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Parasite Resistance

There are some topics that shouldn't be held over a meal, they just aren't the things to discuss as you are eating. Religion and politics are a couple of those mealtime topics to avoid, but what I'm referring to today is internal parasites. Oklahoma State University has a long running history of offering the "Rancher's Thursday Lunchtime Series" which has addressed a plethora of timely topics. Today's presentation from Dr. Rosslyn Biggs was extremely interesting and provided motivation to write about it.

Internal parasites are a reality to address for anyone involved in livestock production. These are mostly nematodes that spend part of their lifecycle, typically the time from egg hatch to adulthood, inside the digestive tract of the animal. These parasites rob nutrients from the animal, reducing performance and health of the animal if their numbers reach high enough levels. In extreme situations animal death can even occur. Small ruminant producers tend to be acutely in touch with this issue as sheep and goats seem to be especially susceptible to the ill effects of internal parasites.

Fortunately, there are some very good animal health products available to producers to control these parasites, called anthelmintic treatments. These products come in the form of injectables, pour-on, and oral products. There are three major classes of these products: Benzimidazoles (oral/white), Macrocyclic lactones (ivermectins) and Imidazothiazoles. While these are all good products, researchers are finding that populations of internal parasites are becoming resistant to some or all the chemistries.

Factors that are leading to this resistance include: treating animals regardless of parasite loads, treating when environmental larval numbers are low, estimating or averaging animal weights therefore not dosing appropriately, lack of fecal egg monitoring and long-term single product usage, to name a few. The mindset of treating animals on a set schedule, whenever they are caught/handled and working to kill every parasite is changing. Discussion within the industry is now shifting to doing Fecal Egg Count Reduction Testing (FECRT) to establish if there is an issue in the flock/herd, targeting specific livestock with specific products, using a planned rotation given the known parasite load and offering refugia – a planned isolation of susceptible parasite genetics.

The Kansas Veterinary Diagnostic Laboratory <https://ksvdl.org> has a good article discussing the FECRT test. This does involve some labor, animal handling and financial contribution. The first step for producers wishing to make changes to current deworming protocols is to visit with your veterinarian. Making changes to the way animal deworming occurs may not only make headway in preventing resistant populations but may also have economic benefits to the operation. One producer on the webinar shared that through planned grazing management and strategic deworming, their mature cows had not been dewormed in eight years. Of course, every situation is different, so working with your herd health veterinarian is the place to start.

There is a growing wealth of information on this subject available. To access the OSU webinar that prompted this article visit: <https://extension.okstate.edu/programs/beef-extension/ranchers-thursday-lunchtime-series/> and look for "Grazing Management Practices at Work Around Oklahoma". I encourage everyone to give some thought to deworming protocols, especially as fall weaning and grazing is just around the corner.