Challenges associated with livestock extension practice in agropastoral Fulani settlement areas of Ogun State, Nigeria.

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Abstract

The study assessed the challenges associated with sustainable provision of livestock extension service in selected agropastoral fulani settlements in the state. The data for the study were collected with the aid of structured questionnaire, and analysed with descriptive statistics, Chi Square and Pearson Product Moment Correlation Coefficient. The result from the study revealed that the challenges of livestock extension practice in agropastoral settlements are; lack of incentives to work in agropastoral areas and poor road networks perceived by (61.4%) and (54.47%) of the extension service providers respectively. The transhumance lifestyle of some of the households was perceived by (50.95%) of the extension service providers as a major challenge to livestock extension service provision in these areas. Pearson Product Moment Correlation analysis showed that, the challenges of livestock extension service were significantly related to the working experience of the extension staff ($p < 0.05$). Chi square analysis result also shows a significant relationship between the challenges of livestock extension practice in agropastoral settlements and the area of specialisation and language competency of the extension staff. It was therefore concluded that, the traditional organizational structure of extension services may be inappropriate for working in pastoral areas. The study recommended that, to reduce these challenges, extension staff from pastoral backgrounds, which are based in pastoral communities, could be recruited and trained for specialised livestock extension services to the agropastoral settlements.

Keywords: Challenges, sustainability, livestock extension, agropastoral settlement.

In Nigeria, over 90% of the cattle, sheep, goats and local chickens are believed to be under the traditional management systems of the pastoral Fulani found mostly in the Northern part of the country and more recently in the humid and sub-humid zones of the country (Omotayo *et al* 1999, Ismail, 2000 and Sodiya *et al* 2009). They are also identified to be the custodians of the nation's herds, for meat, milk, cheese, butter, manure, animal blood, poultry products and skins. They maintain a sustainable livelihood based on intricate relationships between pastures and livestock. Ten percent of the world's meat is also believed to be produced by the pastoralists. (International Land Coalition, 2008). Thousands of Nigerians wholly or partly make a living from selling, milking, or butchering. The government also earns revenue from cattle trade and, in the past,

from the cattle tax (*Jangali*). The Fulanis therefore play an important role in the nutrition and economy of Nigeria serving as the engine belt for food and livelihoods security of communities around them through the production of cattle and small ruminants, which are main sources of animal protein largely consumed in many Nigerian households.

In the Fulani production system, the general management of the herd is the exclusive responsibility of the household head, particularly in regards to decisions on where and when to move. Among the settled groups, the young boys and adolescents are responsible for herding and milking and the women process and sell milk and milk products. Having been known and recognized for their outstanding herding potentials, the Fulanis move seasonally with their herds, often taking

advantage of the non-pastoral "town – Fulani" as links with local rulers to ensure passage and grazing rights, usually in return for tribute paid in kind (Bonfiglioli, 1992). Traditionally, they bring their animals only in to the humid and sub-humid zones during the dry season, when they come from the north to take advantage of pasture, water and crop residues from the farms of indigenous arable farmers (MacClennan, 1979). Over time, the seasonal transhumance is gradually disappearing, and being replaced by sedentarisation as a way of stabilizing the nomadic Fulani's way of life in order to modernize the traditional system of livestock husbandry. The existence of the Fulani pastoralists in the humid and sub-humid zones particularly, in Ogun State is therefore no longer strange among the local people, researchers and policy makers. Based on available records (Oyesola 2000; Omotayo 2002 and Sodiya 2005), agricultural extension service support to farmers in South Western Nigeria and in Ogun state in particular, to some extent has involved the agropastoralist production system. The intervention efforts by the Ogun State Agricultural Development Programme (OGADEP) indicated that livestock extension services are being provided to agropastoral households in Ogun State (OGADEP, 2009). Over the years therefore, the Fulani pastoralists have become integrated into the socio economic system of the state. However, certain constraints are still been experienced by the agricultural extension service providers in ensuring sustainable livestock extension practice among the settled Fulani pastoralists in the state. The influx and settlement of Fulani pastoralists in Ogun State has therefore brought with it numerous opportunities and challenges to policy makers and livestock extension practitioners. The provision of agricultural

extension service to farmers in the state lies mainly in the hands of the Ogun State agricultural development project, therefore, the focus of this study will be; to examine the challenges faced by the agricultural extension service providers represented by the agricultural extension personnel in providing sustainable livestock extension service to agropastoralists in Ogun state. Specifically, the study objectives are to:

1. identify and describe the personal characteristics of extension personnel working in agropastoral settlement areas in Ogun State.
2. assess the type of livestock extension service provided to agropastoralists in Ogun State.
3. determine and rank the challenges facing agricultural extension personnel in providing livestock extension service to agropastoral settlement areas in Ogun State.
4. Suggest possible ways of improving livestock extension practice to agropastoral settlement areas in Ogun State.

Methodology

Description of the Study Area

The study was carried out in Ogun State, in the Southwestern farming system zone (Figure 1). It lies in the tropics and covers 16.025 square kilometers. Ogun State lies between longitude 2° 45' E and 3° 55' E and Latitude 7° 01' N and 7° 18' N. It is bounded in the west by republic of Benin, in the south by Lagos state and the Atlantic Ocean, in the East by Ondo state and in the North by Oyo and Osun states. The majority of the people in Ogun state are Yorubas, with other tribes like Ibos, Hausas, Fulanis and Idomas constituting the minority. The major occupation of the people is farming. Others include trading, animal rearing, *Adire* making, weaving, commercial

vehicles driving, and so on. The relative location of the state makes it accessible and an economically developed region in Nigeria. Ogun State has for long played host, usually, on seasonal basis to nomadic Fulani until the last couple of decades when they decided to settle down permanently in several locations in the state. The Federal government's designation of some lands in Ogun State as grazing reserve made the State a vulnerable settlement area for the Fulani pastoralists.

Ogun State has twenty local Governments Areas, and for ease of administration, it is further divided into four administrative zones, namely, Abeokuta Zone, Ijebu-Ode Zone, Ikenne Zone and Ilaro Zone. (OGADEP 2004). The agropastoralists are only found in five local government areas, which are Abeokuta North, Imeko Afon, Odeda, Yewa North and Ewekoro Local Government Areas. The settlement area of the agropastoralists therefore falls under two of the agricultural zones of the state, i.e.

Table 1: Summary Showing the Number of Respondents Chosen from the Ogun State Extension Agency

<i>Category of respondents</i>	<i>Population</i>	<i>Number of respondents Selected</i>
Senior head quarter staff (SHqs)	8	4
Zonal extension officer (ZEO)	4	2
Subject matter specialists (SMS)	16	4
Block extension supervisors (BES)	20	9
Block extension agents (BEA)	14	6
Village extension agents (VEA)	90	32
Total	152	57

(Abeokuta and Ilaro Zones). Agropastoralists normally live together in communities called kraal or *ruga*. Each *ruga* consists of many temporary tents where the agropastoralists settle with their families.

Seven agricultural extension staff involved in the provision of livestock extension service to agropastoralists in the state. These categories of staff were purposively selected from the list of extension staff covering only the cells where the agropastoralists are currently settled. The sample also involved the senior staff at the head quarters office where decisions

concerning the type of livestock extension service to be provided to the agropastoralists are taken. Questionnaires were administered to them and descriptive statistical techniques were used to describe and analyse the data collected. Chi Square test and Pearson Product Moment Correlation analysis at 5 per cent level of significance was used to test the null hypothesis stated in the study.

Results and Discussion

Results in Table 2 revealed that majority (56.1 percent) of the respondents are between the ages of 31 – 40 years. This

Table 2: Personal Characteristics of Respondents

Variables	Categories	Frequency	Percentage
Age (Years)	Less than 30	8	14.3
	31-40	32	56.1
	41-50	11	19.3
	Above 50	6	10.5
Sex	Male	51	89.5
	Female	6	10.5
Level of Education	Ordinary National	9	15.8
	Diploma(OND)		
	Higher National	29	50.9
	Diploma(HND)/B.Sc		
	M.Sc	13	22.8
	Doctor of Veterinary Medicine/Ph.D	6	10.5
Area of specialisation	Livestock production	18	31.6
	Crop farming	27	47.4
	Others	12	21.1
Working Experience (Years)	Less than 5	9	15.8
	6-10	14	24.6
	11-15	17	29.8
	16-20	11	19.3
	Above 20	6	10.5
Language competency	Yoruba	*38	90.48
	Hausa	*22	52.38
	Others	1	2.38

*Multiple responses recorded

Table 3: Distribution of Respondents According to the type of livestock extension Service Provided To Agropastoralists

A	Services Provided	Extension Staff Responses			
		YES		No	
		Freq.	%	Freq.	%
i	Livestock Feeding (Hay making, range land production, use of concentrate)	49	86.0	8	14.0
ii	Range land carrying capacity	36	63.2	21	36.8
iii	Breed selection	49	86.0	8	14.0
iv	Milking (Timing & Regularity)	39	68.4	18	31.6
v	Culling	5	8.8	52	91.2
vi	Weaning	48	84.3	9	15.8
vii	Local milk processing (Hygiene)	53	93.0	4	7.0
viii	Animal health care	38	66.7	19	33.3
B Group work					
i	Forming cooperatives	12	21.1	45	79.8
ii	How to procure loan	15	26.3	42	73.7

Source: Field Survey

implies that most of the staff of the extension agency is still in their active years of age. The results further show that the extension agency is male dominated with about 89.5 percent of the respondents falling into the male category. Many of the extension staff (47.4 percent) has background training in crop farming. Only 31.6% of them have basic training in livestock production. However, (50.9 percent) have HND/B.Sc degrees. Those with a Ph.D and DVM qualifications occupy supervisory positions at the headquarters. This implies that the field work lies in the hands of staffers who either have HND/B.Sc or lower qualifications and with little or no knowledge in livestock production. This might have a negative impact on the quality of extension services that will be disseminated to the Fulani pastoralists, especially in the area of livestock production, which happens to be their major livelihood activity.

Types of Livestock Extension Service Provided To Agropastoralists

Two major groups of agricultural extension

services for agropastoralists were identified from the study (table 2). The first group of services were termed "livestock extension services" and they consist of services related to livestock feeding practices, range land carrying capacity, selection of improved livestock breeds, frequency of milking and the identification of dams for milking, culling for productive herd maintenance, weaning either by age, weight or using both criteria, local milk processing and animal health care. The second category of services was related to group work and how to procure loan for crop and livestock production.

The livestock production services indicated to be provided to the agropastoral households are milking (timing and regularity) indicated by 68.4 percent, weaning (84.3 percent), animal health care (66.7percent) and culling (8.8 percent). The reason why culling received a very low percentage could be due to the fact that decision makers among the pastoralists may be

Table 4: Challenges Facing Agricultural Extension Agents in Providing Extension Services to Agropastoral Settlements in Ogun State.

Challenges	*Frequency	Percentage	Rank
Poor road network	31	54.4	2nd
Lack of incentive to work			
In pastoral areas	35	61.4	1st
Administrative bottle necks	14	24.6	7th
No technology to be disseminated	28	49.1	4th
Lack of training	22	38.6	5 th
Lack of cooperation from agropastoralists	20	35.1	6th
Transhumance Lifestyle of agropastoralists	29	50.95	3rd

*Multiple responses recorded

inaccessible, the owner of the animals may not herd livestock and the herder may be reluctant to change aspects of husbandry without consultation with the owners (Ismail, 2001 and Butcher, 2000). Group work recorded a lower percentage in terms of its provision. This might be due to the conservative nature of most Fulani pastoralists. The extension agents found it difficult forming them into groups to work towards achieving a common goal. The few households that received these services are the very few ones who are receptive to change.

Constraints to Agricultural Extension Service Provision to Agropastoral Settlements

The extent to which agricultural extension services could be provided to Fulani pastoralists in the state is inhibited by problems perceived by the agricultural extension staff as revealed in table 4. "Problems" here, means an area of concern requiring administrative, leadership or scientific action. The results of this analysis

show that, lack of incentives to work in pastoral settlements and poor road networks ranked first and second in the list of problems (constraints) to agricultural extension service provision to Agropastoral settlements. These problems were perceived by 61.4 percent and 54.4 percent of the extension staff respectively. According to Butcher (2000) extension agents see postings to pastoral settlements as area of punishment areas; therefore, working in pastoral settlements needs extra motivations such as monetary rewards and provision of motorcycles to ease mobility. This will not only motivate the extension staff to work, but will reduce transportation problems especially with the bad state of the roads leading to most pastoral settlements in the state.

Another major inhibiting factor to extension service provision is the transhumance lifestyle of some of the pastoral households. Although, majority of the pastoral households studied had been fully sedentary, some of them still move from one location to another within and outside the state. This had posed a great problem to the extension agency in terms of

Table 5: Chi Square Analysis Between Challenges Faced By Extension Staff And Personal Characteristics Of The Extension Staff.

<i>Variables</i>	χ^2 Calculated	χ^2 tabulated	DF	Contingency Coefficient	Decision
Sex	4.13	12.84	3	0.23	NS
Level of education	2.18	23.60	9	0.19	NS
Area of specialisation	32.74	18.55	6	0.60	S
Language Competency	44.31	18.55	6	0.66	S

reaching them with improved production recommendations. This problem was attested to by 50.95 percent of the extension staff. This particular problem has made it difficult for the extension staff to continuously work with agropastoral households for a long period of time. This according to the extension staff could be frustrating.

Relationship Between Challenges Faced By Extension Staff and Some Selected Personal Characteristics of the Extension Staff.

Table 5 shows that there was a significant relationship between challenges faced by extension staff and their area of specialization. The result further shows that a significant relationship exists between the challenges faced by extension staff and their level of language competency. The implication of this is that, majority of the agricultural extension staff are trained as specialists, whereas to survive in harsh environments, pastoralists are generalists. The extension staff may therefore lack the

skills to work with the agropastoralists. Also, the more the extension staff could speak the language of the pastoralists, the lesser are the barriers to communicate and interact with the pastoralists.

The result in table 6 shows Pearson Product Moment Correlation analysis between challenges faced by extension staff in providing livestock extension services to pastoral settlements and some selected personal characteristics of the agricultural extension staff. The results show that, the working experience of the extension staff was significantly related to the challenges inhibiting provision of livestock extension service to agropastoralists in the state. The reason for this type of result might be attributed to the attitudes of non-pastoral populations, which are frequently negative towards pastoralists. (Hampshire, 2002). Government employees, local non-pastoralist populations including extension staff may see themselves as superior, better educated, more knowledgeable etc. than members of the pastoral population.

Table 6: Correlation Analysis Between Challenges Faced By Extension Staff And Personal Characteristics Of The Extension Staff

<i>Variables</i>	<i>r-value</i>	<i>P-value</i>	<i>Decision</i>
Age	0.16	0.08	NS
Working Experience	0.10	0.003	S

Source: Field Survey

S = Significant at 0.05

NS = Not Significant

Pastoralists are then seen as a problem and often been blamed by extension and other government departments for environmental problems. The calibre and motivation of extension staff may also be poor; the remote areas are then seen as punishment postings.

Conclusion and Recommendations

This study has investigated the challenges inhibiting the provision of sustainable livestock extension service to agropastoral settlements in Ogun State. This information is essential for planning and for making policy. The findings of this study has established seven challenges confronting the agricultural extension in performing their duties in the pastoral settlements. One of such challenges is the rigours involved in getting to the agropastoral settlements due to their previous nomadic life style as well as the inaccessibility of most of their places of settlements. These settlements are in most cases without access roads and not officially recognized as either towns or villages. Agricultural extension staff therefore perceives postings to pastoral settlements as punishment. To reduce these challenges, the study recommends that:

1. With increased sedentarisation of pastoralists in most states in South Western Nigeria, the Organisational structure of the extension units of the Agricultural Development Programmes (ADP) should be reviewed to strengthen its functioning and design programmes related to agropastoral production systems. Such programmes should be clearly stated, such that programme contents and activities would be appropriate and relevant to the needs and production systems of the agropastoralists.
2. One of the major constraints to the

effective provision of agricultural extension services to agropastoralists in the state is the lack of motorable road paths all year round. Most pastoral settlements could only be reached through footpaths constructed by them. The local government councils could train the agropastoralists on how to maintain such roads through collective action of the pastora;ists with the local government authorities. This will enhance good communication network and fast and efficient evacuation of agropastoralists' farm produce.

3. As part of the conditions for effective and continuous dissemination of information to agropastoralists in the state through the extension agency, training becomes imperative and very important. Therefore, scheduled visits and training of the extension agents on relevant aspects of the agropastoral production system should be carried out as expected on a continuous basis.

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Received: 22/03/2011

Accepted: 01/02/2012