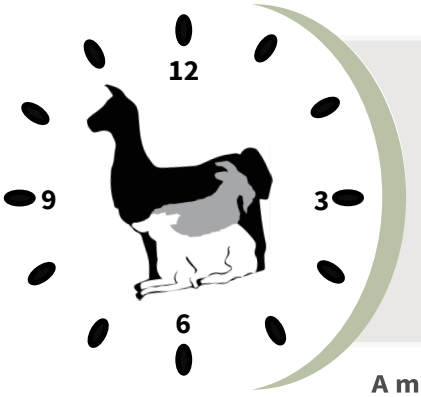

Timely Topics

Role of Fecal Egg Counts in Sheep/Health

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A fecal egg count (FEC) is a quantitative measure of how many worm eggs a sheep/goat is passing in each gram of its manure. You get a number like 1000 EPG (eggs per gram of feces). Fecal egg counts are performed by veterinarians, state diagnostic labs, and independent laboratories. You should only be willing to pay for a quantitative test that gives you eggs per gram. A simple fecal flotation, as is done for dogs/cats, is of limited value in sheep/goat health.

Fecal egg counts, while very useful, are not necessarily indicative of the worm load a sheep/goat is carrying. Thus, by themselves fecal egg counts should not be used to make individual deworming decisions, especially in barber pole worm prevalent areas. Rather the decision to deworm a sheep/goat should be based on the observation of clinical signs, such as bottle jaw and/or a high FAMACHA© score. Usually only clinically-parasitized animals should be dewormed, and it is recommended that they be given combination treatments (dewormers from more than one dewormer class).

Instead fecal egg counts should be used to determine dewormer efficacy, identify resistant animals, and monitor pasture contamination. The most common use of fecal egg counts is to determine efficacy of deworming treatments. Since worms have developed resistance to all of the dewormers and dewormer classes, it is important to know which dewormers work on a farm. FAMACHA© does not work well as a diagnostic tool, if clinically-parasitized sheep/goats are not given effective treatments.

To test the efficacy of a dewormer, you need at least 10 to 15 animals. Testing one or two will tell you if the treatment was effective in those animals, but it will not necessarily tell you if you have resistance to the drug. Fecal samples taken before and after treatment (10 to 14 days) are compared. You need to get samples from the same animals each time. Each sheep/goat needs to have a fecal egg count of at least 250 epg. Higher is better. There is resistance to the dewormer if treatment fails to reduce FEC by 95 percent or more. A fecal egg reduction of less than 70 percent is of great concern.

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An individual fecal sample Image by S. Schoenian

The other common use of fecal egg counts is to determine which sheep/goats are more resistant (and susceptible) to worms. Sheep/goats with good FAMACHA© scores that don't require deworming may still be shedding a lot of eggs onto the pasture. They are resilient,

not resistant. You need to do fecal egg counts to identify them, as well as the ones that are low shedders. It is estimated that 30 percent of the flock/herd sheds 70 percent of the eggs. Selecting breeding stock (especially males) that shed fewer eggs will go a long way towards controlling worms in a flock/herd.

When selecting sheep/goats on the basis of fecal egg counts, it is very important to compare "apples to apples," i.e., animals that are of similar age and being raised the same (together). In addition, in order to accurately select for parasite resistance, you need significant exposure to worms: a group average of 500 or more EPG and a significant spread in values, e.g., 0 to 4000 or 250 to 6000 epg. Selecting for parasite resistance is not for the faint-hearted. Grazing too little, deworming too much, and using BioWorma® will all hinder selection efforts.

Several universities are now offering low cost ($5-$ 6/sample) fecal egg counting for the purpose of genetic selection and fecal egg count reductions (www.wormx.info/lowcostfec). You can also learn to do your own fecal egg counts. The primary expense is a microscope and special slide for counting eggs (McMaster).

Fecal egg counts (EPG) are the only way to identify resistant sheep and goats. Image by S. Schoenian

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