

INDIGENOUS LIVESTOCK MANAGEMENT SYSTEM IN EGBA ZONE OF OGUN STATE, NIGERIA

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ABSTRACT

This study assessed the management of indigenous livestock in Egba zone of Ogun State using one hundred and forty four farmers and twenty Village Extension Agents. Data were collected with interview schedule and questionnaire respectively. The study revealed that indigenous livestock farmers were of average age of 48 years, mostly (77.8%) native of these communities sampled and literate (63.2%), more female (58.3%) and they were not cosmopolite (83.3%). Poultry, sheep and goats are mostly kept by indigenous livestock farmers, followed by cattle and pig, snail and rabbit by a few farmers. Most (66.7%) farmers raised their livestock on free range while few provided feeding and housing for their animals. Local materials were used for feeding, housing, and ethno-veterinary care for animals. Livestock farmers earned an average of twenty one thousand seven hundred and fifty naira monthly from their animals. The materials livestock farmers used included pawpaw seeds for deworming, lime and sandpaper leaf to control lice, sulphur, lime and palm oil to control mange; lye leaves [*Spondia mombin*] for treatment of diarrhea in ruminants. Communication methods used in the diffusion of ethno-veterinary practices were town criers, traditional songs and festivals, folk tales, use of signs and symbols, life dramas and face-to-face interpersonal media while the sources of information were extension agents, community leaders, fellow farmers, neighbours, livestock traders, and farmers' union. Most important information came from fellow farmers. Indigenous livestock farmers should be involved in research and extension planning and regular visits to farmers by village extension agents is recommended.

Keywords: Egba zone, ethno-veterinary practice, indigenous system, livestock management

INTRODUCTION

Economic livestock production in Nigeria consists of cattle, pigs, sheep, goats and poultry. Federal Office of Statistics (FOS) (2011) estimated 19.5 million Cattle, 72.5 million goats, 41.3 million Sheep, 7.1 million Pigs, 28,000 camels, 145 million chickens, 11.6 million ducks, 1.2 million Turkeys and 974,499 Donkeys in Nigeria. The Na-

tional cattle herd was estimated at 19.5 million of which over 90% is reared in the Northern States of the arid sub-region and owned by the Fulani who still use traditional production techniques. The remaining 10% is reared in the southern forest zone (Olafadehan and Akinwumi, 2010). The population of sheep and goats is estimated at 41.3 million and 72.5 million respectively. It

is estimated that pig population is 7.1 million and that of camels is 28,000. The Nigerian poultry is about 180 million birds, Nigeria has the second largest chicken population in Africa after South Africa (SAHEL, 2015) producing 650,000 tonnes of eggs and 300,000 tonnes of poultry meat in 2013 (FAOSTAT, 2017); 90% of which are the local breeds reared under free range conditions. The estimated population of horses and asses was put at 25,000 and 70,000 respectively. Cattle contributed 12.7% of Agricultural gross domestic product (GDP) and is produced in all parts of the Country (Timbi and Aphunu, 2010). The estimated capital value of the Nigerian livestock industry is put at one and a half billion naira to two billion naira (N1.5-2.0 billion). Over 50% of this is in cattle, 35% in sheep and goats, about 7% in poultry and the rest 8% in pigs, horses and other domestic animals. The annual gross output at producers price is about N170 million and about N250 million retail values (Nwafor, 2004; Ahmed and Egwu, 2014).

This livestock production represents a major investment with important economic, nutritional and social implications for the country. The domesticated animals have traditionally formed an important part of the Nigerian economy (Iyayi, *et. al.*, 2003). Sheep and goats contributed about 35% of total meat consumption in Nigeria. Estimations from registered slaughters showed annual off-take figures of 45-70%. These figures excluded ceremonial, religious and private slaughters which could account for about 30% over and above the registered figures. (Olusanya, 2019). This indicated that the economic value of sheep and goats within the national economy is quite substantial. The role of government in livestock production in Nigeria is limited essentially

to the demonstration of the economic viability of livestock projects and the stimulation of private entrepreneurship. The specific areas where government efforts should be concentrated are disease control, provision of feeds and feed stuff, provision of breeding stock, finance, marketing of livestock products, demonstration and model projects, extension services, manpower development and sources of information for planning purposes.

Statement of research problem

In the earlier stage of agricultural extension activities in Nigeria, much priority was given to export crops like cocoa, coffee, groundnut and other cash crops. Much later, the government's policy of self-sufficiency in food production shifted emphasis to food crops like cassava, yam, cowpea and other arable crops. The livestock sector was neglected until recently when the Unified Agricultural Extension System (UAES) was introduced. With the unified system of extension, the livestock technologies were rarely adopted by the rural livestock farmers. The few technologies adopted produced no significant change in the local livestock industry.

Conscious efforts were not directed at developing and conservation of the indigenous livestock technology and resources resulting in eventual loss of genetic resources due to lack of documentation of the use of indigenous resources. Waller (2004) concluded that the total failure of modern broad spectrum drugs in controlling nematode parasites of sheep and goats is a reality, hence the solution is a non-chemotherapeutic management option i.e. indigenous methods of control in livestock management. This calls for investigation into the development and dissemination of information on indigenous livestock production practices with a view to finding

lasting solution to the problems of underdevelopment in the local livestock industry in Nigeria.

Objectives of the study

The main objective of this study was to investigate indigenous methods of livestock production and information dissemination among rural livestock farmers in Egba zone of Ogun State, The specific objectives of the study were to describe the personal and socio-economic characteristics of livestock farmers, the practice of indigenous livestock production and finally examine the indigenous methods of information dissemination among livestock farmers in the study area.

METHODOLOGY

Area of study

The study was carried out in Egba zone of Ogun State. Ogun State is situated within the tropics of the West African sub-region with a land area of about 17,414 square kilometers (Udo, 1978) with a population of over three million (3,751,140) people (NPC, 2009). It is bounded in the West by Republic of Benin, in the South by Lagos State, in the North by Oyo and Osun States and in the East by Ondo and Edo states. The natural resources in the state include extensive fertile soil suitable for agriculture, rivers, lagoon, rocks, mineral deposits and ocean front. The state is divided into four administrative zones namely: Egba, Yewa, Remo and Ijebu zones. Majority of the inhabitants of the state are farmers, mainly practising mixed farming, they rear animals and produce crops (Adebayo, 1994).

The Egba zone of the state is centrally located in the map of Ogun state. It is bounded by Yewa zone in the West, Remo zone in the East, Oyo state in the North, and Lagos state in the South. It occupies a

total land area of about 3,500 square kilometers. It comprises six local government areas, namely: Abeokuta North (Akomoje), Abeokuta South (Ake), Odeda (Odeda), Ifo (Ifo), Ewekoro (Itori) and Obafemi-Owode (Owode-Egba) Local Government Areas. Abeokuta North Local Government is about 90% rural, with farmers cultivating arable crops, livestock and fishing. Abeokuta South Local Government is occupied by people who are predominantly traders and civil servants. Odeda Local Government is occupied predominately (95.5%) by farmers engaging in crops and livestock production. They are also noted for their flair for game animals (hunting). People of Ifo Local Government are predominantly farmers cultivating crops and rearing livestock. They are predominantly farmers in Ewekoro local government and are noted for sugarcane production (OGADEP, 1996)

Sampling techniques and sample size

The population of the study consists of all OGADEP village extension agents and the farm families that keep livestock in the study area. The 24 Village Extension Agents in the zone were enumerated, four communities were sampled from each of the six LGAs in the zone, Six livestock farmers were interviewed from each of the communities. These twenty four Extension Agents and One hundred and forty four farmers represented the sample size. The total number of respondents were 168 (24 VEAs and 144 farmers). These villages were purposely sampled based on the fact that they keep livestock along with cropping activities.

The basic research instruments used were both questionnaire for extension agents and interview schedule for farmers. Data were also obtained through personal observation and interaction with the farmers and village

extension agents during the process of field survey.

Data Analysis

Descriptive statistical tools such as frequency tables, percentages, means and standard deviation were used to describe the personal and socio-economic characteristics of the respondents and the extent of use of the indigenous methods of disseminating information in indigenous livestock production system.

RESULTS AND DISCUSSIONS

Personal Characteristics of Extension Agents

Majority of the village extension agents were young, physically fit and full of energy to discharge their responsibilities. Majority (95%) were males. This shows that gender ratio is not adequately considered or that some educated females do not like rural life, preferring to stay in urban centres. This finding also revealed that more than half (55%) of VEAs have manageable household size. see Table1. All the VEAs have stayed 3years and above, long enough to understand the prevailing physical, social, cultural, economic problems and otherwise of their location. All the VEAs have sufficient academic qualification adequate for their assignment. This is in line with reports of Agbelemoge and Issa (2009) that the high qualifications of VEAs aided their professional competence and understanding of the technical subject matter for effective and efficient job performance.

Furthermore, it revealed that majority (85%) of the VEAs held no other position in the community, meaning, they had no other demanding responsibilities other than their assigned agricultural information dis-

semination duties. Also, 95% of the respondents indicated that the use of indigenous practices for livestock production is common in the study area. The idea is well-rooted in the study area. see Table1.

Personal and socio-economic characteristics of Farmers

There were more female (58.3%) participating farmers than males in indigenous livestock production in the study area. Almost all the sampled farmers were married. Majority of the farmers fell within the age category of 46-55 years, representing 52.1% while none of the sampled farmers was below 25 years with a mean age of 48 years. This indicated that the younger people were no longer interested in farming. This perhaps suggested the need to deliberately encourage and attract the younger generation into agriculture for its sustainable growth. Furthermore, 77.8% of respondents were natives of the study area, while majority (63.2%) of the farmers were literate enough to cope with their farming enterprises. Those having more than primary education were mostly from the urban areas of the zone. In addition, the finding suggested that extension publications such as guides or bulletins written in English would be useful to majority of these farmers. The cosmopolitanness of the farmers was asserted to determine the extent of their exposure to life activities outside their dwelling place. Majority (83%) did not have contact outside the study area, revealing that the respondents were rarely exposed and as such they could not build cordial relationship with other people due to their low level of receptivity and lack of change proneness (Adeniji, 1997). They had lived in these communities for an average of 7 years. The data further revealed that 87.5% engaged in livestock rearing and crop production. See Table 2 .

Table 1: Personal Characteristics Extension Agents (N = 20)

Characteristics	Frequency	Percentage (%)
Age in years		
25 – 35	11	55.0
36 – 45	07	35.0
45 – 55	02	10.0
Sex		
Male	19	95.0
Female	01	5.0
Marital Status		
Married	19	95.0
Single	01	5.0
Number of wife		
1 wife	18	90.0
No wife	02	10.0
Number of children		
None yet	04	20.0
1 – 2	6	30.0
3 – 4	10	50.0
Period of residence in study area (in years)		
3 – 5	12	60.0
6 – 10	05	25.0
11 –15	03	15.0
Household Size(persons)		
1 – 2	04	20.0
3 – 5	11	55.0
5 – 7	05	25.0
Academic Qualification		
NCE	02	10.0
HND	06	30.0
B.Sc.	10	50.0
M.Sc.	02	10.0
Position held in the Community		
None	17	85.0
Group leader	01	5.0
Instructor	01	5.0
Secretary	01	5.0
Usage of indigenous technology		
Aware (Yes)	19	95.0
Not aware (No)	01	5.0

Table 2: Farmers` personal & socio-economic characteristics (N = 144)

Characteristics	Frequency	Percentage (%)
Sex		
Male	60	41.7
Female	84	58.3
Age in years		
25 - 35	26	18.1
36 – 45	30	20.8
46 – 55	75	52.1
55 –65	13	9.0
Level of Education		
No formal education	53	36.8
Adult education	04	2.8
Primary school	58	40.3
Modern school	16	11.0
Secondary school	07	4.9
Post- secondary school	06	4.2
Marital status		
Single	06	4.2
Married	126	87.2
Divorced	08	5.5
Widow/widower	04	2.8
Place of origin:		
Native	112	77.8
Non native	32	22.2
Cosmopolitaness:		
Yes	24	16.7
No	120	83.3

Respondents` level of involvement in livestock production.

Data in Table 3 showed that the farmers kept various types of livestock. Poultry with sheep and goats were widely kept by farmers. This must be due to their market potentials as well as their socio-cultural usefulness. Farmers` involvement in other activities apart from livestock keeping was used to determine their level of commitment to farm operations and the extent of the potential opportunities for improvement of their livestock enterprise. It also revealed

the average income of respondents per month in their livestock enterprise. Income from livestock was an average of twenty one thousand seven hundred and fifty naira monthly. This is a very low income compared to other enterprises. They were subsistence farmers keeping livestock for their family consumption. This calls for serious incentives to improve local livestock sector.. It is interesting to note that the few that earned above N20, 000 were the full-time Fulani herdsmen who were settlers in the study area.

Table 3: Demographic characteristics of respondents (N = 144)

Characteristics	Frequency	Percent %
No. of children		
None yet	8	5.55
Only 1 child	8	5.55
2 – 5	103	71.5
6 – 9	25	17.4
Household Size(persons)		
None yet	6	4.2
1 – 4	38	26.4
5 – 8	69	47.9
9 – 12	23	15.9
13 – 16	08	05.6
Length of Residence in study area (years)		
1 – 2	11	7.6
3 – 4	21	14.6
5 – 6	23	15.9
7 – 8	79	54.9
Social position held		
Community leader	21	14.6
Contact farmer	20	13.9
Fellow farmer	66	45.8
Others (teachers, civil servant)	37	25.7
Financial Status in the community		
Rich	14	9.7
Fairly rich	75	52.1
Poor	55	38.2

It also shown that 51.6% of those that kept livestock provided shed for the animals while 48.4% did not provide shed, this showed the level of care for the animals. About 37.9% of those that provided shed for their animals used bamboo, 30.8% used life plant fencing and mud bricks, thus the materials used for the animal houses were locally available materials which do not re-

quire much financial commitment except labour. All the farmers realized the crucial role of nutrition as all the respondents (100%) provided feeds for their animals regularly, local material were used mostly in feeding the animals. It also revealed farmers closeness to their livestock as 85.7% of the farmers have been able to notice signs of ailment in their animals. See Table 4

Table 4: Farmers' involvement in Indigenous Livestock Management (N=126)

Types of livestock kept	Frequency	Percentage%
Cattle	8	6.3
Sheep/goats	95	75.4*
Poultry	97	77.0*
Pig	10	8.0
Snail	4	3.2
Rabbit	1	0.8
Engagement in other farm activities		
Arable/food crops	30	23.8
Cash/Tree crops	20	15.9
Processing	20	15.9
Marketing	56	44.4
Income per month on livestock enterprise (N,000)		
01 – 10	14	11.1
11 – 20	52	41.3
21 – 30	31	24.6
31 – 40	19	15.1
41 – 50	10	07.9
Provision of housing for livestock: Yes	65	51.6
No	61	48.4
Use of local materials for animal housing		
Use of bamboo / raffia	24	36.9
Life plants (fencing)	20	30.8
Mud bricks	9	13.8
Use of bamboo, Life plants & Mud bricks	12	18.5
Livestock management system		
Free range	84	66.7
Semi intensive	38	30.2
Purely intensive	4	3.1
Feed provided for animals: Yes	126	100
Materials used for feeding		
Household waste	25	20.0
Farm waste	16	12.7
Household/farm waste	60	47.6
Industrial waste	10	7.9
House/ farm/ industrial waste	10	7.9
Feed concentrates	05	3.9
Outbreak of disease in livestock: Yes	108	85.7
No	18	14.3

*Multiple responses.

Indigenous livestock management practices among farmers

The livestock farmers had their indigenous management practices which they used and passed across among themselves. Such as feeding and housing of animals, treatment of some ailments, diseases and pest controls. Table 5 presents the farmers that used them regularly (e. g) Control of lice with lime and sand paper was most regularly used by 85.7% followed by use of local materials for housing (79.4%) , and use of crop

residues for feeding & treating diarrhea with Iyeye leaves in ruminants with 69.1% each. (poultry, pig, rabbit and snail).

They were also engaged in other farm activities different from livestock keeping. This indicated that none of the farmers sampled depended solely on livestock keeping. Majority of the farmers preferred and depended on the indigenous methods of livestock See Table 5

Table 5: Ethno-veterinary Management Practices among Farmers (N=126)

Control of lice with lime & sand paper	108	85.7%
Use of local materials for housing	100	79.4%
Treating diarrhea in ruminants with Iyeye leaves	87	69.1%
Using crop residues for feeding animals	86	59.7%
Deworming with pawpaw seed pastry	72	57.1%
Control of mange with sulphur, lime & palm oil	65	51.6%
Control of mange with ash & palm oil	44	34.9%
Provision of heat during cold	30	23.8%

Extension methods used for teaching indigenous livestock practices

Face-to-face was used for all the eight practices by all the farmers, town crier followed and was used to disseminate information on

four practices by 55% of farmers, traditional festival for two practices; for marketing by 71.2% and stock selection by 23.8% of farmers while signs & symbols were used for only brooding by 16% of farmers. See Table 6.

Table 6: Utilization of Extension methods for teaching Indigenous livestock Management practices

Methods	Face-to-face	Town crier	Traditional Festival	Signs & symbols
Health Mgt	100%	55.5%	--	--
brooding	100%	--	--	16.0
rearing	100%	55.5	--	--
feeding	100%	55.5	--	--
housing	100%	55.5	--	--
marketing	100%	--	71.4	--
Stock selection	100%	--	23.8	--
breeding	100%	--	--	--

CONCLUSION AND RECOMMENDATION

Almost all the farmers sampled kept one or more types of livestock ranging from cattle, sheep/goats rearing because the animals are readily accessible. Extension agents sampled were 95% male, implying a male dominance while majority (58.3%) of the farmers were females, the male extension agents may not be able to interact effectively with the female livestock farmers.

Adequate gender ratio should be considered whenever extension agents were to be deployed to the farming communities. Indigenous livestock farmers should be involved in research and extension planning. Regular visits to farmers by village extension agents should be taken into consideration

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