Control of gastrointestinal nematodes in captive wapiti (*Cervus canadensis*) by feeding pellets with parasiticidal fungal spores

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Keeping of wild animals in fenced plots with vegetation in Zoological Parks results beneficial, but also favors the continued presence of some helminths. In this study, the usefulness of feeding wapitis (*Cervus canadensis*) with pelleted feed industrially manufactured with spores of *Mucor circinelloides* and *Duddingtonia flagrans* has been tested. At the beginning of the study, counts of 546 ± 424 eggs of strongyles per gram of feces (EPG) and 300 ± 178 EPG *Capillaria* sp. were detected in the feces of seven wapitis maintained in a 1 Ha green paddock in "Marcelle Natureza" zoological park. Deworming consisting of 5 mg Fenbendazole / Kg bodyweight was performed, and then 2.5 Kg of pelleted feed containing 10^6 spores of *M. circinelloides* and 10^6 spores of *D. flagrans* / Kg feedstuff were provided every two days during a 1-yr period. The effect of the integrated control program was assessed by evaluating the presence of parasites in the wapitis' feces, through the flotation test.

Fifteen days after the administration of the anthelmintic, the efficacy of the anthelmintic treatment was 99% against strongyles and 95% against *Capillaria* sp. The mean counts of fecal strongyle egg-output ranged between 7 and 184 EPG throughout the study, and between 7 and 81 *Capillaria* sp. EPG. These results demonstrate the usefulness of providing spores of a blend of fungi with complementary activity (ovicidal + larvicidal), to prevent infection in captive animals. It is concluded that the presence of these fungi in the feces seems to avoid the further development of gastrointestinal nematodes to their infective stages, reducing thus the risk of infection in animals confined to the same paddock.

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