

Selected protozoal invasions in calves from small and medium-sized farms in the Lublin region

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Calves during rearing are often exposed to various pathogens which may impair their health status and lead to the death of the animals. Diarrhea is considered one of the most frequent clinical symptoms in the animals affected. The diversified etiology of the disorders includes parasitic protozoa which may play an essential role. The most commonly reported protozoa found in calves in recent years are of the type Apicomplexa with the genus *Eimeria* and *Cryptosporidium*. Moreover, more attention needs to be awarded to *Buxtonella sulcata* ciliates, which are often considered to be non-pathogenic.

The aim of the study was to evaluate the prevalence of the protozoa invasion in calves with diarrheal symptoms. The studies involved 94 calves aged from two weeks to five months with symptoms of diarrhea. The calves originated from 18 small and medium farms comprising up to 50 cattle (six farms bred 20 head of cattle, six farms 30, and six farms 50). The animals of the examined herd were housed in a tether system with straw bedding. The faecal samples were examined by standard flotation using the McMaster chamber and by decantation. Image analysis was performed with the light microscope. A kit for the antigenic diagnosis of *Cryptosporidium parvum* by Elisa in bovine faeces (Bio-X *Cryptosporidium parvum* Elisa Kit) was used to diagnose *Cryptosporidium* spp.

Results. The results show that protozoa belonging to the species *Eimeria* spp were the most common protozoal invasion observed in the present study. The prevalence was 22.3%. The number of oocysts in 1 g of feces ranged from 50 to 414000. The greatest number of oocysts was found in calves from farms breeding 20 head of cattle (184 310 on average) and the lowest one in a farm with 50 animals (200 on average). *Buxtonella sulcata* cysts were found in four calves (4.3%) aged four months from farms breeding up to 50 head of cattle. In households with a lower number of animals, no invasion was found. The prevalence was 4.3% and was similar to that observed in the case of *Cryptosporidium parvum*. The Elisa test revealed that infected individuals were found only in farms with about 50 head of cattle. Three infected animals originated from the farm where invasion had been observed, and one from the farm where no *Cryptosporidium parvum* examination had been carried out. The calves reacting positively were homebred.