

## Survey of Cattle Production Practices in Ibadan, Nigeria

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### Abstract

A survey was conducted on cattle production practices in Ibadan, Nigeria. Fifty cattle farmers were purposively sampled. Structured questionnaire containing information on personal characteristics, farm history and breeds of cattle reared, management and health practices, influence of technology, constraints to cattle production and suggested solutions were administered on cattle farmers in both urban and peri-urban areas of Ibadan, between February to April 2004. Data obtained were analysed by simple statistics. The survey revealed that cattle production is now increasingly being embarked upon by farmers in Ibadan as a complementary form of income to other types of livestock enterprises. It contributed between 2-85% with a mean of 36.6% to the income of the farmers. It is a male dominated (80%) profession with many of the farmers being educated (60%), having one wife (56%) and majority (62%) of them were in the age group 31-60 years. Majority (86%) of the cattle farms were based in the peri-urban areas of Ibadan and only 24% of the cattle farmers also engaged in cropping activities. The study also revealed that many of the farmers (82%) reared Sokoto Gudali breed of cattle. This breed constituted the highest number of cattle reared (48.14%). Forty percent of the farmers had small herd size (1-10 heads of cattle). On the average, the herds comprised of slightly more cows (43.91%) than bulls (36.88%). Some of the cattle farmers (14-28%) also reared other types of livestock such as sheep, goats, poultry, pigs and fish. Majority of the farmers (56%) engaged in cattle production for monetary/commercial reasons and employed Fulanis (46%) as herdsmen to graze the animals. A small number of them (6%) also keep cattle as a means of utilizing feed-mill waste and graze grasses around fishponds as a means of reducing labour cost. The farmers had experience in cattle rearing varying from 1 to 35 years. Majority of the farmers (56%) pay cash only to the herdsmen as a means of reward for their labour. Many of the farmers offered supplementary feed to their cattle especially in the dry season. However, only fourteen percent (14%) of them provided standard housing for their animals. It has been found from this study that helminthiasis was the most important health problem confronting the cattle. Also 26% of the farmers reported tsetse flies infestation as mild problem. The study showed that the average morbidity and mortality rates among the cattle were 19% and 8% respectively. The study also showed that appreciable percentage (44%) of the farmers make use of veterinary services in the treatment of their animals and observed quarantine period (45%) when bringing in new animals into their herds. The farmers ranked limited capital (33%), shortage of grazing land (16%) and inadequate knowledge of farmers (14.94%) as the three most pressing problems associated with cattle production. They also proffered provision of soft loan by the government (34.33%), training of farmers (25.37%) and availability of grazing land (16.42%) as the most urgent solutions to the problems highlighted.

**Keywords:** Survey, cattle production practices, Ibadan

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## **Introduction**

Cattle meat (beef) is the most popular type of meat consumed by Nigerians. This is evident from the cattle population and its carcass yield relative to other livestock. According to a census of livestock in Nigeria (RIMS, 1993), the population of ruminant livestock has been estimated to be about 14 million cattle, 22.1 million sheep and 34.5 million goats. Cattle rearing is carried out mainly in the savannah zones in Nigeria because of the abundance of grasses and forages and the absence of the deadly cattle disease called trypanosomiasis transmitted by tsetse flies. Cattle help to convert grasses to useful animal protein products such as meat and milk, hides, skin for human consumption. Cattle production is generally associated with the pastoral Fulanis, who are reputed to own substantial percentage of the national herd. This is because cattle rearing is their traditional occupation. The heads of cattle accumulated by the Fulanis is used as a measure of wealth among them. It is also an important consideration for contracting marriages. A lot of trading in cattle takes place between Northern and Southern parts of Nigeria. Ibadan is a major market for cattle obtained from the North for distribution to many towns/villages in western Nigeria. Many ceremonies (e.g. marriages, house warming, burial of old people, chieftaincy titles etc.) usually demand slaughtering of cattle. Ibadan is a city in the forest ecological zone with a large population of about three million people. These are mainly of the Yoruba ethnic group with many other tribes as settlers. Keeping of cattle is not a common occupation of the Yorubas.

The type of cattle indigenous to southern Nigeria is the Muturu breed which is a humpless, small sized cattle resistant to trypanosomiasis. They used to be a common feature in the villages in time past. Also N'dama breed of cattle was introduced to western Nigeria

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from the Sene-gambia in the 1950's. They are humpless, non-zebu beef cattle and are trypanotolerant. However, the Zebu breeds of cattle (such as Sokoto Gudali, White Fulani, Kuri) have been more of trade cattle brought from the North for sale in the South. Observations in recent years show that Zebu cattle are being reared on farms and homestead by Yoruba people. Thus, there is a growing interest in rearing cattle by the indigenous people in Ibadan with some measure of success. It is not uncommon to find few heads of cattle roaming about scavenging for food in refuse dumps and bush in suburb /peri-urban areas of the city.

It therefore becomes imperative to study their production practices in order to know the prospects and challenges of cattle rearing in Ibadan. Thus, the objectives of this study were to determine the socio-cultural issues, health and management practices related to cattle production in Ibadan. Also, the study sets out to find the influence of technology and factors enhancing and/or limiting cattle production as well as suggest possible solutions to the problems.

## **Materials and Methods.**

The study was carried out in Ibadan, the *capital* of Oyo State, Nigeria. Ibadan has an area land mass of about 3577-km<sup>2</sup>. It lies roughly on latitude 8°N and 35°S among hills. Ibadan is presently divided into eleven Local Government Areas (LGAs) of which five are within the metropolis (urban) while the remainders are in the rural areas forming Ibadan less city (peri-urban).

Fifty structured questionnaires designed around the objectives of the study were administered on cattle rearers/farmers in Ibadan using the Participatory Rapid Appraisal (PRA) technique. The cattle farmers were purposively selected. Each farmer was personally interviewed and the

farms examined to ascertain the management practices adopted. The questionnaires were administered between February and April 2004. Information were obtained on the family structure, farm history, breeds of cattle, feeding, housing, health care and environmental impacts of cattle among others. Data collected were analysed using simple statistical techniques for calculating frequencies and percentages.

## Results and Discussion.

The results of analyses of the data gathered during the course of the survey of cattle production practices in Ibadan, Nigeria are presented and discussed below.

*1: Personal Characteristics of Cattle Farmers.*  
The personal characteristics of cattle farmers in Ibadan are shown in Table I. Majority of the

Table I. Personal characteristics of cattle farmers in Ibadan

No.	Personal characteristics	Frequency	%
1.	<b>Age in years</b>		
	21 – 30	1	2
	31 – 40	8	16
	41 – 50	9	18
	51 – 60	14	28
	60+	7	14
	No response	11	22
	<b>Total</b>	<b>50</b>	<b>100</b>
2.	<b>Gender of Respondents</b>		
	Female	4	8
	Male	40	80
	Joint male/female ownership	2	4
	Sex not indicated (No response)	4	8
	<b>Total</b>	<b>50</b>	<b>100</b>
3.	<b>Marital Status</b>		
	Married	41	82
	Single	-	-
	No response	9	18
	<b>Total</b>	<b>50</b>	<b>100</b>
4.	<b>Family Type of the Married Respondents.</b>		
	Monogamous	28	56
	Polygamous	6	12
	No response	16	32
	<b>Total</b>	<b>50</b>	<b>100</b>
5.	<b>No of children of respondents</b>		
	1 – 4	18	36
	5 – 8	8	16
	9 – 15	3	6
	No response	21	42
	<b>Total</b>	<b>50</b>	<b>100</b>
6.	<b>Educational Level of Respondents</b>		
	Never attended school (Not educated)	5	10
	Primary School	3	6
	Secondary School	9	18
	Higher Institution	11	22
	Educated (Level not indicated)	7	14
	No response	15	30
	<b>Total</b>	<b>50</b>	<b>100</b>

Source: Field Survey 2004.

cattle farmers (62%) were within the age bracket 31-60 years. This is comparable to the figure of 70% obtained for goat farmers in Ibadan South West local government area of Oyo State (Fapohunda *et al.*, 2003). However, the value obtained in this study is lower than the figure (93.78%) obtained for farmers engaged in peri-urban dairy production in Ogun State, Nigeria (Adu *et al.*, 1998).

Farmers within the age group 51-60 years were in the lead (28%) in this study. This can be attributed to the financial and family stability of that age group. This is possibly due to the fact that issues of having personal house, sending children to school would have almost been settled. Thus, they were able to face and divert their financial resources to cattle production.

Farmers of younger (21-31 years) and old age groups (60 years above) were not much represented probably due to the financial resources and energy demands of keeping cattle for the two respective groups.

The study also showed that cattle production is a male dominated occupation with 80% of respondents being males. However, compared with goat production in Ibadan South west Oyo State, females were the dominant (about 58%) rearers (Fapohunda *et al.*, 2003). This also could be due to the financial resources and energy demands of the venture.

Majority of the respondents were married (82%), with one wife (56%) and moderate number of children (1-4: 36%). Also, many (60%) of the farmers were educated. This is contrary to the findings in another study (Adu *et al.*, 1998) where over 87% of the respondents engaging in peri-urban dairy production had only Koranic education. This could be due to the fact that many of the cattle farmers in Ibadan are "Elites" with other professions engaged in cattle rearing only as a part-time venture.

## *2. Distribution of Cattle Farms.*

Majority of the cattle farms (86%) were based in peri-urban areas of Ibadan while only 14% of them were within the urban areas (Table 2). This can be attributed to the large expense of land required by cattle for grazing which is available in peri-urban areas, and the need to locate cattle farms in areas far removed from human dwellings in order to reduce the incidence of offensive odor. Siting of the majority of the cattle farms in the peri-urban areas agree with the findings of Adu *et al.*, 1998 where 69% of dairy production take place in the peri-urban areas.

Only 24% of the respondents engaged in cropping activities. The land area available to them ranged from 0.13 to 12ha with a mean land size of 5.9ha per farmer. About 42% of the farmers that engaged in cropping possessed small land holdings (0.13 to 4ha). Maize (73%), cassava (64%), and yam (45%) were the three major crops grown by the respondents. Other crops cultivated by the cattle farmers include vegetables (27.27%), millet (18.18%) white pineapple, banana, pawpaw and mango each constituted 9.09% of crops grown.

## *3: Types of Cattle, Herdsize and Structure.*

Table 3a shows the number and breeds of cattle raised by farmers in Ibadan. Forty percentage (40%) of the farmers had small herd size ranging from 1 to 10 heads of cattle with a mean herd size of  $5.45 \pm 2.52$  heads of cattle (Table 3b). The small herd size can be attributed to the huge financial resources required in acquiring the stock, housing and feeding them. Also, it takes longer years to bring in returns on investment unlike other livestock species e.g. poultry and piggery. The overall mean herd size of cattle in this study was 28.42-36.23 with a range of 1 to 180. This is close to the mean herd size of 36.9 obtained (Ndubuisi *et al.*, 1994) among agro-pastoralists

Table 2: Distribution of cattle farms, land size and cropping activities.

Parameters	Frequency	%
<b>A: Farm location</b>		
--Urban	7	14
--Peri-urban	43	86
	<b>50</b>	<b>100</b>
<b>B: Cropping activities</b>		
--Cropping	12	24
--Non-cropping	38	76
	<b>50</b>	<b>100</b>
<b>C: Land size of farms cropped (ha)</b>		
0.13-4.00 ha		1
5.00-8.00 ha	5	41.66
9.00-12.0 ha	2	16.67
No response	3	25.00
	<b>2</b>	<b>16.67</b>
	<b>12</b>	<b>100</b>
<b>D: Types of crops grown **</b>		
Maize	8	72.73
Cassava	7	63.64
Yam	5	45.45
Vegetables	3	27.27
Millet	2	18.18
Pineapple	1	9.09
Banana	1	9.09
Pawpaw	1	9.09
Mango	1	9.09

Sources: Field survey 2004. \*\*Multiple responses

Table 3a: Breeds and herd structure of cattle raised by farmers in Ibadan.

Breeds	No. of Farmers**	Male	Female	Calves	Total
Sokoto Gudali	41	303	265	116	684
White Fulani / Bunaji	22	165	231	106	502
N'dama	10	49	111	38	198
Keteku	3	3	5	-	8
Kuri	1	-	1	-	1
Yakadi	1	4	11	13	28
<b>Total</b>		<b>524</b>	<b>624</b>	<b>273</b>	<b>1,421</b>
<b>Percentage</b>		<b>36.88%</b>	<b>43.91%</b>	<b>19.21%</b>	

Source: Field Survey 2004, \*\* Multiple responses.

Table 3b: Distribution of cattle reared by farmers

Range of animals	No. of farmers	%	Total no. of animals	% of total	Mean no. of animals per farmer
1-10	20	40	109	7.67	5.45±2.52
11-20	11	22	171	12.24	15.82±2.44
21-30	5	10	122	8.59	24.4±3.32
31-40	4	8	153	10.77	38.25±2.05
41-50	3	6	41	9.92	47.0±2.94
51-90	4	8	291	20.48	72.75±12.75
101-180	3	6	431	30.33	143.67±32.56
	<b>50</b>	<b>100</b>	<b>1421</b>	<b>100</b>	<b>28.42±36.23</b>

Table 4: Types of other livestock reared by cattle farmers in Ibadan.

Types of livestock	Farmers keeping them		Range	Mean	Total no. of animals
	No.	%			
Sheep	14	28	3-150	31.57± 40.59	442
Goats	14	28	2-70	18.93± 21.99	265
Fisheries (No. of ponds)	9	18	1-45	8.3 ±13.17	75
Pigs	7	14	5-5000	743 ±1877	5201
Poultry	14	28	20-175.000	15520.76 ±4606	310415

rearing cattle in the Northern Guinea Savanna of Nigeria, but far greater than the value of 12 recorded (Adu *et al.*, 1998) among per-urban dairy cattle producers in Ogun State, Nigeria.

Three of the farmers (6%) had between 100-180 herds of cattle totaling 431 in number. This constituted about 30% of the total heads of cattle in all the farms surveyed. These are big time farmers with one of them having over 100ha of land and 45 fish ponds with cattle grazing round the ponds to replace human labourers used in cutting the grass round the dykes.

There has been a substantial increase in the number of cattle raised by farmers compared with the initial stock. Based on the available information, all the farmers started with 265 heads of cattle and presently have 1421 representing an increase of 436% over number present at inception.

Majority of the farmers (82%) reared Sokoto Gudali breed of cattle. This breed also constituted the highest number of cattle reared altogether (48.14%). This could be because the animals are docile, hornless, ease of herding, easily adapt to the environment and readily convert grass to meat. White Fulani (35.33%) and N'dama (13.93%) breeds of cattle were also reared to a large extent. Though the N'dama breed of cattle is resistant to trypanosomiasis, they are generally very stubborn and difficult to

control. This could have resulted in its small scale of rearing. Female cattle were reared more than the males for all the breeds of cattle surveyed except for Sokoto Gudali. However, for Sokoto Gudali breed the males were dominant in number (44.30%). Overall, the herd structure comprised of 36.88% bulls, 43.91% cows and 19.21% calves.

#### 4: Other Types of Livestock Reared.

Cattle farmers also raised other types of livestock as well (Table 4). Fourteen of the cattle farmers (28%) also keep sheep and goats. Majority (over 70%) of them reared between 1-20 sheep and 1-10 goats. The mean number of sheep and goats per farm in this study (31.57 and 18.93 respectively) were higher than those recorded per household in Anambra State, Nigeria (Gefu *et al.*, 1994). Poultry keeping especially laying birds was a major occupation of 28% of the cattle farmers. Majority (77%) of this group had flock size ranging from 500 to 6000 with mean size of 2660 ± 1584 laying birds. Fourteen and eighteen percentages of the cattle farmers also reared pigs and fish respectively.

#### 5: Sources of Foundation Stock, Farmers' Experience, Sources of Herdsmen, Mode of Payment and contribution of cattle of Farmers' Income.

Table 5 shows data on sources of foundation stock, reasons for keeping cattle, experience of

**Table 5: Reasons for keeping cattle, experience, sources of stock, herdsmen and mode of payment for herdsmen.**

	Parameters	Frequency	%
1.	<b>Reasons for keeping cattle**</b>		
	Form of occupation	37	56.06
	Love of animal/interest	18	27.27
	Personal uses (meat)	4	6.06
	Feeding on waste feed	3	4.55
	Form of investment/ savings	3	4.55
	For grazing around fish-ponds	1	1.52
	<b>Total</b>	<b>66</b>	<b>100</b>
2.	<b>Experience in cattle rearing (years)</b>		
	1 – 5	16	32
	6 – 10	13	26
	11 – 15	5	10
	16 – 20	2	4
	21 – 35	9	18
	No response	5	10
	<b>Total</b>	<b>50</b>	<b>100</b>
3.	<b>Source of stock**</b>		
	Government Farm	1	1.56
	Cattle market in Ibadan	28	43.75
	From other farmers	1	1.56
	Cattle markets in south west Nigeria	4	6.25
	Northern Nigeria	26	40.63
	No response	4	6.25
	<b>Total</b>	<b>64</b>	<b>100</b>
4.	<b>Source of Herdsmen</b>		
	Farmers themselves	11	22
	Relative and Children	4	8
	Hausa	5	10
	Fulani	23	46
	Yoruba	7	14
	<b>Total</b>	<b>50</b>	<b>100</b>
5.	<b>Mode of Payment of Herdsmen</b>		
	Cash + Accommodation	3	6
	Cash + Foodstuff + accommodation	1	2
	Cash only	28	56
	Calf sharing (1 calf in 6 months)	1	2
	No response	17	34
	<b>Total</b>	<b>50</b>	<b>100</b>
6.	<b>Contribution of cattle to farmers' income (%)</b>		
	1 – 20	10	32.26
	21 – 40	11	35.48
	41 – 60	4	12.90
	61 – 85	6	19.36
	<b>Total</b>	<b>31</b>	<b>100</b>

Source: Field Survey 2004. \*\*Multiple responses

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farmers in cattle rearing, sources of herdsmen, system of reward for herdsmen and contribution of cattle to farmers' income. Many of the farmers (43.75%) obtained their initial stock from cattle market in Bodija, Ibadan. Also substantial proportion (40.63%) of them got their foundation stock from the Northern parts of Nigeria (e.g. Bornu, Kwara and Niger States). Majority of the farmers (56%) engaged in cattle rearing for monetary/commercial reason. However, in another study (Fapohunda *et al.*, 2003), it was

observed that majority of farmers (96.84%) reared goats for subsistence reason. Interestingly, a number of farmers keep cattle in order to utilize the waste from feed-mills and to graze grasses around fish ponds as a means of reducing labour cost in cutting grasses round the dykes of fish ponds.

Farmers interviewed had experience in cattle rearing ranging from 1 to 35 years with 18% of them having long term experience (21-35 years).

**Table 6: Feeding system used for cattle in Ibadan.**

	<b>Parameters</b>	<b>Frequency</b>	<b>%</b>
1.	<b>Supplementary feeds for cattle</b>		
	Salt lick (Occasionally)	37	34.91
	Cassava peels	25	23.58
	Charcoal	1	0.94
	Salt	38	35.85
	Other supplementary feeds (e.g. wheat offal)	5	4.72
	<b>Total</b>	<b>106</b>	<b>100</b>
2.	<b>Time of supplementary feeding</b>		
	Before grazing	14	28
	After grazing	4	8
	Both before and after grazing	19	38
	No response	13	26
	<b>50</b>	<b>100</b>	
3.	<b>Easy of feeding cattle with supplementary feeds</b>		
	Easy	30	60
	Not easy	4	8
	No response	16	32
	<b>50</b>	<b>100</b>	
4.	<b>Types of grazing</b>		
	Daily	43	86
	Not grazed	7	14
	<b>50</b>	<b>100</b>	
5.	<b>Distance of grazing (km) from farms.</b>		
	0.5 - 3	25	50
	3.5 - 6	21	42
	6.5 - 10	4	8
	<b>50</b>	<b>100</b>	
5.	<b>Duration of grazing cattle/day (hours)</b>		
	2 - 4.5	5	12.83
	5 - 7.0	24	61.54
	7.5 - 9.5	10	25.64
	<b>39</b>	<b>100</b>	
6.	<b>Availability of paddock</b>		
	Yes	2	4
	No	41	82
	No response	7	14
	<b>50</b>	<b>100</b>	
7.	<b>Use of cut and carry system</b>		
	Yes	11	22
	No	28	56
	No response	11	22
	<b>50</b>	<b>100</b>	

Source: Field Survey 2004, \*\*Multiple responses

However, about one-third of the respondents (32%) had only 1 to 5 years experience. Substantial percentages (46%) of the herdsmen employed in herding cattle were Fulanis. This could be because cattle rearing is their traditional occupation. Few Yorubas were among the paid labourers because cattle production is not their traditional occupation.

About 56% of the farmers pay cash alone as mode of reward for the services of the herdsmen. However, some of the farmers provide accommodation and at times foodstuffs in addition to cash as payment for the herdsmen. The amount of money paid to the herdsmen ranged from N1, 500 to N22, 500 per month with a mean value of N6, 259.30  $\pm$  N4110. The amount paid depends on the size of the herd and possibly on the availability of the herdsmen. Most of the farmers employed individual herdsmen. However, some of them with small herd size pay herdsmen per cattle per day for grazing the animals. The amount charged ranged between N20 to 30/cattle/day. This at times necessitates the practice of mixing cattle of one herd with those from other herds. This has serious health implications as it may aid the easy spread of diseases from one herd to another.

The contribution of cattle to the income of respondents varied from as little as 2% to as high as 85% with a mean value of 36.6  $\pm$  24.48%. The low contribution of cattle to farmers' income in some instances is a reflection of the part-time nature of cattle rearing and other business ventures that they are involved in e.g. poultry keeping, trading and white collar jobs.

#### 6: System of Feeding Cattle.

Data on the system used for feeding cattle are presented in Table 6. Grasses formed the major feed provided for cattle. Many of the farmers

also offer supplementary feed (e.g. maize, straw, wheat bran, brewers dried grain, rice bran, 'dusa' and groundnut leaves) and occasionally provide salt lick to their cattle. Supplementary feeding is increased in the dry season when grasses are in short supply both in quality and quantity. It has been demonstrated (Adebawale *et al.*, 1986) that supplementary feeding of cotton-seed and rice bran in addition to grazing natural pasture during both the rainy and dry seasons by Peulh and Maura Zebu steers in the sahel zone of Republic of Mali resulted in better performance in terms of feed intake, rate of gain, feed conversion and carcass characteristics. Supplementary feeding especially in the dry season has also been shown to be essential for improving reproductive performance in Yankassa ewe (Osinowo *et al.*, 1987). Thirty-eight (38%) percent of the respondents said they feed their cattle with supplementary feeds both before and after grazing. Majority (60%) of the farmers said it was easy to feed their cattle supplementary feeds which are readily available for purchase. However, the cost of some of these supplementary feeds can be prohibitive to purchase large quantities required in feeding their animals.

Majority of the farmers grazed their cattle daily (86%) for 5-7 hours (62%) and at a distance of 0.5 - 3-km (50%) from their farms. The hours of grazing and the distance from the farms increased during the dry season when grasses are in short supply. Some of the farmers (14%) did not graze their cattle because the animals are stall fed by their owners. Many of the farmers (82%) did not have paddocks for grazing their cattle. They only graze them anywhere grasses are available e.g. along the roadsides and in nearby bush. Also many farmers (56%) did not use cut and carry system for their cattle as they are allowed to graze naturally by themselves. However, those that

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**Table 7: Housing system and manure management on cattle farms in Ibadan**

	Parameters	Frequency	%
<b>1</b>	<b>Type of housing system used</b>		
	Standard	7	14
	Sub-standard	20	40
	No housing	21	42
	No response	2	4
		<b>50</b>	<b>100</b>
<b>2</b>	<b>Separate housing for classes of cattle</b>		
	Separate housing	0	0
	No Separate housing	48	96
	No response	2	4
		<b>50</b>	<b>100</b>
<b>3</b>	<b>Usage of litter material</b>		
	Yes	1	2
	No	28	56
	No response	21	42
		<b>50</b>	<b>100</b>
<b>4</b>	<b>Manure Management **</b>		
	No problem	22	19.47
	Burn off	9	7.96
	Pack outside farm in bush	36	31.86
	Soil fertilization	27	23.89
	Smells and problem with flies	16	11.16
	Maggot production	2	1.77
	Pond fertilization	1	0.88
	<b>Total</b>	<b>113</b>	<b>100</b>

Source: Field Survey 2004, \*\* Multiple responses.

practiced cut and carry system (22%) used it to obtain grasses for feeding lactating animals. These farmers usually purchase the grasses from Hausa men that cut and sell to them.

*7: Housing system and litter management.*  
Table 7 shows the housing system and litter management employed by the cattle farmers. Only 14% of the respondents provided standard housing facilities for their animals and none provided separate housing for different classes of cattle (e.g. bulls, calves and lactating dams). Standard housing is made of iron poles and bars strong enough to restrain the cattle in their pens. Also the floor of the animal house is cemented and roofing is provided over the animal house

to prevent rains and direct sun rays from getting to the animals. Sub-standard housing is made of planks. The floor is not cemented but there is a roof over the house.

Many of the farmers (56%) did not use any litter material as bedding for the cattle in their pens/shelter. However, only 2% of the farmers used wood shavings as bedding materials for the cattle. This is subsequently used in the production of maggots, fish pond and soil fertilization after cattle dung has been added to it.

Although substantial percentage of the respondents indicated that they disposed the cattle dung in the bush (31.86%), for soil fertilization (23.89%) and about 19% said they

**Table 8: Animal health problems and management practices used.**

	Parameters	Frequency	%
<b>1</b>	<b>Animal health problems encountered **</b>		
	Diarrhoea	9	9.38
	Loss of appetite	11	11.46
	Foot rot	10	10.42
	Helminthiasis (worms)	22	22.92
	Bloat	3	3.13
	Alopecia/ loss of hair	2	2.08
	Trypanosomiasis	2	2.08
	Tick infestation	10	10.42
	Fly menace	8	8.33
	Mange/streptothricosis	2	2.08
	Sand eating	2	2.08
	Snake bite	3	3.13
	Mastitis	2	2.08
	Injury/damage to crops from cattle	10	10.42
		<b>96</b>	<b>100</b>
<b>2</b>	<b>Problem of Tsetse fly</b>		
	None	31	62
	Yes	13	26
	No Response	6	12
		<b>50</b>	<b>100</b>
<b>3.</b>	<b>Animal health management practices used</b>		
	Usage of veterinary services	30	43.48
	Observance of quarantine period	31	44.93
	Usage of local herbs for treatment	2	2.90
	Self medication by farmers	6	8.70
		<b>69</b>	<b>100</b>
<b>4</b>	<b>Cost of treatment</b>		
	Low	6	12
	Moderate	33	66
	High	0	0
	No response	11	22
		<b>50</b>	<b>100</b>
<b>5</b>	<b>Mixing of cattle</b>		
	- Mixing	17	34
	- Not mixing	33	66
		<b>50</b>	<b>100</b>
<b>6</b>	<b>Off take rate of animal /year</b>		
	1-5	13	41.94
	6-10	10	32.26
	11-15	3	9.68
	16-20	2	6.45
	21-25	3	9.68
	<b>Total</b>	<b>31</b>	<b>100</b>

Source: Field Survey 2004. \*\* Multiple responses

did not have problem with dung/manure management, nevertheless, a growing percentage (11.16%) said they had problem of offensive odour and flies from the dung. This has been a source of recurring feud between cattle owners and their neighbours in some cases where farms are in close proximity to human dwellings, especially in urban areas.

#### *8: Animal Health Issues.*

The health related issues associated with cattle rearing in Ibadan are presented in Table 8. Helminthiasis was the most important (22.92%) health problem reported by the respondents. This finding is corroborated by another study (Alawa *et al.*, 2001) where helminthiasis and gastro-enteritis were highlighted as major health problems prevalent in Sokoto Gudali cattle.

Other major problems highlighted by the respondents include loss of appetite, foot-rot, tick infestation, injury to farmers and damage to crops from cattle and fly menace. Ninety percent (90%) of reported cases of injury from cattle in this study occurred with the Sokoto Gudali breed of cattle. Although, this breed is known to be docile, however the animal should be treated with respect and caution. The high incidence of injury from this breed could be due to its preponderance in the midst of the herds. It has been reported (Abubakar *et al.*, 1991) that breed, sex, season, live-weight and body condition are factors that influenced temperament of cattle. This is sometimes exhibited as vigour of movement, bellowing, kicking or kneeling by the animal. Snake bite was reported by three farmers as cause of death of cattle on their farms.

About one-quarter (26%) of the respondents reported mild problem of tsetse fly, the transmitting agent for the blood parasite trypanosome that causes trypanosomiasis in cattle. The methods of control employed by the

farmers in combating the menace of tsetse fly include smoke by burning of dried orange peels to ward off the flies, use of veterinary drugs ( e.g berenil) , spraying of insecticides and herbal therapy. Trypanosomiasis and its vector tsetse fly are important constraints to cattle production in the humid and sub-humid Africa (Jawara, 1990). Therefore, effective methods for the control of tsetse flies and trypanosomiasis are essential if Ibadan a humid area is to be useful for extensive cattle rearing.

About 34% of the respondents mix their cattle with those from other herds in the course of herding/grazing them. This practice has serious health implications as it can easily aid the spread of diseases across herds. Therefore, the practice should be discouraged as much as possible. Many of the respondents/farmers make use of veterinary services (43%) in the treatment of their animals and observed quarantine period (45%) when bringing in new animals into their herds. A small percent (3%) of the respondents make use of local herbs in the treatment of their animals. This has the effect of reducing the cost of treating animals and can utilize available local resources in place of expensive and sometimes unavailable conventional drugs. The few farmers that treat their cattle with herbs still make use of the services of veterinary personnel. The efficacies of some of these herbs however need to be tested in standard experiments. Many of the respondents (66%) said charges by the veterinary personnel for the treatment of their cattle were moderate.

About 42% of the respondents reported that the off-take rate on their farms was between 1 – 5 animal per year. The mode of off-take was mainly by sale on hoof or slaughtering of the cattle

#### *9: Morbidity and mortality rates in cattle.*

**Table 9: Mortality rates among classes of cattle**

Parameters	Frequency	%
<b>A: Class of cattle</b>		
Mature animals		
--both sexes	3	7.32
--males only	4	9.76
--females only	3	7.32
		<b>24.40</b>
Calves		
--both sexes	2	4.88
--males only	1	2.44
--females only	0	0
		<b>7.32</b>
Growers/weaners		
--both sexes	3	7.323
--males only	1	2.44
--females only	0	0
		<b>9.76</b>
<b>B: Seasonality of mortality</b>		
--Dry season	3	17.65
--Rainy/wet season	12	70.69
--Both wet and dry season	2	11.76
	17	<b>100</b>

Source: Field Survey 2004

The morbidity rates among cattle in farms surveyed in Ibadan varied from 5 to 50% with a mean value of  $18.74 \pm 12.39\%$ . In the case of mortality rates, the range was from 0 to 33% with average value of  $8.36 \pm 12.16\%$ . Zero percent (0%) mortality was most common (65%) among the farms surveyed. The distribution of mortality among the different classes of cattle showed that mature animals were mostly affected (24.4%), followed by weaners/growers (9.76%) and calves (7.32%) (Table 9).

However, in a case study of causes of mortality in sheep (Dipeolu, 1996), it was reported that younger animals (0-3 months old) had higher level of mortality (42.5%) than the older sheep. Also, it was found (Dipeolu, 1996) that helminthiasis was the third most important cause of death (17%) in sheep whereas in this study it was the most prevalent (23%) health problem reported for cattle. Mortality was most prevalent

(71%) in the rainy/wet season as reported by the respondents.

10: *Body condition and reproductive features.* Table 10 displays data on body condition score and reproductive features of cattle in the farms surveyed in Ibadan. Majority of the cattle (82%) had good to very good body condition score. This could be due to small scale of the production, which gave the farmers the opportunity to cater and afford all they could on the welfare of their cattle. It may also be attributed to the supplementary feed offered the animals (Alawa *et al.*, 2002). Only 4% of the farms had cattle with poor body condition score.

Natural mating was the common mating system adopted by all the farmers. This is not surprising since there were no separate housing type for different sexes of the animals. Also, there was no deliberate effort made at influencing breeding

**Table 10: Body condition and reproductive features of cattle surveyed in Ibadan.**

Parameters	Frequency	%
<b>1 Body condition score</b>		
Good	23	46
Very Good	18	36
Fair	6	12
Poor	2	4
No response	1	2
	<b>50</b>	<b>100</b>
<b>2 Mating system</b>		
Natural mating	41	82
Artificial mating	0	0
No response	9	18
	<b>50</b>	<b>100</b>
<b>3 Incidence of dystocia</b>		
Yes	7	14
No	37	74
No response	6	12
<b>Total</b>	<b>50</b>	<b>100</b>

Source: Field Survey 2004

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via choice of bull to mate a particular cow or heifer.

The age of heifer at first service in the farms surveyed varied from 1 to 3.5 years with a mean value of  $2.62 \pm 0.49$  years, while the calving interval ranged from 1 to 2 years with mean value of  $1.33 \pm 0.34$  years. These suggest modest reproductive efficiency in the herds surveyed. The calving interval reported in this study is however higher than that of 331 days (or 11 months) reported for Friesian  $\times$  Bunaji cross-breed of cattle reared in Vom, Nigeria (Ibeawuchi, 1987).

Incidence of dystocia (difficult birth) was not common in all the farms surveyed. However, it was reported in 14% of the farms at one time or the other. The problem could be as a result of using heavier bulls to mate very young heifers especially as the prevalent mating system used was natural mating without control of the choice of bull to service a particular heifer or cow on heat.

The low incidence of dystocia in this study is similar to reports (Alawa *et al* 2001 and Dipeolu 1996) on Sokoto Gudali breed of cattle and sheep respectively. A study (Akpa *et al* 2002) highlighted causes of dystocia to include age, size of dam, abnormal fetal presentation, poor health, multiple foetal presentation, multiple fetuses, weight and sex of young. Some of the indigenous methods said to be used by Hausa-Fulani cattle rearers in combating incidence of dystocia in ruminant livestock in Northern guinea savanna of Nigeria include use of hand to correct foetal position, lubrication of the vulvo-vagina passage with mashed okra fruit for easy passage and oral administration of solutions from native herbs, snake scales, potash and ashes (Akpa *et al.*, 2002).

**Table 11: Types of technologies adopted by cattle farmers in Ibadan.**

	Parameters	Frequency	%
1	<b>Types of Technologies **</b>		
	Veterinary/health services	42	47.73
	Supplementary feeding	32	36.36
	Housing	14	15.91
	<b>Total</b>	<b>88</b>	<b>100</b>
2	<b>Impact of Technology</b>		
	Positive	43	86
	Negative	0	0
	No response	07	14
	<b>Total</b>	<b>50</b>	<b>100</b>
3	<b>Sources of Technology</b>		
	Inheritance	5	16.67
	Other farmers	9	30
	Extension agents	12	40
	Radio	3	10
	Television	1	3.33
	<b>Total</b>	<b>30</b>	<b>100</b>

Source: Field Survey 2004. \*\*Multiple responses.

*11: Technologies and their impact on cattle production.*

Table 11 depicts the types of technology, their sources and impact on cattle production. The use of veterinary services was the most prevalent (47.73%) technology adopted by the respondents. This was followed by the use of supplementary feeds. Housing technology was poorly adopted (16%) possibly because of the huge financial implications involved in its adoption. All the respondents reported that the technologies had positive impact on their cattle production. The adoption of the innovation helped the farmers in improving their productivity, which aids the growth of their enterprise. Many of the farmers (40%) obtained the technologies from extension agents. This makes it important to strengthen the extension outfit in Nigeria in order to further improve extension delivery to farmers and hence improve cattle production. Relatively high proportion of the respondents (30%) obtained the technologies from other farmers. This supports the concept of contact farmers for delivery of extension

**Table 12: Problems associated with cattle production and suggested solution by farmers in Ibadan.**

	Parameters	Frequency	%
1.	<b>Problems associated with cattle production **</b>		
	Theft	3	3.45
	Shortage of grazing land	14	16.09
	Limited capital	29	33.33
	Incompetent/disappointment from veterinaries	2	2.30
	Shortage of veterinary services	2	2.30
	Costly supplementary feed	3	3.45
	Dishonest labourers	2	2.30
	Transport problem	1	1.15
	Scarcity of grasses in dry season	6	6.90
	Lack of training/knowledge	13	14.94
	Pests and diseases	3	3.45
	Unstable market	3	3.45
	Complaint from neighbours	4	4.60
	Difficulty in controlling cattle	1	1.15
	Housing problem	1	1.15
	<b>Total</b>	<b>87</b>	<b>100</b>
2.	<b>Suggested Solutions **</b>		
	Training for veterinarians	4	5.97
	Subsidy on feed	9	13.43
	Provision of grazing land by government	11	16.42
	Regular training/seminars for farmers	17	25.37
	Soft loans for farmers	23	34.33
	Stable market for sale of cattle	1	1.49
	Government should establish cattle ranches	1	1.49
	Good housing	1	1.49
	<b>Total</b>	<b>67</b>	<b>100</b>

Source: Field Survey 2004, \*\* Multiple responses.

messages especially when extension agents are in short supply.

#### 12: *Problems and Solutions to cattle production.*

The problems associated with cattle production and solutions pro-offered to them by the respondents/farmers are presented in Table 12. The three major problems highlighted are limited capital for expansion of cattle production (33.33%), shortage of grazing land (16.09%) and lack of training or inadequate knowledge of farmers (14.94%). The farmers suggested many solutions to improve cattle production. The three

most important solutions from their own perspective include; provision of soft loans by the government for farmers (34.33%), regular training or seminar for farmers on cattle production practices (25.37%), and provision of land for grazing cattle by the government (16.42%).

#### Conclusions

Conclusively, the study revealed the following:

1. Cattle production is now increasingly being embarked upon in Ibadan as a complementary form of income/sustenance.

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2. Many of the farmers reared Sokoto Gudali breed of cattle, with 40% having small herd size (1 – 10 heads of cattle) and are based mainly in the peri-urban/rural areas (86 %).
3. Majority of the farmers (56%) engaged in cattle production for monetary/commercial reason and used Fulanis (48.6 %) as herdsmen. A small number of them also keep cattle to utilize feed-mill waste and graze grasses around fishponds as a means of reducing labour cost.
4. Many farmers provide their animals with supplementary feeds especially in the dry season. However, only 14% of them provided standard housing facilities for their animals.
5. Helminthiasis was identified as the most important health problem. Nevertheless, 26% of the farmers/ respondents reported mild cases of tsetse fly problem.
6. Many farmers use the services of veterinarians (43%) in the treatment of their animals and observed quarantine period (45%) when bringing in new animals into their herds.
7. The major problems associated with cattle production are limited capital (33.33%), shortage of grazing land (16.09%) and inadequate knowledge of farmers (14.9 %).
8. Solutions proffered by farmers to the problems in order of priority were provision of soft loan by government (34.33%), training of farmers (25.37%) and provision of grazing land (16.42%).

#### **Recommendations.**

It is recommended that greater emphasis should be placed on cattle production because of its numerous benefits and the need to solve the low level of animal protein intake in Nigeria. This could be achieved through the following:

1. Farmers should be further encouraged to engage in cattle production as

complementary venture to other forms of agricultural enterprises e.g. utilization of grasses around fishpond or feed on poultry / feed mill wastes.

2. Farmers should provide better housing facilities for their cattle as a means of improving their health and overall productivity.
3. Farmers should not graze their cattle too early in the morning before 9.00am to prevent the consumption of larvae of helminthes likely to be present on wet pasture. Also, prophylactic treatment of the animals against helminths should be regularly carried out.
4. Government should further strengthen the granting of loans to farmers at low interest rate and the processing time should be drastically reduced.
5. Government should provide farmers with grazing reserves with full complementary facilities e.g watering points to enhance livestock productivity.
6. Extension delivery system should be strengthened as a means of imparting management skills and improved technologies to farmers.

These recommendations if fully implemented will ultimately boost cattle production, increase meat supply and improve the animal protein intake of the populace in Ibadan. These recommendations will also be useful for other towns where cattle production is practiced.

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(Received 6<sup>th</sup> June, 2005; Accepted 16<sup>th</sup> Nov, 2006)