

**NSAP****47th Annual
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(JOS 2022)****CONFERENCE
PROCEEDINGS**THEME
**SECURING ANIMAL
AGRICULTURE AMIDST
GLOBAL CHALLENGES****PREVALENCE STUDY ON GASTROINTESTINAL PARASITES OF GOAT'S IN BAUCHI LOCAL GOVERNMENT AREA,
BAUCHI STATE****SULIM, P.Y., SA'IDU, I., MURTALA, A. S T AND MUHAMMAD, S****Department of Animal Production Technology Bauchi State College of Agriculture Bauchi State****ABSTRACT**

A prevalence study on gastrointestinal parasites of goats was conducted for two months from September to November, 2021 in some selected wards of Bauchi Local Government Area in Bauchi State for about 100 goats faecal samples were collected and were examined for gastrointestinal helminthes eggs and protozoan occysts using direct microscopic examination and sodium chloride floatation techniques. Out of the 100 faecal samples examined, 78% were positive for gastrointestinal parasites. Adult goats had the lowest prevalence of 74. 1% while young goats had the highest prevalence of 100%. Male goats had a prevalence of 93.33% while female goats had a prevalence of 75.29%. The gastrointestinal trygonocephalum, ostertagia spp, haemonchus contortus trichostrongylus spp. Coccidia spp had the highest prevalence with 19% while bunostomum trigonocephalum had the lowest prevalence with 3%. There was mixed infection of 30%. I suggest good management practices, prompt diagnosis and treatment with anthelmintic and antiprotozoan drugs and educating animal owners on the bio security as panacea to reduce the risk of infection and increase productivity of the animals and safe guard public health.

Key words: prevalence, gastrointestinal, parasites, goats**INTRODUCTION**

Through the world, parasitic disease constitutes a major impediment to livestock (Haste et al., 2006). Goats of all ages are affected by a diversity of internal parasites. Faizal and Rejapakse (2001) recorded concurrent helminthic and coccidial infections rate of 78% in srilanka. This concurrent infection increase clinical severity with weight loss and death (Abosehaba and Abo - Farina 2003, Agye; et al., 2004) coursing considerable economic losses. Clinical signs in the infected stock include gastroenteritis, anaemia, and mal absorption sequel to gut damage by parasitic larvae and coccidial schizonts (soulsby, 1982 Urquhart ET. Al, 1996). According to Kagira and Kanyari (2001) parasitic diseases coursed approximately 32% of all ovine, death during 1984-1994 in Central Kenya.

Helminthosis and heart water transmitting tick accounted for 63% and 27% of all the parasitic cases, respectively. In a study conducted by waruiru et al., (2001), Haemonchus placei, Trichostrongylus axei, cooperia SPP and oesophagostomum radiatum where responsible for parasitic gastro enteritis in Kenya. Sreed har et al., (2009) Reported helminthic infection in 42% of goats in Andhra India. The highest frequency of 22.25% was of amphistomes by coccidia at 8.1% strongyles at 76% and fasciola at 3.8% there was higher in monsoon season as compared to summer and winter. Tsotetsi et al., (2013) recorded prevalence of helminthic parasites, 30% in goats for in Gauteng province of South Africa. Cyptosporidium species infection rates of 13%, 16.2% 8.2% and 12.5% were recorded in goat kids, lambs, adult goats on 10 small stock farms in Gaborone of Botswana (Sharma and machete, 2009).

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Goats being among the earliest animals domesticated by man, their distribution have high concentration in tropical areas and dry zones. Goats are important source of animal protein in many countries of the world, supplying a good percentage of the daily meat in cities and villages in such countries including Nigeria (Nwosu et al., 2007). A part from being the source of animal protein, their wastes are also very important in agriculture (Nawathe et al, 1985 and Nwosu et al., 2007). In some traditional settings including the study area, they play an essential role in the socio economic system, representing family wealth or survival kit especially in the rural areas. However, goats serve as source of income earning to major dealers and sellers and butchers (meat sellers). It generates employments and creates market for larger number of people who explore their products and by product for economic gain (Lawal - Adebawale, 2012).

Materials and Methods

The study was conducted in Bauchi Local Gvernment Area of Bauchi State and it lasted for two months from September to November, 2021.

Faecal samples were obtained via the recta using sterile polythene bag. Total number of One Hundred (100) goat faces, one to each face of different sexes and ages manage under extensive, semi-intensive and intensive systems. The sample collection was under complete randomization. All sample were put in ice cooled container and kept in the refrigerator until it is taken to NVRI (National Veterinary Research Institute) Bauchi for Laboratory screening of gastrointestinal parasites in the faces.

Coprology was carried out using sodium chloride floatation techniques and direct microscopic examination was used to process the faecal samples. Identification of eggs and oocytes was made on the basis of morphology and Size of egg. Faecal smears were prepared from fresh faecal samples on glass slide using saturated salt solution and covering the slides with cover slip. The slides were examined microscopically for helminthes eggs, oocysts and larvae using x10 and x40 objectives respectively.

Simple percentage was used to determined the prevalence of the parasites.

4.0 Result and discussion

Out of 100 goats screened for gastrointestinal parasites, 78 were with one or more parasites species given an overall prevalence of 78%.

The study revelas that, the infection rate of gastrointestinal parasite was higher among male goats than females with (male 93.33% and fremale 75.29%) shown in table 1. These is in contrast with the study of Odikamnoro et al; (2015) who reported 45.6% infection rate in female and 33.5%vin male goats slaughtered in Anka abattoir, Kogi State and Ardo and Bitrus (2015) who reported 44.4% in females and 3.7% in males slaughtered in Jalingo abattoir, Taraba State.

From this investigation, *Bunostomum trigonocephalum*, *Haemochus controtus*, *ostertagia* spp, *Trichostongylus* spp, *strongloides papiillosus* and *coccidian* spp were the parasites observed. *Coccidian* spp had the highest percentage of infection with 19% while *Bunostomum trigonocephalum* had the lowest percentage of infection with 3%.

These looks similar with the report of Decerbo (2010) who noted that the most prevalence helminthes and protozoan parasites in the intestinal tract of small reuminants *strongyloides*, *strongyle* species and *coccidea* species.



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These indicate that out of 78% positive goats, for gastrointestinal parasites, young goats had 100% prevalence with Adult goats had 74.1% prevalence. The infection rate recorded in young goats is high while adult goats carries lowest infection rate. As shown in table 3.

This research is in agreement with the report of Odikamnoro et al; (2015) who reported that, young goats have higher prevalence than Adult goats slaughtered in Anka Abattior , Kogi State.

Table 1: Survey of Gastrointestinal Parasites in Relation to Sex.

Sex	No. examined	No. positive (%)
Male	15	14 (93.33)
Female	85	64 (75.29)
Total	100	78 (78)

Table 2: Survey of Gastrointestinal Parasites in Relation to Species of Parasite.

Class of Parasite	Parasite spp	No. positive (%)
Protozoa	Coccidian spp	19
Nematode	Bunostomum Tridanocephalum	3
Total	ostertagia spp	4
	Haemonchus contortus	9
	Trichostrongylus spp	9
Protozoa + nematode	Mixed infection	30
Total		78

Conclusion and Conclusion

The overall result of the study indicated that endoparasitosis with gastrointestinal nematodes and protozoa infection are endemic in the study area. These parasitic infections as recorded in the study pose a great challenge and constraint in achieving increased productivity and sustainability of small ruminant's production

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in Bauchi Local Government. In order to limit the effect of parasitic infections, livestock farmers need to be educated on the dangers of parasitic parasites and the need to have a good health care, good sanitary condition and deworming exercise towards maximizing their productivity.

It can therefore be recommended that, it is important that some control measures for gastrointestinal parasites in small ruminants should be considered to reduce parasites burden. Grazing fields should be kept free from contamination with faeces and urine of the animals. Regular sanitation is highly recommended in order to reduce the chance of gastrointestinal infections. Also newly purchased goats should be given prophylactic treatment before introducing them. Farmers should know or be educated on the need for deworming exercise towards maximizing their productivity.

References

- FAO (1994). Disease of domestic animals caused by fluked, FAO (food and agriculture organization of the united nations) report Rome, Italy pp 49.
- Ardo, M.B. and Bitrus, I. (2015). Prevalence of parasitic Gastrointestinal Nematodes of small Ruminants at Jalingo Abattoir, Taraba State, Nigeria. Bayero Journal of Pure and Applied Sciences. 8 (2);29-33.
- Ball Weber, L.R. (2001). Veterinary parasitology (practical veterinarian). (s.p Messonnier ed.). Butterworth Heinemann Publication U.S.A.
- M. Cheesbrough, M. (1999). District laboratory practice in tropical countries part 1. Low price edition, Cambridge university press. Cambridge. Pp 196 -198
- Adejimi, J.O. and Obayomi, J.O. (2010) prevalence of intestinal protozoan parasites of dogs in Ibadan, South western Nigeria. Journal of Animal & Plant Sciences, 7, 2);783-788,2010.
- Dicerbo, A.R., Manfredi, M.T, Zanzani, S and Stradiotto., K. (2010) Gastrointestinal infection in goat farm in Lombardy (Northern Italy): small rumin. Res. 88:102-122.
- Mullah, M.R.R; Islam A.W.M.S and Islam, M.K. (1996) Epidemiology of abomasal helminth of black Bengal goats in Bengladash. Indian J. vet, Med. 16:,29-31.
- Symth J.D introduction to animal parasital 3 ed. Cambridge University press. Pp: 307-581,1995.
- Sowemimo, O.A., A saolu, S.A, Adegoke, F.O and Anyanniyi, O.O (2012) Epidemiological Survey of gastrointestinal parasitas of goats in Ibadan, southwest Nigeria Journal of Public Health and Epidemiology 4 (10,294-298).
- Maleka, I.C. (2006) Bauchi State in brief in Adaba, A.T., Adaba, M. and Hamid, M.A Eds Bauchi State a historical perspective. Trim communication Limited Abuja pp 100.
- Lawal Adebowale, O.A (2012). Dynamics of Ruminant Livestock Management in the context of Nigeria Agricultural System. Agricultural and Biological sciences.
- Nawathe, D.R Sohoel, A.S and Umo, I (1985). Health management of a dairy herd on the Jos Plateau (Nigeria). Bull. Anim. Hlth. Prod. Africa, 33:199-205.