

## Monitoring Parasite Loads

**Find about about the types of tests used to monitor parasite loads in livestock and when to perform the tests.**

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**Q:** I want to protect my goat herd from parasites while decreasing my deworming costs and preventing my livestock from experiencing anthelmintic resistance. Can you explain which test can monitor parasite loads and when should it be done?

**A:** Parasitic infestations flourish during certain times of the year when there is an accommodating environment, particularly during warm and rainy months.

Because our winters here in the United States have been milder recently, animals are suffering from parasites when load burdens were typically decreased.

### Other Considerations

There are several different tests that can assist you in monitoring parasitic burden, but recognize that testing—and deworming—are only two pieces of your overall parasite management program.

Before beginning any testing procedures, you need to evaluate the general appearance and condition your livestock, individually and as a herd.

You should also consider the parasite burden of the pasture itself, and the animal stocking level you maintain.

### About the Tests

Those unfamiliar with the basics of parasitology may become confused between the fecal floatation test and fecal egg count (FEC).

Both tests require separating the parasite eggs from feces by placing a fresh fecal sample in a standardized chemical floatation fluid.

Because the eggs are less dense than the fluid—which has a higher specific gravity than the eggs—they float to the surface, while the remaining fecal material sinks.<sup>1</sup>

Spinning the mixture in a centrifuge (centrifugation) aids the separation process.

Both tests examine samples taken from the surface that are placed on a slide and viewed microscopically. However, a fecal floatation indicates only the presence (or absence) of parasite eggs, and is therefore no more than qualitative.

The fecal egg count test is quantitative because it mathematically estimates the number of eggs present which may help you: Identify those animals requiring more aggressive management Make decisions regarding pasture management protocols Evaluate the outcomes of your parasite control strategies

Performing fecal egg counts regularly will enable you to estimate how well your parasite management program is performing and obtain invaluable information that allows you to adapt your management program before parasitism becomes problematic.

Testing frequency may decrease once your program becomes established.

Livestock owners can use the fecal egg count reduction test (FERCT) to assess developing anthelmintic resistance on their farm.

Fecal samples are directly obtained from randomly selected animals divided into a control group that is untreated and a group that is administered anthelmintics.

Approximately 12-16 days following treatment, depending upon the agent used, fecal samples are again collected to quantitatively evaluate the egg count reduction of the treated group versus the control group.

A FERCT by itself is not definitive, and your veterinarian may suggest a larval development assay, which evaluates the efficacy of several classes of anthelmintics to determine how readily worm eggs progress to the third stage of larval development as dewormer concentrations increase.

Small operators need to work closely with their attending veterinarian and extension agent, both of whom will help them format a parasite management program individualized for their farm.

1 Direct fecal smears detect motile protozoa. Sedimentation exams more readily identify liver fluke eggs.

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