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Evaluation of Challenges Facing Small Ruminants Production in Oyo Metropolis, Southern Guinea Savanna Environment of Nigeria

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Abstract

A total number of two hundred small ruminant farmers were randomly selected from four local government Areas of Oyo metropolis to examine the challenges facing small ruminant production in Oyo metropolis. The researchers adopted two hundred (200) questionnaires for the study. The results indicated that about 64%, 78%, 42% and 36% respectively of the respondents were male, married, in the age range of 41-50 years and pass through secondary school and tertiary institutional respectively as their educational status. The local sheep (74%) were the most preferred and dominant breeds of sheep in Oyo metropolis. The method of feeding commonly adopted (72%) by farmers was a combination of scavenging and supplementation, while cassava peels was the manifested supplement. Majority (38%) of the small ruminant holders practiced semi-intensive system of husbandry and a greater proportion (34%) reared the animals for consumption purpose. Farmers identified scarcity of fodder, lack of training and knowledge, shortage of veterinary service and limited capital as the most serious challenges facing small ruminant production in the study area.

Keywords

Challenges, Small Ruminant Production, Management

1. Introduction

Agriculture, which entails land cultivation of crop production and rearing of farm animals for man and industrial uses, is traditionally carried out in the rural areas. The trend of crop and livestock production has however shifted to urban communities where a member of people cultivates land for crop production mostly arable crops and rearing of farm animals in urban areas, particularly in Oyo metropolis include sheep, goat, poultry, pig, rabbits and fishes are commercially produced in the urban areas "[1]".

The ratio of small ruminants agree with the World Almanac Education Group, cited in "[2]", that Nigeria has a livestock population of 24 million goats, 13-15 million sheep. The tethering system of small ruminants production according to "[3]" is frequently practiced, involves taking the animals out in the morning and tethering them to stakes where they are allowed to graze on pastures unsupervised till evening.

Rearing of the small ruminant animal's sheep and goat in urban areas has continued to be on the increase largely due to procreative abilities of the animals "[4]". The reared small ruminants served as ready or emergency source of income and meat for households as the animals could be sold or slaughtered in time of their financial needs "[5]". Notwithstanding, these advantages of sheep and goats rearing in the urban areas, management of these farm animals has greatly been challenges or hampered by a number of production and environmental factors. These challenges affect the animals in term of number that is kept by households and productivity "[6]". "[7]" opined that animals have a social role in status identification, social occasions, local organization and social generation as prime reason of keeping small ruminants.

Small ruminants especially goat and sheep from an integral and important component of the pattern of animal production

in most rural communities, sheep and goat are widely distributed in Nigeria in rural, urban and peri-urban areas representing about 63.7% of total grazing domestic animals in Nigeria "[8]". Small ruminant remain popular among the rural populace and resource poor people. Their importance is primarily associated with their small size which is significant for the advantage of mankind as it favours low investments small risk of loss and preference over large ruminants for food and reproductive efficiency and economic use of available land "[2]".

There is an enormous challenge to the Nigeria livestock farmer on the need for increased animal protein supply. In this regard, "[9]" reported that one of the policies pursued by the government to accelerate the production of animal food was the encouragement of private sector economy to focus on production of poultry, swine, small ruminant and micro livestock production. Although, poultry has been regarded as the most profitable sources of meat production in many parts of Africa, there is however, a growing awareness among scientists and farmers on the need to exploit the production potentials of goats and sheep which hitherto have been neglected compared with cattle, pigs and poultry "[10]". Therefore, the aim of this study is to determine the challenges facing small ruminants production in Oyo Metropolis, Oyo State, Nigeria.

2. Materials and Methods

2.1. Research Design

The research design examined challenges facing small ruminants production and management in Oyo metropolis, Oyo State. The research adopted a descriptive interview method in collecting data for the sample; these were obtained through the use of structured questionnaires.

2.2. Experimental Site

The study was carried out around the Oyo township, Oyo State, Nigeria and Oyo lies on the longitude $3^{o}5'$ East of the Greenwich meridian and Latitudes $7^{o}3'$ North eastwards from Ibadan, the capital of Oyo State. The altitude is between 300m and 600m above level. The mean annual temperature and rainfall are 27°C and 1,165mm respectively. The vegetation of the area is Southern Guinea Savanna zone of Nigeria "[11]".

2.3. Population of the Study

The population of the study comprises of all identified small ruminants holders in Oyo West, Oyo East, Atiba and Afijio local government areas of Oyo state.

2.4. Sampling and Sample Technique

The small ruminants holders identified and samples were two-hundred in number. This comprises of 50 livestock keepers from each of the local government areas under this study. Five (5) small ruminants' holders were sample from each ward within the local government area; i.e. five (5) farmers per ward multiply by ten (10) wards totaling 50 farmers per local government. The total of 200 questionnaires was allotted to these sampled livestock keepers.

2.5. Research Instrument

The instrument used for assessing this study was a structured questionnaires. These structured questionnaires were groups into A, B, C, D and E items. Group A contains the biography information of the small ruminant holders such as sex, marital and educational statuses and ownership. Group B described the production information of the livestock farmers while section C indicated the labour and capital availability of the small ruminant holders. However, items on group D and Group E described the cost and revenue generated respectively by the farmers.

2.6. Data Collection

The primary data were collected through the use of questionnaire on the small ruminant production in Oyo communities. These questionnaires were structured and were administered by the researcher in order to bring about accuracy data.

2.7. Data Analysis

The method of data analysis used for this is simple descriptive statistic and this involves the use of percentage, frequency distribution and tabular presentation of the data collected.

3. Results and Discussion

3.1. Results

Table 1. *The biodata of the respondents.*

Variables	Frequency	Percentage
Sex		
Male	128	64
Female	72	36
Marital status		
Single	36	18
Married	156	74
Divorced	08	04
Age		
20 years	08	4
21-30 years	40	20
31-40 years	68	34
41-50 years	84	42
Educational status		
Primary School	56	28
Secondary School	72	36
Tertiary School	72	36
Ownership		
Private	196	98
Government	04	02

Source: Field work. 2016

The bio- data of the respondents is presented in table 1, the results revealed that majority of the farmers (64%) were male while the females respondents accounted for 36% of the farmers. Seventy-eight percent of the farmers were married

while 4% of the respondents were divorced. Majority of these farmers engaged in the ruminants' production were of age 41-50 years (42%) while the lowest age was 20 years (4%). The educational status of the farmers were 36% for the both secondary and tertiary schools respectively while 28% pass through primary school. Majority of those who participate in the small ruminant's production were private owners (98%) while (2%) were owned by government establishments.

Table 2. *Production information of the respondent.*

Variables	Frequency	Percentage
Years of engaged		
<5	44	22
5	16	8
>5	140	70
Source of parent stock		
Local	148	74
Foreign	52	26
Year of first batch		
1999-2004	76	38
2005-2010	68	34
2011-2016	56	28
Total foundation stock		
<5	56	16
5	28	14
>5	44	22
System of operation		
Extensive	56	28
Intensive	68	34
Semi-intensive	76	38
Keeping record		
Yes	84	42
No	116	58
Additional feed supplement		
Yes	144	72
No	56	28
Land uses		
Family land	88	44
Purchase	92	46
Gift	20	10
Operations in farm		
Deworming	56	28
Vaccination	136	68
Castration	04	2
Teeth clipping	04	2

Source: Field work. 2016

Table 2 shows the production information of the ruminants production farmers. The results shows that the highest year of engagement on the production was > 5 years (70%) while the 8% of the farmers said they engaged in production of ruminant animals for 5 years. The result further shows that majority of the farmers obtained their parent stock locally (74%) while 13% depends on foreign sources of their stock. Majority of those who received the first batch in the ruminant production were 1999-2004 (38%) while the lowest was 2011-2016 (28%). The total foundation stocks of the farmers were 48% for ten 10 (animals) while 14% are less than 10 animals (28%) while those with 20 animals are 22%. The result also indicated that majority of the farmers raised their animal on intensive system (38%) while the extensive system of operation was 28%. The farmers that keeps records were of 42% while those that didn't kept any records amounted to 58%. Seventy-two percent of the farmers reported that they have an additional feed supplement for their animals while 28% of the respondents said they didn't have access to additional feed supplement. Land uses of the study are accounted to 46% for those purchase their land while 10% documented that the land use were given to them as gift. Many operations were carried out on the animals such as deworming, vaccination, castration and teeth chipping respectively while the most of the operation were vaccination (68%).

Table 3 indicate the labour and capital availability of the small ruminant holders. This result revealed that labour obtained were through family (76%) and hired (24%). Sixty-two percent of the farmers reported that they didn't have accessed to loan while 38% of the respondents had accesses to loan. The source of obtaining loan were mostly from relative (40%) and the capital through loan at most was ₦10,000 (34%).

Table 3. *Labour and capital availability of the small ruminant holders.*

Variables	Frequency	Percentage
Obtained labour		
Family	152	76
Hired	48	24
Availability of loan		
Yes	76	38
No	124	62
Sources of obtaining loan		
Bank	24	12
Co-operatives	48	24
Friends	48	24
Relative	80	40
Capital obtained through loan		
₦10,000	68	34
>₦10,000	44	22
₦20,000	16	08
>₦20,000	64	32

Source: Field work. 2016

Table 4. *Cost of items of the farmers.*

Variables	Frequency	Percentage
Sheep feed Expensive?		
Yes	132	66
No	68	34
Goat feed expensive?		
Yes	140	70
No	60	30
Spending on feed		
₦5,000	84	42
₦6,000	36	18
₦7,000	44	22
₦10,000	36	18
Sheep and goat vaccination?		
Yes	196	98
No	04	02
Maintenance		
<₦5,000	52	26
₦5,000	40	20
>₦5,000	80	40
₦5,000	28	14

Field source: 2016

Table 4 shows the cost of item of the farmers which revealed that 66% and 70% respectively agreed that sheep and goat was expensive. The cost of feed was ₦5,000 (42%) and ₦10,000 (18%) respectively. Those farmers that reported that goats and sheep were vaccinated were 98% while 2% agreed of non-vaccination of their animals. The cost of maintaining the animals is greater than ₦5,000 for (40%) and ₦10,000 for (14%) respectively.

Table 5 revealed the revenue of the small ruminants holders. The result indicates that majority of the farmers hold 5 animals (32%) while 2% of the farmers had 10 animals. The price of procuring sheep or goat mostly are greater than ₦10,000 (54%) while 2% of price of the animals was ₦20,000. The average selling price of the animal were at most when selling their animals for ₦10,000. Most (54%) of the respondents agreed that sheep and goat respectively were profitable.

Table 5. *Revenue of the small ruminant holders.*

Variables	Frequency	Percentage
Sheep or Goat Have Sold		
5	64	32
>5	52	26
10	04	02
>10	20	10
Price of a sheep or goat		
<₦10,000	80	40
₦10,000	08	04
>₦10,000	108	54
₦20,000	04	02
Average selling price Sheep or goat		
<₦10,000	76	38
₦10,000	12	06
>₦10,000	80	40
₦20,000	32	16
Sheep production Profitable?		
Yes	108	54
No	92	46
Goat production profitable?		
Yes	136	68
No	64	32

Source: Field work. 2016

3.2. Discussion

The present result on bio-data information of the small ruminant holders in Oyo metropolis that revealed that majority of the farmers were male, married, age of 41-50 years with educational status of secondary and tertiary school and the animals were owned individual were in line with the findings of "[12]" who reported similar ranged of values for sex, marital status, age, educational status and that majority of the farmers experiences in small ruminant production was greater than 5 years of experiences most depends on Local parent stock of herd of 10 partake in semi-intensive types of system of operation. Lack of record keeping, feeding of the animal with supplements feeds, lands uses were purchased and they do vaccinated their animals, thus this documentations was in line with the reports of "[12]" on small ruminant production and management systems in urban area of Southern guinea savanna of Nigeria. Also, the report on prevalence of diseases among the sheep and goats that were controlled by vaccination was consistent with the findings of "[2], [13]". These authors reported various prevalence of disease that was controlled by vaccinations.

Meanwhile, the labour and capital availabilities of the farmers in the present findings that revealed family, non-availability of loan, was from relatives and most capital obtained was ₦10,000 were in agreement with reports of "[13], "[14]" who reported similar ranges of values for labour and capital access for the farmers. The present information on the cost of the items or materials and the revenues generated by small ruminants holders in the study area revealed that the cost implication were higher for sheep and goat feeding, which amounted to ₦5,000, maintenance cost of about ₦10,000 and cost for vaccination while the selling number of small ruminants animal were 5 at less than ₦10,000 and the farmers were able to make profit all these observations on the cost and revenue made by the small ruminants holders in this present study were consistent with the findings of "[15], [16]" "[17]" respectively in the studies areas. These authors documented similar range of values for cost and revenue made by the small ruminant holders and they were of opinion that the small ruminant farming were of a profitable in nature if properly managed and monitored.

4. Conclusion

The present results made an empirical investigation into the challenges facing small ruminant production in Oyo metropolis, Oyo State. However, the result will provide useful guides to students undertaking similar studies and to policy maker in formulating policy that may be aimed at influencing the production of ruminant animals by farmers in the area of study in particular and also reduce high rate of unemployment in Nigeria.

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