Parasitic worms are a reality for any shepherd with sheep on pasture. In Maryland the barberpole worm, *Haemonchus contortus,* is the most prominent health concern in young lambs. Anthelmintics, drugs to treat animals for worms, are available; however, worms are becoming resistant. The proportion of animals in a flock receiving anthelmintics is said to be the most important factor determining the rate of resistance development.

Drenching animals based on need rather than on a schedule is still a relatively new concept. One of the challenges is knowing which animals need treatment. The gold standard to do this is the FAMACHA© method. I first learned of the FAMACHA© through a workshop put on by the University of Maryland sheep and goat specialist Susan Schoenian. As reported in the Winter 2017 Maryland Sheep News, FAMACHA© training is now available online. Anyone raising sheep should learn to use this system as one important tool in your shepherd toolbox.

As my flock became larger, checking each individual animal became a challenge. Drenching lambs based on production factors is the premise behind The Happy Factor™ program. This program utilized on some farms in Scotland uses 66% of the expected rate of gain as a cut-off to determine which lambs to drench. One reason that this program isn’t readily adoptable is a study had not been done in a region where *H. contortus* is the predominant parasitic worm.

Through a Northeast Sustainable Agriculture Research and Education (SARE) grant I was able to compare using real time generated rate-of-gain with FAMACHA© scores to determine drenching need in Bluefaced Leicester Lambs. 35 lambs were weighed weekly, and the FAMACHA score also recorded bi-weekly. For the Bluefaced Leicesters being raised on pasture with supplemental hay and grain the cut-off for drenching used was lambs gaining less than 0.3 lbs./day. To obtain the rate of gain, all of the lambs were tagged with electronic identification (EID) tags. Using a shearwell stock recorder and scale with a digital scale head the daily rate of gain for each individual lamb could be seen as they got on the scale.

The study had some promising results. Evaluating lambs for drenching took half the time using the rate of gain method compared with FAMACHA© scores. The determination to drench using rate of gain was consistent with drenching animals with a 4 or 5 FAMACHA© score 70% of the time. Reviewing the data there are a few changes necessary to the protocol to make this an ideal program for my farm. First, when lambs needed drenching they tended to need two weeks to recover, so checking the animals every week would lead to excessive drenching. Ewe lambs were also drenched more frequently, sometimes corresponding with a FAMACHA© score of 3 or better, indicating that the cut-off value was too high and the sex difference should be taken into account.

The last component looked at was resistance in worms from a subset of the most treated lambs, to a subset of the least treated lambs. To compare the worms resistance to anthelmintics, pooled fecal samples were sent to the University of Georgia for the DrenchRite Assay. The results came back with a lower egg count in the lesser treated group, but the same resistance profile for both groups. This isn’t entirely surprising but confirms that the worm population can be expected to be homogeneous among the co-located animals. This is just one example of how farmers can help evaluate different production practices and tools to maintain lamb health. – Andrew Keller