

## **Put Out to Pasture**

The most common health problem of domestic sheep, particularly pastured young lambs, is internal parasites. These parasites are ingested while grazing. Thus, the idiom “Put Out to Pasture” has multiple meanings for shepherds: (1) to put the sheep out to pasture to graze and/or (2) to dismiss, retire, or use a sheep sparingly. So the question is, can lambs be allowed to graze without “putting them out to pasture”?

With this in mind, two Sustainable Agriculture Research and Education (SARE) projects were conducted to evaluate: using rate of gain to identify lambs that required drenching (anthelmintics), simultaneous use of drenches, maintaining anthelmintic susceptibility, and using a dry lot following pasture versus maintaining lambs solely on pasture. Here are a few practical take-aways for you to consider before putting your lambs “out to pasture”.

**Lambs need to be identified for drenching.** Even if you use rotational grazing and other best management practices to mitigate parasites, you should have a plan in place to identify and responsibly use anthelmintics should the need arise. Identification of which lambs to drench is critical so that the susceptible lambs receive the care that they need, and so that the parasites in otherwise healthy lambs are not unnecessarily exposed to anthelmintics. Using rate of gain can be a valuable tool for large flocks where analysis of each individual animal may not be practical. To implement this method, producers will first need to know their expected rate of gain for both ram and ewe lambs. In the studies, lambs that did not gain 60% of the expected rate of gain over a two-week period were drenched. These lambs were also evaluated with the gold standard FAMACHA method, with the outcome agreeing over 70% of the time.

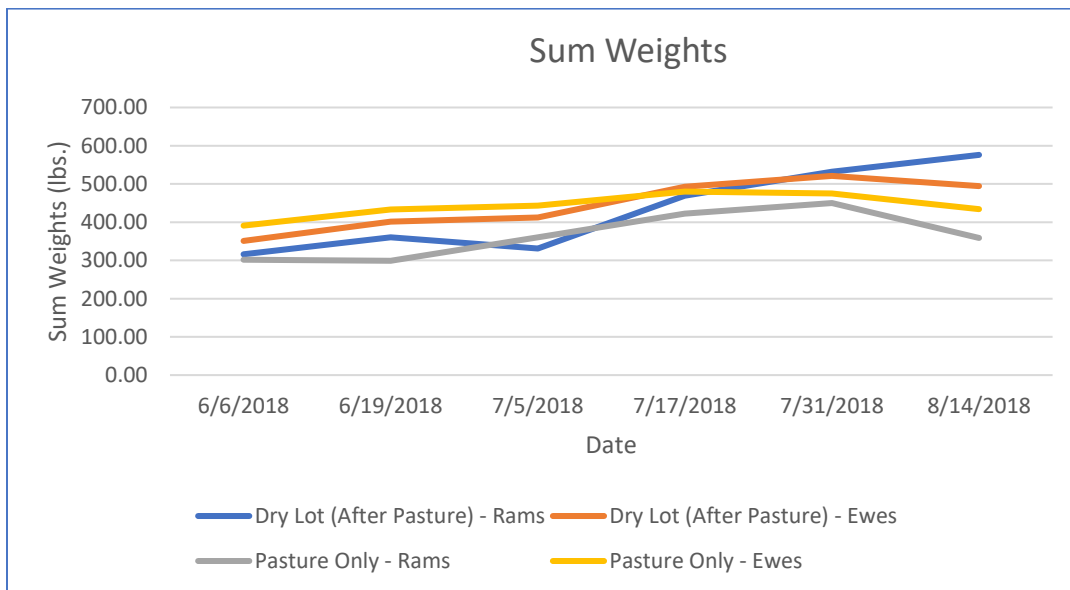
**Lambs need an effective drenching regimen.** There are currently only three classes of anthelmintic drugs approved for use in sheep in the United States. Know in advance which drench(s) you will use and how to properly use them (e.g., for weight-based drenches have an accurate scale for your animals). These SARE studies used all three classes of anthelmintics simultaneously when a lamb required drenching. The drenches were not mixed. Each oral drench was given according to the label directions independently, but sequentially, on the same date. Fecal samples were collected from lambs on the date of treatment, as well as two weeks later. All lambs treated in this manner had an egg count of zero eggs per gram at the two-week collection. This indicated that the combined anthelmintic treatment was effective. For lambs returning to pasture, egg counts did increase and they may require additional treatment following repeated exposure to parasites.

**Lambs that do not have worms do not need to be, and should not be, drenched.** While this seems obvious, producers may be tempted to re-drench a lamb that continues to not meet an expected rate of gain or appears anemic. In general, it took animals at least two weeks to improve their rates of gain and FAMACHA score. In these studies, the fecal egg count conducted at two-weeks demonstrated that this

slow recovery of the lambs was not due to additional parasites. Thus, drenching would not have improved the health of these lambs. Producers may instead focus on the meeting the lambs nutritional needs during this recovery phase.

**Lambs without worms put into a dry lot can continue to be worm “free”.** In the 2018 study when a lamb in the dry lot (after pasture) group required drenching it was removed from pasture and put into a dry lot (e.g., a barn or run in where the area is devoid of vegetation). These lambs continued to have a zero eggs per gram egg count for up to 10 weeks. In addition, when comparing the dry lot (after pasture) group to the pasture only group, the survival rate of treated lambs increased by 40% when lambs that required treatment were moved into a dry lot rather than returning them to pasture.

**Lambs in a dry lot can be more profitable than those out on pasture.** Pounds of lamb available for market was higher in the dry lot (after pasture) group than the pasture only group. The “Sum Weights” figure shows the difference particularly well when comparing the ram lambs. This was true even though only the lambs that required drenching were put into the dry lot. In the 2018 study, 61% of lambs in the dry lot (after pasture) group were not treated and remained on pasture the entire growing season. Even with higher feed costs, the feed per pound of marketable lamb was reduced from \$0.84 to \$0.76.



While healthy lambs on pasture are picturesque, the reality of increased exposure to parasites and higher rates of mortality is not. The use of barns or other dry lots should be perceived as a compassionate means of raising lambs until their systems are better developed to combat gastrointestinal parasites. For producers that would like to maintain at least a partial pasture-based operation, these results indicate that lambs that do not require treatment may still thrive on pasture. This experience also demonstrated that it is best to take lambs requiring treatment off pasture for their wellbeing, and for the producers profitability and psychological wellness. After all, we don't put lambs out to pasture for them to go “out to pasture”.

For more information on these studies please visit <https://www.sare.org/>. Funding was provided by:

