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# LIVESTOCK PRODUCTION CONTRIBUTIONS TO RURAL HOUSEHOLDS' LIVELIHOOD AND ITS CONSTRAINTS IN NIGER STATE, NIGERIA

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***Abstract***

*The paper considered the livestock production contributions to rural households' livelihood and its constraints in Niger State, Nigeria. The data used were primary while the interview schedule was used to collect data from the 120 households. The paper engaged a quantifiable analysis using the descriptive and inferential statistics. The analysis revealed that households' socio-economic characteristics such as sex ($\chi^2$ =9.362; p<0.05), marital status ($\chi^2$=56.06; p<0.05), educational level ($\chi^2$=18.367; p<0.05) and the constraints of livestock production ($\chi^2$= 9.362; p<0.05) among the households are associated factors to the contributions of livestock production the households. These circumstances led to the age (r = 0.267; p<0.05), household size (r =-0.053; p<0.05), years of experience in livestock production (r = 0.204; p<0.05) and monthly income generated (r =0.080; p<0.05) having a significant relationship with the contributions of livestock production to the respondents' households. Based on the findings of this study, it was recommended that households should be encouraged in livestock production through provision of credit facilities, veterinary services and extension in order to contribute to the livelihoods of the households.*

***Key words*****:** *livestock production, contributions, constraints, rural households' livelihood*

## INTRODUCTION

Livestock production 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. Livestock sector aids in supplementing smallholding household revenue, lessening down the protein breach, offering draught power, compost for crop farming and in getting overseas give-and-take. Animal husbandry mostly offers supplementary earnings of livelihood to the agrarians. Livestock rearing is a fundamental fragment of food production [17].

Livestock play important role in the economy of Nigeria and it is an important sub-sector of Nigerian Agriculture. Animals make an important contribution to livelihoods in small holder farming systems throughout the developing world. In these systems, there is often a dynamic interface flanked by livestock and crops [16]. These represents a number of other reimbursements to the agri-business households. Livestocks are major sources of investments and increase the values of a number of assets that could not otherwise be consumed by the agribusiness households. For example, the conversion of feed biomass such as the weeds, straw, cultivated forages, common grazing areas, surplus grains and converting it into valued foods like meat, milk and eggs for consumption and sales and /or the provision of services, for instance, the draught power pack. These enables members of the household to add value to their own labour o the farm [14].

Household livelihood on the other hand refers to the household's means of securing the basic necessities, food, water, shelter and clothing of life. Livelihood is a set of activities involving securing water, food, fodder, medicine, shelter, clothing and the capacity to acquire the above necessities working either individually or as a group by using endowments (both human and material) for

meeting the requirements of the self and his/ her household on a sustainable basis with dignity [15].

Livestock are very important to man's welfare all over the world. The most important usage of livestock is to provide food and animal products which are used for food by the people in in many parts of the world. The animal products used as food for man are meat and milk which may also be included in feed of livestock [8]. Blood meal, and bone meal serves as sources of protein and minerals respectively. Livestock provides nutritive food to all categories of families both in rural and urban areas. Bullock power continues to be the main source of draught power for agricultural operations and transport of agricultural products to nearby markets and is likely to remain so for a long time to come [1].

Livelihood and production dilemma, malnutrition, high and worsening levels of poverty and stagnated or declining human development are some of the challenges and problems facing Africa [6] and [10]. Nonetheless, sub-Saharan Africa (SSA) countries are most awful affected in that way, parting these nation state as the poorest in the world. Undeniably of the thirty-one low human developed countries, twenty-eight were found in the sub-Saharan Africa [11]. Nigeria, for example is one of such countries characterized by high level of risk orchestrated by climatic change (for example frequent flood, drought, and cyclone), low resource endowment depicted by household operating near the margins of subsistence, and the civil war that ended just over a decade ago. All these compelled households to diversify their livelihood sources, as an attempt to overcome some of these challenges [5].

Some reasons offered for such diversification includes; Strong affinity of survival strategies particularly in drought prone areas, reduction of risk where climatic shocks are experienced, withdrawal from providing necessary infrastructure in support for agriculture by the states, diminishing returns on increasing investments in non-agricultural activities that most households are actively involved in synergies(economics of scope) among distinct activities and missing markets that compel self- provision of goods and/or services desired by the households for own consumption [12] and [5].

In Nigeria, diseases and pests are another constraints or problems facing livestock production. Examples are diarrhea, worm, coccidiosis diseases [2]. The existing diseases in livestock lead to animal death, thereby reducing productivity. It increases cost of production, thus reducing income of the farmer. The problem has implications for low productivity for the existing animal consumption [15]. This situation further widens the animal protein consumption gap. Sheep and goats provide about 20- 35% total protein intake, but still falls short of minimum animal protein requirement. [4] reported that the situation is probably due to ever increasing in population. Efforts being made to improve the level of livestock production have not yielded desired results.

Thus, in many Nigerian communities, chronic vulnerability and poverty are entrenched and exacerbated by the everpresent risk of extreme climatic (drought and floods), economic and policy shocks, food insecurity has been seeming primarily in terms of food crop disposal and ease of access [6] and [17]. The role of livestock, which touches upon the livelihoods of approximately 60 percent of the people in Nigeria, is not fully appreciated [18]. This desertion of the part livestock plays is somewhat due to deficiency of concrete empirical substantiation on the tangible offering livestock creates to livelihoods and the continued existence stratagems that are engaged during times of shocks [13].

In spite of the recognized usefulness of livestock, little attention has so far been paid to the contributions to livelihood of the country [7]. It is very important to obtain empirical data on the contributions of livestock to the livelihood of individuals. This knowledge will form useful information for the development of appropriate assistance by the government and policy makers to improve the level of livestock production and provide necessary facilities associated with the

practice in the study area and other parts if the country.

This study was therefore conceived to assess the livestock production contributions to rural households' livelihood and its constraints in Niger State, Nigeria. The specific objectives are to describe the socio-economic characteristics of the respondents, examine the livestock inventory of the households, find out the specific contributions of livestock production to the households, and ascertain the constraints facing households in livestock farming.

## MATERIALS AND METHODS

The study area was the Borgu Local Government Area of Niger State. The Local Government has an area of land of about 16,200 sq. km and also share boundaries with Benin Republic to the west, Agwara Local Government to the North- South and River Niger to the East. The study area lies between Latitude $9^{o}$ $53^{l}$ N and Latitude $4^{o}$ $32^{l}$ E. The area comprises of ten wards and twenty districts. The wards include Bussa Wawa, Rafi, Karabonde, Hsagunu, Pissa, Malale, Babanna, Dugga, and Konkoso Ward.

The population of the study comprised all households that rear livestock in Borgu Local Government Area of Niger State.

Simple random sampling was used in selecting a sample for the study. Out of the ten wards in the LGA, six wards were randomly selected for the study. Twenty households rearing livestock farmers were randomly selected from each of the six wards to give a total of 120 households as the sample size of the study.

Primary were used in the study. The data were collected from the households using the interview schedule. Other relevant information was obtained from journals, text books and the internet.

Data collected were analysed using descriptive statistics such as frequency and percentage while the hypotheses were tested using inferential statistics such as Chi-square and Pearson Product Moment Correlation (PPMC).

## RESULTS AND DISCUSSIONS

Table 1 revealed that the majority of respondents (52.9%) are between the ages of 31 to 40 years. This inferred that most of the respondents were in their energetic time of life period. Hence, they were capable to endeavor into livestock production regardless of the extraordinary level of risks involved. This was consistent with the findings of [9].

Majority (67.3%) of the respondents were males while (32.7%) of the respondents were females. This is because females do not have time like the males due to their domestic activities and taking care of the young ones.

Majority (52.9%) of the respondents were married while those who were not married constituted a proportion of 47.1%. Those who were not married includes the spinsters, bachelors, widowed and the divorced respondents. This implied that the respondents who were married might be tasked with much family responsibilities thereby engaging in livestock production.

Majority (57.7%) of the respondents had post-secondary education while a few of the respondents had no formal education (5.8%). It implies that most of the respondents were relatively educated which could to a large extent positively influence the level of adoption of innovations in livestock production. Hence, education level is a key factor in shaping the perception of individual farmers, thereby more enlightened and educated people tends to be more dynamic to technological innovations and changes than their illiterate counterpart [3].

A larger proportion (44.2%) of the respondents were involved in livestock production which is also their major occupation. 18.3% of the respondents were crop farmers while 23.1% were traders and artisans. A proportion of 12.3% of the respondents were civil servants. This was an indication that majority of the respondents were involved in agricultural activities.

The average monthly income of the respondents was 69,355.80 Naira. By implication, this may be a major reason for the respondents to get involved in livestock

production, hence, in other to make ends meet.

The mean household size was found to be 7 persons. This is an indication that the respondents have a relatively large family size although a majority (92.3%) of the respondents had family size of 10 persons and below.

Majority (82.7%) of the respondents over years had livestock production experience of 10 years and below. The mean years of experience in livestock production business of the respondents was found to be 7.3 years. The implication of this is that the respondents are experienced in the livestock production business.

Table 1. Socioeconomic Characteristics of households

| **Variables** | **%** |
|---|---|
| ***Age (Years) ($\bar{x}$= 37.2)*** | |
| ≤ 30 | 36.5 |
| 31-40 | 52.9 |
| >50 | 10.6 |
| ***Sex*** | |
| Male | 67.3 |
| Female | 32.7 |
| ***Marital status*** | |
| Not married | 47.1 |
| Married | 52.9 |
| ***Educational Qualification*** | |
| No formal Education. | 5.8 |
| Primary School. | 11.5 |
| Secondary School. | 17.3 |
| Post-Secondary | 57.7 |
| Adult Education | 7.7 |
| ***Major Occupation*** | |
| Livestock Farmer | 44.2 |
| Crop Farmer | 18.3 |
| Trader/Artisan | 25 |
| Civil Servant | 12.5 |
| ***Monthly Income (₦) ($\bar{x}$= 69355.8 )*** | |
| ≤ 45,000 | 36.6 |
| >45,000 | 63.4 |
| ***Family size (Persons) ($\bar{x}$= 7)*** | |
| ≤10 | 92.3 |
| >10 | 7.7 |
| ***Experience (Years) ($\bar{x}$= 7.3)*** | |
| ≤10 | 82.7 |
| >10 | 17.3 |

Source: Own calculation.

Table 2 revealed the livestock inventory of the respondents. The table revealed that the most commonly reared livestock by the respondents (96.2%) were the goats. 94.2% of the respondents reared chicken, 87.5% of the respondents reared sheep while 80.8% of the respondents reared cattle. Furthermore, 77.9% of the respondents reared ducks while 76% of the respondents reared guinea fowl. The least reared livestock animal was the pig (62.5%) and this might be as a result of the religious beliefs of the dominant population in the study area.

Table 2. Livestock Inventory of the households

| **Livestock** | **Percentage** |
|---|---|
| Goat | 96.2 |
| Chicken | 94.2 |
| Sheep | 87.5 |
| Cattle | 80.8 |
| Duck | 77.9 |
| Guinea | 76.0 |
| Fowl | 74.0 |
| Pig | 62.5 |

Source: Own calculation.

Table 3 showed the contributions of livestock production to respondents' households. The most important contribution of livestock to the households include the increased cash income from sales of livestock and its products ($\bar{x}$ = 4.2). Other contributions are the fulfilment of socio-cultural needs ($\bar{x}$ = 3.7), job creation and improved households' nutrition ($\bar{x}$ = 3.6) and assets accrual ($\bar{x}$ = 3.3). The least ranked contribution was the having a better social status representation ($\bar{x}$ = 3.2).

Table 3. Contributions of livestock production to respondents' households

| **Contributions of livestock production** | **$\bar{x}$** |
|---|---|
| Increased cash income from sales of livestock/livestock products | 4.2 |
| Fulfillment of socio-cultural needs | 3.7 |
| Improved households' nutrition | 3.6 |
| Job creation | 3.6 |
| Nutrients on the farm | 3.5 |
| Assets accrual | 3.3 |
| Better social status representation | 3.2 |

Source: Own calculation.

Table 4 showed the constraints of livestock production among respondents' households. The most serious constraint of livestock production among respondents' households include diseases and high cost of feed ($\bar{x}$ = 2.5).

Other constraints identified were lack of market for livestock and theft ($\bar{x}$ = 2.3), while predators and inadequate space for livestock production ($\bar{x}$ = 2.2), the harsh weather conditions and inadequate veterinary assistance ($\bar{x}$ = 2.1), and the complaints from neighbors ($\bar{x}$ = 2.0) was ranked the least of the identified constraints of livestock production among respondents' households.

Table 4. Constraints of livestock production among respondents' households

| Constraints | Mean |
|---|---|
| Diseases | 2.5 |
| High cost of feed | 2.5 |
| No market for livestock in my area | 2.3 |
| Theft | 2.3 |
| Predators | 2.2 |
| No enough space for livestock | 2.2 |
| Harsh Weather conditions | 2.1 |
| No veterinary assistance | 2.1 |
| Complaint from neighbors | 2.0 |

Source: Own calculation.

Table 5 presented the Chi-square analysis which showed that the contributions of livestock production to households had a significant relationship with sex ($\chi^2$ =9.362; $p<0.05$), marital status ($\chi^2$=56.06; $p<0.05$) and educational level ($\chi^2$=18.367; $p<0.05$). The result of the analysis suggested that the contributions of livestock production to the respondents' households really does differ by the sex, marital status and educational level of the respondents.

Table 5. Chi-square analysis of households' socio-economic characteristics and the contributions of livestock production to households

| Variables | $\chi^2$ | p | Decision |
|---|---|---|---|
| Sex | 9.362 | 0.009 | Significant |
| Marital status | 56.06 | 0.009 | Significant |
| Educational level | 18.367 | 0.049 | Significant |
| Major occupation | 7.435 | 0.491 | Not significant |

Source: Own calculation.

Table 6 presented the Person Product Moment Correlation analysis which showed that age (r = 0.267; $p<0.05$), household size (r =-0.053; $p<0.05$), years of experience in livestock production (r = 0.204; $p<0.05$) and monthly income (r =0.080; $p<0.05$) had a significant relationship with the contributions of livestock production to the respondents' households.

Table 6. PPMC analysis of households' socio-economic characteristics and the contributions of livestock production to households.

| Variables | r-value | p | Decision |
|---|---|---|---|
| Age | 0.267 | 0.006 | Significant |
| Household size | -0.053 | 0.008 | Significant |
| Years of experience | 0.204 | 0.038 | Significant |
| Monthly income | 0.080 | 0.018 | Significant |

Source: Own calculation.

This implied that the age of the respondents, their household size, years of livestock production experience and monthly income are factors associated positively with the contributions of livestock production to the respondents' households.

Table 7 presented the significant relationship between the constraints of livestock production among households ($\chi^2$= 9.362; $p<0.05$) and the contributions of livestock production to the respondents' households. The result of the analysis suggested that the contributions of livestock production to the respondents' households really does differ by the constraints of livestock production among households.

Table 7. Chi-square analysis of households' socio-economic characteristics and the contributions of livestock production to households

| Variables | $\chi^2$ | p | Decision |
|---|---|---|---|
| **Constraints to livestock production** | 9.362 | 0.009 | Significant |

Source: Own calculation.

## CONCLUSIONS

Households' socio-economic characteristics and the constraints of livestock production among the households are associated factors to the contributions of livestock production the households. Based on the findings of this study, it was recommended that households should be encouraged in livestock production through provision of credit facilities, veterinary services and extension in order to contribute to the livelihoods of the households. Also, more educational programs should be organized to increase the knowledge and the importance of livestock to household's livelihood. Above all, there is a need for pricing policy review of livestock production inputs in order to bring down the prices of livestock and its products making it relatively affordable for the households.

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