

AN ASSESSMENT OF PREVALENT LIVESTOCK DISEASES IN IGARRA CATTLE RANCH IN AKOKO EDO L. G. AREA OF EDO STATE AND GBOKO L. G. A. OF BENUE STATE OF NIGERIA (JAN. 1998 DEC. 2002).

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ABSTRACT

An assessment of Livestock Diseases carried out in Igarra Cattle Ranch in Akoko Edo Local Government Area of Edo State for a period of 5 years (Jan.1998 Dec. 2002) revealed that the prevalent diseases are Helminthiasis (31.55%), Ectoparasitism (37.3%), Trypanosomiasis (18.6%), Pneumonia (7.2%), Rinderpest (3.2%), Foot and Mouth Disease (2.2%). In Gboko Local Government Area of Benue State of Nigeria, for the same period, a similar investigation revealed the following disease conditions: Helminthiasis (33.1%), Ectoparasitism (22.01%), Pneumonia (20.28%), Trypanosomiasis (12.68%), Pneumonia Enteritis Complex (PPR) (11.97%).

KEY WORDS: Prevalent, Livestock, Diseases in Igarra and Gboko.

INTRODUCTION

When adequate nutrition and good management practices are carried out in a livestock establishment, one major factor that can cause severe economic loss and declining productivity is disease. Brunner, D. W and Gillespie, J. H. (1973). Hall, H. T. B. (1977) and Hofstad, G. P. (1978) stated that diseases cause a high mortality rate in livestock herds and this causes a drastic reduction in both the Gross Domestic Product (GDP) and Foreign Exchange earnings of a nation. They also cause a reduction in their economic importance of providing food (proteins), raw materials for agro-based industries, gainful employment etc., Robert, T. E. (1992). In nutrition generally, although other sources of animal protein supply are generally available, ruminants are the most important source and despite the high demand for protein by man, there has been low production of ruminants as a result of various diseases, which if not checked could also lead to a complete reduction in both beef and dairy industries. The effect of diseases has to be reduced to the lowest minimum since diseases can also lead to a complete collapse of the industries. Livestock diseases have also been identified in almost all our development plans as one of the major constraints militating against the expansion of the livestock industry in Nigeria, Bourdin, P. (1980). Findings carried out by different investigators on the effect of diseases on livestock production in Nigeria showed the extent to which these conditions are rampant, Whitney, J. C.; Scott, G. R. and Hill, D. H. (1967).

The system of keeping in line with better ruminant enterprise requires constant surveillance and monitoring of diseases both in the private and public management sectors as part of the statutory government diseases control regulation for increase production in the livestock industry. Also in the realization that livestock production forms a very important sub-sector of the agricultural sector of the nations economy, there is need for proper diagnosis, treatment and control of livestock diseases in order to enhance production, Obi, T. U. (1988). Several diseases are known to affect livestock production but this investigation takes a look at those diseases that were reported, seen, diagnosed and treated or known to have

affected livestock production for five years at Igarra Cattle Ranch in Akoko Edo Local Government Area of Edo State and Gboko Local Government Area of Benue State - Nigeria. In the past years, no comprehensive documentation of the major livestock diseases has been carried out here. This investigation will therefore assist in augmenting the scanty information available in the literature on the prevalent livestock diseases in these areas. Recommendations have also been made on how these diseases can be effectively managed and controlled.

MATERIALS AND METHODS

The animals used for this investigation were those seen, and presented for treatment and being managed in Igarra Cattle Ranch and included the following: Bovine species including breeds like N'dama, Muturu, Kuri, Sokoto Guddahli, Caprine and Ovine species including the West African Dwarf (sheep and Goats). At Gboko the animals used were those presented for treatment at the Veterinary Clinic Gboko, Benue State, located at 33 Akiade Road West, a few metres from Gboko Rice Mill. Different species of Bovine, Caprine, Ovine and Porcine were treated while breeds of cattle encountered include mainly Muturu and the White Fulani. Breeds of goats and sheep were mainly the West African Dwarfs (WAD) while breeds of pigs were mainly the Landrace, Large White and the Locals. Apart from a few cases received, diagnosed and treated by the author from September December 2002 records of different diseases diagnosed and treated in the ranch and clinic were compiled from case books and post-mortem reports. Where diagnosis was doubtful diagnosis was confirmed either at the State Veterinary Clinic, Benin-City, Edo State, the State Veterinary Clinic, Makurdi, Benue State or the Nigerian Veterinary Research Institute (NVRI) Vom, Plateau State.

RESULTS

The assessment shows that the prevalent livestock diseases at Igarra Cattle Ranch are presented in (Table 1). On the whole, the following diseases were prevalent: Ectoparasitism (37.30%), Helminthiasis (31.51%), Trypanosomiasis (18.62%), Pneumonia (7.22%), Rinderpest (3.17%), Foot and Mouth Disease (2.18%).

In the Bovine specie these diseases were Prevalent: Ectoparasitism (20.16%), Helminthiasis (15.83%), Trypanosomiasis (9.67%), Pneumonia (4.87%), Rinderpest (1.39%), Foot and Mouth Diseases (1.13%). In the Caprine specie the following diseases were prevalent: Ectoparasitism (9.00%), Helminthiasis (8.36%), Trypanosomiasis (4.94%), Pneumonia (1.57%), Rinderpest (1.20%), Foot and Mouth Diseases (0.06%). In the ovine specie the following diseases were prevalent: Ectoparasitism (8.18%), Helminthiasis (7.31%), Trypanosomiasis (4.06%), Pneumonia (0.78%), Rinderpest (0.68%), Foot and Mouth Diseases (0.05%).

Similarly the prevalent livestock diseases in Gboko Local Government Area of Benue State are presented in (Table II) which shows an overall infection rate as follows: *Helminthiasis* (33.1%), *Ectoparasitism* (22.01%), *Trypanosomiasis* (20.28%), *Pneumonia* (12.68%), *Pneumo Enteritis Complex* (11.97%). In the Bovine specie the prevalent diseases were *Helminthiasis* (8.31%), *Ectoparasitism* (6.52%), *Trypanosomiasis* (4.32%), *Pneumonia* (3.30%). In the Ovine specie, the following diseases were prevalent: *Helminthiasis* (6.38%), *Pneumonia* (5.74%), *Pneumonia Enteritis complex* (4.52%), *Trypanosomiasis* (3.03%), *Ectoparasitism* (2.10%). In the Caprine specie, *Helminthiasis* (8.26%), *Pneumonia Enteritis Complex* (7.48%), *Ectoparasitism* (5.70%), *Pneumonia* (5.50%), *Trypanosomiasis* (2.64%), were prevalent. In the Porcine specie, *Helminthiasis* (10.11%), *Pneumonia* (5.74%), *Ectoparasitism* (4.69%) and *Trypanosomiasis* (2.69%), were also prevalent.

TABLE 1: PREVALENT LIVESTOCK DISEASES AT IGARRA CATTLE RANCH OF EDO STATE (JAN 1998 DEC. 2002).

DISEASES	BOVINE	CAPRINE	OVINE	TOTAL
<i>Helminthiasis</i>	(15.83)** 1820 (50.28)*	(8.36)** 960 (26.52)*	(7.31)** 840 (23.20)*	(31.51)** 3620
<i>Rinder pest</i>	(1.39)** 160 (43.96)*	(1.20)** 126 (34.62)*	(0.68)** 78 (21.43)*	(3.17)** 364
<i>Foot & Mouth Disease (FMD)</i>	(1.13)** 13 (51.79)*	(0.06)** 65 (25.90)*	(0.05)** 56 (22.31)*	(2.18)** 251
<i>Pneumonia</i>	(4.87)** 560 (67.47)*	(1.57)** 180 (21.69)*	(0.78)** 90 (10.84)*	(7.22)** 830
<i>Trypanosomiasis</i>	(9.67)** 1111 (51.94)*	(4.94)** 568 (26.65)*	(4.00)** 460 (21.51)*	(18.62)** 2139
<i>Ectoparasitism</i>	(20.16)** 2316 (54.03)*	(9.00)** 1030 (24.03)*	(8.18)** 940 (21.93)*	(37.30)** 4286
Total	6097	2929	2464	11490

Source: Compiled from the Case Book of Igarra Cattle Ranch, Akoko, Edo Local Government Area of Edo State.

* Figures in brackets indicate relative percentage occurrence of each disease entity in different species of domestic animals.

** Figures in brackets indicate prevalence of each disease expressed for all the species of domestic animals.

DISCUSSION

From the statistical analysis of the data presented in (Table I), it is apparent that the prevalent livestock diseases in Igarra Cattle Ranch are Ectoparasitism, Helminthiasis, Trypanosomiasis, Pneumonia, Rinderpest, Foot and Mouth Disease. In the Bovine specie the sequence of occurrence of the various diseases is similar to the overall pattern of Ectoparasitism being of the highest prevalence followed by Helminthiasis, Trypanosomiasis, Pneumonia, Rinderpest and Foot and Mouth Disease. In the

Caprine and Ovine species the pattern is also in line with the overall sequence. In terms of total number of different diseases, Bovine diseases predominated followed by Caprine and Ovine specie. This trend is not surprising since Igarra Cattle Ranch was established specifically to boost beef cattle production in the area and thereby increase indigenous protein supply of the people with the other ruminants species forming a supporting stock of the ruminant population. The rates of Rinderpest and Foot and Mouth Disease (FMD) encountered clearly indicate that sporadic cases of these diseases occurred during the period despite vaccination measures taken. Variations in infection rates were also recorded for the different species of domestic animals.

Our investigations at Gboko revealed that the prevalent livestock diseases are Helminthiasis, Ectoparasitism, Pneumonia, Trypanosomiasis and Pneumonia-Enteritis Complex. In the Bovine specie, the disease pattern is similar to the overall sequence whereas in both the Ovine (Sheep) and Caprine (Goats) the sequence is directly related to the resistance of the various species to the different disease entities. While in both species, Helminthiasis dominated, Ectoparasitism was the least in Sheep while Trypanosomiasis was in Goats. The pattern of infection in the Porcine specie is also intrinsic for the specie as the infection rate was dominated by Helminthiasis while the least was Trypanosomiasis. Out of the total number of animals treated, the Caprine species dominated followed by Ovine specie, Porcine and finally Bovine. In terms of different disease entities reported in different species of domestic animals, Caprine diseases were most frequently reported, followed by Ovine, Porcine and Bovine, Ugochukwu, E. I. and Bassey, U. Ephraim (1985), Ugochukwu, E. I. and Nwanori, B. C. (1984), also had similar results / findings.

Most of the pneumonic and Helminthic cases prevalent in the Caprine, Ovine and Porcine species occurred during the rainy season due to inclement weather conditions and the extensive system of animal husbandry practices.

TABLE II: PREVALENT LIVESTOCK DISEASES IN GBOKO LOCAL GOVERNMENT AREA OF BENUE STATE, (JAN 1998 DEC. 2002).

DISEASES	CATTLE	SHEEP	GOATS	PIGS	TOTAL
<i>Pneumonia-enteritis Complex (PPR)</i>		(4.52)** 184 (37.55)**	(7.48)** 306 (62.45)*		(11.97)** 490
<i>Helminthiasis</i>	(8.31)** 340 (25.13)*	(6.38)** 261 (19.29)*	(8.26)** 338 (24.98)*	(10.11)** 414 (30.60)*	(33.1)** 1353
<i>Trypanosomiasis</i>	(4.32)** 177 (34.1)*	(3.03)** 124 (23.89)*	(2.64)** 108 (20.8)*	(2.69)** 110 (21.19)*	(12.68)** 519
<i>Pneumonia</i>	(3.30)** 135 (16.27)*	(5.74)** 235 (28.31)*	(5.50)** 225 (27.11)*	(5.74)** 235 (21.31)*	(20.28)** 830
<i>Ectoparasitism</i>	(6.52)** 267 (29.63)*	(2.10)** 209 (23.19)*	(5.70)** 233 (25.8)*	(4.69)** 192 (21.30)*	(22.01)** 901
Total	919	1013	1210	951	4093

Source: Compiled from the Case Book of the Veterinary Clinic in Gboko Local Government Area for the period.

* Figures in brackets indicate relative percentage occurrence of each disease entity in different species of domestic animals.

** Figures in brackets indicate prevalence of each disease expressed as percentage of the total number of cases recorded for all the species of domestic animals.

RECOMMENDATIONS

Adequate control and management of these conditions include prompt and early diagnosis of diseases, regular anthelmintic administration, regular dipping of the animals with appropriate acaricides. In addition, prompt vaccination of all stock and enforcing strict quarantine regulations where necessary will help check and control most of the infections generally. When animal health improves, livestock production will receive a boost and protein supply will also increase.

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