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ASSESSMENT OF FACILITIES AT KANO MAIN ABATTOIR AND LIVESTOCK SLAUGHTER FIGURES AS AFFECTED BY SEASONS

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ABSTRACT

This study was conducted to assess the facilities as well as seasonal effect on livestock slaughter figures at Kano Main abattoir. The facilities were assessed based on their presence and state of condition while seasonal effects on livestock slaughter figures were obtained from the abattoir record book. Data on total number of goats, sheep, cattle and camels slaughtered daily for a period of nine months were collected and recorded. The result of the study showed that, some of the facilities were not functional. It was observed that the lairage in the abattoir is not used for ante mortem examination. The cruel method of animal immobilization, unhygienic method of animal slaughter and fairly non availability of good water were the negative practices recorded in the Kano Main abattoir. The result of the slaughter figures during the nine months period revealed that, Goat had the highest slaughter figures (27045, 69119, 35905), followed by cattle (21496, 34175, 28460) then sheep (5930, 10258, 6468) while camel had the least (2433, 3979, 3916) at the early dry season, late dry season and late wet season respectively. It was concluded that meat inspectors at Kano main abattoir do not enforce the use of abattoir facilities during inspection which hinders efficient ante and post mortem examination.

Keywords: facilities; abattoir; slaughter; season and livestock

INTRODUCTION

An abattoir is defined as any premises approved and registered by the controlling authority for hygienic slaughtering and inspection of animals, processing and effective preservation and storage of meat product for human consumption (Akpabio *et al.* 2015). These premises are established to centralize slaughtering processes and ensure safety of meat and meat products. Different abattoirs have different facilities and management systems which can affect the quality of meat differently (Mummed and Web, 2015). Therefore, a standard abattoir should have qualified personnel, state of the arts equipment, lairage, adequate and portable water supply, good drainages and efficient sanitation system (Gadisa *et al.*, 2019). Keeping records of abattoir slaughtering figures helps in having the animals slaughtered for food or other reasons such as being diseased and unsuitable for consumption. It is believed that, there is variation in the occurrence of slaughter figures amongst ruminant animals during dry and early wet season due to non availability of year round feed resources which progressively reduce animal performance which causes potential health risk. This study was therefore designed to assess the efficiency of the facilities used at Kano Main abattoir and the seasonal effect on livestock slaughtering figures.

MATERIALS AND METHODS

Study site

Kano Main Abattoir is located within the ancient city gate of Mazugal (Kofar Mazugal) in Fagge Local Government area of Kano State. The abattoir has a GPS coordinates of 12.018°N and 08.521°E. It is very large and known for slaughtering large number of camels, cattle, sheep and goats mainly sourced from within and outside Nigeria.

Assessment of abattoir facilities and operations

The abattoir was visited daily for a period of one month from 6:00am to 11:00am in order to observe the use of the operational facilities. The abattoir facilities were assessed based on their presence and situation on ground (condition).



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Slaughter figures

Record of slaughter figures was taken daily for a period of six weeks of visit to the abattoir. Thereafter, the daily slaughter figures for the remaining period of 30 weeks were obtained from the record book of the abattoir (Kano Abbatior, 2020). The total slaughter figures recorded and or obtained were for a period of nine months as follows for late wet season (August to October), early dry season (December to February) and late dry season (March to May).

Data collection and analysis

Data on total number of camel, cattle, goats and sheep slaughtered daily and the total number of fetus found in the reproductive tract of the animals daily were collected and recorded. The records of the data collected were thereafter sorted out and organized by species into total number of animals slaughtered, number of female animals slaughtered, number of pregnant animals, number of non pregnant animals and also the number of male animals slaughtered. Data was analyzed using simple descriptive statistics of frequencies and percentages using Microsoft excel.

RESULTS AND DISCUSSION

The facilities available at the Kano Main Abattoir are presented in Table 1. The abattoir has slaughtering facilities that are no longer functional. There is lairage in the abattoir which is used for resting few animals. The presence of lairage in Kano abattoir as captured in the current study contradicted the findings of Igwe (2005) and Aliyu *et al.* (2008) which stated that there is no availability of lairages in most Nigerian abattoirs. There was no ante mortem examination in Kano Main abattoir despite the availability of lairage. This finding is in agreement with the findings of Dandago *et al.* (2009) and Akpabio *et al.* (2015) who reported the absence of ante mortem inspection in some Nigerian Abattoirs. There is also slaughtering hall in the abattoir where goats, sheep, cattle and camels are slaughtered but the slaughtering and processing of the carcass is done on the floor in the slaughter hall which resulted in the improper bleeding and non hygienic operations. The result of the present study is in conformity with the findings of Yonel and Muchenje (2017) and Gadisa *et al.* (2019) who revealed that slaughtering of animals on the floor could result in poor meat quality.

Evisceration and cutting up of sheep and goat were conducted manually by professionals through hanging while that of cattle and camels on the floor. Such practice might increase chances of meat contamination. There is need for the enforcement of post mortem examination in Kano Main abattoir.

It was observed that, there was a fairly non availability of water to the abattoir; water was usually obtained from truck pushers who sold water from unrecognized sources for the washing of the carcasses which might have contributed to carcass contamination. The finding of this study agrees with the report of Lawan *et al.* (2013), who stated inadequate source of water as one of the major problem bedeviling abattoirs in North western states of Nigeria. The method adopted in Kano Main abattoir in immobilizing animals before slaughter involves physical struggle to wrestle down the animals which seriously affect the meat quality (Dandago *et al.* 2009). Meat inspectors were available in the abattoir but there is need for them to enforce or encourage the butchers to use some of the facilities in the abattoir.

Table 2 shows the slaughtered figures for Goats, sheep, cattle and camels for early dry season, late dry season and late wet season. The result showed that Goat had the highest slaughter figures (27045, 69119, 35905), followed by cattle (21496, 34175, 28460) then sheep (5930, 10258, 6468) while camel had the least (2433, 3979, 3916) at the early dry season, late dry season and late wet season respectively.

The result of the present study contradicted the findings of Abdullahi *et al.* (2020) who reported high slaughter figures of sheep and goats at the early rainy seasons.



Table 1: Assessment of facilities and practices at Kano main abattoir

S/N	Abattoir activity	Situation on ground	Remark
1	Slaughtering facilities	Good design with facilities that are no longer functional	Need to renovate or relocate to standard and functional abattoir
2	Types of animals	Cattle, Camel, Sheep and Goats	Pigs are not slaughtered
3	Daily slaughter figures	Cattle (150-200), camel (30-40), sheep (150-200), goats (350-400)	These figures varies from season to season
4	Lairage	Present and used for resting few animals but rarely used for ante mortem inspection	Should be enforced
5	Ante mortem	Absent	Should be enforced
6	Immobilization	The animals are wrestled down to the floor and then their feet tied	The practice is dangerous and need butchers education
7	Slaughter wall/hall	The same method for small ruminants but Cattle and Camel are slaughtered separately	Should be enforced
8	Slaughter	Done on the floor and manually using sharp knife by specific personnel. Small ruminants are hanged after slaughter	Improper bleeding and unhygienic
9	Evisceration	Carried out by Professionals. Sheep and goats are hanged. Done on the floor for cattle and camel.	Should be encouraged
10	Post mortem	Present but not quite effective	Should be enforced
11	Fetal losses	High fetal losses	Pregnant animals not should slaughtered
12	Cutting up	Carried out by professionals	Should be encouraged
13	Byproducts handling	Quite professional	Should be encouraged
14	Sanitation	Fairly	Should be enforced
15	Availability of water	Fairly not available	Adequate source of water should be provided
16	Meat inspectors	Available	There is need for improvement

Source: Field visit (2020)

Table 2: Slaughter figures for all livestock in the late wet season, early dry season and late dry season

Animal	Season					
	Late wet season	Percentage (%)	Early dry season	Percentage (%)	Late dry season	Percentage (%)
	Slaughter figure		Slaughter figure		Slaughter figure (%)	
Goats	27045	20.48	69119	52.33	35906	27.19
Sheep	5930	26.17	10258	45.28	6468	28.55
Cattle	21496	25.55	34175	40.62	28460	33.83
Camels	2433	23.56	3979	38.53	3916	37.92

Source: Kano Main Abattoir



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CONCLUSION AND RECOMMENDATIONS

It was concluded that meat inspectors at Kano main abattoir do not enforce the use of available abattoir facilities during operational activities which makes efficient ante and post mortem inspection impossible. There is need for Government intervention in the enforcement of standard practice in the abattoir in order to prevent the production of unsafe meat in Kano.

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