The Skinny on Deworming

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The weather in Ontario is doing the usual up and down of March, where you think spring is coming and then it starts snowing again. On the warm days, everyone starts itching to get started on their spring chore list. For many producers, this includes deworming the cow herd. Though deworming often ends up on the list, considerations of whether it is necessary, what is the right time, and what is the right product can leave producers scratching their heads. So here are a few points to consider when formulating your deworming plan for this season.

Resistance

Anthelmintic (dewormer) resistance is when parasites develop an ability to remain alive after an animal is dewormed. Though dewormer resistance has been a growing concern for small ruminant producers and beef producers in warmer climates for many years, there was skepticism about the presence of resistance in cattle species in northern climates. Our less frequent use of dewormers was thought to decrease the risk of development of resistance and our cold winters were thought to kill off parasites in pastures and decrease the risk of any resistance that developed being maintained from year to year. However, a growing body of evidence shows that dewormer resistance is present in cattle in Ontario. In fact, a recent study in Ontario showed evidence of resistance to both ivermectin and fenbendazole in a herd with very limited dewormer use.

So, does that mean you have resistance in your herd? Not necessarily, but it never hurts to check. This is especially true since the effects of worms in cattle are not obvious. In small ruminants, parasites often cause extreme illness and death, so it is generally pretty obvious if a farm is experiencing resistance. In cattle, parasitism is generally subclinical, meaning there are no obvious signs. We don't tend to see bottlejaw and death in cattle. It is more often decreased milk production, decreased growth, and poorer reproductive performance. This is particularly true in colder climates where the parasite burden is lower.

The easiest way to check for resistance on farm is to test for worm eggs in the feces before and after giving a dewormer. To be sure that the result you get is accurate, it is important to make sure you are giving the appropriate dose of dewormer to each animal. Weighing each animal before treating them is ideal. Take fecal samples on the day of treatment and again 3 weeks later and compare the number of parasite eggs in the samples (fecal egg counts). Speak with your veterinarian to determine the most appropriate time and group to perform this test on in your herd.

Strategic Deworming

Whether or not you have resistance on your farm, it is a good idea to use dewormers judiciously to decrease the risk of development of resistance in the future. We can do this through a process called strategic deworming. When we deworm all cattle in a herd, ensuring that each animal is given the proper dose using the correct administration

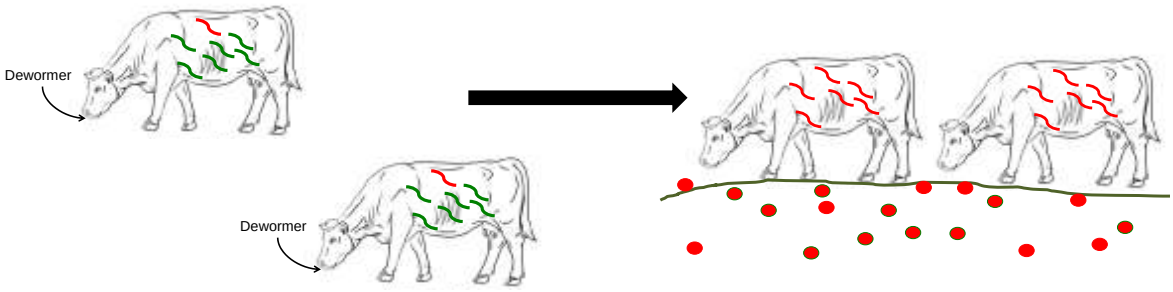
method for that product (oral or topical), we should wipe out all parasites except those that are resistant. When the animals are placed on pasture, they will begin to shed worm eggs onto the pasture. Since dewormer resistance is genetic, eggs from resistant parasites develop into resistant adult parasites leading to all animals in a herd carrying resistant parasites over time (Figure 1).

Strategic deworming is when you leave some animals untreated to ensure that some of the worms on the farm remain susceptible to the dewormer and the resistant parasites do not become the majority. Cattle develop natural worm immunity as they age, so healthy, adult animals carrying a single calf do not suffer the negative consequences of parasites that young or thin animals might. Leaving these animals untreated allows some susceptible parasites to remain in the herd and decreases the risk that the dewormer will not work on higher risk animals (youngstock, 2 year olds, and thin cows).

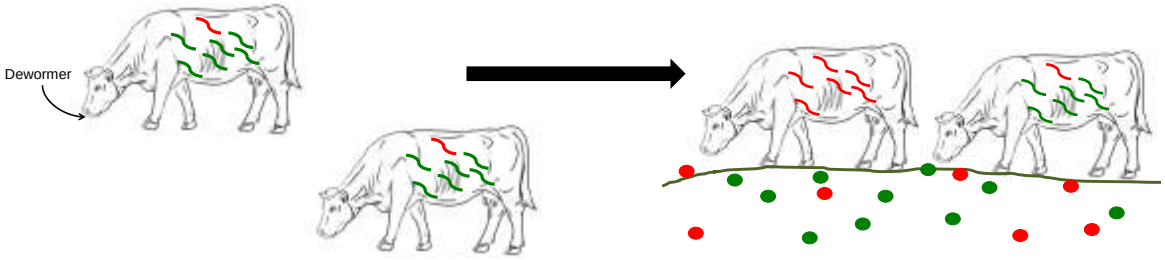
Which dewormer to use and when to apply it are questions that can only be answered by someone familiar with your operation. Parasite control programs are definitely not one-size-fits-all. Speak with your veterinarian about your deworming protocol and whether or not strategic deworming would be beneficial on your farm.

Figure 1. Strategic versus whole herd deworming:
Targeting dewormer use to animals at higher risk of negative effects of worms (e.g. young, thin, and animals carrying more than one calf) can help slow the development of resistance in your herd.

Key:
- Resistant worm∫/egg
- Susceptible worm∫/egg



B. Mass deworming – all animals in the herd dewormed



A. Strategic deworming – only higher risk animals dewormed (e.g. young, thin, carrying twins)