

RAM FATTENING UNDER FEEDLOT SYSTEM PROFITABILITY AMONG SMALLHOLDER FATTENERS IN KANO METROPOLIS, KANO STATE, NIGERIA.

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ABSTRACT

The study analysed profitability of ram fattening under feedlot system among smallholder fatteners in Kano metropolis, Kano State, Nigeria. Data was collected from 70 snowballed sampled smallholder fatteners using structured questionnaire which was analysed using descriptive statistics and Net farm income. Socio-economic descriptive result revealed fatteners as dominantly males (100%), married (84.3%) with an average age of 46years and majority (61.4%) of them received western education. Net farm income analysis of ram fattened for three month average revealed variable cost of NGN48,700 which is majorly constituted by cost of feed (15.7%) and cost of ram (47.1%); A total revenue of NGN95,000 was realised from the sales of ram (84.22%) and manure (15.78%) and a net profit of NGN31,300 was obtained in the period. it could therefore be concluded that ram fattening enterprise is a profitable venture and should be recommended as business venture for younger men and women for start-ups and existing businesses.

Key words: Profitability, Ram, Fattening, Smallholder fatteners and Feedlot.

INTRODUCTION

Demand for animal protein of the geometrically growing Nigerian population continues to increase meanwhile the production of animal protein in the country has remained insufficient to meet nutritional requirements of the low income households. (Gona, Mohammed & Baba, 2019). It's on this note Kolo, (2013) asserted that efforts must be made to develop new technologies that will enhance meat production as a shorter term approach and consequently increase protein availability. Meanwhile, Oyediji, and Akinfolarin (2013) advocated that a shorter-term approach through use of feedlot techniques increase meat output than range management.

Introduction of industrial feedlots in livestock fattening on sufficiently large scale will make the meat industry more efficient due to higher daily weight gains, better feed conversion, short period involved and higher dressing percentage. Other advantages according to Oyediji, and Akinfolarin (2013) includes, possibility of utilizing agro industrial by-products, ensuring greater homogeneity of finished product, conflict free production, easier marketing of finished animal, reduced assembling costs, and rapid money turn over that will make the venture lucrative to private and external financing. Thus, the physical and economic relationships between feed inputs and livestock output within the system, becomes highly important area to be studied. (Gona *et al*, 2019).

Small ruminant Livestock (sheep and goat) has been playing a vital role in the socio-economic life of the rural society. A part from the serving as the source of employment opportunity, they provide a year round flow of essential products (meat, milk and hide), income and manure for crop enterprises. (Umar., Shettima, and Sulumbe, 2014). It is reported that small ruminants are considered as a saving account especially for women in the rural areas of the country. This is because ruminant are much easier and quicker to sell than cattle when cash is needed to meet household expenditure (Gazali, 2010).

Ram production has gain increase popularity in the developing countries. It is reported that all over the world, there is a tendency to change the entire conception toward breeding sheep for mutton production. This might be due to people's preference for mutton especially lean, soft succulent mutton with fine fibred Cola and Cola (2006). Animal fattening simply refers to the preparation of an animal for marketing, fattening therefore, is the feeding method of particular interest in order to increase the weight of the animal (Osuhor 2008). The primary objective of smallholder livestock fatteners/farmers is to increase the live weight of the animal and quantity of meat in a relatively short time (Osuhor 2008).

Livestock fattening by providing meat plays a significant role in the economic emancipation of the nation (Oni, 2006).

Ram fattening is a market oriented programme designed to increase off-farm income through intensive feeding of ram months before the festival of Eid-kabir Sallah celebration. It is one of the oldest farming enterprises in Kano State which is been practice for over a century. Usually the fatteners feed the ram for the average duration of 3 to 11 months in anticipation for Sallah celebration. The animal would be prepared for marketing through increase weight gain. Ram fattening is particularly attractive venture if is targeted towards the Muslim feast of Eid-dulKabir. (Umar *et al*, 2014). Previous studies identified the profitability of conventional ram fattening in Nigeria (E.g Gona et al, 2019; Zalkuwi *et al.* (2014) and Umar et al, 2014) however there is paucity of such evidence in the study area especially feedlot system of ram fattening. It's against this background that this study determine profitability of ram fattening under feedlot system among smallholder fatteners in Kano Matropolis, Kano state Nigeria.

METHODOLOGY

Study Area

The study was conducted in Kano State, Nigeria. It shares boundary with Jigawa, Katsina and Kaduna State. Kano State has a total number of 44 Local Government Areas and a population of more than nine million people (NPC, 2006), with a growth of 2.9 % per annum (KNSG,2006). In 2015 the population was projected to be 11,582,387 (KNSG, 2006). The maximum temperature ranges between 21°C – 42°C with annual rainfall ranges between 787mm and 960mm (KNARDA, 2007). It is situated in Sudan savannah zone within latitude of 10025°N and 13053°N, and longitude of 7040°E and 10053°E. farming and trade are the main occupation of these people, who are predominantly Hausa – Fulani engaged in the production of crops like millet, sorghum, maize, cowpea, groundnut, pepper, onion and rearing animals like cattle, sheep, goat, poultry, etc. the promotion of agriculture in kano state is carried out by a number of governmental and non – governmental organizations. Kano State Rural Agricultural Development Authority (KNARDA) is the technical and management unit responsible for agricultural extension of the state. Agriculture unit in kano state are divided into three administrative zones which are called zone 1, zone 2, and zone 3 by the ADPs.

Sampling Procedure

A sample frame composed of 700 ram fatteners distributed across different locations within Kano metropolis was identified. Snowballing sampling method was then use to reach 10% proportion of the sample frame there by making 70 smallholder fatteners as respondents for the study. The table 1 below shows sample selection summary of the respondents.

Table 1: Sample frame and sample size of Ram fattening operators

S/N	Areas	Sampling frame	Sample size (10%)
1	Goron dutse	150	15
2	Kofar ruwa	207	21
3	Gandun albasa	90	9
4	Kofar kudu	110	11
5	Abattoir	143	14
	Total	700	70

Source: Field survey, 2021

Method of Data Collection

Primary data was used as a source of information in the study. The data was collected with the aid of a well-structured questionnaire. The questionnaires was administered to collect information on Management practices, Constraints, cost and returns of ram fattening and also the farmers preference on selected breeds. The questionnaire was designed in a close and open – ended question.

Data Analysis

The analytical tools used to achieve the various objectives were; descriptive Statistics and Net farm income.

Descriptive Statistics

These are concerned with scientific methods for summarizing presenting and analysing data as well as drawing valid conclusions and making reasonable decisions on the basis of such analysis. This is done with the aid of mean, percentage, frequency distribution etc.

Net Farm Income

Net farm income signifies the difference between total returns in naira for the farm and total expenses of production in naira. **Total revenue** is defined as the total money value of all output produced whether sold, consumed or in stock. **Total fixed cost** are those cost incurred which do not vary when output changes and therefore have no influence on production decisions. **Total variable cost** is the cost of variable inputs such as feeds, labor and drugs used for production. They change directly with the level of production. (Ajala *et al.*, 2007).

The equation for obtaining the Net Farm Income can be stated as follows:

$$NFI = TR - (TVC + TFC) \dots \dots \dots (3)$$

Where; NFI = Net Farm Income (N)

TR = Total Revenue (N)

TVC = Total Variable Costs (N)

TFC = Total Fixed Costs (N) such as rent and equipments used

RESULTS AND DISCUSSION

Socio Economic Characteristics of the Ram Fatteners

The socioeconomic results being described as shown in Table 2 revealed that all the fatteners are males and majority of them (84.3%) are married. The marital status of the farmers' shows that majority of the farmers are having a sense of responsibility. Regarding their education result shows that a substantial number of Ram fatteners (62.4%) in Kano metropolis have formal education while remaining (38.6%) have also attended Qur'anic schools. By implication, ram fatteners in the area will easily adopt new techniques which will improve the level of their production. Result further shows majority (85.7%) of the fatteners as member's farmer cooperatives, most of them (54.3%) have no access to extension service and majority (87.1%) of them have no access to credit facilities, furthermore 44.3% make use of hired labourers, 24.3% do it themselves and also make use of family members while 31.4% use both hired labour and family. Meanwhile they get their information on fattening majorly (74.3 %) through radio broadcast. Most of the findings is in agreement with the that of Shettima, Mohammed, Lawan, & Ghide, (2019) that revealed that most of the fatteners were young, male, married and had one form of education or the other.

Table 2: Socio Economic Characteristics of the Ram Fatteners

Variable	Frequency	Percentage (%)	Min	Max	Mean	SD
Age						
20-40	26	37.1	23	75	45.8	12.9
41-60	33	47.1				
61-80	11	15.8				
Gender						
Male	70	100				
Female	0	0				
Marital Status						
Single	11	15.7				
Married	59	84.3				
Cooperative Membership						
Yes	60	85.7				
No	10	14.3				
Educational Level						
Primary	7	10				
Secondary	23	32.9				
Tertiary	10	14.3				

Adult Edu.	1	1.4
Vocational	2	2.9
Qur'anic	27	38.6
Labour type		
Family	17	24.3
Hired	31	44.3
Both	22	31.4
Contact with Extension Agents		
Yes	38	54.3
No	32	45.7
Source of information		
Radio	52	74.3
Tv	11	15.7
Farmers	3	4.3
Neighbours	4	5.7
Access to Credit		
Yes	9	12.9
No	61	87.1
Total	70	100

Source: Field survey 2021

Estimated Cost and return of Ram fattening

The costs and returns associated with Ram fattening in the study area for average production period of three (3) months is presented in Table 4. Cost of inputs incurred in the fattening includes cost of water, ram, feeds, labour, salt lick, medication and transportation. Total variable cost incurred is NGN48, 700 and is mostly constituted by cost of ram (47.1%) and Cost of feed (15.7%). This validates the claim of Zalkuwi *et al.* (2014) that cost of feed is the largest single variable cost in Ram fattening. Housing and equipment were calculated on rent, and are assumed to be the fixed cost in ram fattening, this was found to be NGN15, 000. This connate that variable cost constituted 76.5% of the total cost of fattening, while fixed capital accounted for the remaining 23.5% of Ram fattening in the study area. Fatteners generated revenue of NGN95, 000 through the sales of Rams and manure accounting for 84.22% and 15.78% of the revenue respectively. Results further revealed that a typical fattener realized a net farm income of NGN31,300 per Ram; indicating that Ram fattening is profitable in the study area. The finding is similar to what was obtained by Zalkuwi *et al.* (2014) that sheep fattening is profitable with a net income of NGN16, 070.71 per Ram. And that of Sanchi I. D. *et al.* (2015) in whom also asserted that sheep fattening is profitable with a net income of NGN31,507.19 per Ram.

Table 4: Estimated cost and return of Single Ram fattening (Three (3) month duration)

Items	Costs/ revenue	Percentage
<i>Variable inputs</i>		
Ram	30,000	47.1
Feeds	10,000	15.7
Labour	1,500	2.4
Medication	3,000	4.7
Salt lick	500	0.8
Water	2,500	3.9
Transportation	1,200	1.9
<i>Total Variable Cost</i>	48,700	76.5
Housing (rent)	12000	4.7
Equipment(rent)	3000	18.8
<i>Total Fixed Cost</i>	15,000	23.5
Total cost	63,700	100
<i>Revenue</i>		
Sales of Ram	80,000	84.22
Sales of manure	15,000	15.78

Total revenue	95,000
Net Farm Income(TR-TVC+TFC)	31,300

Source: Field survey, 2021

CONCLUSION AND RECOMMENDATIONS

Ram fattening was found to be a profitable venture ; dominated by elderly men; and the cost of feed accounted for the major fattening cost. Ram fattening enterprise is a profitable venture and should be recommended as business venture for younger men and women for a start-ups and existing businesses.

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