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Full Length Research Paper

The impact of livestock to community development in Ekiti Central Local Government

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Abstract

Livestock is an important source of food and income in rural areas for poor people. The present research study was conducted to estimate the impact of livestock to community development and poverty alleviation of people in Ekiti Central Local Government. A total of 200 livestock owners were selected using a multistage purposive sampling method for questionnaire interview. Descriptive and regression analyses were used to analyze anthropometrics data collected from 4 selected towns namely; Ado, Are, Afao and Ifaki Ekiti. Descriptive results indicated that 56.5% and 41.5% of the farmers kept livestock for home consumption and income generation. Benefits from livestock financially (63%), food (34%) and socially (3%). Regression analysis showed that there was significant effect of livestock production on income of livestock farmers. The limitation to four towns in the local government were due to scarcity of time, financial and other resources. Based on the results of this study, it is strongly suggested that livestock owners should look forward to the improvement of livestock production system in order to alleviate poverty in rural areas. The government policy loan scheme should also be implemented to assist livestock owners in order to reduce poverty in the rural areas.

Keywords: Community, Impact, livestock, poverty alleviation, Ekiti central LGA.

Target Audience: Livestock farmers; Animal Breeders; Scientists; Researchers.

1. INTRODUCTION

Agriculture has been the bed rock of successful economy in Africa and livestock play a very important role in socio-economic wellbeing of people who live in the rural areas. Africa for example, has an inventory of about 13.7 million cattle, 24.1 million sheep, 5.9 million goats and 1.6 million pigs and this show a potential in the livestock sector to flourish (Livestock Statistics, 2015). Presently, livestock is one of the fastest growing agricultural subsectors in developing countries. Its share of agricultural GDP is already 33 percent and is quickly increasing. Livestock production has also been an important livelihood strategy for many poor households in low-income countries. They can provide income; high-quality animal source foods, draft power, numerous socio-cultural benefits, and serve as a repository for stored wealth, among other functions (Herrero, 2013). Livestock can also play a key role in promoting household resilience and have ability to mitigate, adapt to, and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth (Barrett, 2014). Livestock rear-

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ing is a popular activity among rural households to meet their food and other demands. Other than food, livestock provides cash income (from the sale of dairy and by products), organic fertilizer, and the most important of all financial security during shocks to rural households and thus supporting their livelihoods. It also generates employment opportunities for a large population of the world.

The importance of livestock has been widely acknowledged in the literature for its multiple benefits at household, local, regional and national accounts (Ahmed, 2014; Luqman, 2014). Livestock management requires substantial amounts of time, labour and specialized activities in which both men and women of the household members involved. Among the household labour in livestock management, women play a crucial role by carrying out various livestock activities. However, the labours provided by women are mostly unpaid (Ahmed, 2014). Livestock management has always been perceived as the traditional responsibility of women. They generally, contribute more labour inputs in the activities of fodder cutting, water serving, animals' cleaning and their sheds, milking, and milk processing. Livestock are important in resource-poor communities because they provide tangible benefits such as cash income from animal sales, meat for home consumption, manure, skins, and fiber (Hassen, 2014). They are also a source of intangible benefits, e.g., savings, insurance, and for socio-cultural purposes (Tadesse, 2014). The growth of the livestock sub-sector is attributable to increasing local and regional demand for better human nutrition especially meat (MAAIF, 2011).

Livestock are important in supporting the livelihoods of poor farmers, consumers, traders and labourers throughout the developing world. The greatest impact of livestock in sustainable development designed to help the poor is enhancement of livestock-production systems. Animal diseases are crucial constraints in this: the animals of poor people are particularly vulnerable to disease because of the expense, absence or unsuitability of animal-health and production inputs (FAO, 2010). Livestock production is an important part of the national economy and an integral component of state and local economies. The production of livestock, as well as other commodities, causes ripple effects throughout the economy in the form of employment; production in allied industries; taxes paid to local, state and federal governments; indirect impacts from purchases of input supplies; and induced impacts from household spending throughout the state. In order to improve livestock productivity and marketing, it is important to have in place appropriate intervention measures. This requires a good understanding of the characteristics of the livestock production systems (Assan, 2014). Moreover, it is important to have knowledge of the reasons why farmers keep livestock in order to improve their breeding, health and feeding interventions.

Nigeria is presently in recession and there has been incidence of extreme poverty and malnutrition in the country, livestock contribute directly to the economy through employment generation, increase in savings and investment, foreign exchange earnings, contribution to human food and nutrition. Livestock also contribute indirectly to food security by increasing crop output through providing manure, and serve as a buffer to mitigate the impact of fluctuations in crop production on the availability of food for human consumption, thereby stabilizing food supply. Despite its smaller output compared with that of staple crops, productivity and income growth in the livestock sector have strong income multiplier and poverty reduction impacts. In spite of all this, livestock production has not been taken seriously as part of the contributor to State and local government economy as it is supposed to be and this has led to the study.

Livestock policy can also assist and encompasses a broad set of regulations, laws, and initiatives designed to govern and manage the livestock industry. It involves addressing various aspects such as animal welfare, food safety, environmental sustainability, trade, and rural development. Livestock policy can play a crucial role in shaping the dynamics of rural economies, as livestock farming is often a central component of agricultural activities in rural areas (Scoones, 2019). Effective livestock policy not only ensures the sustainable management of livestock resources but also contributes to the socio-economic development of rural communities through job creation, income generation, and food security (Nugent and Butcher, 2018).

One important aspect of livestock policy is the implementation of animal welfare regulations aimed at ensuring the humane treatment and care of livestock animals. These regulations govern aspects such as housing conditions, transportation, slaughter practices, and veterinary care (Hemsworth *et al.*, 2015). By promoting animal welfare, livestock policy not only addresses ethical concerns but also enhances the productivity and quality of livestock products. Improved animal welfare can lead to better health and growth rates, ultimately benefiting farmers and consumers (Fraser and Weary, 2018). Moreover, adherence to animal welfare standards can enhance the reputation of livestock industries, facilitating access to domestic and international markets.

Livestock policy also encompasses food safety regulations to ensure the production of safe and wholesome meat, milk, and other animal products for human consumption. These regulations govern practices such as livestock feeding, medication use, and handling of animal products to prevent the spread of food-borne illnesses (Grace *et al*., 2017). Compliance with food safety standards not only protects public health but also maintains consumer confidence in livestock products. Inadequate food safety measures can result in disease out-

breaks and economic losses for both producers and consumers (World Bank, 2013).

There also tend to be variations in terms of benefits linked with gender depending on cultural norms regarding ownership and management responsibilities. Kristjanson *et al*.(2014) reported differences in how women benefit from livestock depending on gender roles. Njuki *et al.*(2011) also reported that women are likely to be engaged in commodities that generate lower revenues sold in informal markets than men. Men on the other hand have a high likelihood to control high revenue-generating commodities that are generally sold in formal markets.

Poverty is a situation where a person's resources, mainly material resources, are not sufficient to meet minimum needs including social participation (Joseph Rowntree Foundation, 2013). Livestock can make important contributions to sustainable rural development and alleviate poverty in the regions. Since livestock products are growing rapidly in developing countries, diversification into livestock productivity should form part of the strategy for poverty reduction and agricultural productivity growth and development (Otte *et al.,* 2012). Bamaiyi (2013) in his study opines that animal production is a very important sector of the economy of any nation and is crucial in ensuring food security. He further states that only an optimum animal production level will be able to help alleviate poverty, provide food security and meet other needs of such a growing population. Empirical evidence from developing countries suggests that livestock development has been an important route for the poor household to escape poverty (Birthel, 2008).

The objective of this paper is to determine the impact of livestock to community development and poverty alleviation of people in Ekiti Central local government. Ekiti State was chosen for this study because undernutrition and poverty are prevalent in the State. For example, the nationwide food consumption and nutrition survey conducted in 2004 indicated that the State is among the poorest in Nigeria in terms of prevalence of undernourishment and income poverty (NBS, 2006). Apart from this, there are no recent studies that have empirically analyzed the impact of livestock to community development and poverty alleviation of people in Ekiti Central local government. To achieve the objectives of this study, three main indicators was used; by taking anthropometric measurements of regression on the effect of livestock production on income of livestock farmers and means of alleviating poverty in the study area. Descriptive determinants of socioeconomic characteristics of livestock farmers in Ekiti Central Local Government; and the impact of livestock production in the study area.

2. MATERIALS AND METHODS

2.1 Description of the Study Area

The study was conducted in Southwest Nigeria. Nigeria lies on 10° 0' 0" N latitude and 8° 0' 0" E longitude. The state is located in South western part of the country, Ekiti State covers a land area of 6,353km square (2453sqmi) with a population estimated in 2005 to be 2,737,186. It enjoys tropical climate with two distinct seasons, these are rainy season (April to October) and dry season (November to March). Ekiti has a temperature range between 21 degrees Celsius and 28 degrees Celsius with high humidity, the South westerly wind and the North east trade which blows in the raining season and dry (harmattan) season respectively, the tropical forest exist in the South of Ekiti State while savannah occupies the Northern peripheries. Farming is a major source of livelihood to the people of the Southwest Nigeria. Traditional livestock rearing, especially small ruminants and poultry, is an important agricultural enterprise in these regions.

2.2 Data Collection

Sampling Techniques

Data were gathered by administering a structured questionnaire on livestock farmers in purposively selected area in Ekiti Central Local Government Area (LGA). These are Ado, Are, Afao and Ifaki Ekiti. The selection of these states was based on the fact that they had the highest number of farmers in Ekiti Central Local Government Area. Only farmers rearing small and large ruminants were targeted for the study. A total of 200 farmers were selected for this interview. The set of 200 questionnaires were distributed as follows: Ado, 80; Are, 40 and Afao, 40 and Ifaki, 40. Interview schedules were used to collect data on respondents' socio-economic characteristics, livestock diversity and numbers, breeds of livestock, management system, reasons for rearing, benefits of livestock, income from livestock sold, common diseases, symptoms and their treatments and output from livestock sold.

Study was quantitative and for the sake of data collection interview schedule was prepared as research instrument. After the validity and reliability assessment instrument was ready for the final data collection. Researcher personally conducted the face to face interviews. Livestock keepers were approached at their homes. In addition, observations and informal discussions were also carried out for the data validation. Collected data were analyzed by using appropriate statistical techniques.

2.3 Statistical Analysis

The collected data were entered in the Statistical Package for Social Sciences (SPSS version 20; 2014). The analytical tools used included descriptive statistics such as frequency tables and percentages. Regression analysis was carried out by using the STATA analytical software.

Limitations of the Study

The study was completely based on primary data sources. The present study was confined to study the role of livestock activity and its impact on poverty alleviation in rural areas in Ekiti central local government. It was limited

to four towns in the local government due to scarcity of time, financial and other resources; therefore, the study cannot be representative of the whole state due to small sample size also. However, the results of the study are applicable and can be generalized for the areas having similar backgrounds.

3. RESULTS

3.1 Descriptive statistics of selected households and impact of livestock to community

In the study areas, out of households surveyed (n = 200), about 84.0% of the farmers were female. Most respondents in the area (71.0%) had attained formal education: primary (25.0%), secondary (31.0%), college (7.5%) and Polytechnic/University (7.5%). Most of the respondents got their income from family support (27.5%) while only 3.0% pensioners regarded livestock keeping as the part of their livelihood activities. Out of the livestock types kept, goats were kept in biggest numbers (58.0%), on average range (1-10) as compared to other livestock. Goat herds were generally small. Indigenous breeds (WAD) were most common (48.5%) followed by Chicken (44.5%). They practised semi-intensive mostly (42.0%). There was no significant association between the towns and the proportion of goat herds.

3.2 Reasons for Keeping Goats

The important reasons for keeping livestock in the four towns are reported in **Figure 1**. A reasonable percentage of farmers (27.5%) indicated cash income from other sources like loans and gift, followed by farming (25.0%), artisan (23.5%). Many of the respondents in the study area considered livestock production as important. Irrespective of the towns, majority of the farmers kept goats for home consumption (56.5%), followed by income generation (41.5%).

3.3 Profits made from Livestock (year)

In Ado Ekiti, a high proportion of farmers (70%) made profits of #1 to #100,000 from livestock sold in a year, likewise 90% form Are; 82.5% from Afao and 72.5% from Ifaki Ekiti made the same amount from their sales **(Table 2).** In all the towns, 77.0% of the respondents made profits of #1 to #100,000 from livestock sold in a year.

3.4 Benefits of Livestock to the Community

Table 3 showed that majority of respondents Ado (96.2%); Are (50.0%); Afao (42.5%) and Ifaki (30.0%) respectively received financial benefits from livestock reared in that community followed by Ado (3.8%); Are (47.5%); Afao (55.0%) and Ifaki (60.0%) who benefited from livestock reared through food (consumption). In all the towns, 63.0% benefited financially from livestock while 34.0% consumed livestock (food).

The Ordinary Least Square (OLS) regression result in Table 4 shows that sex of livestock farmer, livestock number, and livestock management system are the significant variables having effect on income of livestock farmers in the study area. A detailed explanation of this regression result is presented below. It can be deduced from **Table 4** that; the sex of livestock farmer was negatively significant to the income of livestock farmer at a 1% statistical level of significance.

This implies that the male livestock farmers have a better income than their female counterpart, all things being equal. This may be attributed to the fact that livestock production is commonly associated with male gender who put in all their energy to ensure great income from the enterprise. The number of livestock kept by farmer was also found to be positively significant to the income of livestock farmer at 1% statistical level of significance. This means, the higher the number of livestock reared by farmer, the higher the income of the livestock farmer, all things being equal. This may be because livestock farmers with large number of livestock will be able to have large livestock production that can be sold to get huge money at the end of the production cycle. Table 4 further show that, the management system used by livestock farmer was negatively significant to the income of livestock farmer at a 10% statistical level of significance. This implies that livestock farmers practicing semi-intensive to intensive management system have a better income than those practicing extensive management systems, all things being equal. This may be attributed to the fact that; intensive management livestock production ensures proper care and management of livestock in order to enjoy high productivity which translates to increased income.

4. DISCUSSION

The present study revealed the impact of livestock and how poverty could be alleviated in Ekiti Central local government area of Ekiti State. The high literacy level, secondary education (31%) in the study area is strength in enhancing goat production, because literate communities are more likely to adopt and practice new technologies, which may enhance commercialization of enterprises (Cicek, 2008). Most of the farmers (41.0%) fell above 50 years of age. This could be attributed to the fact that tendering of the goats for example under tethering system, which was predominant in the area, requires less attention. So, it was easier for older people to manage with this system. The fact that the youth of 20-30 years were only 4.5% rearing livestock means that the enterprise is missing out on a more active group, who would enhance productivity and commercialization. From the study, female and literate respondents owned and sold more livestock (84.0%) compared to male and literate

Table 1: Socio-economic Characteristics of the Respondents (n=200).

Socioeconomic Characteristics	Frequencies	Percentages
Town		
Ado Ekiti	80	40.0
Are Ekiti	40	20.0
Afao Ekiti	40	20.0
Ifaki Ekiti	40	20.0
Age (in years)		
20-30	9	4.5
31 -40	35	17.5
41-50	74	37.0
≥ 50	82	41.0
Sex		
Male	32	16.0
Female	168	84.0
Marital Status		
Single	3	1.5
Married	167	83.5
Widow	30	15.0
Academic Qualifications		
None	58	29.0
Primary	50	25.0
Secondary	62	31.0
College/ Technical	15	7.5
Polytechnic/ University	15	7.5
Source of Income		
Pension	6	3.0
Farming	50	25.0
Trading	42	21.0
Artisan	47	23.5

respondents respectively (16.0%). This may imply that the importance of livestock as a source of income is more realized in female and literate respondents than in male counterpart. Therefore, female respondents are in a better position to commercialize the livestock enterprise. So, in order to have a greater impact in livestock farming, there is need to strengthen female in livestock production and marketing, since they involved in ownership, decision making and provision of labour. Besides, packages that specifically target illiterate communities can be designed in the dissemination of technologies. Most indigenous livestock were mainly acquired through purchases; other ways were gifts, dowry and exchange with food crops. Information on the benefits of livestock to farmers is key in the success of breeding, health and feeding interventions in the tropics (Tadesse, 2014).

In this study, majority of the respondents ranked home consumption as the most important reason for keeping goats followed by income generation. To a lesser extent, farmers also considered socio-cultural values as important. The findings of the present study disagreed with those of Hassen and Tesfaye (2014) in Ethiopia who reported cash income as the most important in goat farming followed by other tangible and intangible benefits. Income from goats is of utmost importance to sustain human nutrition and education for small-scale farmers (Tadesse, 2014). Livestock farmers provide food for their families and indirectly for the families of their employees apart from the fact that there are lots of food generated from livestock such as milk and meat from cattle, Eggs and meat from poultry, Meat from piggery, healthy meat from snail farming and fish. Jilivan (2014) also said cattle and poultry product provide 32% of the total food consumption in the US in 2012. Randolph (2007) indicated that livestock contribute one-third of the protein that people consume: poor people depend on animal-source

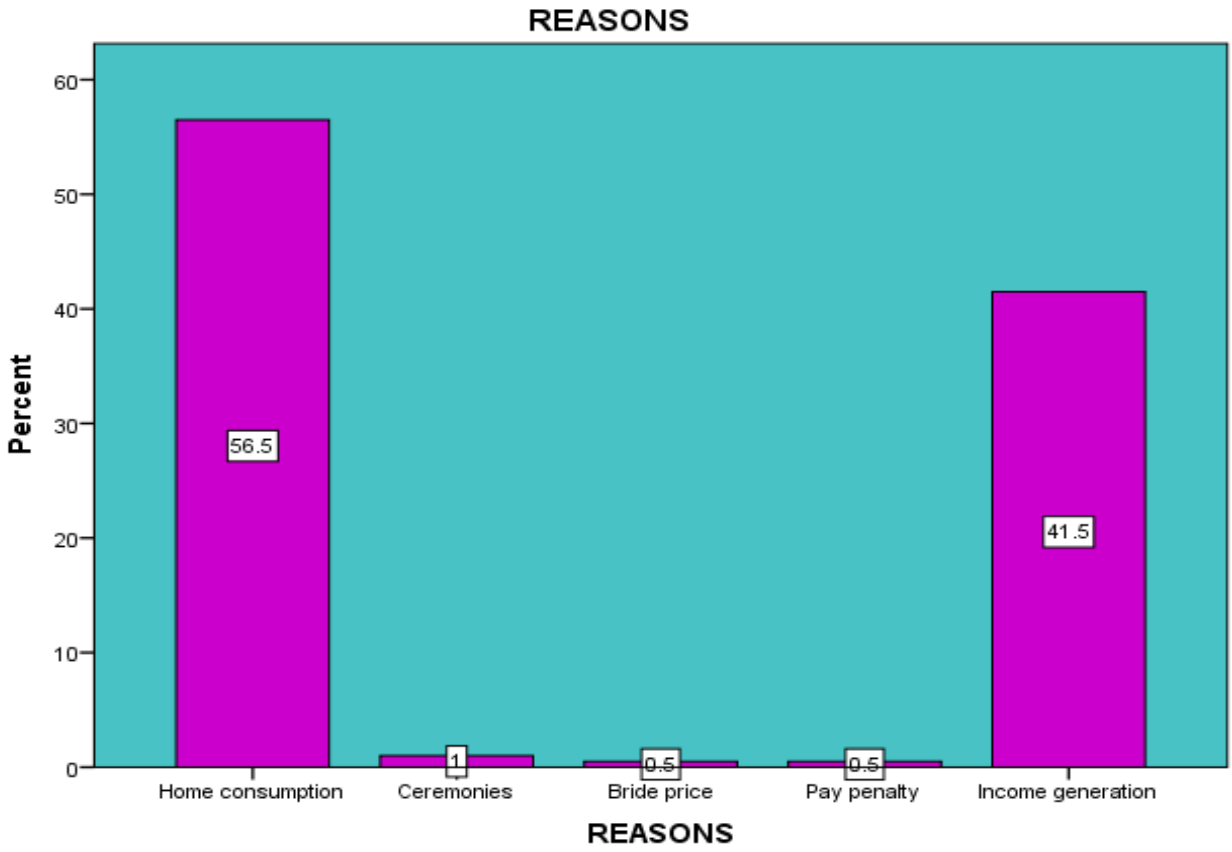

Table 2: Profits made from Livestock (year).

Profit/annum (#"000)	Ado n(%)	Are n(%)	Afao n(%)	Ifaki n(%)	Total	X^2	P
1-100	56(70.0)	36(90.0)	33(82.5)	29(72.5)	154(77.0)	13.98[a]	0.123
101-200	18(22.5)	4(10.0)	7(17.5)	7(17.5)	36(18.0)		
201-300	4(5.0)	0(0.0)	0(0.0)	1(2.5)	5(2.5)		
301-400	2(2.5)	0(0.0)	0(0.0)	3(7.5)	5(2.5)		
TOTAL	80(100)	40(100)	40(100)	40(100)	200(100)		

$p < 0.05$, no significant difference in the profits made by the respondents across towns by Chi-squared test.

food (especially dairy products) to ensure that their diets deliver the nutrients necessary for cognitive and physical development.

Most farmers (77%) made profit of #1-100,000 from livestock production per annum while only 2.5% made #300-400,000 from their sales. This implies that the farmers were earning low from livestock in a local community. Since most farmers owned small or medium herds (94.8%), few livestock and livestock products were available for sell. It is therefore important to build farmers' capacity to efficiently enhance livestock productivity thereby increasing income from livestock production. Various studies have shown that livestock is an important source of income for a large proportion of rural households (Semakula, 2010). In order to improve benefits from livestock production, it is important to understand the opportunities and challenges faced by farmers in the marketing of their products. The main option for selling of goats for example was at weekly markets. To a lesser extent, sales were made at home, shops and daily markets. Goats at weekly markets were sold to traders who acted as middlemen, which is in agree-

Table 3: Benefits of Livestock to the Community.

Benefits	Ado (n=80) %	Are (n=40) %	Afao (n=40) %	Ifaki (n=40) %	Total (n=200) %	X^2	p-value
Financial	77(96.2)	20(50.0)	17(42.5)	12(30.0)	126(63.0)	77.51[a]	0.000
Food	3 (3.8)	19(47.5)	22(55.0)	24(60.0)	68(34.0)		
Social	0 (0.0)	1 (2.5)	0 (0.0)	4(10.0)	5(2.5)		
Labour	0 (0.0)	0 (0.0)	1 (2.5)	0(0.0)	1(0.5)		
TOTAL	**80 (100)**	**40(100)**	**40(100)**	**40(100)**	**200(100)**		

*p < 0.05, no significant difference in the benefits of livestock across the towns by Chi-squared test.

Table 4: Effect of Livestock Production on Income of Livestock farmers.

Variable	Coefficient	Standard Error	t-value
Age (years)	-0.272	0.048	-0.56
Sex (Male=1, Female=2)	-0.346***	0.116	-2.99
Livestock diversity	-0.098	0.077	-1.28
Livestock number	0.282***	0.055	5.12
Breeds of livestock	-0.034	0.033	-1.05
Management System	0.104*	0.058	1.80
Output	0.011	0.081	0.13
Constant	1.84***	0.47	3.91
R-square	0.2586		
Adjusted R-square	0.2315		

Source: Data Analysis, 2020; * significant at 10%, *** significant at 1%.

ment with previous findings in Benin (Dossa, 2007). The middlemen purchased animals and resold at markets and/or to butchers and caterers. In contrast, Kosgey *et al.* (2008) reported that most goats were sold to butchers and to a lesser extent to individuals. The farmers were unable to make arrangements to sell their animals at periods when prices are high because most of the sales are made to solve urgent cash needs. Therefore, farmers in rural areas need to be provided with adequate and reliable market information so that they can benefit fairly from goat farming. Farmers can be advised to organize themselves into groups so that they can market their animals in better markets and in peak periods when demand is high, so that they can reap maximum benefit from sales. Several surveys of ruminants kept by the rural farmers, and even in the markets, across the country revealed that the animals are mostly infected with one form of diseases/pests or the other. According to Dipeolu (2010), most of the diagnosed livestock diseases in the country were identified to be bacteria, viral, fungi and parasitic-caused diseases.

CONCLUSION

In conclusion, although the agriculture sector makes a relatively small contribution to national income or GDP, large proportions of national economically active labour forces are employed in agriculture. Nearly three-quarters of the extremely poor live in rural areas and most depend on agriculture for their livelihoods which include livestock production. Average incomes and productivity are lower in livestock production than in the rest of the agricultural production activities. The study identified some major contributor of livestock production to the community as financial security, food provision, social benefits, human time savings and labour savings. The study further identified some constraints of livestock production as death and diseases, symptoms and treatment of livestock and theft. It was observed that livestock production provides a number of socio-economic benefits which can improve on the livelihoods of communities. Home consumption and regular cash income from selling of livestock was the most important reason for keeping goats, followed by other tangible and intangible benefits. Mostly, about #1-100,000 per annum were made from livestock production in the study areas. Livestock appeared to play role in improving empowerment and reducing poverty in the local government. However, socio-economic condition of farmers was found meager and need to be improved by enhancing their adaptive

capacities. Livestock deem to provide financial support, food and social activities.

Based on the findings of the study, the following recommendations were made: Livestock's impacts are simply not the same everywhere. The impacts, whether good or bad, need to be accepted by the scientific community. Research agendas need to use the livestock limitations and challenges as opportunities for improvement, while continuing to foster the positive aspects. These are essential ingredients for society to make better-informed choices about the future impact of livestock in sustainable food production, economic growth and poverty alleviation. The state government should provide support, financial and otherwise to livestock farmers in the state since their production activities will help to reduce poverty level in the state. Finally, further studies should be carried out to investigate the reasons why the contributions and impact of livestock production to poverty alleviation are not significant in some local government areas.

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