THE TRUTH IS

THE PREVALENCE OF RESISTANCE TO DEWORMERS IN CATTLE IS INCREASING.^{1,2}

Because of this, it's possible for reduced dewormer performance in a herd to go undetected for long periods of time.

This can lead to:

- Reduced appetite
- Diseased GI tract
- Lowered immunity

Not to mention the hidden costs of parasite infection which include:

- Reduced weight gain
- Increased disease incidence
- Decreased reproductive performance
- Lower milk production

DON'T LIE.

The Fecal Egg Count Reduction Test, or FECRT, is a standardized diagnostic tool to determine if there is potential parasite resistance with your current dewormer.

¹Gasbarre LC, et al. The identification of cattle nematode parasite resistant to multiple classes of anthelmintics in a commercial cattle population in the U.S. Proceedings of the 49th American Association of Veterinary Parasitologists. 2004; Abstract #44.

 $^2\mbox{FDA}$ Public Meeting on antiparasitic drug use and resistance in ruminants and equines. March 2012.

³Dobson R, Jackson F, Levecke B, Besier B. et al. Guidelines for fecal egg count reduction tests (FECRT). World Association for the Advancement of Veterinary Parasitology (WAAVP) (2011) Proceedings: 23rd International Conference of the World Association for the Advancement of Veterinary Parasitology.



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Determine the efficacy of your anthelmintic dewormer with a fecal egg count reduction test.





TEST PROCEDURE

and management group.

For the best results, sample animals from the same age group, ideally between six months and two years of age.

- For cow-calf:
 Sample from pastured cattle of the same age
- For incoming cattle including stocker, feedlot and replacement heifers:
 - Test and treat on arrival to check the incoming parasite population.
- For incoming cattle including stocker and replacement heifers on pasture:

Test resident cattle after sufficient grazing time (two months or longer). Sample from pastured cattle of the same age and management group.

• For dairy:

Sample from replacement heifers of the same age and management group.

How many animals should be sampled?

Twenty random animals within a defined group will provide a statistically adequate sample to represent the average egg shedding of the total population.

What samples are needed?

- Twenty random, individual fecal samples taken on treatment day (PRE-TREATMENT GROUP).
- Twenty random, individual fecal samples taken 14 days post-treatment (POST-TREATMENT GROUP).
- Be sure to conduct the field test during optimal parasite transmission on your pasture.



STEP BY STEP

- 1. Sample as directed by cattle veterinarian.
- 2. Collect rectal or observed freshly dropped sample.
 - Invert a resealable sandwich bag to collect a golf ball-sized sample
 - · Re-invert and seal the bag
 - Identify the sample by date and animal group
 - If testing more than one group, be sure to keep sample groups separated
 - Do not mix or pool samples from different animals
- 3. Refrigerate (do not freeze) overnight to ensure each sample is sufficiently cooled.
- Send both pre- and post-treatment samples to the same lab, shipping overnight (or second day) with a freezer pack.
 - · Indicate no signature required for delivery
 - · Avoid weekend delivery
 - Include producer and/or veterinarian contact information

SEND SAMPLES TO THE PARASITOLOGY LAB OF YOUR CHOICE

James Slightom

GI Parasite Diagnostic Laboratory 2415 Ponderosa Drive Lawrence, KS 66046 913-422-6805

Dr. Don Bliss

MidAmerica AG Research 3705 Sequoia Trail Verona, WI 53593 608-798-4901

Dr. Gil Myers

Myers Parasitology Services 2897 Mt. Sherman Rd. Magnolia, KY 42757 270-324-3811

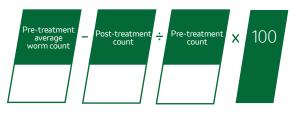
Dr. John L. Myers

Pecan Drive Veterinary Services 438775 E. 250 Road Vinita, OK 74301 918-256-7803

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This protocol was developed by Merck Animal Health with the input and support of leading veterinary parasitologists. For more information about Fecal Egg Count Reduction protocol, contact your veterinarian or your local Merck Animal Health Sales Representative.

CALCULATING EFFICACY



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EFFICACY %*

*Less than 90 percent effectiveness is considered possible resistance.

EVALUATING THE RESULTS

You should see a 90+ percent reduction in fecal egg count after deworming.³

If not, the deworming treatment was a failure and should be investigated with your veterinarian to determine if improper dosing and/or resistance has affected the outcome.

The following can happen due to subclinical worm infections:

- Decreases in feed intake, average daily gain and milk production
- Poor immune response to viral vaccines and diseases
- · Resistance to dewormers may keep increasing

For maximum efficacy, use two classes of dewormers at the same time.

ENDECTOCIDES Ivermectin, Dectomax*, Ivomec*, Cydectin*, LongRange* and Eprinex* BENZIMIDAZOLES Safe-Guard* (fenbendazole) and Panacur* (fenbendazole)				
Dewormer	Average Efficacy**		Dewormer	Average Efficacy**
Pour-On	51.3%		Safe-Guard, Panacur (Various Formulations)	98.7%
Injectable	57.4%			

^{**}Merck Animal Health maintains the world's largest FECRT database to monitor field use efficacy of anthelmintic classes. Through 2018, there were 24,186 samples analyzed – 12,717 pre-treatment and 12,015 post-treatment.