

What you can't see can hurt you. Internal parasites are responsible for \$3 billion per year in lost weight gains, poor feed conversion and increased disease for the U.S. cattle industry, according to statistics from the Iowa Beef Center. Extension specialists and veterinarians urge producers to brush up on internal parasite control and limit the economic impact to their herds.

"Parasites are economically costly at much lower levels than previously thought," note Clell Bagley, Utah State University Extension veterinarian; Mark Healey, former Utah State parasitologist; and Donald Hansen, Oregon State University Extension veterinarian, in the Iowa Beef Center handbook. "Most cattle harbor some internal parasites. Our varied geography and climate allow for a wide variation in the parasite burden. Levels of infection range from a few parasites to large numbers that can cause severe weakness and even death."

Internal parasites affect the gastrointestinal tract by damaging and irritating the stomach and intestinal lining, which leads to decreased digestion and nutrient absorption, protein and blood loss, says Patrick Davis, West Central Missouri Regional Extension livestock specialist. Younger animals are most at risk. Wisconsin Beef Information Center specialists say the most important populations to manage for parasites are weaned calves, heifers and second-calf cows.

Lee Benjamin, Benjamin Ranch based

near Limon, Colo., manages a commercial cow-calf herd of about 250 Angus cows bred to Charolais bulls. His calving season begins March 1. He treats calves with Dectomax® when moving them from winter to summer pasture.

"The labor inputs are already in place to treat for internal parasites at that time," says Benjamin. "I run cow-calf pairs through the winter and then as stockers during the summer."

During a 96-day trial period last year, his calves treated with Dectomax gained an average 335 pounds (lb.), 26 lb. more on average than calves treated with another dewormer.

"The dollar difference depends on the market, but a conservative value for the weight difference is \$1.33 or \$34.58 per head, plus the difference in cost of the parasite products," he says. "Every experience is different, but this one puts money back in my pocket."

Understand active ingredients

Producers should consult with their own veterinarians and develop specific diagnosis and treatment plans for their herds based on their unique farm or ranch conditions.

"There are different active ingredients and different classes of dewormers, which should be used strategically on an operation for effective parasite control," advises Mark Alley, managing veterinarian with Zoetis.

"Once identified, select the proper dewormer to treat them."

Alley stresses producers cannot know what parasites are problems based on a visual evaluation. While a fecal egg count followed by a culture to hatch and identify the larvae is costly, a veterinarian can use the information to determine which parasites are issues for those cattle.

"The most economically important parasite is brown stomach worm," he says. "Some products can provide both extended therapy and good efficacy against adult and inhibited brown stomach worm. However, in populations of cattle where *Cooperia*, *Nematodirus* or *Haemonchus* are issues, other dewormers may be a better selection. Have a discussion with your veterinarian or animal health care provider to determine which is most appropriate."

Assume parasites overwinter

Alley suggests producers work with the assumption that all cattle will have internal parasites. Once cattle are turned into grass in the spring, animals are exposed to overwintered parasites.

"It is a mistake to think it gets cold enough to kill parasites over the winter. Studies demonstrate infective larvae can survive and overwinter in cattle and pastures. One study

CONTINUED ON PAGE 64

Unseen Costs

Take the right track
with internal parasites.

by Barb Baylor Anderson, field editor

Unseen Costs CONTINUED FROM PAGE 62

even shows parasites can reproduce after 12-24 months in the cold,” he says.

Monitor parasite resistance

Choosing products for treatment also needs to include consideration for possible parasite resistance. Alley says more instances of resistance are being confirmed around the country.

“You used to be able to use a dewormer and be done. That is no longer the case. Dewormer products and forms of treatment should be changed every two to three years to cut down on resistance problems,” recommend Wisconsin specialists. “Monitoring treatment effectiveness helps you determine if and when switching products is necessary.”

“No dewormer provides 100% effectiveness against parasites,” adds Alley. “We make the assumption that all parasite-control products are 100% effective, but even with 50% kill of parasites, producers will see a clinical improvement, although the parasites that remain could still negatively impact productivity.”

To diagnose resistant parasites, Alley says a fecal egg count reduction test is best, although it can be a challenge to perform because more cattle handling is needed. It requires identifying specific animals for testing, taking a fecal sample to test for parasites and deworming. Then 10-14 days later, another fecal sample must be taken from the same animals. Test results must show at least a 90%-95% reduction in eggs

Internal activities

A number of internal parasites can cause issues for cattle, but Patrick Davis, West Central Missouri Regional Extension livestock specialist, says the brown stomach worm is generally a primary culprit. It is transmitted between cattle through feces and eating contaminated grass. Clinical symptoms include diarrhea, reduced appetite, anemia, bottle jaw and rapid weight loss.

Davis says the barber's pole worm is a warm-weather parasite. The barber's pole worm sucks blood, and even a small number of them can lead to anemia or death. Another warm-season pest is the hook worm found in the small intestine. Whip, wire and tapeworm are also concerns.

While not a worm, Davis says coccidia is another harmful internal parasite. The protozoan causes enteritis in the intestine, resulting in bleeding and bloody scours. The disease coccidiosis is enhanced by the stresses of weaning, such as food and water deprivation and shipping.

“Worm infestations can enhance the likelihood of coccidiosis, so when you see symptoms of a worm issue you should also check for coccidia,” he says.

to confirm the dewormer worked with no resistance detected.

Control timing and dosing

Timing is crucial for administering antiparasitic products, as well. Rather than deworm when it is most convenient for the farm's schedule, deworm when it is most effective to control parasites.

Alley recommends year-round parasite control, in the fall and in the spring before summer pasture turnout. Wisconsin specialists suggest if mass treating in the spring, do it as late as possible. Four to six weeks after turnout may limit infestation rates in calves. Maintaining appropriate stocking densities to prevent overgrazing can also help limit parasite exposure.

“There are many ways products can be administered to cattle with the most common methods including topical pour-on, injectable and oral drenches,” suggest Wisconsin experts. “Injectable products and oral drenches ensure delivery of the desired dose of drug. Pour-on products can be effectively absorbed systemically and provide a good dose; however, there is more variability, especially if the weather does not cooperate.”

Alley says producers often select products based on ease of use, followed by cost and efficacy. “Topical administrations are only 20% absorbed through the skin. The rest comes with oral consumption from grooming,” he says.

Producers should not only match the dewormer to the type of parasite, but also administer each dose per individual animal weight. Wisconsin specialists find that incorrect dosing contributes to resistant parasite development, and half the herd could be underdosed using an average weight.

Consider other strategies

When it comes to other possible internal parasite-control strategies, pasture rotation, alternate species grazing, haying and rotational tillage may reduce parasite populations.

“The best way to manage parasites in your herd will be unique to your situation,” sums Alley. “This should be part of your total herd health program put together in partnership with your vet.”



Editor's Note: A former National Junior Angus Board member, Barb Baylor Anderson is a freelancer from Edwardsville, Ill.