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ASSESSMENT OF FACILITIES AND SLAUGHTER FIGURES OF LIVESTOCK SPECIES IN OKO-OBA CENTRAL ABATTOIR IFAKO-IJAYE, AGEGE LAGOS STATE, NIGERIA

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ABSTRACT

Abattoirs are needed to centralize slaughter processes and ensure surveillance of animal diseases at slaughter in order to avoid zoonotic transmission to humans through meat consumption. Inadequate facilities and hygiene at abattoirs can result in the contamination of meat and cause occupational hazards to workers. The objectives of this study were to assess the conditions of the facilities and the daily slaughter figures of livestock species at Oko-oba abattoir, Ifako-ijaye, Agege Lagos State. The study was conducted for three seasons from August 2020 to April 2021. A structured questionnaire was used to collect information on the study area, while daily visits, physical observation and interviews were used to collect data. Data collected were analyzed using descriptive statistics of frequencies and percentages. Cattle was the most commonly slaughtered species (92.34 %), followed by goat (6.34 %), sheep (1.15 %) and camel (0.18 %) in the late wet season (August - September). Cattle, goat, sheep and camel were slain in decreasing order during the early dry season (October - December) (90.17 %, 8.38 %, 1.40 % and 0.04 % respectively). In the late dry season (January - April), the cattle were recorded to have 88.00 %, goat 10.92 %, sheep 1.07 % and camel 0.01 %. It was determined that the season had no impact on the types of livestock slaughtered. Cattle were the most butchered species regardless of the seasons studied, followed by goats, sheep and camels. The abattoir also lacks several fundamental amenities that are expected of a standard abattoir, and those that are present are either non-functional or inadequate.

Keywords: Abattoir, slaughter figures, livestock species

INTRODUCTION

An abattoir is a facility or place approved and registered for slaughtering and dressing of animals for human consumption and should therefore, have equipment for slaughtering, holding, processing, storing and distributing the carcass (Dandago *et al.*, 2009). They are formally established institutions that ensure humane handling of animals and hygienic processing of meat animals and their products (FAO, 1992). The production, distribution and marketing of good quality raw as well as processed meat and meat products are the major pre-occupations of the meat industry. This involves not only getting meat from the animals but also the handling, storing, preserving, processing, distributing and marketing of meat in a wholesome condition (FAO, 1992). A standard abattoir should have the following components; lairage, slaughter hall, slaughter slab, gut and tripe section, water supply and cold room. It also includes the hides and skin section, veterinary inspection section, sanitary

section, veterinary office, laboratories and waste disposal facilities. Inadequate abattoir facilities affect the daily operations leading to the production of unsafe and unwholesome meat and meat products for human consumption. Livestock have provided crucial contributions for human wellbeing in the social and economic terms since the time of civilization and domestication of animals (Thornton, 2010). Livestock production is a source of employment and livelihood to many Nigerians and cattle are the most predominant and highly valued livestock in Nigeria (Tewe, 1997). Livestock are a unique source of high-quality proteins and bioavailable essential vitamins and minerals. Livestock are also a powerful safety net for the poor, particularly women and pastoralists (Randolph *et al.*, 2007; Gibson, 2011). The aims of this study were to examine the conditions of facilities in Oko-oba abattoir and to determine the slaughter figures of livestock species as affected by seasons.

MATERIALS AND METHODS

The study was conducted at Oko-oba Abattoir, Ifako-ijaye, Agege Lagos State. Oko-Oba abattoir is the main abattoir serving the needs of providing wholesome meat to the Lagos populace and beyond and it is located at Agege, on latitudes of 6° 27.1834'N and longitude 3°23.75'S (Omotosho *et al.*, 2016). The abattoir receives thousands of animals daily. Animals slaughtered at the abattoir are transported by road from different parts of Nigeria including Sokoto, Bauchi, Adamawa, Maiduguri and many other towns within Nigeria. Other sources of animals slaughtered at the abattoir are some countries mainly within the sub-African region including Niger, Chad and Burkina-Faso. The

abattoir accounts for over 30 % of the meat processed for consumption in Lagos.

The instrument used for data collection was a structured questionnaire, comprising questions on biodata, demography, etc. Data on the number of animals slaughtered daily was collected through observation and interview conducted for a period of 8 months (August 2020 to April 2021). Data was collected in three seasons; late wet season (August – September), early dry season (October - December) and late dry season (January – April). Data collected was analyzed using SPSS statistical software version 16.0. Frequency tables showing values and percentages and subsequently plotting of graphs were used to present results of the study.

RESULTS AND DISCUSSION

Table 1: Assessment of Oko-oba Abattoir, Agege Lagos State based on availability and functionality of basic facilities.

Components of the abattoir	Remarks	Condition
Lairage	Present	Not functional
Slaughter hall	Present	Functional but too small
Bleeding section	Absent	Bleeding carried out on the ground at the slaughter hall
Flaying section	Absent	Flaying carried out in the slaughter hall
Evisceration section	Absent	Evisceration carried out in the slaughter hall
Hoists	Absent	Animals are allowed to bleed on the ground
Laboratory	Absent	
Cleaning room	Present	Functional
Office accommodation	Present	Functional
Toilet facilities	Present	Functional
First aid box	Present	Some of the basic items such as anesthetic spray or lotion for itching, antibiotic spray, aspirin, etc were missing in the first aid box
Cold room	Present	Not functional
Drainage	Present	Poor drainage system as a result of blocked water passage channels.
Water supply facilities	Present	The water taps at the slaughter hall are inadequate
Electricity supply	Present	Electricity supply is not constant
Waste disposal bin	Present	Not appropriately used
Personal protective equipment	In use	Inadequate

Source: Developed from field observation and visit to the abattoir, August 2020 – April 2021.

Table 2: Routine Activities at Oko-oba Abattoir, Agege, Lagos State.

Activities	Remarks
Daily official working hours	6 am – 6 pm
Working days	Monday to Saturday
Ante-mortem inspection	Absent
Post mortem inspection	Absent
Immobilization	Crude; animal welfare violated by whipping, twisting of tails, etc.
Waste handling	Wastes are heaped at the slaughter premises without proper disposal
Frequency of sanitation	Weekly
Average daily slaughter figures	Cattle (1280), sheep (17), goats (138), camels (1)

Source: Field observations and visits to the abattoir, August 2020 – April 2021.

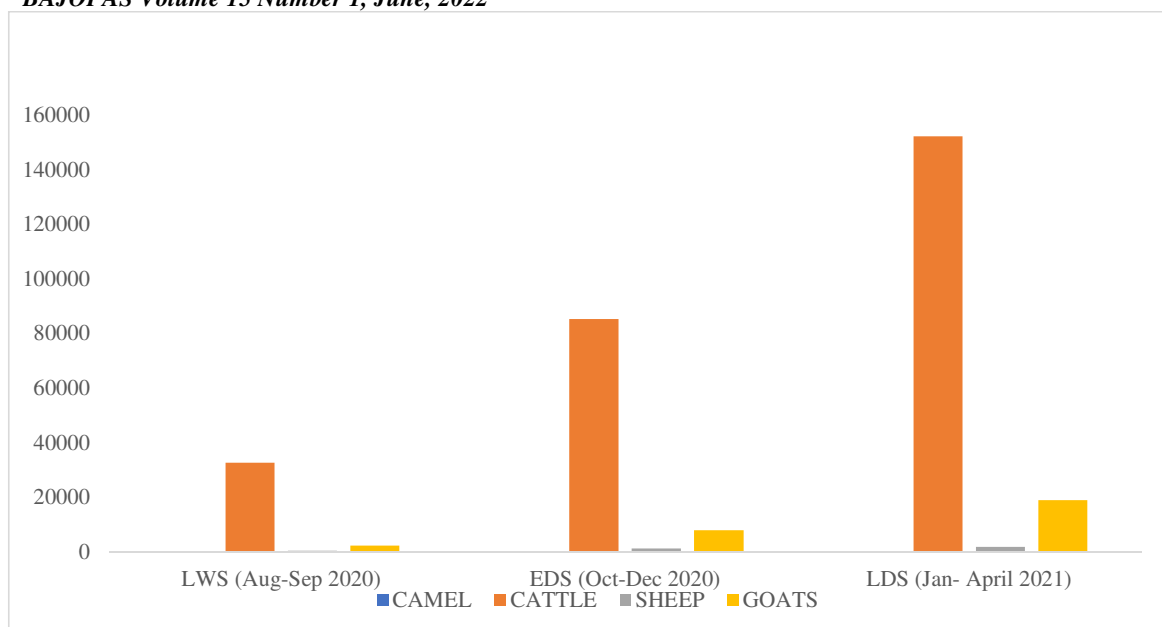


Figure 1: Total Slaughter Figures of Livestock Species by Seasons in Oko-oba Abattoir from August 2020- April 2021.

Table 1 shows the available facilities at the abattoir and their conditions. Some facilities were present and some were absent. Those present were found to be either functional, non-functional or inadequate. Table 2 shows the activities that takes place in the abattoir. These activities include waste handling, immobilization, sanitation, daily slaughter figures, etc. Figure 1 shows the total slaughter figures of livestock species in the abattoir in relation to three different seasons i.e. the late wet season (35474), early dry season (94551) and late dry season (172855). In the late wet season, the cattle was the most slaughtered (92.34 %), followed by goats (6.34 %), sheep (1.14 %) while camel was the least slaughtered with 0.18 %. Similarly, in the early dry season, it was observed that cattle slaughter was the most 90.17 %, followed by goats 8.38 %, sheep 1.40 % and camel 0.04 %. In the late dry season, the cattle were recorded to have a percentage of 88.0 %, goats 10.92 %, sheep 1.07 % and camel 0.004 %. Results of this study reveals that irrespective of the seasons evaluated, cattle species was the most slaughtered followed by goat, sheep and camel.

Adequate facilities and proper sanitary conditions are key factors in the production and distribution of meat in an abattoir as well as prevention of spread and transmission of zoonotic diseases. This study assessed the facilities and slaughter figures of livestock species in Oko-Oba abattoir. It was observed that the abattoir lacks some facilities like hoists, bleeding section, flaying section, evisceration

section and laboratory. Also, some of the facilities that were available were not in use, for instance the lairage and cold room.

According to Adeyemo (2002), the non-functional facilities and level of dilapidated infrastructures recorded in this study could not have supported standard operating procedures and good hygiene practices in the abattoirs, and this situation may pose a risk to public health. The study's findings are comparable to those of numerous others in Nigeria and worldwide. For example, Lawan *et al.* (2013) evaluated the physical facilities and processing operations of major abattoirs in Nigeria's North-western state and found that the abattoirs' basic components were dilapidated and in poor condition, and linked this to a failure of enforcement on the use of standard facilities in abattoir operations and general maintenance. In a comparable study conducted in selected abattoirs in Bauchi state, Zailani *et al.* (2015) found that the microbiological meat at the abattoirs was severely contaminated and that meat inspection services were virtually absent in all of the visited abattoirs. As a result, there was no record of infections discovered during the abattoir's ante-mortem or post-mortem inspections. Poor sanitary conditions, facilities, and waste disposal, according to Omotosho *et al.* (2016), are all typical issues in abattoirs in Nigeria's south-west. Most abattoirs in poorer nations, on the other hand, are poorly built, lack suitable meat inspection facilities, lack qualified meat inspectors, and lack proper sanitary measures (Biu *et al.*, 2006). This has public health

consequences since it affects the likelihood of zoonotic illnesses being transmitted from animals or the environment to humans and vice versa (Tassew *et al.*, 2010).

From the findings of this study, cattle had the highest slaughter rate during the three seasons with an average of 90046 followed by goats (9684), sheep (1193), and lastly camels (37). This is owing to the strong demand for beef in the research area (due to customer choice) over goat, sheep, and camel meat. Cattle are the most common and highly valued livestock in Nigeria, Tewe (1997) reported that beef accounts for more than half of the country's entire meat supply (Haruna & Murtala, 2005). Similarly, butchers and consumers rank camels as the least desirable meat source (Mohammad, 2000).

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- ## CONCLUSION
- Results of this study shows that the abattoir lacks some fundamental facilities that are necessary of a conventional abattoir, and where present are either non-functional or inadequate. The slaughter figures were unaffected by season, with cattle, goats, sheep and camels being the most regularly slain animal species in decreasing order throughout all seasons evaluated.
- ## RECOMMENDATIONS
- i. Adequate ante-mortem and postmortem operations should be performed.
 - ii. Personnel should closely adhere to proper sanitation within the abattoir.
 - iii. The Government should offer standard operating facilities at the abattoir and make equipment repair easier when necessary.
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