



Factors Influencing the Choice of Small Ruminant Rearing among Rural Women in Ekiti State, Nigeria.

¹ A.O. Adedapo and ² I.E. Obabiire

¹Department of Agricultural Economics and Extension Service, Ekiti State University, Ado Ekiti

²Department of Agricultural Technology, Federal Polytechnic, Ado Ekiti

Email: ayodeji.adedapo@eksu.edu.ng

Abstract

The domestication of small ruminants by rural women is very common in the developing nations. The study examined the factors influencing the choice of rearing small ruminant animals among rural women in Ekiti State. The study investigated the socio-economic characteristics of the rural women, identified the types of small ruminants reared and effects of small ruminants rearing on household livelihood. A well-structured interview schedule was used to elicit information from 120 respondents selected through a multi-stage sampling procedure. The data collected were analyzed using descriptive statistics, a 3-points Likert scale and inferential statistics. The preferred small ruminants reared were sheep and goats. The factors influencing the choice of small ruminants rearing were payment of children school fees ($\bar{x}=2.58$), performance of burial rights ($\bar{x}=2.23$), hosting group or societal meetings ($\bar{x}=2.57$), purchase of foodstuffs ($\bar{x}=2.50$), assisting relations in settling contingencies ($\bar{x}=2.60$), family events or occasions ($\bar{x}=2.41$), to avert sickness from the children or family members ($\bar{x}=2.81$), source of income during off season ($\bar{x}=2.43$) and to avoid wastage of farm produce or excess foodstuff ($\bar{x}=2.54$). Rearing of small ruminants has significant effects on the rural women's physical assets ($p<0.05$), social assets ($p<0.05$), economic assets ($p<0.05$) and health ($p<0.10$). Thus, it indicates positive and significant effects of rearing small ruminants on the livelihood of rural women in Ekiti State.

Keywords: Household obligations, influential factors, small ruminants, rural women.

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Introduction

The keeping and rearing of livestock commonly practice among rural households are supported by the large expanse of land not used for cropping activities but put to use the free-range system. Livestock rearing plays important role in the economy of West Africa countries, providing about 44% of the agricultural Gross Domestic Product (GDP), 25% of cattle, 33% of sheep, 40% of goats and about 160 million small ruminants in total (ECOWAS, 2008). Rearing of small ruminants is

one of the main economic activities the poorest segment of the population depends upon. Livestock is the primary subsistence activity utilized by rural households to meet financial and social responsibilities as well as to supplement farm income (Jamali, 2009). The constant market demand for small ruminant animals in the country ensures a good cash supply, socio-cultural wealth, clothing and food security to rural households and hence, improves their livelihoods.

Small ruminants are useful sources of manure, essential protein, easy way to store cash for future needs, easy adaptation to different climatic conditions and lower feed requirements compared to other animals because of their body size (IBC, 2004). Small ruminants have higher survival rates under drought conditions compared to cattle. Being small-sized animals, they require small initial investment and their early maturity (short reproductive cycles) makes them suitable for meeting subsistence needs for meat, milk and to generate income. They also make important contributions to the households through the use of crop by-products, integration with other farming enterprises, use of household wastes and locally grown vegetation, soil fertility improvements and their roles in the social, cultural and religious aspects of everyday life (Devendra, 2001). They are good sources of non-food products with export-earning and import saving potential.

Small ruminants are of particular importance for landless people especially women. Two-thirds (2/3) of the world's 600 million poor livestock keepers are rural women (Thornton, *et al.* 2003). Women play a vital role in agricultural production and also participate in animal rearing for personal upkeep (Jibowo, 2000). However, rearing of small ruminants like sheep and goat would have lasting effects in bringing about social change by improving the rural household livelihood through the provision of income and food, empowering women and children, and reducing fluctuations in cash flow. Their responsibilities in the households and communities as custodians of natural resources have prepared them to possess important skills, knowledge, and experience for adaptation, search for better and safer communities (Emmeline, 2011). Women play very important roles in small ruminants rearing in Ekiti State and they are better managers of household resources than men. Some of them buy these animals using the name of each of their children or grandchildren. There is hardly a household in the rural areas of Ekiti State where one small ruminant is not found. Despite the involvement of women in the rearing of small ruminants, a lot of them is still living below poverty level and one begins to wonder if the animals reared have actually impacted their livelihood or not. Hence, this study was embarked upon to assess some of the contributions of small ruminants to rural women's livelihood and income in Ekiti

State, with the objectives of describing the socio-economic characteristics of the respondents, identifying the types of livestock reared, the factors influencing their choice of small ruminant rearing and the effects of small ruminant rearing on the income and livelihoods of the respondents.

Materials and Methods

Study area

This study was carried out in Ekiti State. The State lies between longitudes 4° 45' and 6° 45' East and latitude 6° 15' and 8° 51' North, and experiences a typical tropical climate with two different seasons; raining season between April and October while the dry season is between November and March. The average annual rainfall ranges between 2000 mm - 2400 mm, the average annual temperature range from 20°C - 27°C and 60% relative humidity. Ekiti State was purposively chosen for the study due to the fact that the land is arid and semi-arid which is the best for animal production. Rural households largely depend on agriculture and small ruminant rearing for their livelihood with exertion to rescue people from famine, poverty, and unemployment.

Sampling procedure and data analysis: A multi-stage sampling procedure was used to select the respondents (rural women). The first stage involved random selection of six Local Government Areas (LGAs) out of the sixteen LGAs in Ekiti State. The second stage involved random selection of two (2) communities from each of the selected LGAs. The third stage involved random selection of ten respondents from the selected communities to make a total of 120 respondents. A well-structured interview schedule was used to elicit information from the respondents. The data were collected on socio-economic characteristics of respondents such as age, marital status, educational level, household size, membership of social association, primary occupation and annual income. Information was also collected on the types of animals reared, factors influencing the choice of small ruminants rearing and the effects of small ruminants rearing on income and livelihood assets.

The data were analyzed with the use of descriptive statistics such as frequency counts, percentages and means. A 3 point-Likert scale was used to analyze the factors influencing the choice of small ruminants rearing while linear regression analysis was used to examine the effects of small ruminants rearing on income and livelihood assets.

Likert Scale: The extent of the preferences was expressed by using a 3-points Likert scale and

accorded 3, 2, and 1 for Agree, undecided and disagree respectively and expressed as:

$$LS = (N_1X_3 + N_2X_2 + N_3X_1) / (N)$$

where:

LS = Likert Scale

N = Total number of respondents.

N₁ = Number of rural women who agree to the statement.

N₂ = Number of rural women who do not decide on the statement.

N₃ = Number of rural women who disagree with the statement

Regression modeling was used to examine the effects of small ruminants rearing on rural women's income and livelihood assets while an estimation of the factors influencing the choice of small ruminant rearing was done, ranked and the use of other

available and accessible ways of meeting livelihoods.

The implicit and explicit form of the regression model (Greene, 2003) employed was of the form:

$$Y = f(X_1, X_2, X_3, X_4, \dots, X_{10}, e_i)$$

$$Y = a_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 + b_{10}X_{10} + e_i$$

where,

Y = Income generated from sales of animal (Naira)

X₁ = Physical assets

X₂ = Economic assets

X₃ = Social assets

X₄ = Health

X₅ = Other assets

e_i = Error term

Results and Discussion

Socio-economic characteristics of the respondents

Table 1 shows the mean age of the respondents at 50 years with 83.33% married, 9.17% widow and 7.50% divorcees. This implies that most of the respondents were ageing and married, which could be one of the factors responsible for the engagement in small ruminant rearing. Most of the respondents (83.33%) belong to one or more social associations, 78.34% had low educational qualification while 20.83% had tertiary education. Adebayo and Adekunle (2016) had asserted that membership of social association affords the farmers a lot of benefits and they would be able to achieve a lot mutually than individually. The average family size was 5 members which implies

relatively large rural household size, in agreement with the findings of Etuk, Udofe and Okon (2018). The average income from small ruminant rearing was ₦75,500.00 but with about 71.67% realizing less and 28.33% realizing more than the average income. This income realized from small ruminant rearing was substantial and could possibly help to meet household financial obligations.

More than half (63.34%) of the rural women were farmers, 20.83% were traders and 17.83% were civil servants. The average numbers of years of experiences in small ruminant rearing by the respondents was about 13 years and almost half of them have more than 13 years of experience of small ruminants rearing.

Table 1. Socio-economic characteristics of the respondents

Variables	Frequency	Percentage (%)	Mean
Age (Years)			
Below 31	7	5.83	50
31 – 50	56	46.67	
51 – 70	53	44.17	
Above 70	4	3.33	
Membership of Association			
Yes	100	83.33	
No	20	16.67	
Marital Status			
Widow	11	9.17	
Divorce	9	7.50	
Married	100	83.33	
Primary Occupation			
Farming	76	63.34	
Civil Service	19	15.83	
Trading	25	20.83	
Educational Qualification			
No Former Education	30	25.00	
Primary Education	36	30.00	
Secondary Education	29	24.17	
Tertiary Education	25	20.83	
Annual Income Realized(₦)			
Less than 31,000	65	54.17	75,500
31,001 – 60,000	21	17.50	
60,001 – 90,000	24	20.00	
More than 90,000	10	8.33	
Household Size			
1 – 3	18	15.00	5
4 – 6	60	50.00	
7 – 9	37	30.83	
More than 9	5	4.17	
Experience (Years)			
1 – 10	60	50.00	12.87
11 – 20	39	32.50	
21 – 30	16	13.33	
Above 30	5	4.17	

Source: Field survey, 2017.

Types of Animal Reared

The result in Fig. 1 shows the distribution of respondents based on the types of animal reared in the study area. Most (69.17%) of the respondents reared goat, 15.17% reared sheep, 12.50% reared goat and sheep. A few (2.50%) reared rams while 0.66% reared goats, rams and sheep. The high preference for goat rearing is because of the wide

acceptability and easy domestication. Also, goat meat is consumed by all households without religious or cultural restrictions and it is marketable. Besides, goats have higher rate of survival than other small ruminant animals. This agrees with the findings of Oluwatayo and Oluwatayo (2012) that people prefer to rear sheep and goats due to their

distinct economic, managerial and biological advantages.

Dossa *et al.* (2008) had noted that women are inclined towards goats because of low risk in

investment and easy to keep, besides being an effective and feasible way of enhancing livelihoods of resources-poor people.

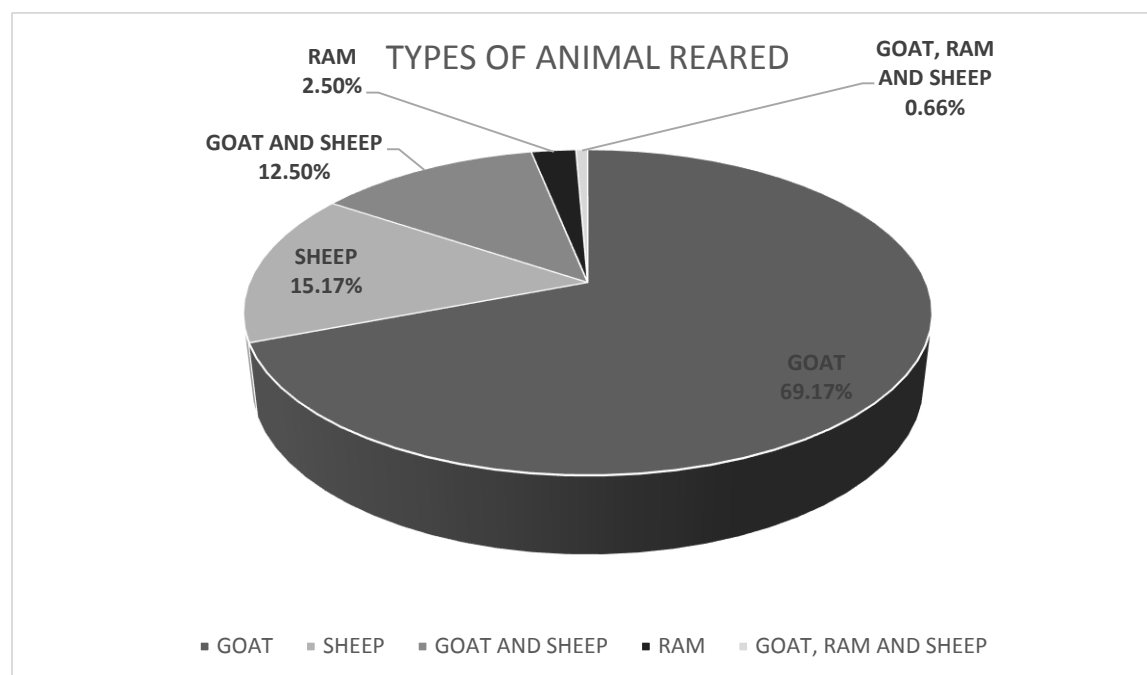


Figure 1.

Source: Field survey, 2017.

Factors influencing the choice of small ruminants rearing

Table 2 shows the factors influencing the choice of small ruminants rearing. The factors were classified into five groups; basic, social, health, financial and other needs. Each of the group has variables ranging from two to four such efforts were made to ascertain the choice of preference and ranked accordingly using the mean scores. The main mean score of the variables was 2 points which was used as the benchmark. The mean score of any variable or statement lower than the main mean score referred to less relevant while the ones greater than the main mean score was regarded as the most relevant. Thus the variable with the highest mean score was accorded the first position while the variable with least mean score took the fifteenth position.

All the five variables under the basic needs were relevant to the factors influencing their choice of small ruminant rearing with mean score of 2.59, 2.58, 2.56 and 2.50 to occupy the fourth, fifth, eighth and tenth positions respectively. This

indicated that basic needs are a necessity in the family and must be well catered for to improve the household livelihoods.

All the variables under the health needs were relevant to the factors influencing their choice of small ruminant rearing with the mean score of 2.81 and 2.72 to occupy first and second positions respectively. This means that the health needs of the family are an important factor if their livelihood is to be improved. This is in line with the general saying that “health is wealth”. Three variables under the social needs were relevant to the factors influencing their choice of small ruminant rearing with the mean score of 2.57, 2.23 and 2.20 to occupy seventh, twelfth and thirteenth positions respectively.

Two variables under the financial needs were relevant to the factors influencing their choice of small ruminant rearing with mean score of 2.60 and 2.43 to occupy the third and eleventh positions respectively. The two variables under other needs were relevant to factors influencing their choice of small ruminant rearing with mean score of 2.58

and 2.54 to occupy the fifth and ninth positions respectively.

These factors can help government, policy makers or NGO in effective intervention strategies to

alleviate poverty and to empower rural women in the area.

Table 2. Factors Influencing the Choice of Small Ruminant Rearing

Statement	A	UD	D	Total	Mean	Rank
Basic needs						
Purchase of foodstuff for family consumption	210	80	10	300	2.50	10 th
Purchase of cloths during festive period	252	46	13	311	2.59	4 th
Payment of children school fees	240	60	10	310	2.58	5 th
Payment of house rent	240	54	13	307	2.56	8 th
Health needs						
To avert sickness from the children or family members	315	14	08	337	2.81	1 st
Payment of medical bills	294	20	12	326	2.72	2 nd
Social Needs						
For festive celebration (Traditional celebration, Ileya, and Christmas)	216	40	8	264	2.20	13 th
For family events (birthday, naming, and hosting group or society meeting)	282	16	10	308	2.57	7 th
Performance of burial rights	222	20	26	268	2.23	12 th
For chieftaincy purpose	138	16	58	212	1.77	14 th
Financial needs						
Source of income during farm off season	240	24	28	292	2.43	11 th
Collateral or pledges for land used for farming activities	42	32	90	164	1.37	15 th
Assisting relations in settling contingencies	252	48	12	312	2.60	3 rd
Other needs						
To avoid wastage of farm produce or excess food in the house	255	30	20	305	2.54	9 th
For consumption of farm tuber peels	261	32	17	310	2.58	5 th

A = Agreed, UD = Undecided, D = Disagreed

Source: Field survey, 2017.

Effects of small ruminant rearing on rural women's livelihood

Table 3 shows the effects of small ruminant rearing among the rural women in Ekiti State on their livelihood. The linear function was chosen because it exhibited better diagnostic statistics than other models. The coefficient of determination (R^2) at 0.165, implies that the explanatory variables accounted for about 16.50% of the amount realized on small ruminants rearing among rural women in Ekiti State. This implies that there are more variables that can be explained by the dependent variable. The overall significance of the model was

measured using F-test and the value of 2.740 was significant at 5.0% risk level.

The physical assets ($P < 0.05$), social assets ($P < 0.05$), economic assets ($P < 0.05$), and health ($P < 0.01$) were the important determinant of small ruminants rearing among rural women. This means that the rearing of small ruminant animals among the rural women have significant effects on their livelihood assets. This agrees with the findings of Devendra (2001) that the development of small ruminants significantly contributes to the increased food production, household income and improved livelihoods.

Table 3. Regression result showing the effects of small ruminant rearing on rural women's livelihoods

Variables	Coefficients	T	
Constant			0.708
Physical Assets	0.167	1.033**	
Social Assets	0.189	1.912**	
Economical Assets	0.188	1.911**	
Health	0.196	1.401***	
R ²	0.165		
Adjusted R ²	0.105		
Std. Error	1764.515		
F	2.74		

Note: **, *** represent 5% and 10% level of significant respectively.

Source: Field survey, 2017.

Conclusion and Recommendation

The study has shown that goat and sheep were the most preferred small ruminants reared by the rural women in Ekiti State. The average income realized from small ruminant rearing was ₦75,500.00 and the factors influencing the choice of small ruminant rearing were to ensure food security, good health and to meet financial and social obligations. Small ruminants rearing serves as source of income

during off season to meet urgent fund needs of the family especially when income realized from farming alone was not enough to deal with the increasing demands of the family. Therefore, the study recommends that efforts should be intensified to build the capacity of women engaged in ruminant rearing to enhance their productivity and income.

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