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Gastrointestinal parasites of cattle at slaughter in Gashua abattoir Yobe State, North-Eastern, Nigeria

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Abstract
Faecal survey of gastrointestinal parasites of cattle at slaughter in Gashua abattoir was conducted between February and May, 2019 using saturated sodium chloride floatation and formal ether sedimentation techniques. Out of 125 faecal collected and examined 72 (57.6%) were infected with parasitic helminthes. The small intestine harboured 47(37.6%) and Large intestine had 25(20.0%) respectively. The male had prevalence of 50(40.0%) while the female had 49(40.0%). Adequate Veterinary services should be adopted to prevent and control the incidence of parasitic helminths as well as feeding the animals with hygienically formulated livestock feeds.

Keywords: prevalence, gastrointestinal, parasites, cattle, Gashua, Nigeria

Introduction
Parasitic helminthes of cattle belong to the phylum platyhelminthes and nemathelminthes (Soulsby, 1982; Urquhart *et al*., 1996) [9, 10]. Parasitic gastroenteritis has posed a major constraints to livestock productivityin Nigeria. Although losses due to gastrointestinal parasitic infections have been estimated and reported in different parts of Nigeria (Akerejola *et al*., 1979), there is paucity of information on the prevalence, distribution and epidemiology of various species of gastrointestinal parasites of cattle in Gashua Yobe State, which is one of the livestock producing area in subSaharan Africa (Eysker and Ogunsusi, 1980) [4].
The epidemiology of the helminthes parasitic diseases depends on factors such as the infection pressure of the environment and the susceptibility of the host species. Hansen and Perry (1994) [6] stated that epidemiology pattern of parasitic helminthes are so distributed that certain species are found in tropical countries like Nigeria, Cameroon, Ghana, etc.
There is paucity of information on the prevalence, distribution and epidemiology of various species of gastrointestinal parasites of cattle in Gashua Yobe State northeastern Nigeria, which is one of the livestock producing ares in subSaharan Africa (Eysker and Ogunsusi, 1980) [4].

Materials and Methods
Study Area
Gashua abattoir is located in Gashua metropolis which lies between the Sudan and Sahel Savannah vegetation zones that characterized by a prolonged dry season between November and Ma, a short rainy season from June to September (Abah *et al.*, 2019) [1].

Sample Collection
125 Faecal samples were randomly collected from the large and small intestines of each cattle slaughtered at the Gashua abattoir in Gashua metropolis, Yobe State, Northeasten geopolitical zone of Nigeria. The cattle were bred and reared by the nomadic Fulani pastoralists, who practices open grazing or traditional husbandry system.
Processing, examination and identification of faecal samples:
Faecal samples collected were processed using saturated sodium chloride floatation and formal ether sedimentation techniques and eggs or oocysts were examned and identified using the light miscrocope at X40 objective and the eggs or oocyts per gram of faeces determined using the Mc Master technique (Urquhart *et al*., 1996) [10].

Result
Out of 125 faecal samples collected and examined for gastrointestinal parasites 72(57.6%) were infected.

Table 1: Prevalence of Gastrointestinal parasites in relation to predilection sites

Predilection sites	No. examined.	No infected	Percentage infection (%)
Small intestine	65	47	37.6
Large intestine	60	25	20.0
Total	125	72	57.6

Table 2: Distribution of Gastrointestinal parasites in relation to sex

Sex	No examined	No infected	Percentage infected (%)
Female	49	2	17.6
Male	76	2	40.0
Total	125	50	57.6

Table 3: Distribution of Gastrointestinal parasites in relation to ova of parasites

No. examined	Nematodes	Cestodes		
125	No. positive	Percentage positive (%)	No. positive	Percentage positive (%)
	2464	87.2	361	12.9

Discussion
The results of this current study has shown that small

intestine harboured more helminth parasites than the large intestine and this might be attributed to helminth parasites preference for dissolved food substances that are readily available in the small intestine. This corroborate with report by Armour *et al.*, 1987 and Pralomkarn *et al.*, (2001) [10, 8] who opined that parasitic helminths preferred small intestine to large intestine as a result of high abundance of dissolved food substances in the small intestine. It was revealed that both sexes were infested with parasites, as result of the fact that both the females and males feed on the same grasses. Also, it might be interested to note that both sexes possessed similar immunity level as well as the same degree of resistance to parasitic helminths. This findings is in agreement with the report by Franklin *et al.*, (1994) [5] and Clacton *et al.*, (1997) [3] respectively.

The findings has revealed that nematodes were more prevalent than cestodes and this might be attributed the types of grasses being fed upon, seasonal infestation and climatic conditions such rainfall, temperature, sunlight and soil moisture of the area. This corroborate with the findings by Holmes (1987) [7] and Kassi (1999) respectively.

Conclusion

There is high preevalence of gastrointestinal helminths parasites examined in this current study undertaken at Gashua abattoir, in Gashua metropolis, Yobe State of Nigeria. The results has shown that the nematodes had prevalence of 87.2% and cestodes had 12.8% respectively. The high prevalence if parasites might be due to poor husbandry management systems such as good hygiene, feeding and veterinary services, and climatic conditions which might encourage faster growth and development of parasitic helminths.

Recommendations

- Veterinary units should be established in the area to carry out routine deworming of livestock
- Local Government Authority should educate the herders or cattle breeders on proper husbandry management of their livestock
- Farmers should endeavour to feed their livestock with hygienically formulated supplementary feeds.
- Farmers should restrict the movement of the animals during grazing in order to reduce their frequency of contact with parasitic helminths.
- Farmers should adopt the modern approach of livestock production for effective management of the animals.

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