



SILAGE FEEDING

J.D. Bobb, DVM

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Feeding silage to sheep is an excellent way to economically mechanize and help reduce the manual labor involved in feeding a large flock. Most producers have three concerns when first thinking about switching their rations to a silage base. First, it takes a specialized set of equipment to plant, cultivate, and harvest the silage. Second, the ewe needs to be handled properly in late gestation to prevent pregnancy toxemia. Third, the threat of listeriosis from moldy silage.

Silage is the term used for the feed produced by controlled fermentation of high moisture herbage. When silage is stored under anaerobic conditions (in the absence of oxygen) lactic acid is produced and will halt the fermentation process. If silage is undisturbed it will keep for extended periods. There are now many products on the market that are added to the silage at the time of putting in the silo that will increase the quality of the silage by reducing fermentation, and some products such as urea (0.5-1%) or anhydrous ammonia will actually increase protein. High quality silage is very palatable, and excellent results can be achieved with ewes in their maintenance period or in early and mid gestation.

Corn silage is the most popular in the midwest regions, but sorghum is used in drier climates with success. Silage contains a moderate to high level of digestible energy, but is low to moderate in digestible protein. As the corn matures the fiber content decreases and the energy content increases, this is directly due to the increase grain content. As a rule, sorghum silage has a somewhat lower nutritive value than corn silage. Corn silage is low in calcium and trace minerals and contains fair levels of phosphorus. Additional calcium and trace minerals must be supplied. Crude protein of corn silage is 7-9% on a dry matter basis.

Listeriosis is caused by a bacteria (*Listeria monocytogenes*) in sheep it usually causes brain related clinical signs. *Listeria* can also cause abortion, diarrhea and septicemia. It is commonly referred to as "Circling disease" and silage is often the source of the listeria, but it can also be found in hay, or even on sheep grazing pastures. The most common clinical signs are a sheep that walks in circles and has one half of the face paralyzed. The affected ear and lips on one side of the face will hang, often the sheep is drooling and the eyelid on the affected side will droop and the eye will also water causing the cheek to be

wet. Finally, after only one or two days the sheep will be found down and be paddling and unable to rise on its feet. Treatment is dismal at best. Very early treatment with high doses of penicillin will save some animals.

Listeria organisms are commonly found in the soil which has been contaminated with manure of apparently normal carrier animals. When making silage it is very difficult to complete the job without some soil contamination. If the silage is not properly packed tight to exclude oxygen, or the pH of the silage is not low enough the Listeria will multiply in these small pockets. Sheep that are cutting teeth such as newborn lambs, yearlings and mature ewes will have the greatest incidence via the bacteria getting in the tooth socket and following the facial nerve to the brain. This will take 2-4 weeks after eating the affected silage. Listeria is also a human pathogen.

Rules to help reduce Listeria in silage:

1. Reduce pocket gopher mounds in the field.
2. Do not cut silage too close to the ground.
3. Use a silage additive to lower the pH.
4. Pack tightly and seal air tight.
5. Test the pH, if greater than 4.5 do not feed to the sheep.
6. Do not feed moldy or suspect silage to the sheep.

Silage should be considered for any producer feeding large groups of ewes that is looking to control feed costs and labor. It takes increased management to handle, but the rewards will be well worth the extra effort. Now, with silage bags a producer can hire some custom labor to chop and fill several silage bags for a smaller or medium sized flock.