Chapter 48

Main endoparms that accommodate bovine animals in farm of old port, Rondônia

10.56238/tfisdwv1-048

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ABSTRACT
Introduction: Endoparasites cause infections that can even kill. They cause great financial loss, with losses of animals, decrease of performance and costs with treatments. Objective: to identify the main parasites infecting the gastrointestinal tract of cattle aged 6 to 12 months. Materials and methods: 30 coprological exams were analyzed. Results: C. potato infection is the most prevalent in the studied locality, followed by Eimeria bovis, S. papillosus and Toxocara vitulorum, and in all concomitant infections there was C. punctata. Conclusion: it is necessary to observe the herd to separate the animals according to the age group for the adequate management of anthelmintic drugs, as well as to implement the rotational grazing system

Keywords: bovine endoparasitosis, bovine verminosis.

1 INTRODUCTION

Endoparasitis is caused by parasites that live inside the animal's organism. These parasites can be ouprotozoa vermin and cause acute or chronic infections, and may infect the intestine or lungs. Depending on the nutritional status of the animal can even kill. It is estimated that 10 million heads are lost each year in the world due to parasitoses (VIDOTTO, 2002; AZEVÊDO, ALVEZ, SALES, 2008).

The work of Delgado *et al* (2009) states that parasitic control in Brazil has a great economic impact and that in 2008 the expenses with antiparasitic veterinary products for cattle were 34.3% in relation to the total value of production costs.

The main gastrointestinal infections in cattle are caused by nematode parasites, especially *the species Cooperia spp* and *strongyloides papillosus*, responsible for bovine strongyloidosis. We also have infections caused by the protozoa of the species *Eimeria spp*. (SANTOS, *et al*, 2015).

Nematodes of the *genus Cooperia spp* lodge in the small intestine of ruminants. The prevalent species in cattle are *C. oncophora, C. pectinata and C. punctata*. The clinical signs observed in the animals consist essentially of decreased or loss of appetite, decrease in the rate of weight gain and, in the particular cases *of C. punctata* and *C. pectinata*, diarrhea, submandibular edema and significant weight loss are observed (DURO, 2010).

Eimeria bovis multiplies within the intestinal cells of animals and eventually destroys them. The reduction in the number of cells impairs the absorption of nutrients leading to a reduction in weight gain. In severe cases, it can lead to calves to death (CANÇADO, 2012).

Strongyloidosis is considered one of the most important gastrointestinal nematode disorders of ruminants production. Even the disease cycle is benefited by the hot climate of Brazil, thus favoring its occurrence. Once in the ruminant organism, the infecting larva *of S.papillosus* begins its parasitious cycle and as it penetrates the tissues of the animal causes a series of symptoms, which can lead to sudden death, a characteristic condition of Strongiloidosis. Clinical signs are uncommon, but may include reduced appetite, retracted abdomen, intermittent diarrhea, deterration and lackluster hair, delayed weight gain, pneumonia secondary to lung changes such as cough and aquipnea, mild anemia, and nerve signs such as ataxia, supor and nystagmus (CAVALCANTE, *et al*, 2014)

Thus, the objective of this work is to identify the main parasites present in the fecal samples of cattle analyzed to offer subsidies to better establish the methods of control of bovine endoparasitosis in the studied locality, since through this knowledge it is possible to intervene directly in the life cycle of these pathogens interrupting the chain of contamination of new animals.

2 MATERIALS AND METHODS

This is a quantitative and qualitative research, where 30 samples of feces of cattle aged 6 to 12 months were collected and analyzed under the microscope by the flotation method. The collection of fecal samples occurred directly from the rehest of the animals reared on the Farm SK Agropecuária, producer of nellore breeding bulls, which is located on the road 21 de Abril, km 19, in Porto Velho, Rondônia. The analyses were carried out at the Clinical Pathology Laboratory of the Veterinary Hospital of The Integrated Colleges Aparício Carvalho (FIMCA). The samples were collected on June 12, 2019 and analyzed the following day. According to information collected the cattle had been treated with the drugs doramectin and moxidectin about two months ago.

3 RESULTS AND DISCUSSIONS

Of the 30 animals evaluated, 28 presented *Cooperia punctata eggs* in the feces samples. *Eimeria bovis* infected 23 animals, while 14 were infected by S. *papillosus*. All cattle had multiple parasitic infection and 14 of them *had Cooperia punctata, Eimeria bovis* and *S. papillosus* concomitantly. *Cooperia punctata* and *Eimeria bovis* were concomitant in 12 animals. Only 2 samples did not present any type of infestation by parasites. *Toxocara vitulorum was also found* in the feces of two animals also infected by *Cooperia punctata, Eimeria bovis* and *S. papillosus.* The following table allows a better understanding of this data:

Table 1: Number of cattle aged 6 to 12 infected byparasitary agent at SK Agropecuária Farm

Eggs of parasitas found on coprological examination	Number of infected animals
Punctata cooperia	28
Eimeria Bovis	23
S. papillosus	14
Vitulorum Toxocara	4
Cooperia punctata, Eimeria bovis and *S. papillosus*	14
Cooperia punctata and *Eimeria bovis*	12
Toxocara vitulorum, Eimeria bovis Cooperia punctata, and *S. papillosus*	1
Toxocara vitulorum, Cooperia punctata, and *S. papillosus*	1

Source: Search data

We can observe that *C. puntata* infection is prevalens in most samples, followed by *Eimeria bovis*, *S. papillosus* and *Toxocara vitulorum* and that in all concomitant infections there was the presence *of C. punctata*. It should be noted that the 30 cattle that provided fecal sample had good general health status.

It is because the drugs used to control parasites were administered approximately 2 months ago, in this interval between the date of worming until the date of collection of feces samples allowed the animals to reinfect themselves again through feeding through ingested fodder. The pharmacoresistance of nematodes also cannot be ruled out in this case. The high prevalence of *Eimeria bovis* is associated with the fact that doramectin and moxidectin have no action against protozoa. The following graphs illustrate the processing of the information obtained in the survey:

Figura 1- quantidade de bovinos com idade 6 a12 meses infectados por agente parasitário na Fazenda SK Agropecuária

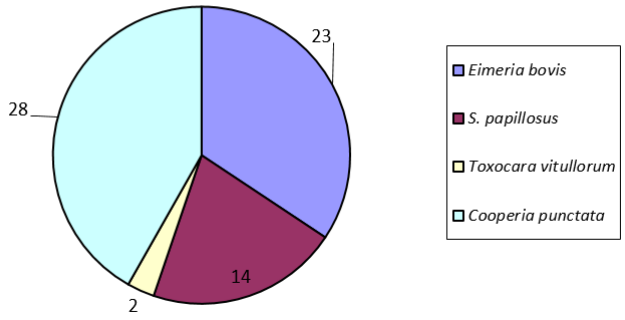
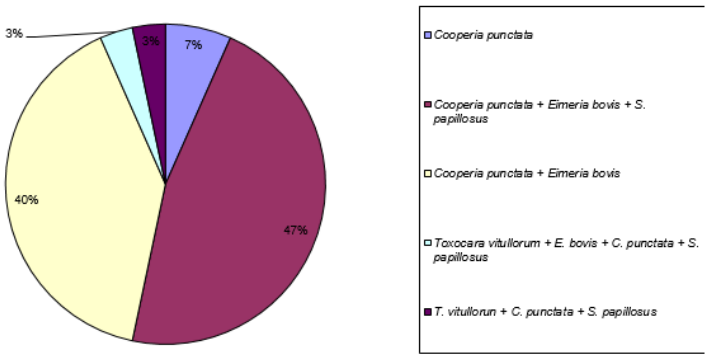


Figura 2 - Prevalência da parasitose bovina de animais 6 a 12 meses de idade na Fazenda SK Agropecuária



Some measures can be adopted to control parasitic infection in the herd, for example, early weaning of cattle is a predisposing factor for helminthinfection, since it stimulates the animal to feed on pasture contaminated by parasite eggs.

Transmamarian transmission also occurs, where larvae are eliminated during the first 9 days of lactation. However, this problem can be avoided by adopting vermifugation about 15 days before delivery (VIDOTTO, 2005).

Also according to Vidotto (2005), the highest load of worms in the gastrointestinal tube of cattle occurs in the driest months of the year, while the highest concentration of larvae in pastures occurs in the wettest months, from November to March.

Thus, for effective and preventive treatment, the application of anthelmintics in The months of May, June and September reduce the burden of parasites in the pasture and consequent contamination of the herd. Rotational grazing with a stay of less than six days on each picket and return only after at least 45 days can reduce contamination of the environment by parasites by about 80%.

4 CONCLUSION

We noticed that the good nutritional management of the herd is effective to prevent the emergence of clinical signs of endoparasitosis, so although infected, all animals appeared healthy. However, it is necessary to prevent, since producers may have the nutrition of their animals shaken by adverse events, such as long periods of drought or excessive rainfall, predisposing cattle to the development of de facto parasitic disease.

It is also necessary to observe the herd for separation of animals according to age group for the proper management of anthelmintic drugs, as well as to implement the rotational grazing system.

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