FECAL EGG COUNT REDUCTION TEST TO EVALUATE THE EFFECTIVENESS OF DORAMECTIN AGAINST TRICHOSTRONGYLE NEMATODES IN BISON FROM EASTERN SOUTH DAKOTA

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ABSTRACT

During the 2010 summer, a commercial bison herd in eastern South Dakota was selected for this study because some of its members showed signs of clinical parasitism, and needed to be dewormed. Freshly excreted fecal samples were collected from bison cows, yearlings and calves. These samples were evaluated for the presence of nematode eggs. On August 12th, mean trichostrongyle egg output for 33 cow samples was 10.5 eggs/gram (epg), for yearlings (N = 21) it was 124.7 epg, and for calves (N = 15) it was 186.1 epg. Some samples were further assessed with PCR analysis (involving the ITS2 region of rDNA) to identify genera/species of trichostrongyle nematodes present. Five trichostrongyles were identified within the bison (Haemonchus contortus 29%, H. placei 26%, Cooperia spp. 26%, Ostertagia spp. 17%, Trichostrongylus spp. 2%). Very little is known about the effectiveness of cattle anthelmintics for controlling trichostrongyle nematodes in bison. The purpose of this study was to measure the effectiveness of doramectin (Dectomax® injectable at the recommended dosage for cattle) for eliminating adult trichostrongyles from bison. Yearlings were treated on September 2, and there was a 100% elimination of egg shedding when 34 samples were evaluated again on October 1. Just prior to treatment in October, egg output in the calves was 70.5 epg, but dropped to 0.056 epg (99.9% reduction) after treatment. Dectomax® treatment of cows during the fall of 2011 decreased trichostrongyle egg output from 6.28 epg to 0.017 epg. These results demonstrate the effectiveness of doramectin as a treatment for adult trichostrongyles in bison.