A RETROSPECTIVE STUDY ON PREVALENCE OF PPR AND HELMINTHOSIS OF SHEEP AND GOATS IN KANO AND ENVIRONS

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ABSTRACT
A retrospective study was conducted on prevalence of *Pests-des-PetitsRuminantum* (PPR)and helminthosisfromKundila veterinary hospital and Gwale veterinary clinic, Kano state, Nigeriabetween2012 and 2016. The investigation revealed the presence of the diseases in the study area. The results recorded showed the highest prevalence of PPR during early rainy season(34.98%), whereashelminthosis was observed to be higherduring the late rainy season (40.00%).Based on species, PPR tended to be higher in goats than sheep; 76.88% and 23.12% respectively. On the other hand, sheep were more susceptible to helminthosis(65.49%) than goats (44.71%). Regarding sex of the small ruminants, both the diseases were more prevalent in females than males:PPR;females (60.31%),males (39.68%) and helminthosis;females (54.26%)males (45.74%). ThePPR and helminthosis are important diseases of small ruminants which may affect their productivity. The results indicated that the diseases occurred throughout the study period and all year round with varying intensities. The occurrenceofthe diseases in both species were statistically significant ($P<0.05$) in relation to sex, season, species and annual distribution. It is recommended that farmers should be enlightened on the effects of the diseases, routine management and seeking prompt veterinary attention in cases of outbreaks.Annual vaccination against PPR isemphasized.
Keywords: Goats**,**Helminthosis,PPR**,**Sheep

INTRODUCTION
Nigeria has an estimated populationof 490 million Sheep and 483 millionGoats. The contribution of livestock to the overall food output in developing countries is increasing faster than that of cereals. In 1990, meat production increased from 69million tones to about 105million tones by the year 2000 (FAO, 2003).Small ruminants constitute an important source of animal protein to Nigerians. A lot of socio-economic importance is therefore attached to ownership of these animals. In some cases, it may be the only reliable wealth of a rural household. This economic importance is primarily associated with their small size, as it favours low investment, small risk of loss and their high reproductive efficiency (Omoike, 2006). Sheep and goats are major sources of food and fiber and play very significant social and economic roles in developing countries. Sheep and goats' secondary functions include the production of milk, wool, skin and manure (Tefera *et al*., 2009).

Pests-des-PetitsRuminantum (PPR)is endemic in various parts of the world including Nigeria(Peacock, 1998;ILCA, 1991). The PPR was first described in sheep and goats in 1956 in Ivory Coast (Cote D'voire) and the Republic of Benin. Small ruminants in all climatic zones of Nigeria are affected by the disease (Peacock, 1998). It has been among the most devastating diseases of small ruminant production in Nigeria. PPR is Rinderpest-like in manifestation and still has a great influence on animal protein supply in many countries (ILCA, 1996).

Helminthosis is a disease or group of diseases which affects animal hosts caused by parasitic worms known as *helminiths*. The infestation is prevalent and constitutes a serious economic problem in livestock. Helminthosis is also a serious risk to humans and companion animals such as dogs, cats and other pets (WIPO, 1994). The rate of development of the parasites tends to increase with rise in temperature and moisture which are factors known to be common in Nigeria, particularly in the northern part. The parasites develop rapidly to the infective stage (Williamson, 1989), and are controlled using various forms of anthelminthic (Peacock, 1998).

RESULTS AND DISCUSSION
The results obtained revealed the variation in the clinical prevalence of both PPR and helminthosis in sheep and goats in the study area. Goats appeared to be more susceptible to PPR than sheep with 3,927 (76.88%) and 1,181 (23.12%) respectively. This is in line with the report of Tail (1984) which

stated thatGoats are often affected by the acute form of the disease while sheep usually suffer from the sub-acute or chronic form. Also, according to Obi (1992) sheep are found to be less affected with PPR than goats.

On the contrary to the findings on PPR above,helminthosisis found to be higher in sheep than goats with 3,422 (65.49%) and 1,803 (34.51%) respectively. This is in line with the results of Downie (1990) who recorded higher prevalence of helminthosis in sheep than in goats.

Based on sex, female sheep and goats showed higher frequency for all the diseases than their male counterparts.This trend is similar with the report of Egwurube and Ofukwo (2002) who indicated higher cases of helminthosis and PPR in females than males small ruminants.

The seasonal distribution of PPR and helminthosis in sheep and goats seem to occur all year round with varying prevalence. In the case of PPR, the highest infestation of 1,784 (34.98%) occurred during the early rainy season followed by the early dry season1,736 (33.99%), then late dry1,073 (21.01%) with least prevalence during the late rainy season 512 (10.02%).The rise in the prevalenceduring the early rainy season and the fact that the disease is mostly encountered all year round is in agreement with the findings of Obi (1990) and Tamburawa (1997) from southern Nigeria.

In case of helminthosis, the highest number of cases was encountered during the late rainy season 2,090 (40.00%). This is in consonance with the findings of Smyth (1996) who stated that these parasites require a period of development outside the host before becoming infective and that the rate of their development and survival are influenced by climatic and environmental factors such as a rise in temperature and moisture. Also, eggs of some trematodes such as *Fasciolahepatica* and *Fasciolamagna* are found to be wide spread in wet, swampy or sub-irrigatedareas which support the emergence of substantial population of their intermediate hosts(snails).

Annually, thedistribution of the disease revealedthe total of 5,108 cases of PPR in both sheep and goats within the study period (2012 – 2016). The highest prevalence of 1,403 (27.47%) were recorded in the year 2016 while the lowest prevalence of 612 (11.98%) was observed in 2014. Thisresultcorresponds with that of Taylor *et al*. (1990), who reported that the disease follows a cyclic pattern with significant increase in prevalence every 3 – 4 years.

For helminths, 5,225 cases were recorded with the highest of 1,501 (28.73%) in 2016. The lowest number of cases of 682 (12.02%) was obtained in 2013. The trend of the disease showed an increasing pattern. Thisis in agreement with the suggestionof Peacock (1996) that the probable increase in animal population and inadequateknowledge of the disease by farmers and poormanagement practices such as lack of regular deworming lead toincrease of the disease.Theresult of the study indicated that occurrence ofthe diseases in both species were statistically significant ($P<0.05$) in relation to sex, season, species and annual distribution.

CONCLUSIONS AND RECOMMENDATIONS

The investigation revealed that thediseasesareendemic in the study area with an increased in prevalence in both species.Theoccurrence of the diseases was affected byspecies, sex, season and annual distribution.Farmers should be enlightened on the effects of these diseases, need to seek for prompt veterinary attention and improved management practices such as good hygiene and annual vaccination against infectious diseases especially PPR.

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