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Profitability of Ram (*Yan'kasa*) Fattening in Fakai Local Government Area of Kebbi State, Nigeria

Sanchi I. D., Baba M. D., J. S. Dabai

Department of Agricultural Extension and Management, Kebbi State College of Agriculture Zuru,
Nigeria

Email address

musababs1970@yahoo.com (Baba M. D.)

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Abstract

The study examined the cost and return of sheep fattening in Fakai Local Area of Kebbi State, Nigeria. Essentially, it focused on profitability and problems of Ram (*Yan'kasa*) fattening in the study area. Data were collected from eighty one (81) randomly selected Ram (*Yan'kasa*) fatteners proportionate to the population by means of interview schedule. Data were analyzed using descriptive statistics and farm budgeting technique (Net farm income). Results revealed that variable costs accounted for 56.5% of the total cost of Ram fattening, while fixed cost accounted for the remaining 43.5%. However, the average total cost per Ram was ₦17, 428.12, average total revenue was ₦48, 429.03 and net income was ₦31, 507.19 indicating that Ram (*Yan'kasa*) fattening in the study area was profitable. Even though Ram fattening was profitable in the study area, the major problem faced by fatteners was high cost of feeds. It could be concluded therefore, that Ram (*Yan'kasa*) fattening enterprise in the study area was a profitable venture. Hence, efficient use of feeds is recommended for profit maximization.

1. Introduction

In Nigeria, the production of food has not increased at the rate that can meet the increasing population. Food production increases at 2.5 per cent, food demand increases at 3.5 per cent due to high rate of population (Central Bank of Nigeria, 2004). The Food and Agricultural Organization (FAO) recommends that the minimum intake of protein by an average person should be 65g per day; of this about 40 per cent, that is 27g should come from animal sources. Nigeria is presently unable to meet this requirement. The animal protein consumption in Nigeria is less than 8g per person per day, which is far below FAO minimum recommendation (Niang and Jubrin, 2001). As a result of the above, widespread hunger and malnutrition are evident in the country. Nigeria is among the least consumers of animal protein in the world. North America, West and Eastern Europe countries consume 66, 39 and 33g per head per day, respectively. The average for Nigeria is 7.5g per head per day, which is below the recommended level of about 27g per head per day by Food and Agriculture Organization (Niang and Jubrin, 2001).

To bridge the demand-supply gap of animal protein in terms of meat in Nigeria, there is need to adopt other sustainable means of production. Thus, livestock fattening appears to be an alternative to meeting the increasing demand for meat in the nation (Oni, 2006). Animal fattening simply refers to the preparation of an animal for marketing (Uza *et al.*, 1999). 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).

Livestock is an integral component of agriculture in the study area and make multifaceted contribution to the growth and development in agricultural sectors. Sheep fattening has been an instrument to socio-economic change to improved income and quality of life. Unfortunately, under traditional management system the animal depend mostly on household waste and bush grazing which do not provide adequate level of nutrition for optimum production or performance. The animal also suffers heavy mortality due to problems of diseases and parasitic infections, while the productivity for surviving one may be low. The demand for animal protein in Nigeria like in other developing countries of the world is far from being met Okuneye (2000). According to Okuneye (2000) the levels of consumption of animal protein in Nigeria was estimated to be about 8g per day, which is about 27g less than minimum requirement (37g) recommended by national council of united State of America (NCUSA). This problem of shortage of animal protein has led to increased nutritional and mal-nutritional diseases and disorder such as Kwashiorkor, Marasmus and retarded growth.

The growing demands for ruminants' meats from city dwellers also present opportunities for fattening as well as improved markets for the animals. Fattening of animals is a highly profitable venture with return of premium to the farmer. Ayantunde *et al.* (2008) reported that in Nigeria, small ruminants (sheep), fattening have been carried out mainly by small holder farmers while medium or big time farmers can handle on a commercial basis feedlot operations. Sheep fattening has been an established practice in Nigeria, but largely carried out by butchers and sheep traders being the only category of people with the resources to buy both sheep and feeds (Ayoola and Ayoade, 2006). People fatten ram for the same reason that other men operate factories, mainly to make a profit by converting raw materials which are of low value in their natural form into a product for which there is a good demand and sell for better prices (Mbanasor, 2000) also, the production technology.

The *Yan'kasa* is a meat breed found in north and north central Nigeria. The *Yankasa* is a medium-sized breed of sheep. The tail is long and thin, the ears moderately long and somewhat droopy. Rams have curved horns and a hairy white mane and ewes are polled. They have white coat colour with black patches around the eyes, ears and muzzle. *Yankasa* rams stand 70 to 80 cm at the withers and weigh 55 to 60kg at maturity. Mature females could weigh 25 to 40kg while male weighs between 35 and 50kg. The milk yield (kg) per lactation is between 30 and 56kg and has a lactation length of 91 days. The peak milk yield per day is 960 grammes (Ayantunde *et al.*, 2008). Despite of all these contributions, the livestock sub-sector is a relatively neglected part of

agriculture with its supporting services collapsing well ahead of others (Oni, 2006). In Kebbi State, most of the fatteners are not knowledgeable as far as modern techniques in animal production are concerned. Their operations are on small scale due to inadequate of capital; feeds offered are of low quality.

Despite the importance of livestock in the economy and the large number of the different species, Nigeria has not been able to provide animal protein sufficient in quantity to meet the per capital requirement of her citizenry. Fattening of sheep is affected by short duration of rainfall and long dry season when nutrition is very poor. Livestock feeds become scarce with resultant poor animal performance. Most of the fatteners are not knowledgeable as far as modern techniques in animal production are concerned. Their operations are on small scale due to lack of capital. Feeds offered are of low quality. Their businesses are seasonal, being done only in the off farm periods during which crop residues are readily available. It has therefore become imperative that the ways these farmers carry out their fattening businesses be evaluated with the aim of finding out areas of deficiencies so as to proffer solutions. In view of the above therefore, it is important to carry out a research on profitability of ram fattening with particular emphasis on *Yan'kasa* breed as a means of ascertaining the profitability of the enterprise. This study therefore, intends to use farm budgeting technique to determine the profitability of Ram fattening and to identify problems associated with ram fattening in Fakai LGA of Kebbi state Nigeria.

2. Methodology

2.1. Study Area

Fakai Local Government Area (LGA) is one of the twenty one Local Government Areas (LGAs) of Kebbi State. The Local Government Area was carved out of the old Zuru Local Government Area and is located within latitude 11° 50' and longitude 5° 11' E of the equator approximately (Augie and Lawal, 1990). Fakai LGA is geographically located in the south-eastern part of the state. The estimated population of the LGA is 121,212 people (NPC., 2006). The weather is marked by a single rainy season and long dry season, the average rainfall is 1025mm/annum, the rainy season is between May to October, the rainy season last for four – five months. The climatic condition of the area is characterized by hot and wet season as in the tropics; the month of November to January is the harmattan period. The soil type is sandy loam and rich, which makes it suitable for agriculture (Augie and Lawal, 1990).

2.2. Sampling Procedure and Sample Size

Fakai Local Government Area comprises of four administrative districts namely; Bajida, Birnin Tudu, Fakai and Marafa. Two-stage sampling technique will be used for the study. The first stage will involve selecting two villages in all the districts purposively; this is because of the

concentration of sheep fatteners in this villages. The second stage will involve selecting sheep fatteners using proportionate random sampling technique from a sampling frame. Thus, a total of eighty one (81) sheep fatteners constitute the sample size for the study.

2.3. Data Collection and Analytical Technique

The instrument used for data collection is interview schedule; primary data were collected with the help of trained enumerators. Data were analysed using descriptive statistics and farm budgeting technique (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, labour 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:

$$NFI = TR - (TVC + TFC).....(1)$$

Where;

NFI = Net Farm Income (₦)

TR = Total Revenue (₦)

TVC = Total Variable Costs (₦)

TFC = Total Fixed Costs (₦)

3. Results and Discussion

3.1. Profitability of Ram (*Yan'kasa*) Fattening

The profitability of any business can be deduced from the relationship between the costs incurred in running the farm business and revenue returning to it (Adegeye and Dittoh, 1985). The costs and returns associated with Ram (*Yan'kasa*) fattening in the study area are presented in Table 1. Cost of water amounted to ₦648.25 representing 3.8% of the total cost of fattening. Cost of feeds (₦6, 196.43) constituted the highest share of the total cost, accounting for 36.3%. This validates the claim of Zalkuwi *et al.* (2014) that cost of feed is the largest single variable cost in Ram fattening. This value confirmed that feed constitutes major factor in Ram fattening. Cost of labour per Ram was ₦1, 050.65 which constituted about 6.2% of the total cost, while medication, transportation and salt lick had ₦950.75, ₦285.32 and ₦648.25 per Ram, accounting for 5.6, 1.7 and 2.9%, respectively of the total cost of fattening. The cost of foundation stock was found to be ₦5, 329.12 representing 31.3% of the total cost. Other cost components such as depreciation on housing and equipments contributed ₦1, 641.58 (9.6%) and ₦457.42 (2.6%) to total cost of fattening, respectively. The cost structure as shown in Table 1 revealed that variable cost

constituted 56.5% of the total cost of fattening, while fixed capital accounted for the remaining 43.5% of investment in Ram fattening in the study area. Fatteners generated revenue through the sales of Rams and manure. Results also revealed that a typical fattener realized a net farm income of ₦31, 507.19 per Ram indicating that Ram fattening is profitable in the study area. The average production period was three (3) months. Zalkuwi *et al.* (2014) in their research on Cost and Return Analysis of Sheep Fattening in Gombi Local Government Area of Adamawa State, Nigeria asserted that sheep fattening is profitable with a net income of ₦16, 070.71 per Ram.

Table 1. Average Costs and Returns of Ram (*Yan'kasa*) Fattening/Ram

Items	Costs/Revenue (₦)	Percentage
Variable Inputs		
Feeds	6, 196.43	36.3
Labour	1, 050.65	6.2
Medication	950.75	5.6
Salt lick	491.97	2.9
Water	648.25	3.8
Transportation	285.32	1.7
Total Variable Costs	9, 623.37	56.5
Fixed Inputs		
Foundation stock	5, 329.12	31.3
Dep. on housing	1, 641.58	9.6
Dep. on equipments	457.42	2.6
Total Fixed Costs	7, 428.12	43.5
Total Cost	17, 051.49	100
Revenue		
Sales of Ram	48,429.03	
Sales of manure	129.65	
Total Revenue	48, 558.68	
Net Farm Income (TR-TVC+TFC)	31, 507.19	

Source: Field Survey Data and Computation by the Researchers, 2015.

3.2. Problems Associated with Ram (*Yan'kasa*) Fattening

Analysis of the problems faced by the fatteners in the study area revealed that about 85.2% reported that high cost of feeds, 51.9% reported inadequate capital, while about 45.7% complained of poor pricing policy. About 41.9% of fatteners reported that inadequate extension services. About 28.4% of fatteners were of the opinion that high cost of medication has been a problem in Ram fattening. Other problems mentioned among fatteners are transportation problem (27.2) and pest and disease problem (14.8). High cost of feeds was the major problem to Ram fattening in the study area. High cost of feeds was revealed to be as a result of the fattening nature (intensive management) that requires regular demand for feeds. This also validates the claim of Zalkuwi *et al.* (2014) that high cost of feeds was the major problem of sheep fattening in Gombi

Local Government Area of Adamawa State.

Table 2. Problems of Ram (*Yan'kasa*) Fattening

Problems	Frequency*	Percentage
High cost of feeds	69	85.2
High cost of medication	23	28.4
Inadequate capital	42	51.9
Poor pricing policy	37	45.7
Pest and disease problems	12	14.8
Transportation problem	22	27.2
Inadequate extension services	34	41.9

Source: Field Survey Data and Computation by the Researchers, 2015. Note that multiple responses were recorded.

4. Conclusion and Recommendations

From the findings of this study, it could be concluded that Ram (*Yan'kasa*) fattening enterprise was a profitable venture. Hence, efficient use of feeds is recommended for profit maximization. High cost of feeds constituted the major problem to Ram (*Yan'kasa*) fattening in the study area. High cost of feeds incurred was as a result of the rate of consumption of the animals through the management system (intensive) adopted by the fatteners in which the demand for feeds by the animals is very high.

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