POS -12

Proximate Characteristics of Some Commercial Broiler Feeds Sold In Owerri for Turkey Production

O.R. Alaoma, U.N. Okehie, V.C. Anyanwu, E.B. Etuk and O.O. Emenalom
Department of Animal Science and Technology, Federal University of Technology Owerri
Corresponding author: U.N. Okehie; E-mail: bishopukachukwu@gmail.com:Tel: 08037521469

Abstract
The chemical characteristics of some commercial broiler feeds sold in Owerri, Imo State were determined. The research was carried out in Owerri, Imo State. A formulated turkey feed (A) and three brands (B, C, D) of commercial broiler feeds (starter and grower) were used for the study. The formulated starter feed contained maize (42.2%) soybean meal (40.5%), spent grain (11%), wheat offal (3.00), bone meal (2.3%), lysine (0.25%), methionine (0.25%), vitamin premix (0.25%) and salt (0.25%).Samples of the feeds were analyzed for their dry matter, crude protein, crude fibre, ether extract, nitrogen free extract and metabolisable energy. The proximate composition of the selected feed brands varied between formulated and the feed brands and were below the recommended values for poultry which will likely affect the performance of turkey when fed such feeds.

Keywords: Broiler feeds, turkey production, poultry

Introduction

Poultry feeds are primarily produced to optimize the growth potential of the target birds through a defined nutritional specification but more than 10% reduction in chicken growth rates has been observed when birds are offered different feed brands (Uchegbu *et al*., 2009). It means that there are variations in the compositions of different feed brands meant for the same class of birds. This is because feeds come in different forms with different brand names and prices. However, the increasing number of people venturing into poultry business and the increasing cost of feed materials, there is no doubt that there is the tendency for feed manufacturers to produce substandard feed, especially as the quality control agencies are non-existent or non-functional (Okoli *et al.,* 2009).A knowledge of the proximate composition of the brands is therefore imperative for the poultry industry as this have been suggested as indicators of feed quality (Wiseman and Inborr, 1990). This affects the degree to which the bird is able to digest, absorb and utilize the feed components.

This report is designed to access the nutritional characteristics of some selected broiler feeds sold in Owerri Metropolis, Imo State.

Materials and Methods

The research was carried out in Owerri, Imo State. A formulated turkey feed (A) and three brands (B, C, D) of commercial broiler feeds (starter and grower) were used for the study. The formulated starter feed contained maize (42.2%) soybean meal (40.5%), spent grain (11%), wheat (3.00), bone meal (2.3%), lysine (0.25%), methionine (0.25%), vitamin premix (0.25%) and salt (0.25%).Samples of the feeds were analyzed for their dry matter, crude protein, crude fibre, ether extract and nitrogen free extract using methods of AOAC (1990). Metabolisable energy was estimated using the formula proposed by Wiseman (1987). ME = 3951 + 54.499-88.7CF-40.8Ash.

Results and Discussion

Data on the proximate analysis of the selected feed brands are shown in table 1. The result of the research showed wide variations between the formulated feed and the other feed brands.This is inline with the findings of Omede (2004), who reported discrepancies between the declared nutrient values by manufacturers in Nigeria and the results from laboratory chemical analysis.

Conclusion

The proximate composition of the selected feed brands varied between formulated and the feed brands and among the feed brands. The values for the commercial feed brands were below the recommended values for poultry and will likely affect the performance of poultry fed such feeds.

Table 1: Proximate composition of selected feed brands

Parameters (%)		A	B	C	D
Moisture	Starter	10.06	9.40±6.56	11.10±10.34	11.00±9.34
	Grower	10.60	10.60±0.00	10.50±0.94	11.40±7.55
Crude Protein	Starter	11.60	16.79±16.79	19.55±19.55	12.04±12.04
	Grower	20.96	13.72±34.54	14.04±33.02	12.69±39.46
Crude Fibre	Starter	5.77	5.06±12.31	6.43±11.44	2.81±51.30
	Grower	5.58	8.69±55.73	4.70±15.77	9.97±78.67
Crude Fat	Starter	6.02	4.67±22.43	4.68±22.26	6.54±8.64
	Grower	5.97	6.11±2.35	4.96±16.92	6.77±13.40
Ash	Starter	7.04	8.75±24.29	6.11±13.21	4.26±39.49
	Grower	6.94	9.15±31.84	6.47±6.77	10.69±54.03
ME (kcal/kg)	Starter	3206.47	3199.68±0.21	3185.87±0.64	3582.44±11.73
	Grower	3227.40	2861.38±11.34	3324.63±3.01	2685.01±16.81

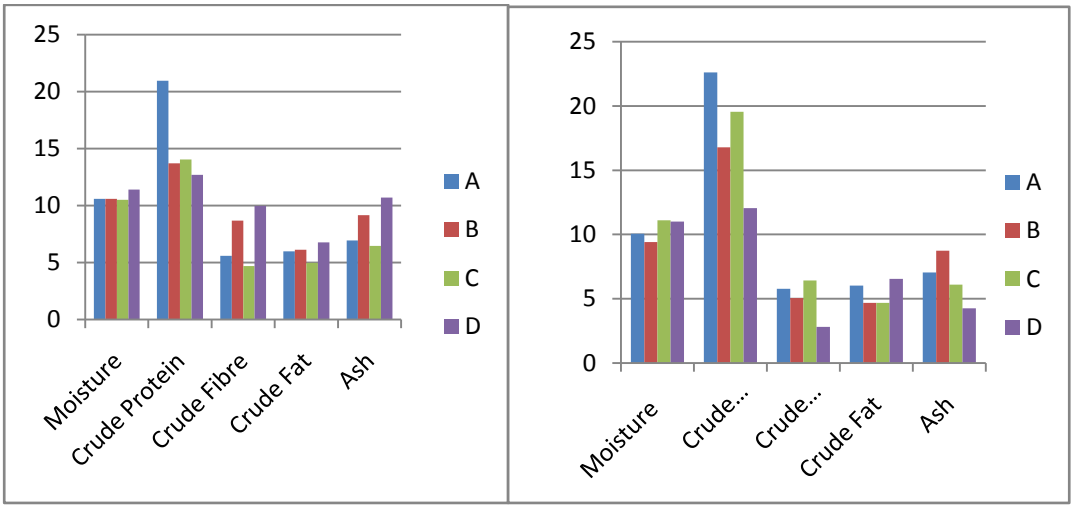


Fig. I: Proximate composition of selected starter and finisher feed brands

Reference

AOAC (1990). *Official methods of analyses*, 14th Ed. Association of Official Analytical Chemists, Washington DC.

Okoli, I.C., Uchegbu, M.C., Ogbuewu, I.P. and Omede, A.A. (2009). Physical characteristics as indicators of poultry feed quality; A review. In: S. I. Ola, A. O. Fafiolu and A. A. Fatufe. (Eds*). Proceedings of the 3rd Nigerian International Poultry Summit*, Abeokuta, Nigeria. Pp: 124-128.

Omede, A.A. (2004). Quality assessment of some commercial poultry feeds sold in Nigeria. B. Agric Tech Project Report. Federal University of Technology Owerri, Nigeria.

Uchegbu, M.C., Irechukwu, N.M., Omede, A.A., Nwaodu, C.H., Anyanwu, G.A., Okoli, I.C. and Udedibie, A.B.I. (2009). Comparative evaluation of three commercial feeds on the performance of broilers. *Report and Opinion,* 1(4):

Wiseman, J. and Inborr, J. (1990). The nutritive value of wheat and its effect on broiler performance. In: W. Harresigh and D.J.A. Cole (Eds.). *Recent advances in animal nutrition*. Butterworths, London.Pp: 79-102.