

**PERCEIVED CAUSES OF LIVESTOCK INVOLVEMENT IN ROAD ACCIDENT:
THREAT TO LIVESTOCK PRODUCTION AMONG WOMEN IN OYO STATE**

¹Adefalu, L.L; ²Usman, B; ¹Omotesho K.F; ¹Aderinoye-Abdulwahab, S.A and ¹Olateju, O.A

¹Department of Agricultural Extension and Rural Development, Faculty of Agriculture,
University of Ilorin

²Department of Geography and Environmental Management, Faculty of Business and Social
Sciences, University of Ilorin

Corresponding author: adefalulateef@yahoo.com / +2348063468477

ABSTRACT

This study examines women farmers' perception on livestock involvement in road accident in Surulere L.G.A of Oyo State, Nigeria. Surulere LGA was purposively selected because most of its communities are located very close to the highways. Multi-stage random sampling technique was used to select 120 respondents for the study while interview schedule was used to elicit information from respondents. Descriptive statistics (frequency counts, percentages, Mean scores and ranking) and inferential statistics (Chi-square) were used to analyze the data. Findings revealed that the mean age of respondents was 46.5 years with a typical rural woman having an average monthly income of ₦12,250.00; 73.3% had one form of education or the other; 68.3% were full-time crop farmers while 16.7%, 11.7% and 3.3% combined trading, civil-service, and artisan work with livestock farming. Majority (77.5%) of the respondents had goats, while 52.5%, 29.2% and 33.3% kept poultry, sheep and duck respectively as income generating enterprises. Chi-square analysis showed a significant relationship between respondents' perception on causes of livestock involvement in road accident and some of their selected socio-economic characteristics (age = 0.00, education = 0.00 and experience = 0.00) of the. The study concludes that road accident constitutes a major threat to free-range livestock production in the study area. It is therefore recommended that road signs and speed breakers be constructed on highways that transverse the rural areas.

Keywords: Women farmers, Perception, Livestock, Involvement, Road accident

INTRODUCTION

Livestock as a sub-sector of agriculture contributes significantly to the protein needs and economy of rural and urban communities and the nation as a whole. It accounts for one third of Nigeria's agricultural Gross Domestic Product (GDP), providing income, employment, food, energy, manure, fuel and transport (Anon, 2004, 2006). Livestock include animals such as cattle, goats, sheep, dog, cat and poultry. They are relatively easy to own by resource poor rural women and as a matter of fact, two-thirds of the world's 600 million poor livestock keepers are rural women (Thornton *et al.* 2003).

Traditionally, Nigerian rural women are faced with cultural and political challenges which limit their access to a number of resources compared to their men counterparts (Rahman and Haruna, 1999). When women own livestock, their social status is enhanced and this could empower them to participate better in decision-making process, both at family and community levels. Livestock

plays a crucial role in the growth and development of household, rural and national economies, thus, its economic importance cannot be over emphasized (Anon, 2006). It contributes in the production of organic fertilizer and fuel and in the use of marginal nutritional resources which are not directly accessible to mankind. Livestock also have the characteristics of capital investment, yielding high interest in the form of milk, egg and other valuable products (Oluwafemi *et al*, 2001). Apart from serving as source of food for humans, Livestock production also enable women to fulfil important social and financial obligations. For example, mother-goat is used for traditional wedding purpose in the Southern part of the country as a requirement for giving out the hands of a female child in marriage. Not only this, goats or chicken could be sold while the money realised may be used to pay the children school fees or settle other emergency debt situations. Essentially, livestock management represents an important safety-net during the period of needs among rural women. It also play an important role in strengthening family tie or relationship and this could be made possible through exchange of female goats among kilns and kiths in a revolving manner.

However, livestock production is faced with a number of constraints which on the long run could render the production effort of the rural women to fluctuate between stagnation and decline to the extent that participation in decision making process becomes threatened or endangered. Prominent among these constraints are: diseases, insufficient water supply, shrinkage of land for grazing and lack of funding. A number of researches had been conducted on constraints facing women in livestock production (Ayoade *et al.*, 2009). Loss of livestock to road accident is a major constraint facing the resource poor rural women involved in livestock production. Livestock that are not confined or out of their confinement in search of food, water and mates, stray unto the road and could fall victim of road accident (Lunney *et al.*, 2008). Some livestock may even find road sides and trees along the roads more friendly as resting points and may find their way unto main road and get injured losing some vital parts of their body to the accident or get killed. Moreover, when unexpected road accidents involving these livestock occur, the purpose for keeping such livestock diminishes. For instance, when a livestock is injured by a motorist, it reduces the market value of such livestock and the expectation of the owner is dashed. Perpetual involvement of animals in road accident constitutes arithmetical decrease in both the quality and quantity of livestock with exponential decrease in the purchasing power of their owners who in most cases are resource-poor rural women. Because of the poor resource base of most of the livestock owners in the rural areas, animals are often left at the mercy of the nature to scavenge for food and water during the day and return home at sunset. This practice is inimical to the achievement of using livestock management as an alternative livelihood source for the rural women particularly during the off-season when crop production activities become less active.

Objectives of the Study

The general objective of this study is to determine women farmers' perception on Livestock involvement in road accidents, while the specific objectives are to:

- describe the socio-economic characteristics of the respondents in the study area
- Identify various types of Livestock being kept by respondents

- determine the perceived causes of losing Livestock to road accident
- Identify coping strategies adopted against the loss of livestock to road accident.

Hypothesis of the study

Based on the objectives of the study, the following hypothesis was tested:

H₀: There is no significant relationship between respondent's socio-economic characteristics and their perception on causes of Livestock involvement in road accident.

MATERIALS AND METHODS

The study was carried out in Surulere Local Government Area (LGA) of Oyo State. The State is bounded partly by Ogun State in the south, Kwara state in the North. To the west, it is bounded partly by Ogun state and partly by the Republic Benin, while in the east; it is bounded by Osun state. Surulere LGA has a total area of 23 square km and a population of 142,070 in 2006 (Federal Republic of Nigeria, Official Gazette, 2009). It has its headquarter at Iresa-Adu. The LGA is located in the Ogbomosho Agricultural zone of Oyo State. The main primary occupations in the area are farming and hunting. Major crops planted include yam, cassava, cowpea and vegetables with many people also engaging in livestock production.

Multi-stage sampling technique was used to select 120 respondents for data collection using interview schedule. The process involved purposive selection of Surulere Local Government Area out of the 33 LGAs in the State due to their proximity to the highways. Out of the ten wards in the LGA, six administrative wards were purposively selected from the Local Government Area because of their proximity to trunk 'A' roads. The selected political wards are IresaAdu, Oko, IresaApa, Iregba, Gambari and Iwofin. One Women Farmers' Association was randomly selected from each of the selected administrative wards and finally, 20 women farmers were randomly selected from the list of each of the selected Women Farmers' Association.

The data was analyzed using descriptive statistics including frequency counts, percentages and mean ranking. Chi-square technique was also used to test for significant relationship between the socio-economic characteristics and their perception on causes of Livestock involvement in road accident. Perceived causes of losing livestock to road accident were obtained using a 5-point-likert-type. It was measured on a scale of SA (4), A(3), D (2), SD (1) and U (0). The mean scores were then used to rank the respondents perception on the basis of what they perceived to be the highest causes of losing their livestock to road accident in the study area.

RESULTS AND DISCUSSION

Socio-economic characteristics of the respondents

The results on table 1 showed that 39.2% of the respondents were 57 years and above, 35.5% of them were 44-56 years, 22.5% indicated 31-43 years while the rest 3.3% of them indicated 18-30 years of age. The mean age of the respondents was 46.5 years. This implies that majority of the respondents are still in their active age and possessed enough strength to undertake strenuous tasks associated with livestock production on free-range scale.

Table 1: Distribution of the socio-economic characteristics of the respondents

Variable	Frequency	Percentage (%)	Mean
Age			
18-30	4	3.3	46.5years
31-43	27	22.5	
44-56	42	35.5	
≥57	47	39.2	
Total	120	100	
Marital status			
Single	9	7.5	
Married	51	42.5	
Divorced	25	20.8	
Separated	19	15.8	
Widowed	16	13.3	
Total	120	100	
Religion			
Islam	51	42.5	
Christianity	66	55.0	
Traditional	3	2.5	
Total	120	100	
Educational Status			
Non-formal Education	31	25.8	
Primary Education	50	41.7	
Secondary Education	24	20.0	
Tertiary Education	15	12.5	
Total	120	100	
Secondary occupation			
Trading	20	16.7	
Arable crop farming	58	48.3	
Civil Service	38	31.7	
Artisan	4	3.3	
Total	120	100	
Experience in livestock management (Yrs)			
≤5	22	18.3	14.8Years
6-11	30	25.0	
12-17	55	45.8	
≥18	13	10.8	
Total	120	100	
Monthly income (₦)			
≤10,000.00	60	50.0	₦12,250.00
10,001.00-20,000.00	30	25.0	
20,001.00-30,000.00	20	16.7	
≥30,001.00	10	8.3	
Total			

Source: Field survey, 2012

The distribution of respondents based on marital status showed that less than half (42.5%) were married, while the rest 20.8%, 15.8%, 13.3% and 7.5% were divorced, separated, widowed and single respectively. Livestock production could be a good source of livelihood to resource poor rural women regardless of their marital status due to the low initial capital outlay involved. Education is an important factor which can influence farm productivity and determine farmer's access to new ideas and new practices. As shown in table 1, majority (67.5%) of the respondents had non-formal (25.8%) and primary education (41.7%), 20.0% had secondary education while only 12.5% of them had tertiary education. In terms of secondary occupation, a little below half (48.3%) of the respondents were arable crop farmers, 31.7% were civil servants, 16.7% were traders while the remaining 3.3% of them were artisans.

Furthermore, Table 1 showed that less than half (48.3%) of the respondents indicated 12-17 years of experience in livestock production, 25.0% indicated 6-11 years while 18.3% of them had equal or less than 5 years of experience. Table 1 also showed that respondents were generally low income earners with half (50.0%) of them earning N10,000.00 or less in a month while the rest 25.0%, 16.7% and 8.3% earned N10,001.00 – N20,000.00, N20,001.00 -30,000.00 and ≥N30,001.00 respectively. The mean income as indicated by the respondents was N12, 250.00. This mean income was found to be lower than the minimum wage (N18.000.00) of Nigerian civil servants. The involvement of these rural women in other secondary occupations could be for the purpose of cushioning the effects of the financial short-comings from livestock production which may be due to incessant loss of their animals to road accident.

Types of livestock kept by the respondents

On the type of livestock kept by the respondents, all the respondents kept small livestock like goat, sheep and poultry. Table 2 indicated multiple responses in which majority (77.5%) of the respondents engaged in rearing of chicken, 52.5% reared goats, 29.2% reared sheep while the remaining 33.3% of them indicated rearing of duck.

Table 2: Distribution of respondents based on the Livestock kept

Variables	Frequency	Percentage
Types of Livestock kept		
Goat	63	52.5
Sheep	35	29.2
Chicken	93	77.5
Duck	40	33.3
Total	MR	MR

Source: Field survey, 2012

This distribution showed very clearly the participation of rural women only in small livestock production possibly to avoid the stress often involved in keeping large animals like cattle. This is supported by Bravo-Baumann (2000) who suggests that men have control over large animals, whereas women tend to own only small livestock and poultry.

Perceived causes of losing livestock to road accident

According to table 3, non-confinement of animals was perceived as the most important cause of road accident and ranked 1st. As widely observed in the study area domestic animals were allowed to move around freely within and around the communities. It is common sight to see especially goats moving across the roads, lying on road shoulders or even on the roadway in the area.

Table 3: Distribution of respondents based on their perceived causes of livestock involvement in road accident

Variables	Mean	Rank
Non-confinement of animals	4.23	1 st
Lack of speed breakers on the road	4.08	2 nd
High cost of feed and feed ingredients	3.95	3 rd
Poor access to credit facility	3.87	4 th
High cost of procuring confinements	3.76	5 th
Animals move out of confinement	3.54	6 th
Poor access to relevant information on livestock management	2.75	7 th
Poor visibility due to bad weather condition	2.45	8 th
Lack/poor road signs	2.15	9 th

Source: Field survey, 2012

Table 3 further showed that, lack of speed breakers on the road ranked 2nd. Speed breakers which are expected to help reduce the speed of vehicles moving through the communities are only available in a few of the villages. Thus, vehicles move through the communities at high speed which increases the possibility of collision with domestic animals. Poor access to credit facility is ranked 3rd. This is not surprising because of the high rural poverty rate in Nigeria put at 63.8% (National Bureau of Statistics (NBS), 2007). It is difficult for the farmers to provide adequate housing and feeding for their livestock. Many of the respondents believe that, access to credit will allow them to take proper care of their animals. Other perceived causes of road accidents were high cost of feed and feed ingredients, high cost of procuring confinements, animals moving out of the confinements, poor access to information on livestock management, poor visibility due to bad weather condition and lack or poor road signs.

Coping strategy against losing livestock to road accident

Table 4: Distribution according to coping strategies adopted by respondents

Strategies used by farmers to cope with road accident	Freq. (N)	Percentage (%)
Reduction of existing stock	82	68.3
Adoption of semi-intensive livestock management	80	66.7
Putting planks on the road to reduce speed	75	62.5
Adoption of mixed farming	68	56.7
Offering prayers to appease God	66	55.0
Total	MR	MR

Source: Field survey 2012

Table 4 showed multiple responses of respondents on coping strategies against road accident in which 68.3% of them adopted reduction of existing stock, 66.7% adopted semi-intensive livestock management, 62.5% of them indicated putting planks across the road, 56.7% of them used adoption of mixed farming while offering of prayers to appease God was opted for by 55.0% of the respondents as a coping strategy. However, some of the coping strategies adopted by the respondents appeared to be counter-productive and may pose a challenge to the original intention of the rural women which essentially revolves around sustainable livestock production.

Test of Hypothesis

Ho: There is no significant relationship between respondent’s socio economic characteristics and their perception on the causes of livestock involvement in road accident.

Table 5: Chi-square distribution of significant relationship between selected socio-economic characteristics of rural women and their perception on the causes of livestock involvement in road accident.

Variables	X ² _{Cal}	df	Critical value	Decision
Age	11.133**	6	0.00	Reject
Marital status	1.159	3	6.18	Accept
Religion	39.300	4	49.07	Accept
Educational status	1.515**	5	0.00	Reject
Occupation	1.317	5	7.11	Accept
Years of experience	31.495**	5	0.00	Reject
Average monthly income	1.999	3	2.76	Accept

** Significant at 0.05 level

Source: Computed from field data, 2012

As indicated in Table 5, significant relationship was found between respondents’ age, educational status and years of experience in livestock production and their perception of causes of livestock involvement in road accident, thus, the null hypothesis was rejected. However, Table 5 also showed that respondents’ marital status, religion, primary occupation and average monthly income were not significantly related to their perception on the causes of livestock involvement in road accident, thus, the null hypothesis was accepted.

CONCLUSION AND RECOMMENDATIONS

The study concluded that production efforts of resource-poor-rural-women-livestock-farmers were threatened essentially by incessant loss of livestock to road accident due to non-confinement of animals. These losses could have accounted for low income level of the women farmers in the study area. This situation has therefore frustrated women farmers to diversify production, reduce stocking to minimize losses and adopt other measures that are capable of undermining their initial production plan.

The study therefore recommends the construction of speed-breakers and provision of road signs on all the high-ways that transverse the rural communities in Oyo State in particular and Nigeria

in general, in order to protect this important source of livelihood activity of the rural women. Government should also assist the rural women through provision of effective “livestock-production-based-extension-service” to allow for more intensive system of livestock management, capable of reducing loss of stock to road accident.

Governments at different levels should also make and enforce laws to regulate speed of vehicles when moving through settlements along the highways. This will reduce the possibility of collision with livestock along the roads. Provision of credit facilities specifically directed at rural women groups would also help them adopt modern livestock management techniques. This will ensure improved feeding and ensure that most of the animals are properly confined. It will also, help minimise financial stress and drudgery occasioned by the loss of their livestock to road accident.

REFERENCES

- Anon, J. E. (2004). Realizing the promise and potentials of African agriculture. *Inter Academy council*, 267pp.
- Anon, J. E. (2006). Opening address by Mallam Adamu Bello – Nigerian Federal Ministry of agriculture (1999 –2007), at the **5th Nigerian economic Summit Group** (NESG), Abuja, October, 2006.
- Ayoade, J. A; Ibrahim, H. I and Ibrahim, H. Y. (2009). Analysis of women involvement in livestock production in Lafia area of Nasarawa State, Nigeria. *Livestock Research for Rural Development* 21 (12).
- Bravo-Baumann, H. (2000). ‘Gender and Livestock: Capitalization of Experiences on Livestock Projects and Gender’ Swiss. *Agency for Development and Cooperation*, Bern.
- Federal Republic of Nigeria, Official Gazette (2009). Legal Notice on Publication of 2006 Census Final Results. Federal Government Printer. Abuja
- Lunney, D; Munn A. And Meikle, W., (2008). Too Close for Comfort: Contentious Issues in Human-Wildlife Encounters. Royal Zoological Society of New South Wales, Mosman, NSW, Australia. Cited in: D. Ramp & E. Roger, (no date). Frequency of Animal – Vehicle Collision in NSW. *School of Biological, Earth & Environmental Sciences*, University of New South Wales, Sydney 2052 Australia.
- National Bureau of statistics (2007). *Nigerian Poverty Assessment (Hamonised)*. National Bureau of Statistics, Abuja.
- Oluwafemi, R. A., Ilemobade, A. A and Laseinde, E. A. O (2001). Study of Tsetse fly and bovine trypanosomosis in the Biological control of tsetse fly project area in Lafia Local Government of Nasarawa State, Nigeria. An unpublished **Masters Degree Thesis Report**, Federal University of Technology, Akure Ondo State, July 2001. 165.
- Rahman, S. A. and Haruna, I. M. (1999). Determinants of Women Economy Contribution to the Farm Sector in Nasarawa State, Nigeria. A Paper Presented at the **National Workshop of Society for International Development** held at Institute of Administration, Ahmadu Bello University, Zaria, Nigeria.
- Thornton, P; Kruska, R. L; Henninger, N; Kristjanson, P. M; Reid, R. S; Robinson, T. P. (2003). Locating Poor Livestock Keepers at the Global LEVEL for research and Development Targeting. *Land Use Policy* 20(4):311–322.