

INCIDENCE OF ENDOPARASITES IN EXOTIC CATTLE CALVES

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ABSTRACT

Incidence of endoparasites was investigated in 100 and 157 youngstock of Holstein-Friesian and Jersey breeds, respectively. Youngstock attaining the age of 9 months or more maintained at the Livestock Experiment Station, Bhunikey (Pattoki), District Kasur were selected for the present study. Faecal samples of all the selected animals were collected per rectum aseptically on quarterly basis from 1st July 2003 to 30th June 2004. These faecal samples were processed and examined using the standard methods i.e. direct faecal smear method, sedimentation method and floatation technique. Overall incidence of endoparasites in youngstock of Holstein-Friesian and Jersey breeds was 39.00 and 38.21 per cent, respectively. The highest incidence in Friesian and Jersey youngstock was 50 and 60 per cent during 3rd and 4th quarters, respectively, while the lowest incidence was 21.05 and 17.07 per cent, respectively during 2nd quarter. In 1st quarter the infestation of endoparasites was 34.61 and 19.44 per cent in Holstein Friesian and Jersey calves, respectively. It was higher than infestation of endoparasites observed in 2nd quarter. The incidence of endoparasites in 3rd quarter was higher than incidence observed in 1st and 2nd quarters. It was concluded that the youngstock should be regularly monitored for the presence of endoparasites for their effective control programmes.

Key words: Endoparasites, faecal, Holstein-Friesian, Jersey, youngstock

INTRODUCTION

Parasitism is one of the major problems affecting cattle and buffalo calves. The associated economic losses are inflicted in the form of low productivity, reduced product quality, high treatment cost and mortality (Gupta *et al.*, 1978). In Pakistan, the prevalence of the parasitic infestation is very common and costs about 26.5 million rupees annually to livestock industry (Anwar *et al.*, 1995).

Endoparasites include protozoa and helminths, which comprise of trematodes, cestodes and nematodes. These parasites affect the health of animals and their productivity. They also decrease resistance to diseases and even cause severe mortality, leading to heavy losses. The gastrointestinal parasites adversely affect the nutritional status and even cause death of the host. Those, which infect other organs such as liver, lungs, heart, brain, kidneys and muscles produce clinical and sub-clinical parasitism. Heavy outbreaks of fascioliasis, paramphistomiasis, parasitic pneumonia, ascariasis, haemonchosis, strongylosis and hook worm disease can cause deaths, whereas hydatidosis, cysticercosis and habronemiasis cause extensive damage to the organs. The impact of parasitism is immensely important towards the productive capabilities and certain other disorders like sterility in animals (Terbalanche, 1979).

The objective of the present study was to know about the incidence of endoparasites affecting youngstock of exotic cows maintained at the Livestock Experiment Station, Bhunikey (Pattoki), District Kasur. This study is expected to be helpful and beneficial for planning the control measures for the treatment of parasitic diseases of precious youngstock of exotic breeds.

MATERIALS AND METHODS

A total of 257 calves, including 100 Holstein-Friesian and 157 Jersey, were examined for endoparasitism. It was ensured that the animals examined had not been given anthelmintics at least one month before collection of samples. All the youngstock attaining the age of 9 months or more were selected for this study.

Faecal samples from all the selected animals were collected aseptically on quarterly basis from 1st July, 2003 to 30th June, 2004 directly from the rectum. The division of the quarter was 1st from July to September, 2nd from October to December, 3rd from January to March, and 4th from April to June. Samples were put in separate polythene bags. Each sample was labelled with specific number and date of collection. Faecal samples were processed and examined in laboratory using the

direct faecal smear method for the presence of various endoparasites (Sastry, 1983). The parasites were identified under a microscope according to their morphological characteristics (Soulsby, 1986).

RESULTS AND DISCUSSION

Results of the present investigations are given in Table I. Overall incidence of endoparasites in youngstock of Holstein-Friesian and Jersey breeds recorded in the present study was 39.00 and 38.21 per cent, respectively. The highest incidence of endoparasitic infestation in youngstock of these breeds was 50 and 60 per cent during 3rd and 4th quarters, respectively, while the lowest (21.05 and 17.07 per cent) was during 2nd quarter. In 1st quarter the

Table I: The incidence of endoparasites in youngstock of Holstein-Friesian and Jersey cows

Quarters of the study	No. of samples	Holstein Friesian			Jersey			
		No. of positive samples	No. of negative samples	Percentage of positive samples	No. of Samples	No. of positive samples	No. of negative samples	Percentage of positive samples
1 st	26	9	17	34.61	36	7	29	19.44
2 nd	19	4	15	21.05	41	7	34	17.07
3 rd	26	13	13	50.00	45	25	20	55.55
4 th	29	13	16	44.82	35	21	14	60.00
Total	100	39	61	39.00	157	60	97	38.21

infestation of endoparasites was 34.61 and 19.44 per cent in Holstein-Friesian and Jersey youngstock respectively, which was higher than infection of endoparasites observed during 2nd quarter.

The findings of the present study indicate that animals were badly affected by endoparasites from January to June, while the infestation of parasites was very low from October to December and moderately high from July to September. These findings are not in line with those of Anwar *et al.* (1996), who reported 63.8% incidence of helminthiasis and low incidence of cestodes in young buffalo calves in Faisalabad. Malik (1994) reported that the incidence of gastrointestinal parasites in buffaloes was 46.6% in District Charsadda of NWFP, which is in line with findings of the present study. Bejsovec (1991) reported the incidence of internal parasites in cow calves of 6-12 months of age as 18.9%, which is partially in agreement with the findings of the present study. Similarly, Enyeniki *et al.* (1975) claimed that optimal conditions (hot and humid climate) are really helpful in the development of these parasites.

In the light of the above discussion, it may be concluded that the youngstock should be regularly monitored through faecal examination for the presence of endoparasites in order to provide rational treatment and make them profitable.

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