

## APE -02

### Economics of Small-Scale Broiler Production in Ondo-West Local Government Area of Ondo State, Nigeria

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#### Abstract

Adequate supply of protein in average home has been a major problem both in rural and urban areas of developing countries. Studies on poultry production have little empirical evidence to understand the economics of small-scale broiler production. Hence, economics of broiler production in Ondo-West Local Government Area of Ondo State was investigated. The multistage sampling technique was used to select One hundred and two respondents for the study. Data collected using structured questionnaire were analysed with the aid of descriptive statistics, gross margin and benefit-cost ratio. The mean age of respondents was  $43.6 \pm 4.7$  years, 63.7% were males and 78.4% were married with mean household size of  $7 \pm 4$  members and mean flock size was  $82.6 \pm 29.8$  birds. The gross margin was N217328.25 with gross ratio of 0.539. Inadequate capital and high cost of feeds among others were the constraints facing broiler production in the study area. It was recommended that adequate capital, feed ingredients and drugs/vaccines should be made available to broiler farmers.

**Keywords:** Broiler production, flock size, profitability analysis, farmers

#### Introduction

Broiler production is an important sector in the poultry industry. Broiler production entails the raising of birds specifically for meat (Iwena, 2012). Broiler production has being a major means of increasing the protein requirements of an average home both in rural and urban areas of developing countries. Broiler production forms a good source of employment, income and meat (Varinder *et al.*, 2010). The production of broilers has advantages over other aspect of poultry because it is affordable to produce on a small scale, could be raised at the backyard and it can be combined with other enterprise. Despite the importance of poultry production to households and the economy, high cost of feeds and feed ingredients, infestation of pests and diseases, high mortality rates, high costs of drugs and vaccines, poor access to credit, among others constitute some constraints in poultry production. Researchers such as Varinder *et al.* (2010) and Ameh *et al.* (2016) have worked on poultry production however; there is little empirical evidence to understand the economics of broiler production in the study area. The results of the study will provide information to policy makers, stakeholders, extension practitioners in formulating policies regarding economics of small-scale broiler production.

The study examined economics of broilers production in Ondo-West Local Government Area of Ondo State. Specifically, the objectives are to; examine the socio-economic characteristics of broiler farmers, identify the challenges associated with broilers production, determine the costs and returns in broiler production.

#### Materials and Methods

The study was carried out in Ondo-West Local Government Area (LGA) of Ondo State. The LGA has a population of 283,672 people (National Population Commission, 2006). Farming is the primary occupation of people in the study area with petty trading as other means of livelihoods. Multi-stage sampling technique was employed in selecting One hundred and two (102) poultry farmers who are into broiler production.

Primary data were collected with the aid of structured questionnaire and data were analysed using descriptive statistics, gross margin, marketing margin and benefit-cost ratio to determine the profitability of the business.

#### Results and Discussion

The results of socio-economic characteristics of the respondents (Table 1) showed the mean age of respondents was  $43.6 \pm 4.7$  years implying that broiler farmers were within the economic active age. Gender analysis showed that 63.7% were male and 36.3% were female showing that majority of broiler farmers in the study area were males. This is in line with Smith (2001) that gender enables or restricts access to economic activity. This may not be unconnected with the fact that most operations in the industry are tedious. This is in line with Kimaro *et al.* (2015). The marital status revealed that 78.4% were married with an average household size of  $7 \pm 4$  members. This implied that the household size in the study area is fairly large thus more labour could be

supplied to other sectors. On educational attainment by respondents, the result showed that 62.7% had primary education. Education enabled individuals to develop successful businesses (Rath *et al.*, 2002). The low level of respondents' education has a serious implication on broiler production and other activities. This is in line with the findings by Wandschneider (2003) that better educated individuals are likely to possess skills and ability to manage a business. The cooperative society (68.6%) constituted the main source of credit for broiler farmers. This may not be unconnected with timeliness of loan disbursement, low interest rates and less procedural bottlenecks.

The result revealed the mean flock size of respondents in the study area was about 83±30 birds. On challenges facing broiler farmers, the result revealed that, inadequate capital accounted for 54.6%. This is in line with Amao (2013) who posited that poultry industry has been greatly challenged by inadequate capital or fund. High cost of feed accounted for 23.5% while high mortality rates, costs of labour and high cost of drugs and vaccines accounted for 10.8%, 5.9% and 4.9%, respectively.

Table 1: Socio-economic characteristics of broiler farmers n = 102

| Variables                        | Frequency | Percentage (%) |
|----------------------------------|-----------|----------------|
| Age (years)                      |           |                |
| < 25                             | 3         | 2.9            |
| 25-43                            | 58        | 56.9           |
| >43                              | 41        | 40.2           |
| Mean(SD)                         |           | 43.6±4.7       |
| Sex                              |           |                |
| Female                           | 37        | 36.3           |
| Male                             | 65        | 63.7           |
| Marital status                   |           |                |
| Single                           | 8         | 7.9            |
| Married                          | 80        | 78.4           |
| Widowed/Divorced                 | 14        | 13.7           |
| Household Size (numbers)         |           |                |
| < 5                              | 10        | 9.8            |
| 5-11                             | 81        | 79.4           |
| >11                              | 11        | 6.9            |
| Mean(SD)                         |           | 7.2±4.3        |
| Educational status (years)       |           |                |
| Primary education                | 64        | 62.7           |
| Secondary education              | 11        | 10.9           |
| Tertiary education               | 10        | 9.8            |
| Non-formal education             | 17        | 16.6           |
| Sources of Credit                |           |                |
| Commercial Banks                 | 5         | 4.9            |
| Cooperative Society              | 70        | 68.6           |
| Moneylenders                     | 12        | 11.8           |
| Friends/Relatives                | 15        | 14.7           |
| Number of birds raised (numbers) |           |                |
| <50                              | 32        | 31.4           |
| 51-120                           | 51        | 50.0           |
| >120                             | 19        | 18.6           |
| Mean (SD)                        |           | 82.6±29.8      |
| Constraints                      |           |                |
| High cost of feed                | 24        | 23.5           |
| Inadequate Capital               | 56        | 54.9           |
| High mortality rate              | 11        | 10.8           |
| High cost of drugs & Vaccines    | 5         | 4.9            |
| Cost of labour                   | 6         | 5.9            |

Source: Field Survey, 2016. Mean (SD) = Mean (Standard Deviation)

The result of the cost and returns analysis on broiler production (Table 2) revealed that the gross margin was ₦217328.25. The estimated gross and operating ratios were 0.54 and 0.46 respectively while the return (Benefit-Cost) on every naira invested was 1.512. This implied that for every naira invested in broiler production, ₦1.512 was realised. This indicated the profitability of broiler production in the study area.

Table 2: Cost and Returns Analysis on Broilers' Production

| Variables                      | Amount (₦) |
|--------------------------------|------------|
| Total Revenue (TR)             |            |
| Sale of birds                  | 403200.00  |
| Variable Costs (VC)            |            |
| Cost of birds (4weeks old)     | 68880.96   |
| Cost of feed                   | 94200.30   |
| Drugs                          | 5540.15    |
| Labour                         | 15000.00   |
| Miscellaneous running expenses | 2250.34    |
| Total Variable Cost (TVC)      | 185871.75  |
| Fixed Cost                     |            |
| Cages                          | 62675.68   |
| Rent of land                   | 18000.00   |
| Total Fixed Cost (TFC)         | 80675.68   |
| Gross Margin (GM-TVC)          | 217328.25  |
| Net Farm Income (GM-TFC)       | 136652.57  |
| Gross Ratio                    | 0.539      |
| Operating Ratio (TVC/GR)       | 0.461      |
| Benefit-Cost Ratio TR/TC       | 1.512      |

Source: Authors' Computation, 2016

### Conclusion and Recommendations

Broiler production has being a major means of increasing the protein requirements of average homes and a good source of employment and income. It was recommended that adequate capital, feed ingredients and drugs and vaccines should be made available to broiler farmers to enhance production and ensure healthy development of the birds.

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