Impact of Gastrointestinal Nematodes in Lactating Cattle - A Clinical Trial

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Introduction

The importance of gastrointestinal parasites in young cattle on pasture is well established, with clinical signs of nematode infestations commonly observed during the animals' first grazing season. The impact of these parasites in mature animals is less certain. Adult cows with exposure to pasture will harbour worms, but will usually not display the clinical signs seen in younger stock. There is, however, some evidence of increased milk production in lactating animals following anthelmintic treatment.[1]

Materials and Methods

A clinical trial was performed to assess the effect of Ivomec-Eprinex in lactating cattle. Cows from 14 farms in Prince Edward Island and 14 in Quebec were treated with a pour-on formulation of the drug at calving in a double-blind, randomized clinical trial. Animals were randomly allocated to either treatment or placebo, through a one-year period on PEI and 6 months in Quebec. Selection criteria for inclusion in the trial included no endectocide treatment of adult animals during the last 6 months before study onset, and that animals had met at least some of their nutritional requirement from pasture. Outcomes measured were milk production, composition and somatic cell count; general health events, and selected reproduction parameters.

Eight cows from each of the 28 farms were monitored more closely through one year, from October 1999 to September 2000. In these cows parasite burdens were measured quantitatively using monthly fecal egg counts, and species breakdown of the worms was determined by initial larval cultures in fall 1999. Occurrence of tailhead mange was recorded on a herd level, and information on farm management factors was collected using a standard questionnaire.

Results and Conclusions

A total of 1142 cows were treated with Ivomec-Eprinex through the course of the trial. Mean number of trichostrongyle-type eggs per 5 grams of feces for the monitored cows was 9.2. Counts ranged from 0 to 419, with a median of 1 and a standard deviation of 30.0. Compared to levels one would expect to find in younger cattle, all these counts are considered low. Preliminary results from PEI show that fecal egg counts in the treated cows were lower than for the placebo group for at least 10 weeks after calving. There was a significant increase in milk production during the first 90 days of lactation for cows that received Ivomec-Eprinex, although this was dependent on the season of calving. A significant increase of 1.53 kg milk per day for the first 90 days of lactation was seen for cows treated during the summer months, while no increase was observed for winter-calving cows.

The effect of Ivomec-Eprinex on health and reproduction will be included in the presentation, as will the complete analysis of trial results, including the herds from Quebec.

Reference

1. Gross SJ, Ryan WG, Ploeger HW: Anthelmintic treatment of dairy cows and its effect on milk production, *Vet Rec* 144:581-587, 1999.