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SOCIO-ECONOMIC CHARACTERISTICS OF PIGEON FARMERS IN BENUE STATE OF NIGERIA

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ABSTRACT

In Nigeria pigeons are well distributed in the different agro-ecological zones of the country. Their widespread distribution in the urban and rural areas demonstrates the socio-economic and cultural importance of these small and easily managed birds. Pigeon production may never rise enough to compete with commercial poultry as a major source of food, but for the poor farmers and some urban dwellers, these birds could become a significant addition to their diet (as per animal protein intake) as well as a source of substantial supplemental income. It is therefore imperative to study the socio-economic characteristics of pigeon farmers in the study area. Three Local Government Areas namely Okpokwu (Ugbokolo), Katsina-Ala, and Vandeikya were chosen for the study. A total of sixty (60) pigeon farmers and three hundred (300) domestic pigeons were covered during the survey. Qualitative data collected were subjected to descriptive statistics such as percentages and averages, while the data quantitative (economics) traits were analyzed through the use of Analysis of Variance (ANOVA) technique and correlation analysis based on the SPSS II programme. The data showed that men were more involved in domestic pigeon production (87.77%) than women (12.23%). Students constituted the majority involved in domestic pigeon production (38.89%) followed by food crop producers (32.22%) and farmers/traders being in the least (5.56%). The major crops cultivated were yam (30.00%), cassava (15.67%), rice (13.67%), maize (11.67%) respectively. It was recommended that Proper housing for domestic pigeons should be adopted by pigeon farmers.

Keywords: *pigeons, characteristics, farmers, socio-economic*

INTRODUCTION

The domestic Pigeons (*Columbia livia domestica*) are hardy birds that can be raised with little effort. They are able to survive in hostile climates and fend for themselves, often ranging over many kilometers in attempt to locate seeds and edible scraps (Holderread, 2008). They have been raised for centuries, especially in North Africa and the Middle East. In parts of North America and Europe, they are produced and prepared as delicacies for the gourmet market (i.e. meat of special taste and often expensive). At the moment, raising pigeons for food is not as widespread as it should be in Nigeria. In fact, in modern times, its potential has hardly been touched. Farmed Pigeons are particularly promising as urban micro livestock because they require little space and thrive in cities (Holderread, 2008).

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The domestic pigeon (*Columba livia domestica*) was derived from the rock pigeon. The rock pigeon or rock dove is a member of the bird family columbidae (doves and pigeon) which is the world's oldest domesticated birds (Gibbs, 2000).

The domestic pigeon was originally found in Europe, North Africa and was first domesticated around 4500B.C from stock inhabiting the sea cliffs of the Mediterranean (Link, 2008). Mesopotamian Cuneiform tablets mentioned the domestication of pigeons more than 5,000 years ago as did Egyptian hieroglyphics (Blechman, 2007). Research suggests that domestication of pigeons was as early as ten thousand years ago. (Blechman, 2007).

Pigeon usually lay two cream coloured eggs. Both male and female take part in the incubation and rearing of the young. The females lay their first egg about 10days after mating, usually in the late afternoon or early evening at about 3-4pm (Mosca, 2003). A second egg is laid two days after the first (i.e. 40-48 hours later). Incubation commences with the laying of the second egg. Both parents incubate the nest (Fig 23), the male (cock) sits during the day from around 10.00am till about 5pm and the female (hen) sits the rest of the time.

Hatching normally occur 18days from start of incubation. Depending on ambient temperature however, this may vary by a day or so either way (Mosca, 2003). Breeding season for this species can last up to 8 months (Cutright et al, 2006), giving rise to about 10-22 youngs per annum with 12-16 squabs per pair per year considered a good commercial production average depending very much on environment and management (Holderread, 2008, and Jahan, 2008).

Pigeon production may never rise enough to compete with commercial poultry as a major source of food, but for the poor farmers and some urban dwellers, these birds could become a significant addition to their diet (as per animal protein intake) as well as a source of substantial supplemental income.

It is therefore imperative to study the socio-economic characteristics of pigeon farmers in the study area.

OBJECTIVE

To determine the socio-economic characteristics of pigeon farmers

METHODOLOGY

Location of study area

This study was conducted in Benue State of Nigeria. Benue State is located between latitude 6^0 20' N - 8^0 60' N and longitude 7^0 40` E – $9^0$ 45` E (Andrew, 2007). The attitude is 97m above sea level and shares common boundaries with five states namely: Nassarawa to the north, Taraba to the east, Cross River to the south, Enugu to the south east and Kogi to the west (Andrew, 2007) The state has a population of over 4.2 million people (Census, 2006) and occupies a land area of 30, 955 sq km.

Climate

The state experiences a sub-humid tropical climate with two distinct seasons namely rainy and dry seasons. The rainy season is characterized by 6-7 months of rainfall with an annual rainfall of 1250 -2000 mm. Ambient temperature ranges from 32.0^0C (July) to 37.0^0C (February/March). Relative humidity ranges from 30.6% to 78.5% (Okoh, 2007).

Occupation

The main occupation of the people is farming, which includes the cultivation of crops such as yam, soybean, rice, cowpea, cassava, millet, cocoyam, sorghum, pepper, tomatoes and sesame.

Livestock and poultry are kept as past-time farming activities. The classes of livestock and poultry kept by the people include local chickens, ducks, geese, pigeons, turkey, guinea fowl, sheep and goats, and pigs.

Sampling procedure

Field data collection

Three Local Government Areas namely Okpokwu (Ugbokolo), Katsina-Ala, and Vandeikya were chosen for the study. Four (4) locations in each local government area were randomly selected and five (5) local pigeon farmers in each location were visited and administered questionnaires by the defacto method. In other words, field data collection phase of the study was carried out through combined use of questionnaire and fortnightly visits for a period of six months. A total of sixty (60) pigeon farmers and three hundred (300) domestic pigeons were covered during the survey.

The questionnaire addressed the following:-

(i) Personal profile of the pigeon farmers.

(ii) Management practices such as housing type, feeding, watering and sanitation.

Experimental procedure

The experiment was conducted in two phases Viz:

(1) The field data collection phase, where the birds used were those pigeons kept by local farmers in the study area.

(2) The on-station experimental phase: Foundation stock consisting 150 pairs (i.e. 150 males and 150 females) of domestic pigeon were randomly sampled from the three local government areas in the study location as described in section 3.2.1, with each local government area contributing 50 pairs

On-station trial

The total of 150 pairs (i.e. 150 males and 150 females) of domestic pigeons were managed intensively on a private Poultry Farm (Anebi Farms, Otada Otukpo) in an open sided poultry house screened with poultry wire mesh for protection. Each mating pair was provided with a pigeon hole made of wood and measuring 30cm x 30cm x 30cm. These cages were raised to about 50cm above the concrete floor of the poultry house with enough room for free flight within the house. They were maintained as single unselected and unimproved pair-mating population. They were provided with formulated diet (as shown in Table 1 below) and clean water, *ad-libitum*. Nesting materials of soft sticks, broom sticks and grasses were provided for the birds.

The birds were allowed to mate, produce eggs and hatch their eggs naturally, on hatching, squabs were fed and nursed by their parents for about four weeks. After this period, feeds were formulated and provided for the birds. The composition and nutrient analysis of the diet is similar to the Table 1. Measurements were taken on all the first generation progeny produced during the experiment. A total of about 300 progenies were measured.

Table 1: Composition of pigeon diet

Sr. No.	Ingredient	% inclusion
1	**Guinea corn**	54
2	**Groundnut cake**	16
3	**Maize offal**	26
4	**Bone Ash**	2.0
5	**Limestone**	1.0
6	**Premix**	0.25
7	**Salt**	0.25
8	**Methionine**	0.58

Table 2: Calculated analysis

ME kcal/kg	2933
C.P(%)	14.95
Ether extract (%)	3.5
Crude fiber (%)	5.44
Lysine (%)	0.54
Methionine (%)	0.70
Calcium	1.14
Phosphorus	0.59

Statistical analysis

Qualitative data collected were subjected to descriptive statistics such as percentages and averages, while the data quantitative (economics) traits were analyzed through the use of Analysis of Variance (ANOVA) technique and correlation analysis based on the SPSS II programme (Hedderson, 1991).

RESULTS AND DISCUSSION

Characteristics of pigeon farmers in Benue State

Table 3: Personal profile of domestic pigeon farmers in benue state

L.G.A	Sex		Educational Background		Occupation					
	Male	Female	Formal	Informal	Farming	Trading	Student	Civil Service	Farming/ Trading	Civil Service/ Farming
Okpokwu	88.30	11.70	76.70	23.30	33.33	11.67	40.00	06.67	01.67	06.67
Katsina-Ala	88.30	11.70	70.00	30.00	31.67	10.00	41.67	05.00	05.00	06.67
Vandeikya	86.70	13.30	66.70	33.30	31.67	06.67	35.00	06.67	10.00	10.00
Average	**87.77**	**12.23**	**71.13**	**28.87**	**32.22**	**09.45**	**38.89**	**06.11**	**05.56**	**07.78**

Table 3 Shows the personal profile of the domestic pigeon farmers in Benue state. The data showed that men were more involved in domestic pigeon production (87.77%) than women (12.23%).

The educational background of the domestic farmers showed that 71.13% had formal education. Students constituted the majority involved in domestic pigeon production (38.89%) followed by food crop producers (32.22%) and farmers/traders being in the least (5.56%). The main occupation of the respondents was food crop production (32.22%). Other occupations of the respondents include trading (9.45%), civil service (6.11%), trading and farming (5.56%), civil service and farming (7.78%).

Table 4: Major crops cultivated by domestic pigeons farmers in benue state

L.G.A	Crop cultivated								
	Yam	Cassava	Rice	Maize	Sorghum	Groundnut	Sesame	Orange	Melon
Okpokwu	18.00	27.00	13.00	10.00	23.00	08.00	12.00	-	08.00
Katsina-Ala	27.00	12.00	18.00	17.00	07.00	03.00	-	-	05.00
Vandeikya	45.00	08.00	10.00	08.00	03.00	05.00	-	07.00	05.00
Average	**30.00**	**15.67**	**13.67**	**11.67**	**11.00**	**05.33**	**04.00**	**02.33**	**06.00**

Table 4: Shows the major crops cultivated by the domestic pigeon farmers in Benue state. The major crops cultivated were yam (30.00%), cassava (15.67%), rice (13.67%), maize (11.67%), sorghum (11.00%), groundnut (5.33%), sesame (4.00%), orange (2.33%) and melon (6.00%) respectively.

CONCLUSION

Pigeon production in Benue State is largely in the hands of young people (students) alongside with civil servants and arable crop farmers who engage in the enterprise as a sideline activity. The educational status of these pigeon keepers indicate that opportunity exist to easily introduce modern management and breeding strategies to improve pigeon productivity and sustainable genetic improvement programmes.

Kaiser (1990) and Adegbola (1998) had reported unsustainable rural poultry genetic improvement programmes in the late 1960s and early 1970s as a result of poor educational profile of rural poultry farmers who could not maintain higher management level of improved stock in the villages.

IMPLICATION

Proper housing for domestic pigeons should be adopted by pigeon farmers. Further research should be conducted to investigate the performance of Benue pigeons managed intensively.

CONFLICT OF INTEREST

No conflict of interest among researchers.

REFERENCES

Adegbola, A.A (1998). The structure and problems of Poultry Industry in Africa. In proceedings, 18th World Poultry Congress. Nagoye Japan, 4 - t h September 1988 Pp. 31-37.

Andrew, E.C (2007) Benue at a glance: A language/culture guide. Simandrechus Technologies, Delta Nigeria Pg. 4.

Blechman, A (2007). Pigeons – the fascinating saga of the world's most revered and reviled bird (http:// andrewblechman.com/pigeons/lear- more.html).

Cutright, N.J, B.R. Harriman, R.W. Howe (EDs) (2006) Atlas of Breeding Birds of Wisconsin. Wisoc. For Ornithology, Inc. Waukesha.

Gibbs, D (2000) Rock Pigeon: In Eustace Barnes, John cox Pigeons and Doves: A guide to the Pigeons and Doves of the World, United Kingdom, Pica Press. 624.

Holderead, D (2008). Pigeon: In micro livestock, Little known small Animals with a promising Economic Future: Part II: Poultry.

Jahan, S (2008). Feral Pigeon. http://www.fsquares.com/bis/ Bird.

Kaiser, D. (1990). Improvement of Traditional Poultry keeping in Niger. In: Proceedings. C.T.A Seminal, 3rd International Symposium on Poultry Production in Hot climates. Hame in Germany 12th June, 1987.

Link, R (2008). Domestic Pigeons (Rock Doves): In living with wild life in the pacific Northwest. http:// www.wdfw.wa.gav/wlm/living.htm.

Mosca, F (2003) Basic Pigeon Information http:// www.angelfire.com/ga3/pigeongenetics/ BASICPIGEONINFO. html.

Okoh, J.J. (2007). A Swey of local chicken farmers and the characterization of local chickens in Idoma land area of Benue State, Nigeria Uni. Of Agric. Makurdi (M.Sc thesis).

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