

Parasite Patrol



Get your cattle off to a clean start this grazing season.

Story by
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Parasite control is an important part of a cattle operation, but many producers either neglect this key practice or waste money by applying products at the wrong times.

To get the most bang for his buck, Alan Graybeal of Blacksburg, Va., follows the advice of Virginia Tech professor and large-animal veterinarian Dee Whittier. Whittier emphasizes spending dewormer money on calves, particularly on replacement heifers.

"We have about 20 trials in Virginia that indicate no benefit to deworming adult cows. Basically, they don't have any better body condition, wean any heavier calves or get pregnant any better if they are dewormed," Whittier says.

Virginia Tech does have ample evidence that deworming calves at strategic times results in increased weight gains. To Whittier, strategic timing means administering dewormers so overall worm numbers (both in cattle and on pastures) are decreased.

Whittier's deworming program

Veterinarian Dee Whittier recommends this program for spring-calving beef herds in his area:

- Deworm first-calf heifers at the beginning of spring grazing.
- Deworm calves at midsummer (July 4 in Virginia).
- Deworm calves at weaning and place them in clean pastures (regrowth of a hayfield) or in a drylot.
- Deworm grazing replacement heifers with sequential treatments in the spring.

In Virginia, spring-born calves benefit from a midsummer deworming, with weaning weight increases of 12 pounds (lb.) to 50 lb. Fall-born calves should receive a spring deworming, followed by a second deworming in midsummer.

Yearling cattle in Virginia benefit from a sequential spring deworming approach. This approach starts with a treatment at the beginning of spring grazing, followed by a second treatment at the point when egg shedding would occur. For example, if replacement heifers are dewormed at the start of spring grazing with endectocides that provide four weeks of persistent activity (Cydectin® and pour-on Dectomax®), they should then be treated again in seven weeks. This treatment allows four weeks of parasite control, plus three-week control of adult-stage brown stomach worm. In Virginia Tech trials, this strategic approach resulted in 20 lb. to 70 lb. extra of summer growth on growing cattle compared to traditional deworming at spring turnout.

Graybeal follows Whittier's recommendations and includes an endectocide dewormer treatment when his cows are pregnancy-checked in late fall.

Whittier also uses endectocides in late fall. "Endectocide dewormers have become very economical, and they are very effective for lice control. I find myself applying these products to cows, ... but it is for the external parasite control, not the worms," he says.

Generics are attractive

Generic ivermectin has made the price of parasite control attractive for many producers. "I believe that it's economical to deworm even mature cows with today's price of generic ivermectin," says North Carolina Extension animal nutritionist Matt Poore. "Another thing that pushes me to use the generic pour-ons twice a year on our mature cows is the fly

and lice control we get."

On his family ranch, Poore deworms cows with pour-on ivermectin in midsummer (July 1) and late December. The midsummer treatment provides a period of horn fly control. To control horn flies until the ivermectin application, Poore uses insecticide sprays and treated backrubbers. This technique avoids the use of insecticide ear tags, which have lost their effectiveness in many areas due to horn fly resistance. The December treatment controls lice and eliminates worms that were picked up during fall grazing. This treatment helps cattle start the following spring grazing season relatively free of internal parasites.

At today's prices, generic ivermectin products cost \$1-\$2 per dose. The two insecticide applications Poore previously used to control lice cost 50¢ per dose and required an extra gathering of the cattle.

The enemy

Several internal parasites infect cattle, but the brown stomach worm (*Ostertagia ostertagi*) is the one that causes most economic losses. Due to the brown stomach worm's life cycle, it takes strategic planning to defeat this persistent parasite.

As cattle begin grazing in early spring, the animals ingest brown stomach worms that overwinter in the pastures. The worms find a home in the animals' gastrointestinal tracts, where they cause indigestion, reduced feed consumption and, in severe cases, death. Signs of wormy cattle include diarrhea, rough hair coats, thinness, potbellies and bottle jaws. Poor nutritional condition increases the effects of brown stomach worms. However, most worm infections are subclinical, meaning there are no outward signs.

While living in the gastrointestinal tracts, the adult worms lay microscopic eggs. These eggs pass into the manure, where they hatch

into larvae that migrate to nearby blades of grass. As cattle graze, the eggs are ingested, and the worm life cycle continues.

In southern areas, infective larvae don't survive in hot, dry summer pastures. In northern climates, the infective larvae are active through mild summers, but they can't survive in pastures during cold winters. At these times, the worms imbed in an animal's stomach lining and remain as inhibited larvae for several months. As pasture conditions again become favorable, these larvae emerge from the stomach lining in large numbers to make animals seriously ill.

In addition to deworming, several management practices decrease the problems caused by worms:

- Provide high-quality pasture and forage. Cattle in poor nutritional condition can't tolerate worms.
- Rotate pastures to prevent a buildup of worm larvae.
- Prevent overgrazing and overstocking of pastures.

Your veterinarian can recommend a laboratory that will examine fecal samples from your pastures to determine the parasite population in your cow herd.

Strategic deworming

The goal of a strategic deworming program is to allow young cattle to graze "parasite-safe" pastures for 90 days during the spring grazing period, according to large-animal veterinarian D.L. Step of Oklahoma State University (OSU). Remember, these are parasite-safe, not parasite-free pastures. Step emphasizes. Parasites can't be completely eliminated from pastures, but their effects can be minimized at a reasonable cost.

When cows and calves graze the same pasture, Step recommends deworming the cows and the calves to minimize pasture contamination with worm eggs. If the adult cattle were dewormed the previous fall or

winter, these animals should contribute very little to initial contamination of a pasture during the first few weeks of spring grazing. If the cows weren't dewormed the previous fall or winter (or their deworming history is unknown), then they should be dewormed at the beginning of the grazing season.

However, some worm eggs and larvae will overwinter, and adult cattle will acquire parasite infections as they graze. To decrease the level of pasture contamination in situations where cows and calves will be grazing together, the adult cattle should be dewormed about six weeks after turnout.

As the young calves begin grazing in spring (at around 200 lb.), they also acquire infective larvae and start contributing to pasture contamination about four weeks later. As part of a strategic program, a dewormer should be administered when the internal parasites the young calves have acquired start to shed viable eggs. Additional dewormer medications will need to be administered when the pasture is potentially contaminated within the 90-day period, Step says.

Of course, grazing seasons and

calving periods vary widely around the country. To plan a specific program that gives your calves 90 days of parasite-safe grazing, discuss strategic deworming with your veterinarian or Extension livestock specialist.

Sound investment

A study by OSU researchers found that strategically deworming steers during

the grazing period and at feedlot entry increased weight gains and improved carcass characteristics across the board.

During a study involving 734 steers, cattle strategically dewormed in pastures and at feedlot entry averaged higher daily gains, higher dressing percentages, better yield grades and larger ribeye areas, and a higher percentage of them graded Choice at harvest.

Cattle dewormed during the grazing phase and at feedlot entry averaged 55% Choice carcasses vs. 29% Choice for control cattle that were never dewormed. Cattle that were not dewormed on pasture but were treated at feedlot entry averaged 45% Choice.



Hitchhiking flukes

Liver flukes were once considered a problem for cattle in warm, wet areas such as Florida, the Gulf Coast and the Pacific Northwest. But, cattle have traveled widely from those hot spots, and flukes have hitched rides in infected animals. Most of the outbreaks in new areas are associated with stocker calves from the Northwest and Gulf Coast or with dairy replacement heifers from Florida.

Liver flukes have now been found in 24 states. As flukes have spread, liver condemnations at harvest have become a major economic loss for the beef industry.

Infected cattle spread fluke eggs through their manure. Lymnaeid snails, a freshwater variety, are intermediate hosts for liver flukes. These small snails live in muddy areas with clay soils. This is why the new populations of liver flukes are usually found in river valleys.

Two formulations of cattle flukicides are available. Curatrem® (clorsulon) drench treats mature and immature flukes. Ivomec® Plus (ivermectin and clorsulon) injections treat mature liver flukes plus lice, grubs and nematode parasites.

