

THE INCIDENCE OF GASTRO-INTESTINAL PARASITES IN BUFFALO CALVES

Q. Hussain*, B. Hayat**, C. S. Hayat** & S. E. Kazmi

One thousand faecal samples were collected directly from the rectum of buffalo calves of both the sexes upto one year of age from in and around Livestock Production Research Institute, Bahadurnagar (Okara). It was found that 76.7% faecal samples were positive for the presence of gastro-intestinal parasites. The incidence was higher (80.9%) in males than in females (74.4%) and it was also higher in calves of 1—3 months age as compared to those above 3 months old. Eggs per gram of faeces ranged from 200 to more than 1200 in the present study. *Strongyloides papillosus*, *Neosascaris vitulorum*, *Oesophagostomum radiatum*, *ostertagia Ostertagi*, *Bunostomum phlebotomum*, *Haemonchus contortus*, *Nematodirus spp.*, *Moniezia benedeni*, *Moniezia expansa* and *Eimeria spp.* were the gastro-intestinal parasites found in buffalo calves.

INTRODUCTION

It is an established fact that the gastro-intestinal parasitic infections especially in buffalo calves is one of the major constraints in buffalo production. These parasites are responsible for loss in body weight, decreased feed efficiency, reduced growth rate, delayed maturity, poor body condition, unthriftiness, anaemia and low resistance to various other diseases. Although Livestock Production Research Institute (LPRI), Bahadurnagar (Okara) and the surrounding areas are among the major milk producing pockets in the Province of Punjab, yet no report regarding the incidence of gastro-intestinal parasites infecting buffalo calves is available. The present study was conducted to know the specific incidence of gastro-intestinal parasites in buffalo calves. It's results will provide a guideline for deworming strategies.

MATERIALS AND METHODS

One thousand buffalo calves of both the sexes upto one year age kept

*Livestock Production Research Institute, Bahadurnagar (Okara).

**University of Agriculture, Faisalabad.

in and around LPRI, Bahadurnagar were sampled. Faecal samples were collected directly from the rectum early in the morning in separate small plastic bags and by salt floatation technique following the method described by Soulsby (1982) for determining the eggs per gram in faeces. The faecal samples positive for nematode eggs were cultured for the recovery and specific identification of different larvae. The study was conducted during the months from June to October, 1984.

RESULTS AND DISCUSSION

Of one thousand faecal samples, 767 (76.7%) were found infected with various gastro-intestinal parasites. Incidence of infection was higher in male buffalo calves (80.9%) than in females (74.4%) (Fig. 1). These results are in agreement with Salim and Tawfic (1966) who observed higher incidence in male buffalo calves as compared to females. This is probably due to the fact that the male calves are neglected and not properly cared. The buffalo calves of 1-3 months age showed 80.6% infection which decreased to 75.4, 76.9 and 75.3% at the age of 4-6, 7-9 and 10-12 months, respectively (Table 1). Higher incidences of parasitic infection at 1-3 months of age might be due to the prenatal infection of *Neoscaris vitulorum* and *strongyloides papillosus* as stated by Silva (1959) and Enyeniki (1969).

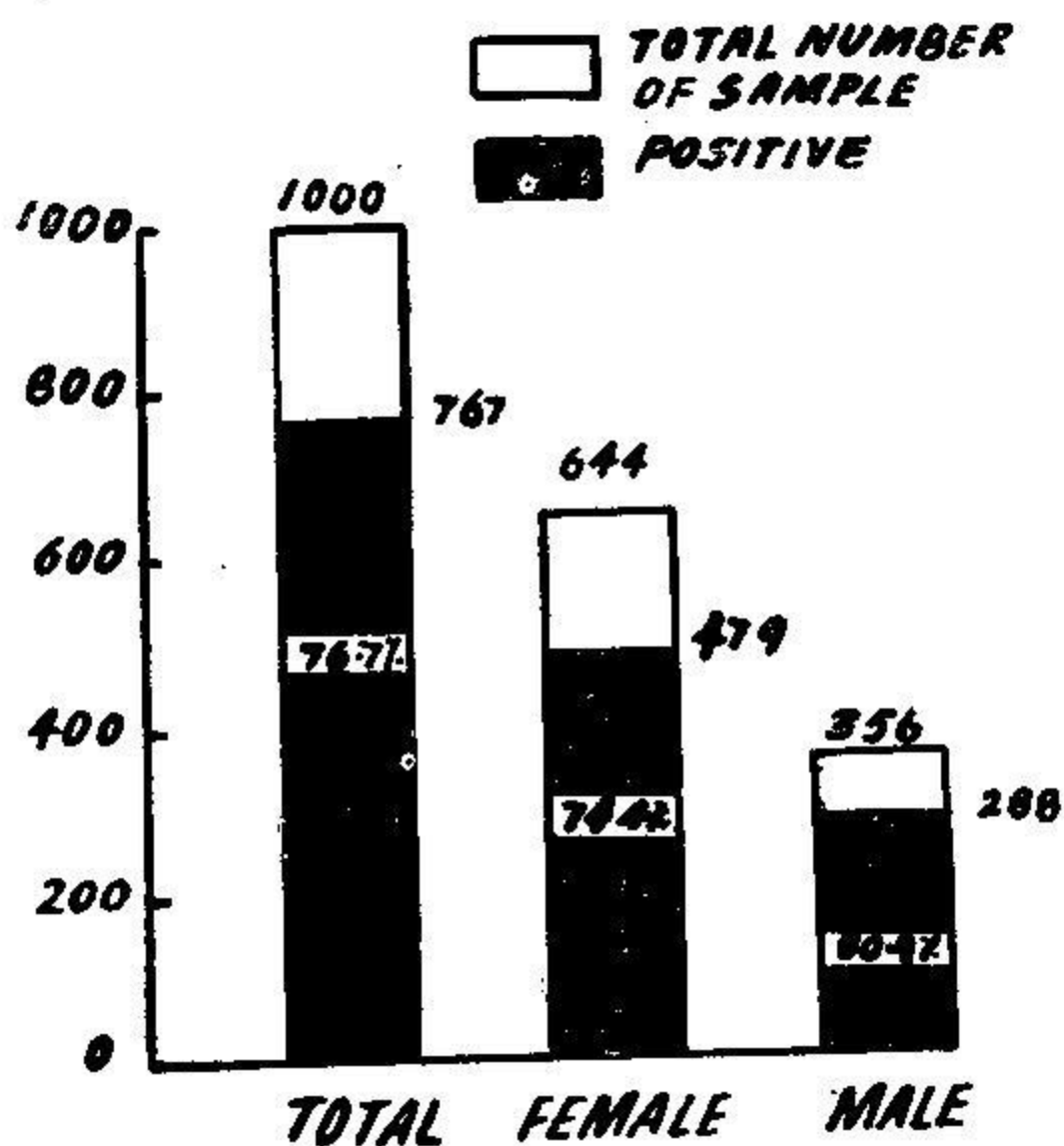


Fig. 1. Incidence of gastro-intestinal parasitic infection in buffalo-calves.

Table 1. *The effect of variation in age on the incidence of gastro-intestinal parasites in buffalo calves.*

Age in months	Total No. of Samples	No. of positive Samples	Percentage
1-3	196	158	80.6
4-6	118	89	75.4
7-9	212	163	76.9
10-12	474	357	75.3
TOTAL :	1000	767	76.7

Table 2. *Incidence of parasitic infection in buffalo calves.*

Species	Infection			
	Pure	Percentage	Mixed	Percentage
<i>Strongyloides papillosus</i>	193	19.3	257	25.7
<i>Neascaris vitulorum</i>	66	6.6	79	7.9
<i>Bunostomum phlebotomum</i>	27	2.7	14	1.4
<i>Oesophagostomum radiatum</i>	65	6.5	47	4.7
<i>Ostertagia ostertagi</i>	44	4.4	17	1.7
<i>Nematodirus</i> spp.	19	1.9	28	2.3
<i>Haemonchus contortus</i>	24	2.4	16	1.6
<i>Moniezia benedeni</i>	82	8.2	73	7.3
<i>Moniezia expansa</i>	—	—	21	2.1
<i>Coccidia</i> spp.	—	—	20	2.0

Table 2 shows the relative incidence of parasitic infection in pure or mixed form. In the present study *Strongyloides papillosus*, *Neascaris vitulorum*, *Bunostomum phlebotomum*, *Oesophagostomum radiatum*, *Ostertagia ostertagi*, *Nematodirus* spp., *Haemonchus contortus*, *Moniezia benedeni*, *Moniezia expansa* and *Eimeria* spp. were the gastro-intestinal parasites found in buffalo calves. The *Strongy-*

loides papillosus was found to be the commonest parasite (45%). Such findings have also been reported by Sharma and Pande (1963) and Patnaik and Pande (1963). Highest incidence of this parasite in above studies might be due to prenatal infection and milk-borne larval transmission as reported by Soulsby (1982). *Moniezia benedeni* was the second common parasite while *Moniezia expansa* was found in only 2% cases.

Neoascaris vitulorum was recorded in 14.5% samples whereas Cvetkovic and Nevenic (1960) found 40% of buffalo calves of 4 months age infected with this nematode. The lower incidence in the present study might be due to age variation in both these studies. The faecal samples positive for nematode eggs were cultured for the identification of larvae as specific diagnosis may not always be made on the basis of egg morphology. Okpala *et al.* (1978) also identified different nematode larvae on the basis of their morphology after faecal culture.

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