

Feeding Management Practices of Small holder Turkey Farmers in the Warm Wet Tropical Environment of Imo State, Nigeria

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Abstract: Primary data were generated from field surveys conducted with the aid of questionnaires, personal interviews, field measurements and conversation between May and August, 2005 on the feeding management practices of 90 smaller holder turkey farmers in Imo State. All of the farmers fed their turkeys with commercial chicken feeds. Fifty (50.00%) of the farmers used chicken layer rations for their breeder turkey, another 30(33.33%) used breeder ration and 15 (16.67%) fed any ration available in the market. Sixty (66.67%) farmers did not observe influence on feed consumption, while thirty (33.33%) observed seasonal influence on feed consumption. Thirty (33.33%) each of the farmers fed their turkeys twice and thrice, while 15(16.67%) each fed theirs *ad libitum* and once daily. Another 45 (50.00%) each of the farmers used broiler starter and chicks mash to raise their turkey from day old to 8 weeks, while 90(100.00%) used grower ration to feed their turkey to maturity. These results proved that the small holder turkey farmers do not fully understand the nutritional requirements and appropriate feeding management of turkeys at different stages of growth. [Report and Opinion. 2009;1(4):56-58]. (ISSN: 1553-9873).

Keywords: Turkey, chicken feed, management, small holder farmers, Nigeria

1. Introduction

Turkey production in Nigeria has largely remained at the smallholder level due to high cost of feed, inconsistency in feeding programmes, as well as lack of knowledge of the adequate levels of nutrient requirement (Ojewola et al., 2002). Research into nutritional aspect of turkey production in Nigeria is however beginning to receive attention (Ojewola et al., 2002; Tanko and Ojewola, 2003; Etuk, 2007). Usually, farmers who are unable to mix their own feeds may rely on feeds originally formulated for chickens to raise their turkey (Okeudo, 2004; Okoli, 2005). As a result, there seems to be a gradual assumption that feed formulated for chickens could be used for turkeys with the same or better result. This assumption is not only misleading but also dangerous, especially as turkey production enterprise begins to attract considerable investment attention (Etuk, 2007).

There is a dearth of information on the nutrient requirement of turkeys especially the local turkey being raised in tropical environments. This is evidenced by the conspicuous absence of turkey feeds from commercial feed millers in the country (Ojewola et al., 2002). Lack of knowledge of limitations of feed ingredients used in turkey feeds leads to poor growth (Etuk, 2005). Proper nutrition is a basic pre-requisite for successful poultry production (Kekeocha, 1984), since it increases the resistance of poultry to diseases and also allows the producer to optimize the genetic potentials of birds (FAO, 1971). Since feed cost represents over 70% of the cost of production, special care should therefore be taken in providing the most suitable diet and safeguarding feed quality (Cobb Breeding Company Limited, 1988).

This study was designed to investigate the feeding management practices of smallholder turkey farmers in Imo State, Nigeria.

2. Materials and Methods

Study area: This study was carried out in Imo State, which is situated in the Southeastern vegetation belt of Nigeria and lies between latitude $5^{\circ} 4^{\prime}$ and $6^{\circ} 3^{\prime}$ N and longitude $6^{\circ} 15^{\prime}$ and $7^{\circ} 34^{\prime}$ E. The agro-ecological characteristics of the area have been reported (Okoli, 2003). The state is divided into 27 Local Government Areas (LGA), which are further divided into three agricultural zones namely; Owerri, Orlu and Okigwe. Poultry production in the study area could be a combination of extensive, semi-intensive and intensive systems. The greatest population of poultry in the study area constitutes local chickens and is reared by rural households under the extensive production systems (Okeudo, 2004). Commercial intensive poultry production includes eggs, broilers, parent stock, hatchery, turkey, started chicks and poult production. These poultry operations are distributed over urban, sub-urban and rural areas.

Data collection: The primary data used in this study were generated from field surveys conducted between May and August, 2005. The study was preceded by a preliminary informal survey of the study area through which the researchers became familiarized with the nature of turkey production in the area and explained the purpose of the study to the participants. Data were generated with the aid of questionnaires, personal interviews, field measurements and observations.

Information was elicited from the respondents with the aid of structured questionnaires as the need arose. One hundred (100) questionnaires were distributed among turkey farmers in the three agricultural zones of Imo State, targeting their major towns. In Orlu zone, Orlu town, Mgbidi, and Mgbirichi were purposely selected for the study because they are known to represent areas of high turkey production. In

Okigwe zone, Amaraku, Okigwe town and Okwelle were selected, while from Owerri zone, Owerri Municipal, Nguru and Ahiara were selected. Smallholder turkey farmers who stocked at least ten turkeys were identified and selected for the study. Where the farmer is not literate, the researchers interpreted the questionnaire and filled in the answers accordingly. Personal interviews were conducted where appropriate and observations were made during field visits to each of the participating farms

The respondents were selected based on their willingness to participate in the research and supply the required information. To ensure consistency in data quality, the same researcher performed all the interviews. Ninety (90) of the distributed questionnaires were laid.

Data generated were analyzed using simple descriptive statistics such as frequency distributions percentages and tables.

3. Results and Discussion

Table 1 showed the type of feeds offered to the turkeys. All the farmers fed their turkeys with commercial feeds. Farmers are unable to formulate their own ration thereby relying on rations originally formulated for chicken, with the assumption that all feedstuffs used for chicken could also be used for turkey with the same or better results (Etuk, 2005).

Forty-five (50%) of turkey farmers used ordinary chicken layer ration for their breeder turkeys, 30 (33.33%) made use of broiler breeder ration and 15(16.67%) fed any available ration. The farmers fed their breeder turkeys with different classes of commercial chicken feed probably because of insufficient knowledge of the levels of nutrient requirements of breeder turkeys (Ojewola et al., 2002).

Table 2 showed feeding regime and seasonal effects on feed consumption. Thirty (33.33%) each of the farmers fed their turkeys twice and thrice a day respectively, while those that fed *ad-libitum* and once a day were each also fifteen (16.67) each. Restricted feeding should be practiced, with the breeder birds to prevent them from accumulating fat. Sixty (66.67%) farmers reported no seasonal influence on the feed consumption while thirty (33.33%) farmers agreed that there is seasonal influence on feed consumption especially during the cooler months of the year.

Table 3 showed the types of feed offered at the different stages of development of turkeys. Forty-five (50%) each of the farmers offered broiler starter and chick mash to raise their turkey poults from 0-8 weeks of age, while all of the farmers reported that they used chicken growers mash to feed their turkeys from 8 weeks to maturity. The farmers preferred growers ration to any other class of feed because of its availability and low cost.

Table 1: The types of feed offered to turkeys

Type of feed	Frequency	Percentages (%)
Commercial feed	90	100.00
Home made feed	0	0.00
Type of commercial feed offered		
Any feed available	15	16.67
Breeder layer rations	30	33.33
Layer ration	45	50.00

Table 2: Feeding regime and seasonal influence on feed consumption

Feeding regime	Frequency	Percentages (%)
<i>Ad-libitum</i>	15	16.68
Once a day	15	16.68
Twice a day	30	33.33
Thrice a day	30	33.33
Seasonal influence		
Yes	30	33.33
No	60	66.67

Table 3: Types of feed offered to the turkeys at the different stages of development

Feed consumed 0-8 weeks	Frequency	Percentages (%)
Broiler starter ration	45	50.00
Chicks mash	45	50.00
Grower mash	0	00.00
Broiler finisher ration	0	00.00
Feed 8 weeks to maturity		
Layer ration	0	00.00
Broiler finisher ration	0	00.00
Grower ration	90	100.00
Home made feed	0	00.00

According to Peter (2006), turkeys have a strong aversion to any change in their feeding routine and nature of their feed. Poults up to 10 weeks of age require ration containing approximately 23% crude protein (CP). The CP content of the ration should be gradually reduced to about 15% for mature turkeys. For the breeder hen, diets low in protein (914%) and low in energy (2600 Kcal/Kg ME or 10.8 MJ/Kg) is required and also the hatchability of turkey eggs and quality of the poults depends greatly on the quality of feed given to them (Peter, 2006). The average daily feed intakes of light and heavy breeds of turkeys are 113 and 284 g respectively. In the tropics approximately 23 kg of feed is required to produce a 6.4 kg turkey at 24 weeks of age provided the birds were properly managed (Williamson and Payne, 1978). Heavy hens at 14 weeks of age, weighing 7.7 kg would usually consume 17.4 kg of feed for feed conversion of 2.35 kg of feed for 1 kg of weight gain. Heavy toms at 16 weeks of age, weighing 12.30 kg would consume 28.85 kg of feed for a feed conversion of 2.29 kg of feed for 1 kg weight gain (Anon, 2005). The implication is that turkeys have specific nutritional needs (ARC, 1975; Maynard et al., 1979; Aduku, 1993), which are somewhat different from that of broilers and growers on which most farmers base their turkey feeding.

4. Conclusion

These results suggest that smallholder turkey farmers in Imo State have not fully understood the nutritional requirements and appropriate feeding practices at the different stages of development of turkeys. There is therefore the need to develop appropriate nutritional and feeding management practices for turkey production in the warm wet tropical environment of Imo State and disseminate such information to smallholder farmers for efficient turkey production.

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