

## Assessment of rural dwellers' involvement in livestock farming as a means of livelihood in Afijio Local Government Area of Oyo State

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### Abstract

*The study was designed to investigate the involvement of the rural dwellers in livestock farming as a means of livelihood in Afijio Local Government area of Oyo State. Data were collected with the aid of well constructed questionnaire distributed to respondents selected using a multistage sampling technique. Data collected were subjected to descriptive analysis; Chi-square was used to determine the relationship between socio-economic factors and their level of involvement in livestock farming as a means of livelihood. Pearson Product Moment Correlation was used to examine the relationship between constraints and benefits of livestock farming to the livelihood of the respondents. The result of the study shows that majority of the respondents (59.8%) were male, Married (63.2%) with minimal of primary school education (35.9%). The analysis of the data reveals that most of the respondents in the study area are involved in livestock farming (60.7%) and mixed farming (85.5%) in most of the time. On the types of livestock, majority of them are into goat and poultry production. This study concludes that most of the respondents in the study area are already into livestock farming but at backyard small holder levels. It is therefore recommended that the rural dwellers should improved in their level of involvement in livestock farming through education and provision of necessary input by the concerned stakeholders.*

**keywords:** Livelihood, livestock, rural dwellers, income

### Introduction

Low-income and poverty are major challenges confronting the rural dwellers. In response to these, smallholders have developed multiple strategies for risk management and coping with poverty. According to Diao *et al.* (2006) majority (60-70 percent) of Africa's population live in rural areas where poverty and deprivation are most severe. Since almost all rural households depend directly or indirectly on agriculture (in the area of small scale farming), and given the large contribution of this sector to the overall economy, it might seem obvious that agriculture should be a key component of growth and development.

In 2006, the government approved a National Livestock Policy based on the promise that the Livestock Industry has an

important role to play in building a strong national economy and in the process, reducing inequalities among Nigerians by increasing their incomes and employment opportunities (URT, 2006). The policy also recognizes that apart from contributing to GDP, the livestock sector has a role to play in i) ensuring food security, ii) providing households with employment, income, and a store of value and investment opportunity, iii) providing draught power and manure for sustainable agriculture, and iv) fulfilling cultural roles.

Livestock farming represents the only way by which the large parts of natural vegetation can be converted into economic products. Livestock products play an important role in export earnings. Animal husbandry mostly provides subsidiary means of livelihood to the farmer as

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livestock rearing is an integral part of agriculture. Its share in gross state domestic product of agriculture sector during 2009-10 was about 7.8 per cent (Anonymous 2011).

Animals are essential asset to the rural poor, both those directly engaged in agricultural production and poor non-farm rural households who rely on local production for affordable nutrition. In the West African context, livestock dependence is remarkably high. Large arid expanses in this region are best suited to livestock-oriented agricultural production, where extensive land use is required to sustain populations and mobility has historically been important for coping with climatic variability (Adeyeye, 2001).

The importance of livestock to smallholder livelihoods around the world is well understood and will continue to play a key role in farming system even in the future. To date, research in the livestock production system emphasized much on its production parameters and there is a paucity of information on its contribution to the livelihood of farmers. In view of this, the present study was taken up with the aim of assessing the involvement of livestock farming as a means of livelihood among rural dwellers in Afijio Local Government Area of Oyo State.

This study generally assessed the rural dwellers' involvement in livestock farming as a means of livelihood in Afijio local Government Area of Oyo state. However we specifically assessed the socio-economic characteristics of the respondents in the study area, ascertain the livelihood of the dwellers in the study area, determined the level of involvement in livestock farming as a means of livelihood in the study area, assessed the kind of livestock farming adopted as means of livelihood in the study area, assessed the benefits derived

from livestock farming to the livelihood of rural dwellers and also examined the constraints faced by rural dwellers with respect to livestock farming as a means of livelihood.

### **Materials and methods**

This study was carried out in Afijio Local Government area of Oyo state with administrative headquarters located at Jobele. It is located within Latitude  $7^{\circ}47'\Delta N$  of the equator and Longitude  $3^{\circ}56'\Delta E$  of the Greenwich Meridian and falls in the rainforest zone of Nigeria.

The population of this study consisted of rural dwellers in Afijio Local Government Area of Oyo state. A multistage sampling technique was employed in the selection of the representative dwellers used for this study. In the first stage, four wards out of the ten wards in the local government were purposively selected due to the level of livestock farming activities in those areas. The second stage involved the random selection of three villages from each selected ward viz; Agunpopo, Ilu Aje, and Idi-Iroko in Iminni; Alausa, Ayetoro and Aba Pastor in Ilora III; Idi-Orupa, Araromi and Gaa-Ajegunle in Awe II, Aba-Oje, Akinola, Akinwande in Iware, while the third stage involved the selection of dwellers based on the probability proportionate to size of the rural dwellers in the communities. A working list of rural dwellers was obtained from the Local Government Secretariat at Jobele. Structured questionnaire was used to gather data. Questionnaire was used because it guarantees anonymity, thereby increasing the chance of getting true information. A total of 138 questionnaires were administered of which 117 were retrieved. Data collected were subjected to descriptive analysis. Chi-square was used to assess association between socio-economic

factors and their level of involvement in livestock farming as a means of livelihood. Pearson Product Moment Correlation was used to examine the relationship between constraints and benefits derived from livestock farming to their livelihood.

Chi-square model used is expressed below:

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

Where:

$\chi$  = chi-square

O = the frequencies observed

E = the expected frequencies

= summation of frequencies

Pearson Product Moment Correlation model used is expressed below.

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n \sum y^2 - (\sum x)^2][n \sum x^2 - (\sum y)^2]}}$$

where:

r = Pearson correlation coefficient

x = Values in first set of data

y = Values in second set of data

n = Total number of values

## Results and Discussion

Results in Table 1 show that more males (59.8%) were involved in livestock production than females (40.2%). This finding is similar to report of Ajala (2005), that although the role of women in livelihood activities is very important, majority of the respondents were male. This may also be due to the perceived believe that livestock farming demands much physical energy, hence females try to avoid it as much as possible. However it is important to educate the women on the need to go into the livestock farming as most of the family responsibilities usually rest on them. In terms of age distribution of the respondents, majority of them were in their

economically active ages, (mean = 48 years). This implied that the respondents will be active based on their ages and will have ability to cope with day to day activities on the farm. This finding agrees with Salimonu (2005) who also reported a mean age of 48 years for farmers in Osun state.

The result also shows that 63.2% were married, 5.1% were single, 6.0% were divorced; 7.7% of the respondents were widow while 17.9 were widower. According to Akinbile (2007) marriage confers responsibility. This implies that most of the respondents who are married will need to cater for and be responsible for the needs of their household, so farming and other diversified occupations serve as their livelihood activities (Aluko, 2011).

The result further shows that majority of the respondents in the study area had at least primary education (35.9%). This is a reasonable level of literacy among a typical Nigerian rural dwellers but higher education is important as this is likely to lead to quick access and adoption of new innovations and would immensely influence their income. Low level of educational attainment according to Adams (2002) will limit respondents' access of information which might be of great assistance to them especially in the adoption of new farming system, rearing methods, processing techniques and exploitation of market opportunities.

The respondents were dominated by Yoruba people (83.9%) this may be because the study area is located in Yoruba region. Meanwhile majority of the respondents (52.1%) had at least 10-15years of experience. This will have positive effect on their farming and rearing skill and income because the more their experience, the more their farming efficiency.

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**Table 1: Socio-Economic Distribution of the Respondents**

Variable	Frequency	Percentage
Sex		
Male	70	59.8
Female	47	40.2
Total	117	100.0
Age (years)		
20-29	5	4.3
30-39	13	11.1
40-49	27	23.1
50-59	47	40.2
60years and above	25	21.7
Total	117	100.0
Marital status		
Single	6	5.1
Married	74	63.2
Divorced	7	6.0
Widow	9	7.7
Widower	21	17.9
Total	117	100.0
Education		
No formal education	42	35.9
Primary six certificate	42	35.9
Secondary school	23	19.7
Tertiary institution (ND, NCE, HND)	7	6.0
Tertiary institution (BSc.)	3	2.6
Total	117	100.0
Tribe		
Yoruba	98	83.9
Igbo	1	0.9
Hausa/Fulani	18	15.4
Total	117	100.0
Year of experience		
Less than 1	1	0.9
2-5	15	12.8
10-15	61	52.1
Above 15years	40	34.2
Total	117	100.0

Source: field survey, 2016

**Table 2: Respondents' primary means of livelihood**

S/N	Means of livelihood	Yes	No	Rank
i.	Trading	29.9	70.1	6 <sup>th</sup>
ii.	Crop farming alone	6.8	93.2	13 <sup>th</sup>
iii.	Livestock rearing	60.7	39.3	2 <sup>nd</sup>
iv.	Mixed farming	85.5	14.5	1 <sup>st</sup>
v.	Tailoring	11.1	88.9	11 <sup>th</sup>
vi.	Livestock marketing	19.7	80.3	9 <sup>th</sup>
vii.	Palm oil processing	58.1	41.9	3 <sup>rd</sup>
viii.	Yam flour processing	47.0	53.0	4 <sup>th</sup>
ix.	Garri processing	44.4	55.6	5 <sup>th</sup>
x.	Fish processing	13.7	86.3	10 <sup>th</sup>
xi.	Civil service	11.1	88.9	11 <sup>th</sup>
xii.	Artisan	23.1	76.9	7 <sup>th</sup>
xiii.	Hunting	21.4	78.6	8 <sup>th</sup>

Source: Field Survey, 2016

Table 2 presents the various means of livelihood of the respondents. The study showed that majority (85.5%) of the respondents were involved in mixed farming, while the other occupations like trading (29.9%), palm oil processing, (58.1%), garri processing (44.4%), civil service (11.1%), and artisans (23.1%) among others, were practiced by the respondents. This implied that the main

source of livelihood for majority of the respondents is the combination of crop and livestock farming; it also implied that the rural dwellers participate in other income generating activities as means of increasing their income and improving on their access to food. This finding corroborates the finding of Sodiya (2005) who reported that majority of livestock farmers are also growing crops as their main means of livelihood.

**Table 3: Types of livestock farming in the study area**

S/N	Livestock farming	All the times	Sometimes	Never	Rank
i.	Cattle rearing	17.1	8.5	74.4	4 <sup>th</sup>
ii.	Goat production	94.9	3.4	1.7	1 <sup>st</sup>
iii.	Piggery	6.8	47.0	46.2	5 <sup>th</sup>
iv.	Fish farming	5.1	10.3	84.6	7 <sup>th</sup>
v.	Poultry	84.6	6.0	9.4	2 <sup>nd</sup>
vi.	Rabbit production	6.0	11.1	82.9	6 <sup>th</sup>
vii.	Sheep rearing	62.9	24.8	6.0	3 <sup>rd</sup>

Source: Field Survey, 2016.

Table 3 above shows that majority of the respondents at all the times were involved in goats and poultry production (94.9% and 84.6%) respectively as ranked first and second. Goats are the most common sights within many rural localities in Southern Nigerian. Ajala (2004) reported earlier that small ruminants form an integral part of the cultural life and farming system of Nigerian's peasantry. Further, 62.9% and 17.1% of the respondents were into sheep and cattle rearing respectively as ranked third and fourth. The low percentage of dwellers rearing cattle alone could be attributed to the ecological problem which makes the area prone to trypanosomiasis, goat has been reported to be resistant to trypanosomiasis attack (Oladele and

Adenegan, 1998).

Meanwhile, 6.8%, 6.0% and 5.1% of the respondents at all the times venture into piggery, rabbit production and fish farming respectively. This implies that most of the respondents are goat and poultry producers. The general implication of these findings is that respondents in the study area were mainly backyard livestock farmers. This showed that majority of these respondents were engaged in livestock production as complementary to crop farming, which is the primary occupation to most of them. This finding is in agreement with that of Pollot and Wilson (2009) who reported that livestock production are favoured by small scale farmers because low capital are required especially in the rural communities.

**Table 4: Level of Involvement in livestock farming**

Level of Involvement	Frequency	Percentage
Low	44	37.6
Average	11	9.4
High	62	53.0
Total	177	100.0

Source: Field Survey, 2016.

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Table 4 above shows the respondents' level of involvement in livestock farming in the study area and the result shows that 53.0% of the respondents were highly involved in

livestock farming. This was in agreement with the findings of Charray *et al.*, (1992), who reported majority of rural dwellers in Africa to keep small groups of livestock.

**Table 5: benefit derived from livestock farming**

S/N	Benefits	High	Moderate	Low	No benefit derived	Rank
i.	Generating additional income	98.3	0.9	0.9	0.0	1 <sup>st</sup>
ii.	Body nourishment	97.4	1.7	0.9	0.0	2 <sup>nd</sup>
iii.	Nutrient to the farm soil	57.3	16.2	15.4	11.1	9 <sup>th</sup>
iv.	Generating employment	77.8	15.4	5.1	1.7	7 <sup>th</sup>
v.	Source of food	87.2	9.4	1.7	1.7	3 <sup>rd</sup>
vi.	Security for uncertainty	75.2	18.8	2.6	3.4	8 <sup>th</sup>
vii.	Proper weed management	45.3	14.5	21.4	18.8	10 <sup>th</sup>
viii.	Efficiency of the household and farm system	78.6	17.9	0.9	2.6	6 <sup>th</sup>
ix.	Assurance of food security	84.6	13.7	1.7	0.0	5 <sup>th</sup>
x.	Solution to other family problems	87.2	10.3	0.9	1.7	3 <sup>rd</sup>
xi.	Gift	85.5	10.3	3.4	0.9	4 <sup>th</sup>

Source: Field Survey, 2016.

Table 4 above shows the contribution of livestock farming to livelihood of the respondents. Additional income is generated from livestock farming by the respondents in the study area as testified by 98.3% and was ranked first. At farm level, the importance of livestock as additional source of income and the actual sources of income vary across ecological zones and production systems, which in turn determine the species raised as well as the products and service generation. Cash can be generated from sales of livestock products regularly (milk, eggs) or periodically (live animals, wool, meat, hides) or from services (draught, transport). Dairy product is the most regular income generator as reported by the respondents. This is in accordance with Kulkarni *et al.* (1989) and Saini *et al.* (1989) who stated that Livestock development has been shown to increase income, consumption and repayment capacity in India. The livestock contributes to high body nourishment to 97.3% of the respondents

which can make them to have good economic condition and hence they might retain adequate quantity of milk and meat for their family consumption due to their knowledge of its nutritional value.

Also, 57.3% of the respondents stated the livestock convert crop residues and fodder/ forage to soil nutrients through manure. Application of manure helps to improve soil texture and decompose litter more easily. It also contributes to increased productivity and is greatly acknowledged in the science that organic manure adds foundation to the sustainable and eco-friendly farming. 77.8% of the respondents felt high employment generation from livestock farming. Increased production implies higher employment. Livestock rearing is labour intensive activity and it requires daily care and regular performance of certain related activities. Goats, sheep and poultry are an important source of part-time work, particularly for landless women and children. The work is in accordance with the findings of (Prasad *et al.*, 2001; Rao *et al.*,

2002).

Moreover, 87.2% and 84.6% of the respondents observed livestock farming as a high source of food and assurance of food security respectively. Product such as milk, meat and egg are food which are relatively high in protein but are also source of energy, vitamins and minerals. Although the staple foods of most animal-keepers are cereals, they generally place high value on food from livestock. Livestock and their products are also exchanged or sold to obtain crop products. In this way livestock food becomes available on local markets as well as on market further afield. 75.2% of

the respondent's families used livestock for meeting uncertainties. Availing credit from banks would be difficult for the farmers due to the procedures involved and in sudden need for the money, farmers might have felt it easier to rely on the sale of livestock. Livestock farming proffers solution to other family problems, serves as gift and highly increase the efficiency of household, farm system and proper weed management as testified to by 87.2%, 85.5%, 78.6% and 45.3% respectively. This result is in line with that of Nagaratna *et al.* (2013) on assessing the benefit of livestock to the livelihood of farmers of Western Maharashtra.

**Table 6: Constraints facing Livestock Farming**

S/N	Constraints	Major constraint	Minor constraint	Not a constraint	Rank
i.	Inadequate capital	55.6	39.3	5.1	4 <sup>th</sup>
ii.	Rampant disease infestation	46.2	49.6	4.3	8 <sup>th</sup>
iii.	Low demand of livestock products	46.2	43.6	10.3	8 <sup>th</sup>
iv.	Inadequate market for the product	48.7	41.9	9.4	5 <sup>th</sup>
v.	High mortality rate	47.9	36.8	15.4	6 <sup>th</sup>
vi.	Inadequate access to vaccination/medication	2.6	9.4	88.0	12 <sup>th</sup>
vii.	Inadequate technical know-how	42.7	21.4	35.9	10 <sup>th</sup>
viii.	Low or fluctuating price	53.8	35.0	11.1	5 <sup>th</sup>
ix.	Inadequate space	41.9	30.8	27.4	11 <sup>th</sup>
x.	Damage to farm crops	79.5	16.2	4.3	1 <sup>st</sup>
xi.	Inadequate quality feed	59.8	35.9	4.3	2 <sup>nd</sup>
xii.	Theft	58.1	38.5	3.4	3 <sup>rd</sup>
xiii.	Predator	47.9	47.9	4.3	6 <sup>th</sup>

Source: Field Survey, 2016.

An investigation of the constraints encountered by the respondents yielded the data contained in Table 6. Thirteen constraints identified during the field survey were presented on a 3-point Likert-type scale. The result shows that the respondents' major constraint was the damage done by their livestock to crop plants which was ranked first. The fact that the impact of livestock on crop production is serious goes to confirm the findings of Sulaiman and Ja'afar-Furo (2010) and Williams (1998) which indicated that crop farmers incurred higher losses from conflicts

that results from livestock grazing on crops. Also 59.8%, 58.1%, 55.6%, 48.7%, 47.9%, and 46.2% of the respondents testified to the fact that inadequate quality feed, theft, inadequate capital, inadequate market for product, high mortality rate and predators and rampant disease infestation respectively were the major constraints facing livestock farming in the study area as ranked 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup> and 8<sup>th</sup> respectively. Medication/vaccination is not a constraint as reported by the respondents as veterinarians are always available. This implies that the production potential of the

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Nigerian livestock would appear to be high; they experience high mortality from diseases, often aggravated by malnutrition and poor management (Akerejola *et al.*, 1979). In heavily cropped areas, nutrition has been shown to be a major constraint during the raining season when animals have to be restricted to avoid damage to

crops.

**Hypotheses Testing**

Hypothesis 1 ( $H_{01}$ ): there is no significant relationship between personal characteristics of the respondents and their level of involvement in livestock farming as a means of livelihood.

**Table 7: Cross tabulation of Personal characteristics of the Respondents and their level of involvement in livestock farming as a means of livelihood**

Variables	X <sup>2</sup> -value	p-value	Decision
Sex	3.337	0.189	NS
Age	5.315	0.723	NS
Marital Status	10.815	0.212	NS
Education	7.246	0.510	NS
Tribe	9.823	0.044*	S
Experience	5.727	0.455	NS

Source: field survey, 2016.

Ns – Not significant at 5% level of probability

\* - Significant at 5% level of probability

The result of hypothesis showed non-significant ( $p > 0.05$ ) relationships between gender ( $X^2 = 3.337$ ,  $p = 0.189$ ) age ( $X^2 = 5.315$ ,  $p = 0.723$ ), marital status ( $X^2 = 10.815$ ,  $p = 0.212$ ), educational status ( $X^2 = 7.246$ ,  $p = 0.510$ ), experience ( $X^2 = 5.727$ ,  $p = 0.455$ ) and level of involvement in livestock farming as a means of livelihood. This implies that the gender, age, marital status, educational status and experience of the respondents had no influence on the level of involvement in livestock farming as a means of livelihood which could be because most of the respondents rear these

animals as an alternative to their crop farming. Nevertheless, the result further showed significant ( $p < 0.05$ ) relationship between tribe ( $X^2 = 9.823$ ,  $p = 0.044$ ) and involvement in livestock farming as a means of livelihood. This implies that tribe influences the level of involvement in livestock farming in the study area. Therefore,  $H_{01}$  is rejected while  $H_{11}$  is accepted. This result corroborates that of Nagaratna *et al.* (2013).

Hypothesis 2 ( $H_{02}$ ): there is no significant relationship between Contribution of Livestock farming to livelihood and Constraints faced by the Respondents.

**Table 8: Pearson Product Moment Correlation (PPMC) Analysis of benefit derived from livestock farming and Constraints faced by the Respondents**

Variables	p-value	Correlation	Decision
Benefits derived from Livestock farming to livelihood	0.0001	-0.424**	S
vs Constraint facing livestock farming			

Source: Field Survey, 2016.

\*\* Significant at 0.01 level (2-tailed)



Table 8 above shows the relationship between the benefits derived from livestock farming to livelihood and constraints facing it. The table revealed that there is a relationship between benefits derived from livestock farming to livelihood and its constraints (Pearson's  $p$ -value = 0.0001,  $p < 0.01$ ). However, this relationship is not a very strong one and is negative. This implies that the constraints have negative effects on the benefits from livestock farming to livelihood of the rural dwellers in the study area (i.e. the higher the constraints, the lower the benefits derived from livestock to their livelihood). Nevertheless,  $H_{02}$  is rejected while  $H_{12}$  is accepted. This research is in accordance with Adeshinwa *et al.*, (2004), on socio-economic characteristics of ruminant livestock farmers and their constraints in some parts of southwestern Nigeria

### Conclusion and Recommendation

Livestock is an essential asset to the rural poor, both to those directly engaged in agricultural production and to poor non-farm rural households who rely on local production for affordable nutrition. Animal production confers many economic advantages on small farm operations, and in an era of rising urban incomes and improving market access, animal products have increasing potential as marketable commodities. If small farmers can more effectively participate in local regional, and even larger food markets, national growth can contribute significantly to livelihoods of the world's poor rural majority. This study therefore focused on establishing the benefits of livestock farming as practiced in the study area towards the development of the people in the area in terms of their capacity to generate adequate employment, income and reduced vulnerability, lessening poverty and improved wellbeing.

Based on the findings of this study, it was concluded that rural married men of economic age were highly involved in livestock farming as their means of livelihood. Increase in household income, high body nourishment, source of food, solution to other family problems, gift, high efficiency of household and farm, assurance of food security and employment generation were the major benefits of livestock farming to their livelihood as claimed by the respondents. The major constraints facing livestock farming in the study area were, damage to crop farms, inadequate quality feed, theft, inadequate capital, inadequate market for product, high mortality rate and predators and rampant disease infestation. The study revealed no significant ( $p > 0.05$ ) relationship between some selected socioeconomic characteristic variables and level of involvement in livestock farming apart from tribe ( $p < 0.05$ ) that was found to be significant; there is negative and significant relationship between benefits derived from livestock farming to livelihood and its perceived constraints ( $p < 0.01$ ).

Efforts at making livestock enterprise information available to rural people should be intensified at all levels in order to improve their enterprise performance as well as food security outcome

Developmental organizations should endeavour to ascertain relevant constraints to livestock entrepreneurs and make efforts to address them in order to improve their activities and enhance the food security outcome.

Farmers should form cooperative society in order to access loan so as to combat their capital input problems

Livestock programme and productivity based on production technologies should be disseminated in order to make livestock production environmentally compatible in

the study area.

## References

- Adams, R. H. 2002.** Non-Farm Income, Land and Inequality in Rural Egypt. *Economic Development and Cultural Change*, 50(2), Pp. 339-363.
- Adesehinwa, A. O. K., Okunola, J. O. and Adewumi, M. K. 2004.** Socio-economic Characteristics of Ruminant Livestock Farmers and their Constraints in some parts of Southwestern Nigeria. *Journal of Livestock for Rural Development* Vol 16, No.8, Pp. 1-10.
- Adeyeye, V. A. 2001.** Food and nutrition survey in Nigeria. 1st ed., University of Ibadan
- Ajala, M. K. 2005.** Household decision-making in the Production of Small Ruminants in Giwa Local Government Area of Kaduna State of Nigeria. In: Proceedings of the 29<sup>th</sup> Annual Conference of the Nigerian Society of Animal Production. Pp. 399-402
- Akerejola, O. O., Schillhorn van Veen, T. W. and Njoku, C. O. 1979.** Ovine and Caprine diseases in Nigeria: A review of economic losses. *Bulletin of Animal Health and Production in Africa*, Vol. 27, Pp.65-70
- Akinbile, L. 2007.** Social Impact of Limestone Exploitation in Yewa North, Local Government of Ogun State. *Pakistan Journal of Social Sciences* 1:107-111.
- Aluko, J. O. 2011.** Effect of Displacement on Livelihood Activities of Rural dwellers
- Anonymous 2011.** *Economic Survey of Maharashtra*, Directorate of Economics and Statistics. Planning Department, Government of Maharashtra, Mumbai, P.91.
- Charray, J., Humbert, J. M. and Levif, J. 1992.** Manual of Sheep production in the humid tropics of Africa. Wallingford: CAB International. Pp.187
- Diao, X., Hazell, P., Resnick, D. and Thurlow, J. 2006.** The Role of Agriculture in Development: Implications for Sub-Saharan Africa. [http://www.ifpri.org/sites/default/files/publications/\\_dsgdp.pdf](http://www.ifpri.org/sites/default/files/publications/_dsgdp.pdf) Retrieved: October, 2015, Pp 8-19
- Kulkarni, G. N., Bhatta, R. and Kumar, N. K. 1989.** Integrated rural development programme in Bijapur: An evaluation of dairy scheme. *Social Change*, 5: 72-79.
- Nagaratna, B., Monica, D., Manjunath, L. and Doddamani, M. T. 2013.** Assessing the contribution of livestock to the livelihood of farmers of Western Maharashtra. *Journal of Human Ecology*, Vol. 41(2). Pp. 107-112.
- Oladele, O. I. and Adenegan, K. O. 1998.** Implications of small ruminant farmer's socio-economic characteristics for Extension services in Southwestern Nigeria. The Nigeria Livestock Industry in the 21<sup>st</sup> Century. Publication of Animal Science Association of Nigeria, Lagos, Nigeria. Pp.243-246
- Pollot, G. and Wilson, R. T. 2009.** Sheep and Goats for Diverse Products and Profits (Food and Agricultural Organisation), Rome.
- Prasad, R. M. V., Rao, G. N. and Krishna, J. V. 2001.** An analysis of milk production from buffaloes. *Journal of Veterinary*, 78: 257- 259. Press,

- Ibadan, Nigeria, pp. 35-39.
- Rao, S. V., N., Ramkumar S. and Woldie, K. 2002.** Dairy Farming by the Landless Women in Southern States of India. In: Livestock Services and the Poor. *Proceedings and Presentations of the International Workshop held at Bhubaneshwar, India*, Pp. 73-86.
- Saini A. S., Singh R. V. and Patel, R. K. 1989.** Credit management through dairying. *Financial Agriculture*, 21: 6-10.
- Salimonu, K. K. 2005.** Attitude to risk in resource allocation among food crop farmers in Osun State, Nigeria PhD thesis, Department of Agricultural Economics, University of Ibadan, Oyo State, Nigeria.
- Sodiya, A. 2005.** Assessment of Agricultural Extension Service, Availability and Need in Agro-pastoral production systems of Ogun State, Nigeria. Ph.D Thesis, Department of Agricultural Extension and Rural Development, University of Agriculture, Abeokuta pp 24-45
- Sulaiman, A. and Ja'afar-Furo, M. R. 2010.** Economic Effects of Farmer-grazier Conflicts in Nigeria: A case study of Bauchi State. *Trends of Agricultural economics*, Vol. 3. Pp. 147-157..
- United Republic of Tanzania, Bureau of Statistics 2006.** *Population Census Report*. Dares Salaam: Ministry of Planning.
- Williams, T. O. 1998.** Multiple use of common pool resources in Semi-Arid West Africa: A survey of existing practices and options for sustainable resources management. ODI National Research Perspectives, No. 38.

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