TECH TALK

Turning Data into Decisions: A Smarter Approach to Parasite Control

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MERCK Animal Health

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You are constantly working to give your clients' herds the best opportunity for health and well-being. Unfortunately, an unseen obstacle can be working in the background to derail your efforts — internal parasites.

Often undetectable to the naked eye, parasitism can significantly impact herd health and productivity. Internal parasites thrive in the cow's gut, causing damage to the gut that decreases feed intake and keeps nutrients from going toward growth, reproduction, and immune support.

How do you combat this unseen threat quietly robbing herd performance? Diagnostic tools let you see what's really happening inside the animal. Combined with regional parasite surveillance data, they give you a clearer picture of risk and resistance, so you can help your customers build a targeted deworming plan that protects herd health and their bottom line.

Understanding the different types of fecal diagnostics

When we look at testing for parasites within cattle herds, there are two common approaches:

A composite fecal egg count, or FEC, is a diagnostic test that provides a snapshot of the current parasite load within a herd. To conduct the test, approximately 20 fresh, randomly collected fecal samples are gathered from the ground and submitted to a laboratory, where they are analyzed to assess overall parasite pressure. Results indicate the herd's parasite burden and can guide informed decisions about whether deworming treatment is necessary. This approach supports more judicious use of dewormers — an important practice for preserving their long-term effectiveness.

A fecal egg count reduction test, or FECRT, helps determine deworming treatment effectiveness. Twenty samples are taken before deworming treatment, and 14 days after treatment, 20 samples are again taken from the same group of cattle. We compare pre- and post-treatment egg counts to determine the effectiveness of the deworming treatment. FECRTs are the best tool to assess if a class of dewormer is working in your herd. A successful deworming should show a 90% or greater reduction in fecal egg count after deworming. If not, it should be further investigated with a veterinarian to determine if improper dosing or resistance has affected the outcome.

Merck Animal Health offers free diagnostic testing to help customers make the most informed decisions possible. Contact your Merck Animal Health representative to learn more.

FECRT results across regions

The largest database of FECRT results actively monitors the field efficacy of cattle deworming products in the U.S. It includes all major dewormer forms — drenches, feedthroughs, pour-ons and injectables. Findings show that macrocyclic lactone pour-on and injectable dewormers average approximately 60% efficacy, while benzimidazole dewormers, such as SAFE-GUARD® (fenbendazole) drenches and feedthroughs, demonstrate approximately 98% effectiveness.[1]

Extension services in Florida, Missouri and Kentucky have taken a closer look at how major dewormer classes are performing through on-farm field surveillance studies.

Kentucky
Data from FECRTs collected from 79 herds showed that dewormers in the benzimidazole class achieved a 99% reduction in parasite egg counts in both cows and calves.[2] Macrocyclic lactone dewormers, when used alone, resulted in a 73.7% parasite egg reduction in cows and 63.5% reduction in calves. When benzimidazoles and macrocyclic lactones were used together, the 90% reduction threshold was met.

Missouri
Missouri FECRTs from 51 herds indicated reduced efficacy for macrocyclic lactones, with egg reductions of 69.4% in calves and 80.1% in cows.[3] In contrast, benzimidazole-class dewormers met efficacy thresholds in both age groups. Injectable and pour-on macrocyclic lactones performed similarly, with reductions of 70.7% and 72.7%, respectively.

Florida
Florida researchers reported comparable findings from FECRTs collected across 35 herds. Dewormers containing benzimidazoles reached the 90% reduction benchmark, while macrocyclic lactones used alone did not.[4]

Together, these findings from on-farm studies across multiple states indicate that dewormer efficacy can differ by class under real-world conditions.

Use strategic timing to make the most of deworming protocols

Using FECRT data to help recommend the best deworming protocol for your customers is only the first step. Timing, frequency and seasonality all factor into a successful deworming program.

For mature cows, the ideal program will deworm:
- Before spring turnout, if they weren't treated in the fall.
- 6 to 8 weeks after turnout to interrupt the parasite lifecycle.
- In the fall after cattle come off pasture or after frost.

Calves are more vulnerable to parasites since they lack prior exposure. Deworming in the summer while they are still on the cow 6 to 8 weeks after turnout is a strategic way to protect health and gains.

For stocker cattle, the ideal program will deworm:
- At turnout or at the beginning of extended grass growth.
- Follow with a second treatment 3 to 4 weeks after turnout.
- Finish with a third treatment 3 to 4 weeks after the second treatment.

Save time and labor with SAFE-GUARD feed formulations

The good news is that you can help your customers implement this strategic deworming protocol without added time or labor. Feed formulations of SAFE-GUARD (fenbendazole) are a great way to deworm cattle in the pasture while they graze — no trip through the chute required.

All SAFE-GUARD feed products provide a cumulative dose effect. Whether in blocks, cubes, pellets or free-choice mineral, fenbendazole builds up in the fat tissue of parasites.[5] In free choice formulations, salt is used as a limiter to ensure the entire herd gets a dose. Even small amounts ingested over a few feedings quickly build up to a lethal dose for parasites. **For all formulations of SAFE-GUARD, the average FECRT efficacy is 91-98.7 percent.**[1]

Effective deworming will help protect your customers' cattle and profits. To learn more about the convenience and efficacy of SAFE-GUARD feed forms of dewormers, visit safeguardworks.com.

Important Safety Information

Do not use in beef calves less than 2 months old, dairy calves and veal calves. A withdrawal period has not been established for this product in pre-ruminating calves. Additionally, the following meat withdrawal and milk discard times apply:
Safe-Guard Paste: Cattle must not be slaughtered for 8 days. For dairy cattle, the milk discard time is 96 hours.
Safe-Guard Suspension: Cattle must not be slaughtered for 8 days. For dairy cattle, the milk discard time is 48 hours.
Safe-Guard EnProAl Type C Medicated Block: Cattle must not be slaughtered for 11 days. For use in beef cattle only.
Safe-Guard 20% Protein Type C Medicated Block: Cattle must not be slaughtered for 16 days. For use in beef cattle only.
Safe-Guard Type A and other medicated feed products (pellets, cubes, free-choice mineral, or free-choice liquid): Cattle must not be slaughtered for 13 days. For dairy cattle, the milk discard time is 60 hours.

References:

1. Merck Animal Health National FECRT Database.
2. Merck Animal Health. Technical Bulletin, Beef Cattle Dewormer Efficacy Surveillance in Kentucky. 2025.
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4. João Bittar, Heather Walden, Thomas Denagamage. University of Florida. College of Veterinary Medicine. Department of Large Animal Clinical Sciences. Prevalence, fecal egg counts, and species identification of gastrointestinal nematodes in beef cow/calf operations in Florida. May 13, 2025.
5. Vercruysse J, Claerebout E. Mechanisms of actions of anthelmintics. Merck Veterinary Manual Online. https://www.merckvetmanual.com/pharmacology/anthelmintics/mechanisms-of-action-of-anthelmintics. Accessed June 4, 2026.
6. Merck Animal Health. Technical Bulletin, Deworming with SAFE-GUARD® Suspension and Cydectin® Pour-On with or without Strategic Deworming with SAFE-GUARD 0.5% Alfalfa-Based Pellets. 2024.

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