

Acidosis is also known as 'grain overload'. It is frequently seen when sheep are on high grain rations. Commonly high grain rations are lactation rations for winter-lambing ewes and lamb creep or growing rations. High grain rations are also used when drought conditions mean less forage is available, or is high priced. Grain can be used to supplement and extend forage, but care must be taken.

As the common name, grain overload suggests, the condition is a sudden intake of too much grain or concentrate. This high level of grain causes a change in the rumen acidity and bacteria population. The increase in acid causes an inflammation of the rumen wall (rumenitis) and a reduction of bacteria needed to digest fibre. Symptoms may include depression, animals off feed, bloat, founder (stiffness, or tender feet), scours and occasionally death. Occasionally lambs develop a thiamine (B vitamin) deficiency (polio) due to the inability of rumen to produce adequate thiamine in the highly acidic environment. Very often animals are treated for the symptoms, and the cause is overlooked.

This is one condition that management can control completely:

- Feed test all feeds. Develop rations with the correct amount of grain to balance the forage available.
- Make every, and all ration changes very gradually over ten days to two weeks.
- Increase grain levels slowly over at least one week. The rumen microbial population adapts to grain feeding over time.
- Feed grains whole. Beyond the baby lamb creep, sheep do best on whole grain. Whole grain feeding slows rumen fermentation, which in turn slows down acid production, reducing the chance of grain overload.
- Divide grain feedings so that no more than 1.5 pounds of barley or corn / mature ewe is fed at any one time. Oats can be fed at somewhat higher levels than barley. Wheat or hull-less barley need to be fed carefully and at lower

levels due to higher energy content. Wheat can make up to 1/3 of the grain in a grain ration.

- Have good gates, securely closed, on all sheep areas. Have feed bins and grain bins securely closed. Clean up all grain spills.
- Do not set out the morning grain or bags of creep where escaped sheep can get into it. Hungry ewes that manage to escape will gorge themselves on any handy feed.
- Make sure creep gates are tall enough, are solidly built, and are well secured. Ewes will pressure the creep fence steadily to get to their lambs and to the feed - though not necessarily in that order.
- Never let self-feeders empty—if they do, slowly start animals onto grain again by hand feeding. Never allow hungry sheep access to full grain feeders.
- Remember the last ewes to lamb have been getting less grain than those on the lactation rations. Start them slowly onto full lactation ration.
- Increase particle size in rations (long hay, processed hay over one inch, whole grains).
- Bicarbonate of soda can be added to rations or self fed to help buffer the rumen.
- Ewes require 1.5 to 2 pounds of forage to maintain healthy rumen function. Lambs need ½ to 1 pound of forage.

Treatments for acidosis / grain overload should be discussed with your veterinary practitioner. There are several treatment routes including drenching with mineral oil to move the rumen (stomach) contents quickly, antacids, oral antibiotics to limit bacterial growth and antihistamines to reduce the potential of founder. Your vet will recommend what is most effective for a particular situation.

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If you have questions or require further assistance on this topic, please call the AgInfo-Center at 1-866-882-7677