

Northwest Veterinary Associates Newsletter

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by Dr. Allison Maslack

As many of you know our practice set out to evaluate internal gastro-intestinal parasites in our herds this month. Dr. Don Bliss of Mid America Ag Resources looked at over two hundred fecal samples and in the process identified the need to deworm cattle on nearly all of the dairies involved.

Gastro-intestinal parasites in dairy cattle

Our parasite evaluation clinic focused on identifying the eggs of stomach and intestinal worms, as well as protozoal organisms. Below are brief descriptions of those identified:



Stomach worms – *These worms were found in 75% of the farms sampled.*

- Haemonchus (barber pole worm) is a blood-sucking parasite that can be a very damaging parasite in cattle, but is especially harmful and can cause death in sheep and goats.
- Ostertagia (brown stomach worm) is the most prevalent parasite in cattle. Larval stages invade and destroy the stomach glands, therefore large numbers can reduce digestion efficiency. Larval stages can also undergo inhibition and remain in the glands for months before emerging.
- Trichostongylus (bankrupt worm) is a stomach parasite that sucks stomach fluids and can cause tissue death in large numbers.

Intestinal worms - *These worms were found in over 75% of the farms sampled.*

- Cooperia (small intestinal worm) is the second most prevalent parasite in cattle and disrupts digestion by damaging the small intestine.
- Nematodirus (threadneck worm) is most commonly found in young animals and can cause diarrhea and death in young calves and yearling heifers. Its larvae can survive cold weather and can live for two years on pasture.
- Trichuris (whipworm) is another damaging parasite in young cattle and symptoms, such as bloody diarrhea, can be confused with coccidiosis. Several hundred worms can kill a young calf.
- Bunostomum (hookworm) is a blood-sucking parasite of the intestine that can also penetrate skin and migrate to cause dermatitis (itchy skin) and pneumonia.
- Moniezia (tapeworm) is a different type of intestinal worm that is passed through ingestion of a soil mite. The adult tapeworm takes 6-8 weeks to develop then resides in the small intestine where it can grow to be 1 inch wide and six feet long. They absorb nutrition from the intestine and in large numbers can even cause a blockage.

What does this mean for your farm?

For most farms, parasitism is recognized most prominently as a problem in calves and young animals, but did you know that even a few parasites in a high producing lactating dairy cow can reduce her production? Deworming studies conducted in the U.S. and Canada have demonstrated that lactating cows may lose anywhere from 100 to 1,200 pounds of milk per lactation due to internal parasites. The greatest responses with treatment came from high-producing herds with moderate levels of parasitism. The deworming strategy was to keep the lactating animals parasite free for the first 90-100 days of lactation (deworm at freshening and again six weeks later). The studies demonstrated that by removing parasites during the period of greatest stress (during the early lactation period), production losses due to internal parasites could be prevented. A separate study conducted at the University of Wisconsin confirmed this effect, showing that when parasite-free fresh cows were exposed to infective parasite larvae they lost an average of 6.5 pounds of milk per head per day. For a 1,500 cow dairy at \$12 cwt, this would add up to \$1,080 per day, \$7,560 per week, and \$30,240 per month. Hopefully, parasites are not impacting your herd to that degree. But can you spare even a fraction of that loss?

In addition to affecting the milk check, it is also important to realize that the internal gastro-intestinal parasitism can amplify the stress on the fresh cow's immune system. The parasites can directly hinder one or more of the cow's immune system defense mechanisms, as well as indirectly hamper immunity by causing malabsorption and malnutrition. This in turn, can also negatively impact the cow's ability to respond to vaccinations effectively, further hindering her ability to fight disease.

Strategic Deworming

Our practice recommends Safe-guard/Panacur (Fenbendazole) as the deworming product of choice. It is the safest and most efficacious internal parasite dewormer on the market and has been shown to destroy the parasitic worms within the first 12-hours following treatment. Unlike the pour-on and injectable macrocyclic lactone deworming products (ivermectin, etc.) on the market, Safe-guard has no issues with parasite resistance. It is an oral product with several methods of administration, including: single oral dose as a drench or paste, pellet form as top-dress or mixed in the TMR, or medicated mineral blocks. Safe-guard is extremely safe and can be used at any stage of lactation or gestation. There is no milk withdrawal; however there is an 8-day beef withdrawal.

Treatment can be administered on a herd basis or individual basis. The best dewormer in the world used at the wrong time is a wasted resource; therefore it is important to consult with your herd veterinarian regarding the best strategy for your farm. On a herd basis, it is generally recommended to coincide with seasonal grazing practices. The entire herd should be treated 4-6 weeks into spring grazing, as well as in late fall following a hard frost or after the pastures are dormant. Depending on parasite load, additional deworming may be necessary. The goal of this strategy is to render the animals parasite-free for maximum over-wintering ability and to limit contamination of pastures in early spring. Individual treatment of pre-fresh and freshening animals (ideally repeated 6 weeks later) is another treatment strategy aimed at maximizing individual cow milk production and immunity at the beginning of her lactation.

Parasite Evaluation

We strongly encourage all herds, particularly those who have grazing in any phase of their production, to submit manure samples for evaluation- whether it is to find out your herd's parasite status or to evaluate the effectiveness of your current deworming practices. Sample evaluation will continue to be complementary through Dr. Don Bliss and samples should be brought to our office within one week of collection.

Instructions for Collection:

- ▶ Collect fresh manure (golf ball size) from individual animals using an inverted plastic bag or glove, then seal and clearly identify each sample using a permanent marker. Alternatively, collect fresh manure samples at random from a particular pasture and label according to age group/pasture location.
- ▶ Collect sufficient samples to profile your operation (usually 5-10% of the production/age class within each herd) – 6 samples from any size group will be adequate. Do not combine samples.
 - For beef cattle, sample adult cattle from different pastures or locations on the operation and from all ages of young stock (especially calves and replacement heifers).
 - For dairy cattle, collect samples from cows in different stages of lactation, as well as from dry cows, replacement heifers, and suckling calves.
- ▶ Samples should be cooled by refrigeration as soon after collection as possible. DO NOT FREEZE.