COMPARATIVE ANALYSISOF SELF COMPOUNDED POULTRY FEED AND COMMERCIAL POULTRY FEED ON POULTRY ENTERPRISE IN SOUTH WEST NIGERIA

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Abstract: The issues of feed have been the major challenge in poultry enterprise in recent times. The cost of feed is about 60% - 70% of the total cost incurred on poultry enterprise and it reduces rate of returns of farmers. Due to increase in demand of poultry products and contribution to economy and livelihood, most of the farmers compound feed in order to proffered solution to this challenged, reduce cost and also to improve the quality and quantity of poultry products. This study compares the effect of self compounded feed and commercial poultry feed on poultry enterprise in Ekiti state. A total of 120 poultry farmers were randomlyselected from 8 Local Government Areas. Data were collected with the use of structured questionnaire and analyze by the use of descriptive statistics, Likert scale, and partial budgeting analysis. Findings show that 54.17% of the farmer uses commercial feed while 48.83% uses self compounded feed, 54.16% were within the active age range of 31 – 40 years, 60.83% has tertiary education and 45.83% were small scale farmers. However, the results revealed that the rate of returns for poultry farmers using commercial feeds is lesser than that of farmers using self compounded feed. Benefit cost ratio shows that poultry farming is profitable even with small capital investment with any type of poultry feed. This study recommends that poultry farmers should be encouraged to improve theirproduction through provision of loans and availability of essential feed ingredients.

Keywords*:* Profitability; Poultry feed, Rate of Returns, Poultry enterprise.

Introduction: The importance of poultry enterprise to the national economy of developing nations cannot be overemphasized, as it can been seen in the role it plays in meeting nutritional needs and generation of employment for vast population. It is becoming popular with the small scale holders and this in turn increases the gross domestic product (GDP) of the country. The profitability of the enterprise is high with brief production cycle, resources are not put on-hold, and consumers' preference for poultry products is increasing and there is prepared market for its products [12]. Poultry enterprise is arelevant livestock sector [3] and gives plenteous low cost food of high grade quality [5],[1],[8]. Poultry birds contribute meaningfully to human food through its supply of meat, eggs, and industrial raw materials. Furthermore, it's a provider of income and employment to unemployed compare to other livestock section [7].

The goal of every poultry farmer is to produce meat and eggs at low cost rate and this can only be achieved by the use of feed. The cost of feed is about 60 - 70% of the total costs incurredin poultry enterprise. However, production activities in poultry enterprise must have clear goalof reducingcost of feed. Bird's growth, meat quality and quantity all depends on the quantity and quality of feed used [6],[5]. The exorbitant costof commercial feed has made farmers to think of alternative ways of overcoming the high cost offeed,and to go extra mile in converting feed to gain.

Therefore, it is essential to examinethe usage of poultry feeds in relation to profitability.Most of the medium to largescale poultry farmers compoundfeed by themselves, while a good number of small-scale poultry farmers use commercial feeds in an effort to save time and stress.The contribution of poultry enterprise to the economy can be enhanced and sustained with a proper analysisof the type of feed used in poultry enterprise viz as viz its profitability. The main objective of this study is to compare the effect of self compounded feed and commercial feed on poultry enterprise in Ekiti State, Nigeria. The specific objectives of this study is to ascertain the profitability of the type of feed used in poultry enterprise; identify factors influencing the type of feed used on poultry enterprise.

Materials and Methods:

Study Area: This study was conducted in Ekiti State, Nigeria which lies within the tropics and located betweenlongitudes $4°45^{1}$ and $6°45^{1}$East of Greenwich meridian, latitude $6°15^{1}$and $8°5^{1}$North of equator. The state enjoys a typical tropical climate with two distinct seasons, raining season between April to October and dry season which prevails for the remaining months. EkitiState shares boundary in the South with Kwara and Kogi States, bounded in the east by Ondo State and on the west by Osun State.Having population of 2,384,212, covered an area of 6,353 km^2, average rainfall annually ranges between 2000 mm - 2400 mm, the temperature range from $20^{o}C$ -$27^{o}C$ and 60% relative humidity, with sixteen (16) Local Government Areas [4],[10].

Sampling Technique: A total of 120 poultry farmers

from 8 Local Government Areas were randomly selected for this study using well structured questionnaire which was the primary source of data collected from the sampled poultry farmers and the secondary data source were annual reports and published materials.

Method of data analysis: Data were analyze with the use of descriptive statistics such as frequency distribution, and percentage to determine the socio economic characteristics, five point Likert scale of strongly agree, agree, uncertain, disagree and strongly disagree were used to determine the factor influencing the type of feed used. Partial budget analysis were also employed to compare the performance of farmer's productivity based on type of feed used such as benefit cost ratio, and rate of returns on poultry enterprise in the study area.

Results And Discussion: Age is one of the important factors among the socio economic characteristics that determine the effectiveness and availability of competent labour in poultry enterprise. 54.16% of the respondents are within the active age range of 31 – 40 years, hence they have the ability to supply the labour require for production processes. 60.83% of the respondents have tertiary education which has direct influence on the farmers to keep record of activities and make necessary observation on poultry enterprise compare to non educated farmers. 50% of the respondents falls between 11 – 30 years of farming experience which depict that they have good farming experience which have influence on their performance and observation about the effect of feed on poultry enterprise. 54.17% of the respondents used commercial feed which was due to capital, availability of ingredients and size of farm while 45.83% of the respondents were small scale farmer. They have less than 1000 birds in their farm

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Table I: Socio Economic Characteristics of Respondents		
Variables	**Frequency**	**Percentage%**
Age		
21 - 30 Years	18	15.00
31 - 40 Years	65	54.16
41 - 50 Years	29	24.16
> 50 Years	8	6.68
Level of Education		
Primary Education	9	7.5
Secondary Education	38	31.67
Tertiary Education	73	60.83
Years of Farming Experience		
< 10	48	40
11 – 20	35	29.17
– 30	25	20.83
>30	12	10
Type of Feed Used		
Commercial	65	54.17
Self Compounded	55	45.83
Size of Farm		
< 1,000	55	45.83
1000 – 3000	33	27.5
3000– 5000	15	12.5
>5000	17	14.17

Source: Field survey, 2013

Factors determining the types of feed used on the farm

The respondents were made to respond to a five point Likert scale of strongly agree (SA), agree (A), uncertain (U), disagree (D) and strongly disagree (SD). Judging by the mean (X= 2.94), factors influencing the use of commercial and self compounded feed by the respondents include the following: It's cheaper to compound feeds from toll millers (x=3.44), Self compounded mills is richer than commercial feed (x=3.05), quality of egg produced is higher with self compounded feed (x=3.56), preferred the use of commercial feed due to lack of essential ingredients (x=3.1), commercial feeds saves time and that commercial feeds are readily available (x=3.85) respectively.

However, it was deduced thatthe use of commercial feeds is influenced by inadequate and/or proximity of essential

ingredients for self feed formulation, timeliness as well the readily availability of commercial feeds.

Table II:Factors determining the types of feed used on the farm							
Variable	SA	A	U	D	SD	Total	Mean
Its cheaper to compound feeds from toll millers	120	208	15	64	10	417	3.48*
Self Compounded feed is richer than commercial feed	50	176	45	82	14	367	3.06*
Birds growth rate is faster with self compounded feed	80	120	51	74	20	345	2.88NS
I produced major ingredients used in compounding feed	15	92	30	142	16	295	2.45NS
quality of egg produced is better with self compounded feed	50	44	81	62	42	279	2.33NS
Quantity of eggs produced is higher with self compounded feed	75	180	93	66	14	428	3.57*
Bird lay longer with self compounded feed	55	120	93	36	30	334	2.78NS
Commercial feed saves time	200	200	30	30	05	465	3.88*
I prefer the use of commercial feed due to lack of essential ingredients	110	128	45	66	23	372	3.10*
its difficult to compound feed by female gender	50	60	27	60	46	243	2.03NS
mortality rate is lower with compounded feed	90	76	45	40	48	299	2.49NS
Weight of spent layers eating commercial feed is higher than that of the one eating self compounded	15	48	45	142	17	267	2.23NS
I use commercial feed because its readily available	200	200	30	30	05	465	3.88*

Source: Data analysis, 2013.

Profitability Of Poultry Farmers Based On Typeof Feed Used

From the table below the average total cost for commercial feed was ₦31,875.00 while compounded feed was ₦29,375.00. Total Revenue for both commercial and self compounded feed was ₦49,700. Net Profit for commercial feed was ₦17,825.00 while for self compounded feed was ₦20,325.00. Benefit cost ratio for commercial feed was 1.55 and 1.67 for compounded feed which indicate profit with little capital. Rate of returns for poultry farmers using commercial feeds is 55% which shows that for every ₦1.00 invested ₦0.55 is been gained while for self compounded feed users rate of returns is 69% which shows that for every ₦1.00 invested ₦0.69 is been gained.Gross ratio for commercial feed implies that for every ₦1.00 returns ₦0.64 is been spent while for compounded feed for every ₦1.00 returns ₦0.59 is been spent.

Conclusion: This study compares the effect of self compounded feed and commercial poultry feeds on poultry enterprise among poultry farmers in Ekiti state Nigeria, in ensuring reduction in the cost of feeds. Findings show that54.17% of the farmers uses commercial feed which are influenced by inadequate of essential ingredients and timeliness while 48.83% uses self compounded feed which are influenced by cheapness and quality advantage, 54.16% of the farmers were within the active age range of 31 – 40 years, 60.83% has tertiary education which influence proper documentation of farm activities, 45.83% were small scale farmers due to experience and time. However, rate of returns for poultry farmers using commercial feed is lesser than that of farmers using self compounded feed, benefit cost ratio shows that poultry farming is profitable even with small capital investment with any type of poultry feed. To further improved the quality of poultry enterprise and also reduce the cost of feed the following recommendation are made: provision of loans and availability of essential feed ingredient

	COMMERCIAL FEEDS	SELF COMPOUNDED FEEDS
Average number of birds	2,500	2,500
Feed consumed daily per bag	12.5	12.5
Cost of feed per bag (25kg)	₦2,550.00	₦2350.00
Total cost of feeds consumer per day	**₦31,875.00**	**₦29,375.00**
No of egg produce per day per tray	71 ₦700	71 ₦700
Cost of egg per tray	**₦49,700.00**	**₦49,700.00**
Total Revenue	**TR - TC**	**TR - TC**
Net Profit	₦(49,700-31,875) **₦17,825.00**	₦(49,700 -29,375) **₦20,325.00**
Benefit Cost Ratio (BCR)	**TR ÷ TC** ₦(49,700 ÷ 31,875) **1.55**	**TR ÷ TC** ₦(49,700 ÷ 29,375) **1.69**
Gross Ratio (G.R)	**TC ÷ TR** ₦(31,875 ÷ 49,700) **0.64**	**TC ÷ TR** ₦(29,375 ÷ 49,700) **0.59**
Rate of Returns (R.O.R)	**NET PROFIT ÷ TC** ₦(17,825 ÷ 31,875) **0.55**	**NET PROFIT ÷ TC** ₦(20,325 ÷ 29,375) **0.69**

Source: Data analysis, 2013.

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