

PROFIT AND CONSTRAINTS OF SMALL-SCALE BROILER PRODUCTION IN EGBEDA LOCAL GOVERNMENT AREA, OYO STATE

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Abstract

The article assessed profit and constraints of small-scale broiler production in Egbeda local government area, Oyo state. The main objective of the study was to analyze the level of returns of small-scale broiler farmers in the study area. Data were collected using a structured questionnaire. Purposive and random sampling technique were employed to select 120 small scale poultry farmers for this study. The data were analyzed using frequencies, percentages, and gross margin analysis. The study focused on profitability of small-scale broiler production in the study area. Result indicated that an average broiler farmer was 47.4 with an average household size of 4.6, the farmers had average farming experience of 24 years. Small scale broiler production was profitable with a gross margin of ₦511,867.64. Cost of feed constituted the major variable cost of the total production process. Inadequate capital, scarcity of labour, lack of access to market, high cost of day-old chick, high cost of feeding access to land, farm security, and seasonality of the business were the major constraints that are faced by farmers. The study recommended that government should provide financial support and access of credit facilities for the farmers, also small-scale broiler farmers should form cooperative to be able to access credit for their operation and to be able to buy farm input in bulk to reduce high cost of input facing them.

Keywords: profitability, broiler, purposive, gross margin, day old chick

Introduction

Poultry production is unique in that it offers the highest turnover rate and the quickest returns to investment outlay in the livestock enterprises (Sanni & Ogundipe, 2005). Funds invested in poultry production are recovered faster than in any other livestock enterprise. The rate of growth in production of poultry is the highest when compared with ruminants and other monogastric animals (Sanni & Ogundipe, 2005) and the cheapest, commonest and the best source of animal protein Ike and Ugwumba (2011). Ogundipe and Sanni (2002) affirmed that returns to investment can be improved by turning out batches in a year depending on length of the production cycle. The poultry industry in Nigeria has undergone significant transformation since the early fifties, from a backyard, peasant and primitive household-oriented husbandry of breeds of semi-wild chicken to the cash oriented, modern and large-scale poultry.

Poultry, broiler inclusive was introduced into Nigeria in the 1950s to supplement the fast-declining rate of cattle production is a bid to supply the much-required protein in the diets of Nigerian. The need to provide sufficient animal protein for the human consumption is of paramount concern to animal scientists and veterinarians. Animal protein, apart from its profitability in terms of income to the farmers, is essential for normal physical and mental

development of man (Ugwu, 1990). Poultry makes a substantial contribution to food security and nutrition, providing energy, protein, and essential micro-nutrients to humans, with short production cycles and the ability to convert a wide range of agri-food by-products and wastes into meat and eggs edible by humans (FAO, 2013). According to Wikipedia (2021) poultry can be defined as domesticated fowls including chickens, turkeys, geese and ducks raised for the production of meat or egg. For instance, poultry meat and eggs are highly desirable in all parts of the country. Just two (2) eggs a day are sufficient to meet 17.2% of an adult person's protein needs as well as essential vitamins and trace elements (FAO, 2013). Poultry meat contains more proteins than beef. In addition, poultry housing can be provided at a relatively low cost and growth period is short (usually about 10 weeks for broilers). The Poultry industry has become very popular during the past few years due to the growing rate of unemployment and population explosion in Nigeria (Nwandu, 2019)

Though the value of livestock resources has grown in absolute terms in recent years, its overall contribution to agricultural output remains dismally low (Eke & Effiong, 2016). In Nigeria, animal protein, especially meat is expensive, in short supply and out of reach to the majority of the population. The effect of inadequate animal protein intake is felt more by a large proportion of the population especially in rural areas, whose inhabitants constitute over 70% of the Nigerian population and who constitute over 85% of the extreme poor in the country (Nwandu, 2020). There is therefore need to explore the different sources of animal protein including poultry production towards meeting these needs. Agriculturists and Nutritionists generally agreed that developing the poultry industry in Nigeria is the fastest means of bridging the protein deficiency gap presently prevailing in the country (Netherlands Enterprise Agency, 2020). In spite of these advantages the industry is yet to attain the desired level of productivity in Nigeria due to the high cost of production (Ogba et al., 2020). For instance, poultry farmers are faced with the problem of extremely high cost of day-old chicks, drugs and other poultry inputs. The situation has forced small scale poultry farms to close down and those still managing to survive are producing at very high cost and also contending with serious input limitations. Availability of credit and capital accumulation within the agricultural sector, poultry sector inclusive is very slow (Nwandu, 2021). There is also low level of productivity (Ogba et al., 2020). Amid these problems, there is need to investigate the profitability of embarking on poultry production.

According to Ike and Ugwumba (2011) broiler birds in terms of their nutritive value rank second to cow milk and the most economically produced animal protein. Its deficiency in the diet exerts adverse effects on human population due to abnormal development of the organs and body parts. The large share of livestock budget going to broiler production reflects its importance in Nigeria economy in 2000, out of ₦19,193,500 budgeted to the livestock sector, ₦11,680,000 (72.05%) of the budget was disbursed to poultry sub sector. Broiler production is a means of livelihood and a way of achieving certain level of economic independence in Nigeria. Its production is carried out in all parts of the country with no known religious, social or cultural inhibitions associated with its consumption. Specifically, investment in broiler enterprise is attractive because the production cost per unit is low compared to other types of livestock; its meat is very tender and has short production cycle. Owing to these obvious advantages of broiler production, large number of farmers both men and women ventures into their production mostly for income generation purpose besides meeting the protein needs of the households.

The profitability of small-scale broiler production is a critical issue for the small-scale farmers seeking to improve their livelihoods. Despite the potential for broiler farming to

provide a significant source of income, many small-scale farmers face challenges that hinder their profitability. These challenges include high cost of feeding, limited access to quality chick and feed, inadequate veterinary services, and lack of proper management practices. Additionally, market fluctuations and competition from large poultry producers further make worst the difficulties faced by small-scale broiler farmers.

According to (Ezeano&Ohaemesi, 2020), broiler farmers are faced with the problem of extremely high cost of day-old chicks, drugs and other poultry inputs.

Addressing the issue of improper management and introducing cheaper alternative source of feed without compromising the feed quality will improve the profitability of broiler production and give high return to the farmers. The following research questions will give an insight to elicit response from the respondents.

- (i) What are the socio-economic characteristics of broiler famers in Egbeda local government?
- (ii) What is the level of return of small-scale broiler production?
- (iii) What are the factors affecting profitability of broiler small holder farmers in Egbeda local government?
- (iv) What are the constraints of broiler small holder farmers in Egbeda local government?

This research aimed to assess the profitability of small-scale broiler production in Egbeda local government of Oyo state.

While the specific objectives are to: (i) describe the socio-economic characteristics of small-scale broiler famers in the study area. analyze the level of returns of small-scale broiler farmers (ii) identify the factors affecting profitability of small-scale broiler farmers in the study area (iii) identify the constraints facing small scale broiler farmers in the study area.

Methodology

This study was conducted in Egbeda Local Government Area (LGA) of Oyo state, which is one of the thirty-three LGA in Oyo State, a suburban located in the rainforest agro-ecological zone. It lies between latitudes 7°21'N4°3E' and 8°N of the equator. The LGA is bound in the north by Lagelu LGA, in the west by Ibadan North East LGA, in the east by Osun state and in the south by Ona-ara LGA. It has a land area of 420 square kilometer and a population of 39,500 (2006 census). There are about 195 settlements in the local government area while over 60%of these settlements are rural in nature. The annual mean temperature and rainfall in the area are about 28°C and 2650mm respectively. The people of the LGA are predominantly farmers.

The population of the study comprises of all broiler farmers in Egbeda Local Government Area of Oyo State. Multistage sampling technique was used to select respondents in the study area.

Purposive selection of 4 wards out of 11 wards in Egbeda local government, 30 respondents was randomly selected from each selected ward to give 120 respondents.

The respondents were asked to indicate how the listed constraints affected broiler production using a two-point rating scale of constraint, and not constraints. Scores of 1 and 2 was assigned respectively. A mean score was determined. Respondents with scores equals to or above the mean score was regarded as having severe constraints and those below means score

were regarded as not having a constraint, descriptive statistics was used which include measures of central tendencies such as mean, frequency distribution and percentages.

Gross Margin (GM) analysis was used to achieve the second objective.

$$\text{Gross Margin} = TR - TVC$$

Where GM = Gross Margin (₦)

TR = Total Revenue (₦)

TVC = Total Variable Cost (₦)

Results and Discussion

The socioeconomic characteristics of the respondents were presented in Table 1. The results show that 0.83 percent of the respondents were aged below 30 years, 27.75 percent of the respondents fell within the age range of 30-40 years, 30.84 percent of the respondents were in the age range of 41-50. While the mean age is 47.4, which shows that most of the small-scale broiler farmers were in their active stage. This demographic profile indicates a vibrant, energetic workforce capable of withstanding the daily labor-intensive demands of poultry management (Ibidapo et al., 2024). The sex distribution of the respondents as shown indicates that 48.33 percent of the respondents were male, while 51.67 percent of the respondents were female. It shows that female farmers were more into broiler production compare to their male counterpart.

The result indicates that 95.0% of the respondents were married this shows that majority of the small-scale broiler farmers in the study area which suggested more responsibilities that need financial commitment. The household size is between 4-6 while 3.36 percent of the respondents had household size above 6. The size of the farm also indicate that respondents operated on small scale

The mean income of ₦174,947.5 monthly income by respondents show that poultry production is profitable. This study supports the findings of Chiekezie et. al. (2021), Aminu and Hermmans (2021), Wale et.al. (2020) and Hassan (2014) who also had a positive profitability ratio, which measures the overall success of the poultry enterprise. while mean of 24 years has experience shows being in the business indicate level of expertise. A good number of the respondents had formal (70%) education which is pivot to development, The result of the finding corroborates with the findings of Yusuf et al. (2016) that age have direct relationship with farm output in poultry production.

The size of the flocks as indicated in the table below shows that 0.83 percent of the respondents had above 400 flock size while that 80.83 percent of the respondents had flock of 100-200.

Table 1: Socio-Economic Characteristics of the Respondents in the Study Area

Variable	Frequency	Percentage	Mean
Age (in years)			Age (in years)
< 30	1	0.83	< 30
30-40	33	27.5	30-40
41-50	37	30.84	41-50
51-60	40	33.33	51-60
> 60	9	7.5	> 60
Sex			Sex
Male	58	48.33	Male

Female	62	51.67	Female
Religion			Religion
Christian	68	56.67	Christian
Islamic	52	43.33	Islamic
Marital status			Marital status
Married	114	95.0	Married
Single	4	3.33	Single
Widow	2	1.67	Widow
Household size (No)			Household size (No)
1-3	16	13.44	1-3
4-6	99	83.20	4-6
> 6	4	3.36	> 6
Farm size (in Ha)			Farm size (in Ha)
< 3	66	64.71	< 3
3-5	35	34.31	3-5
> 5	1	0.98	> 5
Source of farm			Source of farm
Bought	31	25.83	Bought
Communal	1	0.83	Communal
Personal/inherited/personal	52	43.33	Personal/inherited/personal
Rented	36	30.0	Rented
Monthly income			Monthly income
Below 50,000	6	5	Below 50,000
50,000-100,000	31	25.83	50,000-100,000
100,001-150,000	8	6.67	100,001-150,000
150,001-200,000	29	24.17	150,001-200,000
Above 200,000	46	38.33	Above 200,000
Years of experience			Years of experience
Below 5	7	5.83	Below 5
5-10	50	41.67	5-10
11-15	50	41.67	11-15
16-20	11	9.16	16-20
Above 20	2	1.67	Above 20
Education level			Education level
Primary	2	1.67	Primary
Secondary	84	70.00	Secondary
Tertiary	34	28.33	Tertiary
Primary occupation			Primary occupation
Artisan	20	30.77	Artisan
Trader	6	9.23	Trader
Civil servant	39	60	Civil servant
Secondary occupation			Secondary occupation
Artisan	101	92.66	Artisan
Trader	2	1.84	Trader
Civil servant	6	5.50	Civil servant
System of production			System of production
All year round	72	60.00	All year round
Occasionally	2	1.67	Occasionally
Quarterly	46	38.33	Quarterly

Size of flock	97	80.83	Size of flock
100-200	17	14.17	100-200
201-300	5	4.17	201-300
301-400	1	0.83	301-400
Above 400			Above 400
Duration of sales	52	43.33	Duration of sales
3 weeks	45	37.50	3 weeks
4 weeks	4	3.33	4 weeks
7 weeks	19	15.83	7 weeks
Matured birds 12 weeks			Matured birds 12 weeks

Note. From Field Survey, 2024

Cost and Return of Small-Scale Broiler Production

The result of cost and return of small-scale broiler production in the study area were presented in Table 2. The result shows that the average flock size was estimated at ₦222.0833, total Variable Cost was estimated at ₦520,132.846 and total fixed cost was ₦92034.17. Total revenue generated from sales of broiler was ₦939,966.3, gross margin was ₦511,867.64 and net farm income was ₦419,833.454.

Table 2: Cost and Return of Small-Scale Broiler Production

Items of Cost	Cost
Size of flock	222.0833
Cost of DOC	140723.3
Cost of transportation	16327.88
Cost of wood shaving	6689.076
Cost of heat source	4235.294
Cost of feed and supplements	199790.7
Cost of drug and vaccine	16050
Cost of Pen	92034.17
Cost of Maintenance and Repair	15216.67
Miscellaneous cost	29067.23
Total Variable Cost (TVC)	428,098.676
Total Fixed Cost (TFC)	92034.17
Total cost	520,132.846
Revenue from sales of broiler	939966.3
Net Farm Income (NFI) = TR – TC	419,833.454
Gross Margin = TR – TVC	511,867.64

Note. From Field Survey, 2024

The distribution of respondents based on the factor influencing scale of production of producers in the study area were presented in table 3. The table shows that high cost of feed and farm input (WMS=3.85) availability of labour (WMS=2.70) access to finance (WMS=3.76) access to market (WMS=2.73), technology are all high and severe respectively (WMS=2.81). low cost of DOC(WMS=2.70),high quality DOC(WMS=3.68), high quality feed (WMS=3.00) were the factors identified by the respondents in the study area as factor influencing profitability of small-scale broiler production.

Table 3: Factor Influencing Profitability of Small-Scale Broiler Production

Variables	High F (%)	Not a problem F (%)	Severe F (%) WMS
High cost of feed and farm input	16 (13.56)		102 (86.44) 3.85
Availability of labour	119 (99.17)		1 (0.83) 2.70
Access to finance	113 (94.17)	1 (0.83)	6 (5.0) 3.76

Access to market	105 (87.50)	2 (1.67)	13 (10.83)	2.73
Technology	105 (87.50)	7 (5.88)	7 (5.88)	2.81
Access to loan	10 (8.33)	2 (1.67)	108 (90)	3.04
Interest rate	116 (96.67)		4 (3.33)	2.81
Low cost of DOC	17 (14.17)		103 (85.83)	2.70
High quality DOC	113 (94.17)	1 (0.83)	6 (5.00)	3.68
High quality feed	111 (93.28)		8 (6.72)	3.00

Note. From Field Survey, 2024

The distribution of respondents according to constraints faced by small scale broiler farmers were presented in Table 4 and identified various constraints face by broilers farmers at level such as inadequate capital as major and high constraints, while scarcity of labour, lack of access to market, high cost of DOC, high cost of feeding respectively has mild constraints, cost of table size broiler, disease outbreak, climate change, lack of access to loan, and high interest on loan has mild constraints, 87.50 percent, 85.0 percent, 75.0 percent, and 72.50 percent of the respondents identified poor market structure, poor government policy, high risk involved in the business and low return from the business as mild constraints, while 94.1 percent, 90.83 percent, and 95.00 percent of the respondents identified access to land, farm security, and seasonality of the business as high constraints. This finding supports the submission of Adebayo et al. 2005 Among the constraints identified in this study, finance and input had significant relationship with average production of the respondents. Probable reason for this may be due to the fact that, only few respondents had access to credit facilities or loan from financial institutions. Earlier reports (Agbato, 1997; Akeeb, 1997) also confirmed that credit facilities or loans from financial institutions are not accessible to the poultry farmers in the rural area.

Table 4: Constraints of Broiler Small Holder Farmers

Variables	High F (%)	Mild F (%)	Extreme F (%)	WMS
Inadequate capital	12 (10.06)	107 (89.9)		2.85
Scarcity of labour	15 (12.50)	105 (87.50)		1.89
Access to land	112 (94.12)	7 (5.88)	2.45	
Lack of access to market	13 (10.83)	107 (89.17)		1.46
High cost of DOC	13 (10.92)	106 (89.08)		3.89
High cost of feeding	13 (10.83)	107 (89.17)		2.76
low price of table size broiler	14 (11.86)	104 (88.14)		2.80
disease outbreak	10 (8.33)	110 (91.67)		2.50
Climate change	15 (12.50)	105 (87.50)		2.57
Lack of access to loan	13 (10.92)	106 (89.08)		3.56
High interest on loan	14 (11.67)	106 (88.33)	3.01	
Farm security	109 (90.83)	11 (9.17)		1.89
Seasonality of the business	114 (95.00)	6 (5.0)		2.41
Poor market structure	15 (12.50)	105 (87.50)		2.00
Poor government policy	18 (15.0)	102 (85.0)		2.20
High risk involved in the business	8(6.67)	90(75.0)	22 (18.33)	1.98
Low return from the business	29 (24.7)	87 (72.50)	4 (3.33)	2.00

Note. From Field Survey, 2024

Summary of Findings, Conclusion and Recommendations

Profit and constraints of small-scale broiler production in Egbeda local government area, Oyo State was investigated in this study. The population of the study comprised all broiler farmers in Egbeda local government area of Oyo state. Structured questionnaire and interview schedule were used to elicit response from the respondents on socioeconomic characteristics, level of return of small-scale broiler production, factor affecting profitability of broiler small

holder farmers. Data were analyzed using descriptive statistics (frequency counts, percentages, mean and standard deviation) and gross margin analysis.

Challenges that were mostly encounter by small scale broiler farmers in the study area were identified as inadequate capital, scarcity of labour, lack of access to market, high cost of DOC, high cost of feeding, low cost of table size broiler, disease outbreak, climate change, lack of access to loan, high interest on loan, access to land, farm security, and seasonality of the business.

Conclusion

Based on the findings of the study, it can be concluded that, small scale broiler production is profitable and it's a viable business that can be venture into for quick return on investment. Also, high cost of feeding, low cost of table size broiler, disease outbreak, climate change, lack of access to loan, high interest on loan, access to land, farm security, and seasonality of the business were the constraints faced by small holder broiler farmers in the study area.

Recommendation

Therefore, it is recommended that government should provide financial support and access of credit facilities for the farmers. Also, small scale broiler farmers should form cooperative to be able to access credit for their operation and to be able to buy farm input in bulk to reduce high cost of input facing them.

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