Profitability Evaluation of Broiler Production among Small-Scale Commercial Poultry Farmers in Nassarawa - Eggon Local Government Area of Nasarawa, State, Nigeria.

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Abstract
This study was set to determine the profitability of broiler production in Nassarawa Eggon Local Government Area of Nasarawa, Nigeria. A total of 30 broiler farmers served as respondents for the study. A structured questionnaire and interview schedule was used in collecting data for the study. The data collected were analyzed by means of descriptive statistics such as frequency distribution, percentages and Gross margin analysis. The major findings were that majority (66.7%) of broiler producers are between the age range of 20-50 and the computed mean age of the respondents is 37.1. it was further discovered that majority (66.7%) of respondents are female. It was revealed that net income percentage was 11.6% which indicates that farmers earned an average of 11 kobo for every naira invested. The result also showed that total revenue generated was found to be ₦ 119050.00 while the cost of production (Total cost) incurred was ₦ 13,775.00. Feeds and medication was said to be the highest cost of resources used. In a bid to meet part of our animal protein requirement, from domestic source, effort should be geared towards intensification of animal production in general. Government should intensify effort on provision of portable water which has been the major problem in the area which is a known fact, provision of soft loan to help boost poultry production in the area.

Keywords*: profitability, costs, broiler, rate on investment, operating ratio.*

Introduction

This livestock sub-sector of the Nigerian economy has undergone significant changes especially in the last decade. It came to the limelight in the 70s when, through various government policy measure and programmes, the growth of the sector was actively promoted (David-west, 1984). Nigeria has remained the least consumer of animal protein in Africa (Egbunike, 1997) in spite of her enormous natural and human resources. The primary motive of poultry farmer had been to produce good quality meat and eggs at minimal cost but this objective has been hampered by man's keen competition with his animals over grains (Ademosun and Eshiett, 1980, Ijaiya et al. 2002).

The demand for broiler chickens in Nigeria is progressively rising as meat consumers' interest is gradually being shifted from red to white meat. But this is presently, being undermined by high cost of production necessitated by escalating cost of major and essential ingredients

required for feeds production. According to Akinyosoye (1992), poultry farming is the management of domestic birds for food and other purposes. It is the important part of farming industry in many part of the world, providing a fairly rapid return on capital outlay.

Broilers are birds that grow rapidly and reach marketable size after two to three months. They need enough feeds to maintain their body weight. Traditionally, broiler product has been a part-time or supplementary enterprise on many Nigeria farms. One or more members of the family may be employed off the farm or engaged in other farming enterprises (Koeslag, 1992). However, Uzegbu et al. (2007) maintained that as the cost of these major feed ingredients continues to increase, there is still the need to maximize productivity. Measures to achieve this maximum production should start at early stage of life because according to Obioha (1992) that what happens during the starter period determines the final performance of broiler chickens.

According to Ogunfowora (1989), inefficiency and poor quality feeds are some of the constraints to the growth and profitability of intensive poultry enterprises. Once the supply of feeds becomes unsteady, business expansion is curtailed and in extreme cases, poultry producer are forced to sell their birds pre-maturely. Poor quality of feeds on the other hand, lead to high mortality rate, low productivity and consequently, low rate of returns to investment.

Methodology

The study was carried out in Nassarawa-Eggon Local Government Area of Nasarawa State, Nigeria. Nassarawa-Eggon lies between latitudes $8^0$43' and $8^0$45' North and longitude $8^0$30' and $8^0$34' East. It is bounded to the North by Akwanga, to the East by Wamba, to the West Kokona and to the South by Lafia local government area which is the state capital. The climate of the area is the savannah type (rainforest and guinea). It is characterized by two seasons. The wet season is usually under the influence of the south westerly winds from the equatorial rain belt, while the dry season is influenced by the dust laden harmattan from the North East.

The economy of the local government area is predominantly agriculture, practicing subsistence agriculture. Main agricultural products include Yam, Groundnut, Cassava, Sorghum, Maize, Cowpea, etc. Tree crops like Palm trees, Mangoes, Oranges and Banana are also grown in Nassarawa-Eggon local government area. In addition, the people undertake livestock production activities like poultry, piggery, cattle, sheep and goats in fairly large scale (Information unit, Nassarawa-Eggon local government area, Ayimom, 1986). The population of the area is 149,129 (77,888 males and 71,241 females) as at 2006 population census (NPC, 2007).

Primary data were collected with the aid of structured questionnaires and interview schedules. A purposive sampling method was used to select 30 poultry (broiler) farmers within the local government area. Information was gathered on the socio-economic characteristics of the respondents and their poultry production activities or operation. The data were analyzed using descriptive statistics such as frequency distribution, percentages, and mean. Gross margin analysis was used to ascertain the profitability of broiler farmers in the area.

The gross margin is the difference between the gross farm income (GFI) and total variable cost (TVC). It is a useful planning tool in situation where fixed capital is negligible portion of the farming enterprises in the case of small-scale subsistence agriculture (Olukosi and Erhabor, 1988). They further stated that gross margin analysis enables the estimation of the total expenses (costs) as well as various receipts (revenue or returns) within a production period.

It is expressed as:

GM = GFI – TVC

NFI = TGM – TFC

Where:
GM = Gross Margin, GFI = Gross Farm Income, TVC = Total Variable Costs, TFC = Total Fixed Costs, NFI = Net Farm Income.

Results and Discussion

Table 1 however portrays the socio-economic characteristics of respondents while Table 2 indicates the Gross margin analysis of broiler farmers and Table 3 identifies the basic constraints to poultry production in the study area.

The result in table 1 showed that majority (50.0%) of the poultry (broiler) farmers were between 31 and 40 years old, followed by 33.3% of the respondents falls between 41 – 50 years old. The computed mean age of respondents is 37.1 indicating that many of them are quite young. This agreed with the view of Ekong (2003) that youths have been part of the overall agricultural development process in Nigeria because of the immense contribution of agriculture to the economy. Majority (90.0%) of the respondents are married. Higher percentage of married people is an indication of more responsible adult. This is in line with the report of Adegboye (1998) and the report of Tologbonse and Adekunle (2000) that married life is a mark of responsibility. The table further revealed that majority (90.0%) of respondents was literate. Post-primary education accounted for about 46.7%, followed by post-secondary education which accounted for about 33.3%. The ability to read and write will enable them to reason well and participate effectively in agricultural and rural development programmes in their communities (Kuye, 2004). It was also discovered that women form the majority (66.7%) of the respondents which showed that women are now economically engaged in a vocation and no longer solely dependent on their husbands. Table 1 showed that majority (63.3%) of respondents are civil servant in the study area indicating that nobody want to depends on salaries alone rather engaged I something that may generate income to the family coffers. Majority (80%) of the respondents depends on informal sources of credits to carry out their activities. This also revealed that formal source of funds is not easy to come by. A computed mean year of experience is 7.3 years old.

Table 1: Socio-Economic characteristics of respondents

Variables	Frequency	Percentage
Age:		
20 – 30	5	16.7
31 – 40	15	50.0
41 – 50	10	33.3
> 50	0	0
total	30	100
Marital status		
married	27	90
single	3	10
total	30	100
Sex:		
male	10	33.3
female	20	66.7
total	30	100
Educational level:		
Non-formal	2	6.7

Primary	4	13.3
Post-primary	14	46.7
Post-secondary	10	33.3
Total	30	100
Year of experience:		
1-5	9	30.0
6-10	16	53.3
11-15	5	16.7
> 15	0	0
Total	30	100
Occupation:		
farming	8	26.7
civil servant	19	63.3
business	3	10
Total	30	100
Sources of funds:		
personal savings	23	51.1
banks	9	20.0
friends	8	17.8
relatives	5	11.1
Total	30	100

- multiple response

Source: Field survey, 2014

The data in Table 2 revealed that net income percentage was 11.6%. This indicates that after deducting the costs of performing market functions, the poultry (broiler) farmers earned an average 11 kobo for every naira of the final price paid for the buyers.

The result showed that total revenue per poultry (broiler) farmers was found to be ₦ 119,050.00 which accrued from the sale of birds and poultry dung while the total cost incurred per the respondent was ₦ 13,755.00. In addition, feeds and medication accounted for 27.6% and 12.0% of the total variable costs respectively. Feeds resource is a major input production system, accounting for over 60% of total production costs in commercial poultry sector (Renkema, 1992).

Table 2: Average Costs and Returns of broiler production

Items	average value (₦)	percentage
Sales of birds	117,600	98.8
Sales of dung	1450	12.2
Total Revenue (TR)	119,050	
Variable costs:		
Cost of 100 birds	28,000	41.4
Purchase of feeds	18,680	27.6
Medication	8150	12.0
Transportation	4640	6.9
Equip.(watering can, feeders)	1150	1.7
Bulbs	500	0.7

Labour	3555	5.3
Miscellaneous	3000	4.4
Total variable cost (TVC)	67,675	
Fixed cost		
Rent	25,000	66.5
Bills	12160	32.3
Depreciation.	460	1.2
Total fixed cost (TFC)	37,620	
Total cost (TC) =	105,295	
Gross margin (GM) =	51,375	
Net income (NI) =	13,755	

Source: field survey, 2014

The profitability ratio was calculated to determine the profitability level of the enterprise. The result in table 3 showed that the profitability index (PI) was 0.12 indicating that out of every naira earned, about 12 kobo returned to the farmer as net income. Similarly, operating ratio that is less than one (unity) indicates a good, efficient and profitable business (Idowu, et al, 2005).

Table 3: Profitability analysis

Profitability index (PI)	0.12
Rate of returns on investment	11.6
Rate of returns on variable cost	20.3
Operating ratio	0.6

Table 4: Constraints faced by farmers

Category	Frequency	Percentage
High cost of feeds	30	36.6
Inadequate funds	20	24.4
High cost of medication	13	15.9
High mortality rate	11	13.4
All of the above	8	9.8

- Multiple response

Source: field survey, 2014

Table 4 revealed that majority (36.6%) of respondents said high cost of feeds was their main problem in the business. This was followed by inadequate funds which accounted for about 24.4% and medication with 15.9% of respondents.

Conclusion

The study envisaged that poultry business in Nassarawa-Eggon area is a viable one that needed to be supported by credit availability. The profitability index, rate of return to investment, variable and operating ratio were calculated as 0.12, 11.6%, 20.3, and 0.6 respectively, all of which implies that poultry business in the area is a profitable venture. In a bid to meet part of our animal protein requirement, from domestic source, effort should be geared towards intensification of animal production in general. It is recommended that poultry farmers can increase their profit by expanding their marketing outlet.

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