: Tobacco Use, Cigarette Smoking and Sustainable Development in Nigeria <i>Bello, R.A.</i>	119
Chapter Nine: Dams and the "Damned": Impact of Dams on Indigenous Communities in Nigeria <i>Abdullahi, Ali Arazeem</i>	137
Chapter Ten: Precipitation Features as an Index of Climate Change and Its Implications on Agriculture in Kwara State, Nigeria. <i>Olanrewaju, R.M.</i>	159
Chapter Eleven: Dynamics of Nutrient Cycling in Cocoa Ecosystem in Nigeria <i>Ajibade, L.T. and Afolayan, O.S.</i>	173
Chapter Twelve: Emerging Challenges in Agricultural Extension Service Delivery: A Perspective of Pastoral Livelihoods in Kwara State, Nigeria <i>Aderinoye-Abdulwahab, S.A., Adefalu, L.L., Dolapo, A.T. and Ladipo, F.O.</i>	193
 Section E: Politics and Development	
Chapter Thirteen: Democracy, Local Government and Service Delivery in Nigeria since 1999 <i>Aliu, Fatima O. and Ifejika, Solomon I.</i>	215
Chapter Fourteen: Roles of Civil Society Organisations in Governance Process in Nigeria <i>Lawal, E. Ejalonibu and Bakare, Adebola Rafiu</i>	235
Chapter Fifteen Enhancing the Performance of Nigeria's Foreign Service <i>Saliu, Hassan</i>	261

CHAPTER TWELVE

Emerging Challenges in Agricultural Extension Service Delivery: A Perspective of Pastoral Livelihoods in Kwara State, Nigeria

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1.0 Introduction

Various studies, with implications for extension service delivery, have been carried out on livestock farmers as well as pastoralists (Sadaf et al., 2005; Rass, 2006; Allahyari, 2008; Catley et al., 2013). It has been found that extension service has a major role to play in enhancing both crop and livestock farmers with the knowledge and technology required to achieve agricultural development and improvement in rural livelihoods (Owens et al., 2003). Due to the migratory nature of pastoralists, it becomes increasingly important to investigate how pastoral households survive the economic hardships posed to them as a result of absence of cattle when the herds are relocated for grazing. Given the role of extension services in improving rural livelihoods, it therefore becomes crucial to investigate how pastoralists survive the shortage of extension facilities, and their lack of access to extension agents. This paper precisely sets to uncover the significance of extension services in the livelihoods of pastoralists. Whilst being a review paper, the study also seeks to investigate the approaches in use by extension agents in providing extension services to users. It also examines the challenges experienced in the provision of agricultural extension services by Kwara ADP.

The study aimed at investigating the role played by extension services and agents in pastoral livelihoods and finally we explain the challenges the deter pastoralists from accessing extension service and explored how they have been dealing with such factors. The knowledge gained may then make policy makers, government

and other stakeholders to begin to understand how to formulate and implement policy that will favour pastoral households so that the hitherto marginalised cultures can attain improvement in their livelihoods.

2.0 Agricultural Extension: Development and Focus

There have been several attempts at defining agricultural extension (Leagans, 1961; Röling, 1994; Oladele, 2004; Garforth, 2005; Allahyari, 2008; Davis, 2008; Spielman et al., 2009). It was initially defined as a process of educating people to depend on themselves in order to acquire skills that will lead to beneficial changes in life (Leagans, 1961). Agricultural extension was also traditionally described as the service to extend or transfer new technology to rural people so as to improve their lives (Davis, 2008). Although Röling (1994) is of the opinion that farmers invent and re-invent technology for themselves, in his opinion, there is a need for extension to shift from knowledge transfer to facilitation of learning. As a result, he perceives extension as a policy instrument for stimulating a voluntary change through communication (Röling, 1994). Extension is a process which dwells on communicative interventions that can help farmers to get the required information to help them increase and improve their productivity and livelihoods. It includes non-formal education and management skills which aim at training farmers, improving yield, increasing production and enhancing productivity. It includes non-formal education and management skills which aim at training farmers, improving yields and increasing production (Pretty and Chambers, 2003). Nonetheless, extension has recently been regarded as more than training farmers and technology transfer. It is now being described to include innovative skills like facilitation, learning and partnering with relevant stakeholders rather than a set of linear, top-down recommendations (Garforth, 2005; Allahyari, 2008; Davis, 2008; Spielman et al., 2009), as well as a process of applying knowledge (Agwu et al., 2008). This means that agricultural extension goes beyond training farmers and technology transfer, but encapsulates the new agricultural innovation systems.

The agricultural innovation system (AIS) emphasises that innovation is not only about new ideas but also about facilitation and application of knowledge to generate institutional change among a heterogeneous set of actors (Spielman et al., 2009; Klerkx et al., 2010). Even though various definitions of extension exist in literature (Allahyari, 2008; Atanda, 2011; Davis, 2008; Anderson and Feder,

2004), this study tends to adapt the definition of Leeuwis (2004) who argues that extension entails an active role of all actors in processes of innovation and adaptation. It involves processes that help to facilitate innovations. This implies that rural people will have the opportunity to influence the type of agricultural extension services made available by providers.

3.0 Effective Extension Services for an Improved Rural Livelihoods

The term agricultural extension involves rural resource management which goes beyond water, land and biological processes to include human relations, knowledge and skills, as well as institutions (Leeuwis and Ban, 2004). Agbamu (2005) also notes that adequate knowledge and skills are vital in building technology, human resource, and economic growth for agriculture and agricultural users. Therefore, extension workers need to be intellectually equipped to meet the demands of their roles as change agents. It is worth mentioning at this juncture, that extension is a communication process and communication is an integral and essential part of extension. In view of this, Leeuwis (2004) suggests that for agricultural development to take place there has to be communication between farmers and agents of change. Agricultural extension service would therefore not be possible without an effective communication among all actors.

The question that may arise is: why would it be necessary to improve the uptake of extension services among users? Romani (2003) states that extension services would lead to increased productivity among rural dwellers provided it is properly designed. The aim of agricultural extension is ultimately to enhance agricultural sustainability and livelihood improvement by improving rural farmers' production (Budak et al., 2005). Budak et al. (2005) expect that this can be realised through effective information that will engage farmers in learning processes and enable them make appropriate decisions. Extension also involves enabling farmers to clarify their own goals and possibilities as well as stimulating desirable agricultural development (Anderson and Feder, 2003). Notwithstanding the previous definitions of extension, the objectives of agricultural extension have, however, shifted from emphasis on production to productivity (Ahmadvand and Karami, 2007). Extension in sub-Saharan Africa in recent times is shifting from knowledge and technology transfer to knowledge and technology-sharing concept (Allahyari, 2008). This is a concept which has already been adopted in developed worlds.

This study emphasises a need for all stakeholders in the field of agricultural extension to embrace an innovation approach to extension service provision.

Innovation has been described as an introduction of any new idea that has achieved a successful economic change (Spielman et al., 2008). Extensionists need to see innovation as something which works for the people it is meant for. For example a study in Ireland found that farmers who did not accept innovations propagated by extension workers were regarded as backward and stagnant (Leeuwis, 1989). Although, the farmers did adopt a number of similar innovations that were different from what the extension agents propagated. This shows that extension workers and organisations need to better anticipate diversity among farmers. Furthermore, Pantuliano (2002) reports that there is always emphasis on agricultural than pastoral activities in rural areas. Hence, there is a need for more diversity in innovation practices to better provide adequate and appropriate extension services for all farmers including pastoralists. This is to ensure an overall improvement in agrarian production since pastoralists constitute a key component of rural community.

There are circumstances when a new technology is available and farmers or rural people are not aware of them. As such, they are not able to utilise the resources. Hence, it is pertinent not only to make these services available but, to also make the users aware of them. Communities are one way of making users of extension service aware of services available. The community plays a leading role in provision of extension service through innovation procedures (Nambiro et al., 2005). These communal associations are formed through extension service with the aim of accelerating food production and increasing rural income. The ultimate goal is to achieve overall development of the rural areas (Oladele et al., 2004). Additionally, communities contribute to extension service provision by organising occasional meetings to discuss issues that can improve their productivity (Nambiro et al., 2005). Certainly, when communities come together to organise an intervention, it often leads to greater achievement because such interventions address the needs of the people.

4.0 Methodology and Study Location

Pastoralists are largely located in the arid and semi-arid regions of sub-Saharan Africa. In Nigeria, they are found in the northern part of the country as the area is characterised by weather and vegetation type that support pastoral life. However, due to acute desertification and reduced rainfall in the arid areas, pastoralists tend to migrate and settle in recognised buffer⁵ areas of the country (Medugu et al., 2008). This study purposively focus on Kwara State as the specific case study site partly because Kwara State is among the recognised buffer areas of the country (Medugu et al., 2008; Medugu et al., 2011). It would be worthwhile to note that pastoralists have settled in Kwara in large numbers. Moreover, the weather and climate of the state is favourable for pastoral settlement.

Kwara State accommodates diverse cultures with different tribes and ethnic groups. Among these tribes and culture are: Yoruba, Fulani, Hausa, Nupe, Bororo, Igbira, Baruba, and others. Given that pastoralists of Nigeria are typically Fulani by tribe they have therefore found an ideal environment in Kwara State, thus making the area suitable for this research. Finally, evidence from literature shows that not much research has been carried out in respect of pastoralists in Kwara State (Ekpo et al., 2008). Kwara State is one of six states in the north-central geo-political zone of Nigeria. The State was created in 1967 as one of the twelve states carved out of the hitherto four regions. It lies between latitudes 7°45 N and 9°30 N and longitudes 2°30 E and 6°25 E. The population is about 2.5million (NPC, 2006) and it has an area of 36, 500 sq km. Although the people engage in several economic activities such as trading in textiles and leather materials, weaving, blacksmithing as well as white collar jobs, notwithstanding, agriculture remains the main-stay of its economy (Kwara State Diary, 2010). The capital city of Kwara State is Ilorin and this is situated about 300 km from the coastal city of Lagos and about 500 km from Abuja, the capital of Nigeria. The State shares an international boundary with the Republic of Benin to the west and borders internally with Osun, Oyo, Ondo, Kogi, Niger and Ekiti states (Figure 1). Major cities in Kwara State apart from the capital include Offa, Isin, Igbaja, Jebba, Omu-aran and Share. Others are Tsaragi, Omupo, Patigi, Kaima and Iponrin. The

⁵ Buffer areas: these are places with less aridity and are more suitable for rearing of livestock due to favourable weather conditions (Medugu et al., 2008).

state is a typical rainforest zone with wooded savannah covering the larger part. It benefits from a good supply of water and has high soil fertility as a result of various tributaries of river Niger which runs through hills and valleys. Rainfall is equally recorded in summer time with annual rainfall ranging from 50.8 mm during the dry months to 2,413.3 mm in the rainy months (Babatunde et al., 2007). The minimum average temperature ranges from 21°C to 35°C (Babatunde et al., 2007). The state experiences dry season between November and April and this has a significant contribution to the movement of pastoralists to greener areas at this period.

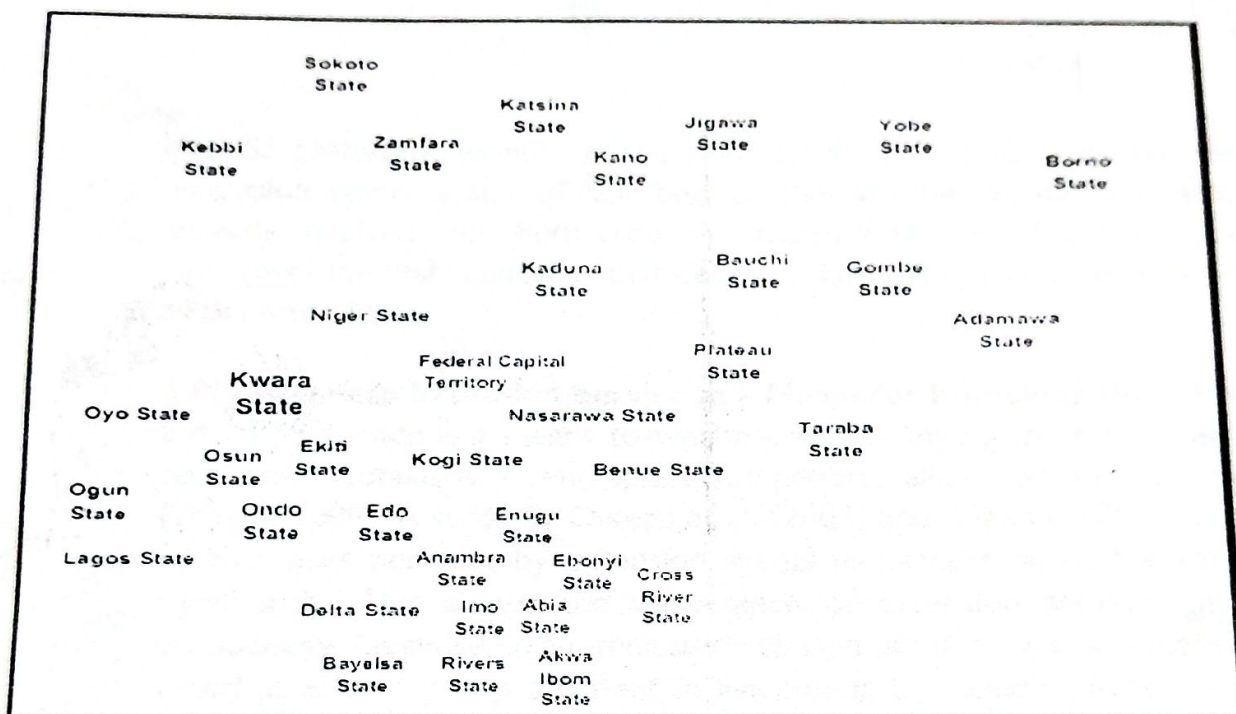


Figure 1. Map of Nigeria.

Source: *FAO Country Data Profile, 2016.*

This study made efforts to visit the pastoralists' families in their hamlets. The ability to communicate with the research participants in their language was also a major consideration for choosing the location of the study. The study, despite being a review, made references to survey and interview carried out with 25 extension agents of the Kwara State Agricultural Development Project (KWADP)

and 63 pastoralist women in the study location. The study limited the use of extension agents to staff of ADP because they are the only definite agency that is directly involved with both crop and livestock farmers. The other recognised non-governmental agency/ies that deal with farmers does not have direct linkage with pastoralists.

5.0 Access to Extension Service as a Means for Improving Rural Livelihoods

Extension service is a means to wealth creation among the rural poor, because technology uptake is a centrepiece for poverty alleviation and wealth creation (Worth, 2006). A study by Owens et al. (2003) and Davis (2008) found that one or two visits per year by extension agents to farmers raised the value of crop significantly. This shows the importance of extension services in improving productivity. Likewise, in another study carried out in Kenya, an extension project aimed at achieving improvement in livelihoods by including livestock owners in the planning stage using a bottom-up approach. The project served as a source of employment for 80 per cent of the participants. Overall, 70 per cent of the livestock owners in the community were satisfied with the outcome as they emerged from the project with a better perception of agricultural innovation. It was indicated that the program helped them to gain profits from their farms (Davis, 2008; Hill, 2011; Kiara, 2011). A study on the impact of extension in Mozambique also found that extension services have positive impact on rural livelihoods (Davis, 2008). The study showed that access to extension services increased farm production for rural livelihoods through innovative procedures.

It has been established that extension delivery is usually anchored by the public, private and non-governmental organisations (Birner et al., 2009 and Agbamu, 2005). However, government plays the key role of delivering extension service in most developing countries (Allahyari, 2008 and Adegeye and Azeez, 2006). In Nigeria, the Agricultural Development Project (ADP) is the main body through which the government provides clients with extension services. Kwara State arm of the ADP (KWADP) was launched in June, 1988 with the aim of improving living standards of small farm holders in the state. This was to be achieved through on-farm research and dissemination of proven agricultural technologies in a bid to alleviate farmers' poverty (KWADP, 2011). The KWADP has accomplished several projects among which are: provision and sale of improved variety seeds, agro-chemicals and agro-equipment to farmers in the state, increase yield in

cassava through introduction of improved method of cultivation, procurement of fertilizer and herbicides with the aim of selling to farmers at a reduced rate, provision of vaccination services to poultry, sheep and goat farmers, technical support to livestock farmers and organising of training workshops to farmers and extension agents (KWADP, 2011). Table 1 shows an empirical analysis of some of the achievements of KWADP.

Table 1: Pastoralist Women's Account of Extension Services by KWADP. (n = 63)

Extension service	Availability	Frequency	Per centage
Training	-	63	100
Milking machine	-	63	100
Cheese-making machine	-	63	100
Preservatives for cheese	-	63	100
Animal husbandry	-	63	100
Provision of improved seeds	x	5	7.9
Provision of fertilizer	x	15	23
Provision of pesticides	-	63	100
Provision of medicine	-	63	100
Vaccination for livestock	x	9	14.3
Loans from government	-	63	100
Loans from NGOs	-	63	100
Loans from banks	x	4	6.3

Questionnaire Survey (Pastoralist women), 2011/12

x: is used to represent availability of an extension facility. The lower case is used to depict limited access.

One would easily notice that there is no mention of any pastoral production project. Although farmers include both crop and livestock keepers, it is apparent from this evidence, that there was no record of any pastoral activity or intervention, whereas, it was severally reported that farmers adopting the various technologies introduced by the KWADP have been able to boost their productivity and incomes. Table 2 is another evidence that pastoralists in the study have limited access to extension services.

Table 2. Access to Extension Services for Pastoralist Women (n = 63).

Access	Frequency	Per centage
No	45	71.4
Yes	16	25.4
No response	2	3.2
Total	63	100

Questionnaire survey (Pastoralist women), 2012.

It is therefore unequivocal to say that pastoralists' productivity and income would increase provided they are able to access extension facilities in a like manner that farmers do. There is no doubt that the ADP is working hard to improve farmers' livelihood but not much is being done to improve pastoral livelihoods. This might tempt one to summarise that KWADP's efforts are geared towards crop farmers. Pantuliano (2002) reported that there is always more emphasis on agricultural than pastoral activities in rural areas. Box 1 further gives a perspective of an extension agent to further buttress that pastoralists in the study area have limited or no access to extension services.

Box 1: Interview held at the KWADP headquarters in Ilorin, Kwara State

What extension service would you recommend for pastoralists from an expert point of view?

Pastoralists need technology on livestock management. On several occasions, when extension agents are on the field, we see pastoralists milking cattle. We also see their wives cooking and processing milk into cheese. The methods adopted are not hygienic. I believe some of their customers would not buy if they saw the procedure. Hence, I would say they require processing equipment that can facilitate milk extraction and processing. Again, I personally feel pastoralists and their wives require training, maybe in form of workshops or seminars. In these gatherings, pastoral households can be educated on specific issues that relate to their livelihoods.

Purpose of visiting pastoral households

We do not pay specific visits to pastoral households. Pastoralists are not beyond our scope. They are rather inclusive because they are farmers as well. However, their population is extremely mobile. Pastoralists have already taken herds for grazing by the time we enter fields to discharge our duties. On our way to the fields, we do come across some pastoralist women setting out to hawk cheese. So you can understand what I mean by referring to them as a mobile population. If we make attempt to approach them while they are hawking, what amount of listening ears would they lend us? Similarly, the pastoralists would also want to keep watch of their cattle. Consequently, they barely have our time.

Frequency of visits

Our working hours are 9am to 4pm every day of the week. We rotate our schedule in a way that it takes up to a month between visits to each locality. However, like I mentioned earlier, our aim is not particularly to target pastoralists.

Factors limiting you from visiting pastoralists

I believe I have touched on that in my response above. In addition, I would think inadequate funding is one of the factors limiting extension agents from discharging their duties accordingly. Our salaries are not motivational.

Agricultural extension is necessary for livelihood improvement as well as poverty reduction among farmers because it enhances productivity thereby leading to increased incomes (Luqman et al., 2012). It has been established that women constitute the majority of crop and livestock processors. Therefore, women need to be able to access agricultural extension services as much as men do. However, multiple studies have found that extension service is almost non-existent for women despite their prominent roles in agriculture (Sadaf et al., 2005; Budak et al., 2005). Budak et al. (2005) stress that women play a significant role in animal production, even though their roles are often not recognized. This is no different from what is obtainable among pastoralists found in Kwara State. It was observed that pastoralist women process milk from cattle into cheese which they sell to generate income to feed the family and train their children. Despite women's role, educational and/or training programmes for women are very minimal. Again, Box 2 illustrates that pastoralist in this study do not have access to extension services.

Box 2: Extension services for pastoralist women

Researcher: What types of extension services do you currently have access to?
Folasade: What exactly do you mean by extension services?
Researcher: For example, do you receive agricultural help or support from government, private enterprise or individuals from outside your community?
Sheri: Not at all. We do not receive visitors except for this visit from you.
Researcher: How about Mr Lamido*?
Folasade: He is our veterinary doctor. He takes care of our livestock when they fall ill.
Researcher: What about assistance in form of workshops or training?
Aishat: There is nothing of such, except you want to count this gathering as one.
Sheri: We know we could borrow money from banks, but we do not have collateral, hence no bank will loan us money. Is this part of help and support you were referring to?
Researcher: Well, if you have provision for assistance in that regards, then you may have some level of access to extension facility, depending on who provides you with such help. Do you have any of such access?
Amina: No, we do not have such access. The difference between the loan issue and the extension services that you inquired about is that, we are aware there are loan facilities from banks. Even though it appears the service is beyond our reach but we do not know there is anything like extension service.

**Mr Lamido is actually an extension agent: posted to Ekiti LGA. He works as an extension agent for KWADP but known as a veterinary doctor by pastoralists.*

This review established that many of the mini projects executed by the ADP are targeted at crop farmers. The Women in Agriculture (WIA) department of KWADP aims at improving rural women livelihoods. It achieves this by

empowering women with information, knowledge, and skills that could enable them to increase their incomes and technical capacity. This department can therefore be exploited to reach out to pastoralist women. KWADP can use this avenue to educate and enlighten pastoralist women on alternative activities that they can perform to boost their incomes and productivity especially when their husbands have relocated with the cattle. This medium could also be used to strengthen the capacity of pastoral women by engaging in policy debate, for example, establishment of women forum where pastoralist women will have a representative who will speak for them in such meetings. Here they can discuss problems being encountered and the agents could render all the necessary supports. These supports can be in the form of educating the women on improved technology, enlightening them on reasons why they should be flexible with cultural norms and counselling them on the advantages of extension service in their productivity. These would help to boost their production and increase their incomes and eventually their livelihoods.

6.0 Challenges Facing Agricultural Extension Services

Extension services have suffered from top-down approach which has been the conventional practice. More often than not, communication in many formal bureaucracies has always been a top down format (Leeuwis, 2004) and this has greatly been responsible for failures in many institutions. It has also contributed to failures in extension service as organisations have little knowledge of the problems they are attempting to address (Qamar, 2003). In a similar vein, information and organisational structures are major hindrances to agricultural extension service (Feder et al., 2001). The needs of farmers are often not considered before designing a project, yet the donors want results that would seem to motivate them to do more. In view of this, extension workers are usually required to give reports that suit the donor of a given programme (Anderson and Feder, 2007). Interestingly, many of these extension workers are not adequately equipped for the tasks given to them. They need to be professionally updated so as to cope with the demands of their jobs. This was implied by Agbogidi and Ofuoku (2009) who affirm that improved research and training are necessary for the development of extension services. This could imply, on the one hand, that extension workers may be deficient in the training they require to discharge their duties effectively (Adesiji et al., 2010). On the other hand, it could also mean that

they lack motivating factors such as good roads and means of transportation that would facilitate the discharge of their duties (Agbamu, 2005).

The issue of funding constitutes a major challenge to extension services and this arises as a result of lack of strong financial base (Leeuwis, 2004). This problem is kind of symbolic to agricultural extension because extension programmes are usually expensive (Adegeye and Azeez, 2006). Agbamu (2005) stated that extension programmes are not adequately funded by governments due to poor gross domestic earning and other reasons. This study found that extension workers like pastoralists complained about the issue of funding (Table 3). Many of the extension agents that were sampled reiterated the issue of lack of funds to assist them in discharging their responsibilities effectively.

Table 3. Extension Workers' Account of Constraints Hindering the Provision of Services (n = 25).

Factor	Frequency	Per centage	Rank
Inadequate Financing	25	32.1	1 st
Cultural Constraint	22	28.2	2 nd
Seasonality	15	19.2	3 rd
Transportation Problem	14	17.9	4 th
Poor Communication	2	2.6	5 th
Total	78*	100	

**Multiple responses*

In addition, an official of the KWADP in an interview informed of certain interventions such as the distribution of livestock to farmers. The official noted that such intervention is very occasional and they are discontinued once donor agencies withdraw the funds making them unsustainable. The problem of funding extension programmes still persists and it is also being compounded with dwindling resources despite the seeming interest and loyalty of organisations and donor agencies to their projects. Donor agencies may completely withdraw funds or sometimes, the rural people may completely lose interest in the project (Anderson and Feder, 2004). Either way, the intervention is often discontinued or

abandoned and this brings about abrupt end to extension programmes (Leeuwis, 2004).

There is also the problem of inadequate number of extension agents. Feder et al. (2001) inform that extension worker to farmer ratio is low. This culminated into over stretching the extension agents. Here, it is meant that extension staff should not be expected to meet unrealistic target, doing this would not make their work successful and sustainable. For example, in 2003, only one extension agent was expected to cover 1,722 farm families in Nigeria (Agbogidi and Ofuoku, 2009) which is clearly unrealistic and inefficient. Similarly, this study established that KWADP has 68 field level workers as of the year 2010 in contrast to the 86 that it had in employment in the year 2009. The reason for this shortfall is a result of constant retirement of staff who have contributed long years of service (KWADP, 2011). However, the project has not been able to employ more staff to replace the short fall. Thus extension agent/farm family ratio stood at 1:3950 (KWADP, 2011). Budak et al. (2005) found that the ratio of extension personnel to farmers range from 1:1800 to 1:3000 in developing countries in contrast to 1:400 in Europe and North America. It is therefore, evident that the ratio of extension agent to farm family is grossly inadequate and this, in addition to geographical location of pastoralists, could contribute to the low level of extension agent/pastoralist contact.

There is also a challenge in environmental factor, limiting access to extension services (Leeuwis, 2004). By this, it could be said that the environment of farmers and agriculture are dynamic (Belay and Abebaw, 2004), and changes are bound to occur naturally. This would of course pose challenges to farmers and agricultural extension. The pastoralists of Kwara State for example live in the peripheral regions hence they are faced with several challenges that limit their ability to maximize the potentials within their community. Other problems related to environment are poor infrastructure such as the issue of roads and transport. Agbamu (2005) mentioned that extension workers find it difficult getting to villages assigned to them as a result of poor roads and lack of transportation. Similarly, this study found that transportation problem is a major concern to both pastoralists and extension agents. Pastoralists complained of lack of transportation to enable them commute their cattle to villages/cities for grazing during dearth periods. Similarly, wives of pastoralists grumbled about lack of good roads and

transportation for them to market their products in nearby towns. Furthermore, extension agents expressed that transportation problems are among the constraints that discourage them from widening their extension service capacity to pastoralists. They complained of lack of incentives such as good roads and means of transportation that would make them discharge their duties effectively. This was evidenced in the comments by some of the sampled extension agents.

'The major challenge that limits our performance is the issue of transport. Often times, extension agents ride motor cycles to villages where they are posted to. This is due to poor road networks or lack of funds to purchase a vehicle.' (EA 1, QS retrieved on 28th July, 2011)
'Most of the roads leading to pastoral settlements are not accessible by cars or buses. Even though government gave us motor cycles to access these communities but the roads are dusty and our clothes get dirty easily, hence it is difficult to manoeuvre the roads. However, these areas are remote such that they are hardly used by commercial vehicles. Where commercial vehicles take such routes, they do on occasional basis.' (EA 1, QS retrieved 28th July, 2011).

'Pastoralists often clash with farmers in neighbouring communities. There is always one incidence or the other. It could be that, pastoralists' cattle grazed on farmers' plots. These tussles make their locality hazardous for us to visit, therefore, we always exercise caution by steering clear their area. I have witnessed a case where a pastoralist used cutlass to threaten a farmer. Such occurrences are apprehensive to behold.' (EA 19, QS 17th July, 2011).

Another point that can emanate from the environmental problems is the aspect of natural phenomenon such as weather and climate and these can threaten or affect farmers and extension workers. Again, some reports from this study are listed.

'Our environment does not benefit from heavy rains hence it is mostly dry for the major part of the year. This natural occurrence makes it difficult for us to maintain desirable livelihoods. When the rains refuse to come, crops do not thrive well and our cattle do not produce adequate milk, as a result, we often go low on incomes. We need extension facilities to help us improve our livelihoods. The extension

facility can be in form of inputs and technology or it can also be in form of training from experts.' (Mallam Jalingo, Gaa Temidire, 8th October, 2011).

'Given that pastoralists live in dry and marginalized areas, we are often reluctant to go to their province. Our fear is always that of accessibility. Their areas are remote and it is often difficult getting across. It could either be due to transportation or proximity to city. If natural hazard such as heavy rain or excessive heat arise, we would not be able to return to our locales very quickly.' (EA 5, QS retrieved 28th July, 2011).

7.0 Concluding Remarks

Many of the challenges mentioned in this paper can be remedied if the agricultural extension sector adopts a more sophisticated and holistic approach towards attaining knowledge and information. For instance, stakeholders could engage in a more formidable bottom-up participatory approach of providing extension service. This was suggested by Leeuwis and Ban (2004) and Spielman et al. (2008) who reiterated the need for stakeholders in extension to view extension as an innovative procedure. This way, all actors involved in the field of extension will begin to participate and facilitate changes in extension services rather than assuming the older linear method of technology transfer. Furthermore, there is a need for pluralism in extension service provision. By pluralism, we mean a situation whereby all stakeholders will join forces to fund extension service. For example, users of extension service may be encouraged to contribute to its funding through a fee-for-service approach rather than waiting for government alone to bear the cost of extension provision (Agwu et al., 2008; Wahab et al., 2013).

It has been established that there is a need to reform agricultural extension from what it is today to a more pluralistic service which will adequately provide for the achievement of its goal and objectives (Sulaiman and Hall, 2004). Finally, it would be helpful if government and donor organisations could invest in training extension workers. Such training might improve the confidence levels of extension agents and they may, as a result, gain more credibility among stakeholders. It would further ensure that extension agents are more competent to address emerging issues.

The paper aimed at uncovering the importance of extension service in the livelihoods of pastoralists. It began by giving insights to what extension entails and built on this to explore the availability and access of extension services among pastoral households. The paper drew largely from agricultural extension literature and narrowed in on data generated from the field survey. It highlighted the role of extension agents to farmers' livelihoods and also indicated the contribution extension agents can impart on pastoral livelihoods. The paper also touched on the function of KWADP in extension delivery in the state.

It was established that extension services are not available to pastoralists because the approach employed by the ADP is not participatory. There is an urgent need for beneficiaries to be able to dictate the kind of intervention needed as this would guarantee the needs of users are provided. Due to the challenges listed in the study, it has become pertinent that government alone cannot continue to fund and administer extension services. Users of extension and non-governmental organisations need to contribute financially to enhance sustainability of its provision a pluralism approach. Increasing avenues for training, seminars and workshops for extension agents would also heighten the level of extension agents' confidentiality and the credibility level by beneficiaries might increase. It can thus be summarised from the reports in this paper that addressing the cause and effect of lack of extension services among pastoralists would improve poverty reduction and lead to livelihood sustainability among them.

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