

SUCLING BUFFALO CALVES MORTALITY IN PARA STATE - BRAZIL

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INTRODUCTION

The buffalo constitutes an important dairy animal in Pará State. However, the mortality rates among suckling buffalo calves, particularly at first months of age, is a serious problem in this State. Besides causing heavy financial losses it reduces considerably the scope for selection of breeding animals and building up of desired type of herds. No much information is available on buffalo calf mortality. Parasitic, bacterial and viral infections are considered to be the common aetiological factors for the losses. In addition deficient management and unhygienic conditions also contributed to the mortality rate of buffalo calves. The present study was undertaken to find out the different pathological conditions responsible for the mortality in buffalo calves and the various aetiological factors associated with the disease conditions.

MATERIAL AND METHODS

The data regarding the buffalo calves mortality was obtained from a herd of 442 suckling buffalo calves (226 males and 216 females) in the five years period (1988 - 1992). The information in regard to total births, sex, date of birth, date of death and cause of death as determined on the basis of necropsy findings, was obtained. The animals all belongings to the Agroforest Research Center of Oriental Amazon (EMBRAPA-CPATU), located in Pará State-Brazil, were reared under uniform management. All calves were crossbreed Murrah/Mediterranean and ranging from 1 at 180 days of life. The statistical analysis of the data was made for Tukey test at the level of 5% with help to the Scientific Software Program.

RESULTS AND DISCUSSION

The numbers of buffalo calves born and dead and mortality rate in the period (1988-1992) are showed in Tables 1. The overall mortality of buffalo calves was 13.80 % (12.38 % males and 15.27 % females). The difference in mortality rate between sexes was not significant. This finding agreed with the conclusions of (1). The age group of mortality rates are presented in Figure 1. The high mortality rate were seen in the age group of 1 to 3 months (51 %). The highest mortality in this age group is perhaps due to the patent infection by *Neoscaris vitulorum* during this period of buffalo life. Also is may be possibly due to the milk with higher fat percentage may give rise to hard curd formation in the abomasum which is difficult to digestion and consequently leadig to digestive disturbance.

Index terms: Calf disease, Pathology of calves, Ascariasis, Clinical findings.

Table 1 - Buffalo calves born and dead and mortality rate (1988-1992).

Years	Born (No)			Dead (No)			Mortality (%)		
	M	F	T	M	F	T	M	F	T
1988	52	47	99	6	8	14	11.53	7.02	14.14
1989	43	39	82	5	6	11	11.62	15.38	13.41
1990	47	46	93	7	6	13	14.89	13.04	13.97
1991	32	35	67	2	5	7	6.25	14.28	10.44
1992	52	49	101	8	8	16	15.38	16.32	15.84
Total	226	216	442	28	33	61	12.38	15.27	13.80

M= Male F= Female T= Total

The differences in mortality rates in different age groups were found to be significant (Tukey 5 %). This is in agreement with the reports of (2) and (3).

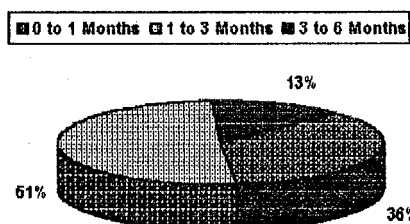


Fig. 1 - Age group of calves mortality.

Mortality rate in buffalo calves during the different months are presented in Figure 2. It was maximum (73.76 %) during June to November (dry-hot period) and least (26.24 %) during January to May (wet period).

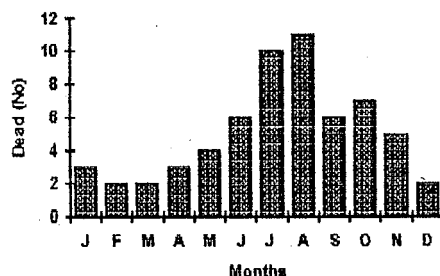


Fig. 2 - Monthly incidence of mortality rate.

during December to May (humid-hot period). This may be due to the reason that young calves, particularly new born, are exposed to environmental stress of high climatic temperature and vectors which may prove then to certain infections conditions. The causes for deaths of buffalo calves are detailed out in Table 2. The major cause were due to ascariasis, followed by enteritis and pneumoenteritis. The principal causes of death by ascariasis are due to the obstruction of gastrointestinal tract by adult worm balls, fatal pneumonia from migration of larvae in the lungs and toxemia. These results are in agreement with previous reports by (4). *Neoscaris vitulorum* and *Escherichia coli* are found to be associated with calf enteritis. Omphalophebitis, is not of major economic importance but it can be and occasionally is a serious problem in individual herds. Calves born prematurely are more likely to be affected than those carried to term. Miscellaneous includes hernia, dermatitis, congenital defects, wounds and digestive system disorders.

Table 2 - Principals diseases causing mortality in buffalo calves

Diseases	Cases	
	No	%
Ascariasis	19	31.14
Enteritis	15	24.59
Pneumoenteritis	12	19.67
Omphalophebitis	8	13.11
Miscellaneous	7	11.49
Total	61	100.00

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