

FOOD ANIMAL SUPPLY AND CONSUMPTION PATTERN IN AKWA IBOM STATE, NIGERIA

O. L. OBASI, E. O. EKANEM, O. J. IFUT and M. E. OGBEBOR

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ABSTRACT

A three-year retrospective study (1994-1996) of food animal supply and consumption in Akwa Ibom State was carried out, based on records kept at the Veterinary Services Department of the Ministry of Agriculture. This was complemented with visits to appraise operational areas and interviews of the operators.

The animals that provided meat included cattle (47%); Pig (37.5%), Goat (9.2%); Dog (4.8%) and sheep (1.5%). Most of these animals originated from the Northern part of Nigeria, and were transported by road. Poultry, fish and other sea foods abound but were not covered in this report. The supply and slaughter of the various animal species peaked during the periods of Christian and Traditional festivities (December, March, April and May). The calculated animal protein intake per person per day from these sources was 0.57g, equivalent to 3.45g of meat. The calculated monetary value of the meat trade was N1.6 billion, representing 26.23% of the state's budget for the period.

In conclusion, livestock and dog do not appear to provide adequate meat for the inhabitants of the state. There is the need to adequately coordinate food animal production and procurement and also ensure proper abattoir operations.

KEY WORDS – FOOD ANIMAL, MEAT, SUPPLY, CONSUMPTION.

INTRODUCTION

Agriculture is the major employer of labour in Akwa Ibom State. Crop farming, fishing and livestock farming are the important areas. Animal agriculture is the least developed (Abasiattai, 1987). There is therefore a great deal of dependence on outside sources in order to meet the animal protein need of the inhabitants.

The quantity and quality of meat consumed by a people, and the animal species used for food are governed by several factors, among which are social status and culture. Foods of animal origin are essential in man's diet

and are an excellent source of essential amino acids, vitamins and minerals (CAST, 1997).

The food and Agriculture organization's (FAO, 1980) estimate for Nigeria is that cattle is the major meat source (36%), followed closely by poultry (34%), small ruminants (24%) and pigs (6%).

The various ecological zones of Nigeria are not equally endowed with livestock resources. An interdependence is thus created, whereby high livestock producing areas supply areas with a net deficit (Agyemang, 1998). This interdependence is well pronounced because of minimal obstacles and restriction on livestock movement and livestock trade.

This study was undertaken to evaluate

O. L. OBASI, Department of Animal Science, Faculty of Agriculture, University of Uyo, Uyo, Nigeria
E. O. EKANEM, Department of Animal Science, Faculty of Agriculture, University of Uyo, Uyo, Nigeria
O. J. IFUT, Department of Animal Science, Faculty of Agriculture, University of Uyo, Uyo, Nigeria
M. E. OGBEBOR, Department of Animal Science, Faculty of Agriculture, University of Uyo, Uyo, Nigeria

the structure of food animal supply and consumption in Akwa Ibom State. It was, in particular designed to determine the volume and the value of food animal and the meat trade.

METHODOLOGY

The study was conducted between December 1997 and August 1998. It was a 3 year retrospective study of food animal supply and consumption in Akwa Ibom State (January 1994 to December, 1996).

Akwa Ibom State is located in the humid forest zone of Nigeria. It is made up of 31 Local Government Areas; with Uyo urban doubling as the State Capital and Uyo Local Government Headquarter. Uyo is also the only metropolitan city of the state. The human population of Akwa Ibom State is 2, 359, 736 (NPC/CBN, 1992).

Information on number and type of livestock transported into the state and the daily slaughter figure were collected from the livestock control post and abattoir units record books of the Department of Veterinary Services,

Ministry of Agriculture, Uyo. Some abattoirs, livestock sales out posts and meat markets were visited and an on the spot assessment of activities recorded. Operators of these areas as well as the butchers operating outside the abattoirs were also interviewed and evaluated. Data collected were analyzed, using descriptive statistics, while Scheffe's method (Morad, 1990) was used to separate means.

RESULTS AND DISCUSSION

The animals used for food were cattle, pig, goat, dog and sheep. These animals mainly originated from the Northern part of Nigeria, principally Kano, Kaduna, Plateau and Gongola (now Taraba and Adamawa) states, and arrive Akwa Ibom State by road. (Poultry, fish and other seafoods and snails abound but were not covered by this study. The meat from these animal species are widely consumed in Nigeria, except the dog which has not recorded a wide and open acceptance, and the pig which is limited by the Islamic faith. Ekumankama and Ekumankama (1998) reported 10% acceptance

TABLE 1: TOTAL NUMBER OF LIVESTOCK TRANSPORT INTO AKWA IBOM STATE (1994 - 1996)

Month	Cattle No (%)	Goat No(%)	Sheep No (%)	Pig (%)	Dog No (%)
January	2605 (8.8)	2888(2.9)	456(10.0)	2525(5.3)	1622(7.2)
February	1995 (6.7)	2496(2.5)	354(7.8)	2310(4.9)	1260(5.6)
March	2926 (9.7)**	4905(5.0)**	546(12.0)**	2342(4.9)	1810(8.1)
April	3484 (11.6)	3810(3.9)	501(11.0)	4805(10.1)	2603(11.6)**
May	2737 (9.1)	2821(2.9)	345(7.6)	5654(11.9)**	1686(7.5)
June	2541 (8.5)	2586(2.6)	256(5.6)	2354(4.9)	1240(5.5)
July	1846 (6.2)	2564(2.6)	289(6.3)	2491(5.2)	1856(8.3)
August	1936 (6.5)	2460(2.5)	184(4.0)	2404(5.1)	950(4.2)
September	1807 (6.0)	2650(2.7)	345(7.6)	2642(5.6)	1644(7.3)
October	2571 (8.6)	3121(3.2)	362(8.0)	2528(5.3)	1950(8.6)
November	2429 (8.1)	3560(3.6)	417(9.2)	3129(6.6)	2526(11.3)
December	3052 (10.2)*	64705(65.7)*	497(10.9)*	14448(30)*	3330(14.8)*
TOTAL	29929 (100)	98566(100)	4552(100)	47,628(100)	22,457(100)

* Highest value; ** 2nd highest value

Source: Adapted from Livestock Control Post Records, Akwa Ibom State (1994 - 1996)

TABLE II: TOTAL NUMBER OF LIVESTOCK SLAUGHTERED IN AKWA IBOM STATE (1994 - 1996)

Month	Cattle No (%)	Goat No (%)	Sheep No (%)	Pig No (%)	Dog No (%)
January	2247 (7.3)	4112 (8.3)	412 (7.7)	2000 (5.2)	1575 (3.6)
February	2377 (7.8)	3677 (7.5)	480 (8.9)	2762 (7.2)	3141 (7.2)
March	22311 (7.5)	5507 (11.2)**	542 (9.8)	2815 (7.3)	4860 (11.1)
April	3857 (12.6)**	3055 (6.2)	673 (12.6)**	2832 (7.4)	6676 (15.2)
May	2152 (7.0)	3109 (6.3)	415 (7.8)	2735 (7.1)	7323 (16.7)**
June	2303 (7.5)	3050 (6.2)	332 (6.2)	3106 (8.1)	1764 (4.0)
July	1937 (6.3)	2829 (5.7)	309 (5.8)	2259 (5.9)	1577 (3.6)
August	1772 (5.8)	2932 (5.9)	359 (6.7)	1901 (4.9)	1865 (4.3)
September	1697 (5.5)	2766 (5.6)	320 (5.9)	3236 (8.4)**	1682 (3.8)
October	818 (2.7)	2515 (5.1)	270 (5.0)	2505 (6.5)	1741 (4.0)
November	1943 (6.4)	3186 (6.5)	324 (6.1)	2487 (6.5)	1524 (3.5)
December	7200 (23.5)*	12,581 (25.5)*	938 (17.5)*	9815 (25.5)*	10,094 (23.0)*
TOTAL	30,614 (100)	49,319 (100)	356 (100)	38,453 (100)	43,821 (100)

* Highest value; ** 2nd highest value

Source: Adapted from abattoir records, Dept. of Vet. Services, Akwa Ibom State (1994 - 1996)

of dog meat in Abia State. Okpuduedu (1994) and Odo *et al.* (1998) also reported dog meat consumption in Akwa Ibom State and Enugu State respectively.

The total number of animals transported into the state during the period January 1994 to December, 1996 is shown in Table 1. More animals were transported in December followed by March (cattle, goat, sheep, dog) and May (pigs). The slaughter records also showed consistent highest values in December for all the animal species, followed by March (goat); April (cattle, sheep); May (dog) and September (pig) (Table II). The high supply and slaughter values for December and March; April and May correlates with the period of high demand. These periods fall within the traditional Christian festivals, when also the population of the state is swollen by returnees, coming home to celebrate the season with their kiths and kins. Most cultural activities and marriage ceremonies are also scheduled within these periods.

In terms of the quantity of meat derived from the slaughtered animals per annum; cattle yielded 991 893.6 kg; pig 807,513 kg; goat

182,480.3 kg; Dog 102,249 kg and sheep 25,228.8 kg representing 47%; 37.5%; 9.2%; 4.8% and 1.5% respectively of the total quantity of the meat derived per annum (Table III). These values were based on a calculated carcass yield of 54% and 48% respectively for cattle and sheep (Williamson and Payne, 1978); 55.5% for goat and 70% for pig (Thornton, 1974). There was no referenced carcass yield for dog; and being a monogastric had to be approximated to the same value as for the pig. Cattle provided the bulk of meat consumed in the state, while sheep was the least (Table III). In a study of meat supply in Enugu State (1999-1995), Odo *et al.* (1998) reported an average contribution of 54% for cattle; 21% for small ruminants; 6.44% for pigs and 0.18% for dog. The significant contribution to meat supply by the pig and the dog in our study is note worthy. Meat of both species are more commonly vended. Pork in particular was very cheap (N180/kg); Mutton and goat meat (N200/kg) and Poultry meat (N250 per table weight). The relatively low price of pork coupled with the absence of religious and

cultural taboos might, in a great part explain increased contribution to consumable meat. If meat derived from food animals is assumed to contain 16% protein (Obioha, 1976); 2109,364.7kg (mean quantity/annum) of meat shall therefore yield 348,041.1kg of protein. An adjustment of 40% to cover non reported and non recorded slaughter (Okpuduedu, 1994) brings the total value to 487,263.1kg protein per annum. For a population of 2,359,736 persons (NPC/CBN, 1992), this value translates to 0.57g protein per person per day (equivalent to 3.45g meat/caput/day). An adult Nigerian was estimated to require 65g protein per day, out of which 35g should be from animal sources (Olubajo, 1976; FAO, 1980). Ademosun (1976) projected a daily per capita meat consumption of 5.7g equivalent to 0.85g protein for an adult Nigerian in 1980. Estimates on the animal protein intake in Nigeria vary between 7g and 8.27g (Obioha, 1970). On the lower margin, the difference of 6.43g protein (7g less 0.57g) should be supplied by the other animal protein sources not covered in this study, for the inhabitants of Akwa Ibom State to meet the national average. In this regard, fish and other seafoods, poultry, rabbit and snail should play a

significant role. The various rivers of the state are home to a variety of fishes and other seafoods. Fishing also constitutes the major occupation of the riverine people. Game meat is derived from the forested areas, wild Elephants constitute a danger to natives in Ikot Abasi (Okoh, 1985) and are often hunted for food. A significant contribution is, however, expected from these sources in order to meet the FAO (1980) minimum requirement of 35g animal protein/caput/day. A study in this respect would be helpful to avert grave implication of an endemic protein deficiency.

Annual distribution of livestock supply and slaughter values is shown in Table IV. Cattle and sheep showed no significant difference ($P > 0.05$) in the number transported into the state between the years. The value for goat differed significantly ($P < 0.05$) across the years, while the dog showed a significant difference ($P < 0.05$) in 1994. The study also revealed that the number of cattle transported into the state in 1994 was higher than the number slaughtered, while the reverse was the case in 1995 and 1996. The difference was also negative for goat and sheep in 1994 and 1995, while 1996 showed a positive value for

TABLE III: QUANTITY OF MEAT DERIVED FROM THE RESPECTIVE FOOD ANIMALS (1994 - 1996)

PARAMETER	ANIMAL SPECIES					TOTAL
	CATTLE	GOAT	SHEEP	PIG	DOG	
1. NUMBER OF ANIMAL	30614	49319	5256	38453	43821	167463
2. TOTAL LIVE WEIGHT (kg)	5,510,520 (180*kg)	986380 (20*kg)	157,690 (30*kg)	3,460,770 (90*kg)	438,210 (10*kg)	10,553,500
3. QUANTITY OF MEAT (kg)	2,975,680.8 (54**%)	547,440.9 (55.5**%)	75,686.4 (48**%)	24,225.39 (70**%)	306,747 (70**%)	6,328,094
4. MEAN QUANTITY (per annum) (kg)	991,893.6	182,480.3	25,228.8	807,513	102,249	2,109,364
5. MEAN QUANTITY PROTEIN (per annum) (Assume meat contains 16.5% protein)	163,662.4	30,109.2	4,162.8	133,239.6	16,871.1	348,045.1
6. % OF ALL ANIMALS	47	9.2	1.5	37.5	4.8	100

* = Average live weight per animal.

** = Carcass yield.

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TABLE IV: ANNUAL DISTRIBUTION OF LIVESTOCK TRANSPORT AND SLAUGHTER IN AKWA IBOM STATE (1994 - 1996)

YEAR					
1994					
Transport	10807	12652	1486	11047	10034
Slaughter	<u>9389</u>	<u>16671</u>	<u>1488</u>	<u>2361</u>	<u>15988</u>
Difference	+1418	-4015	-2	-1314	-5954
1995					
Transport	9646	14357	1350	13913	6603
Slaughter	<u>10500</u>	<u>18473</u>	<u>2130</u>	<u>11508</u>	<u>19232</u>
Difference	-854	-4116	-780	+2405	-12629
1996					
Transport	9476	71551	1716	22668	5820
Slaughter	<u>10725</u>	<u>14175</u>	<u>1638</u>	<u>14584</u>	<u>8,601</u>
Difference	-1249	+57,378 +78	+8084	-2781	

both. The value for pig was negative for 1994 and positive for 1995 and 1996. The dog showed consistent negative values. The difference between the number of animals transported into the state and the number slaughtered is not unexpected. Where the supply is greater than slaughter, it could mean that some of the animals were withheld across the period. Similarly where slaughter is greater than supply the difference might be accounted for by the contribution from the locally produced stock, and withdrawals from the holding pens.

The calculated monetary value of the meat trade for the 3-year period was ₦1,594,679,713 (or an average value of ₦531,559,904.3 per annum). This value was calculated based on the quantity of meat derived from all the animal species (6,328,094,1kg; Table III), adjusted for 40% non reported and non documented slaughter (8,8859,331.74 kg), and sold for an average price of ₦180/kg. This value represents 26.23% of the states total budget for the period.

CONCLUSION

Food animal production is low in Akwa Ibom State. there is therefore a great deal of dependence on supplies from other parts of Nigeria, principally the Northern state. the total consumable meat and therefore, the quantity of animal protein per caput per day was grossly below the FAO recommended level and the national average. The quantity however was augmented by poultry and other non-livestock meat. The meat trade has an immense potential to enhance the development of the state through employment and revenue₃ generation. At present there is need to adequately coordinate food animal procurement and ensure proper abattoir operations. This would plug loopholes in revenue losses and ensure that accurate data on livestock purchases, slaughter and distribution are kept.

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