



Technical Bulletin

Brown Stomach Worm - Does it Arrest in US Dairy Cattle?

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Summary Points

Dairy producers receive advice from different sources (vet, feed/animal health reps, nutritionist, other producers, commercial ads, etc.) concerning control of gastrointestinal nematode (worm) infections. Much of this information and opinion comes from beef cattle research and from foreign sources; such information may not apply to US dairy cattle management.

Dairy versus beef cattle management differences are considerable and may affect the type of worm infections found. For example, dairy cows give birth throughout the year. In contrast, 70 % of US beef cows give birth in the spring. Differences in calving pattern and season may explain some of the parasitology described below.

Young dairy cattle are often confined. Confinement can expose cattle to worm infections such as Nematodirus and whipworms. In fact, published surveys show these infections are more common in dairy cattle than beef cattle.

Most of what is known about worm infections in US cattle comes from studies involving beef cattle. In beef cattle, seasonal patterns of arrested development for the brown stomach worm (*Ostertagia ostertagi*) have been described.

Arrested development is the temporary cessation of development by the brown stomach worm in the lining of the abomasum. In the deep South, this worm arrests in the spring to avoid extremely hot dry summer conditions. Arrested development is well-documented in southern beef cattle but is not clearly defined in US dairy cattle nor in beef cattle in the upper South and northern states.

Producers, veterinarians and others involved in the dairy industry often assume that parasite data generated in beef cattle is fully applicable to dairy cattle. Such assumptions can be costly to dairy producers who seek cost-effective solutions to the problem of worm control.

A good example of this difference can be found in research conducted at the University of Kentucky dairy farm. In this two-year study, 50 parasite-naïve tester dairy calves were allowed to graze pastures for one month. Worms picked up during grazing were then recovered from the calves and identified. This method allows for determination of the type and size of the worm population present on contaminated pasture.

In this study, Nematodirus was the most common worm found with an average of 2,220 worms per calf. Cooperia was the second most common worm found (2,018 worms). Brown stomach worm was third (846 worms). No population of arrested brown stomach worm was found. These results were surprising because the study had been conducted to determine the seasonal pattern of arrested development for brown stomach worm!

A second study conducted by USDA researchers on a commercial Pennsylvania dairy supports the Kentucky finding. This dairy has practiced management-intensive grazing for a number of years. After several years of serious grazing, it was evident that worm infections were suppressing milk production. A multiyear study similar in design to the Kentucky study revealed that, while *Ostertagia ostertagi* was the predominant worm present on the farm, little or no arrested development occurred.

Dairymen should ask themselves if they need to spend extra money to control arrested brown stomach worm, a parasite stage they may not have. Parasite control products promoted for control of arrested brown stomach worm can add up to \$4 per cow / year to the cost of worm control. In contrast, SAFE-GUARD® (fenbendazole), is about half the cost of the pour-on dewormers and should be considered the dewormer of choice for dairy producers, when they don't need to worry about arrested brown stomach worm.

References

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