

Health and Disease Issues

Acidosis

Also known as grain poisoning, ruminal stasis or grain engorgement.

Predisposing Factors:

Acidosis is caused by accumulation of large amounts of ruminal lactic acid following ingestion of diets that are high in fermentable carbohydrate or low in effective fibre. Acidosis occurs most commonly in grain fed animals.

Sheep should be introduced gradually to grain over a two week period whilst ensuring adequate palatable roughage is available. Wheat, triticale, rye, barley and oats are (in that order) the most likely grains to cause acidosis.

Overeating does not usually occur when animals are first offered grain because they have not developed a 'taste' for the new feed. Overeating is more likely to occur when animals are offered large amounts of grain after a period of abstinence, offered a sudden increase in amount or sudden change to a more 'dangerous' grain, or allowed access to their normal full ration after a short period of starvation or cold stress.

Signs and Symptoms:

- Rumen contents become acidic, falling below 5.0
- Excessive fluid build up within rumen and intestinal contents lead to a distension of the abdomen
- Inappetence, depression, isolation, panting, dehydration,
- Laminitis (lameness)
- Reduced cud chewing
- Variation in feed intake, reduced feed efficiency and average daily growth rates
- Faeces may vary from firm to diarrhoea and may appear foamy, with gas bubbles and/or contain undigested fibre or grain and/or mucin/fibrin casts.



Control and Prevention:

The gradual introduction of high risk feeds (starch rich cereal grains, grain-based pellets, peas, etc) to sheep and lambs is the most effective prevention option.

Total mixed ration systems can assist in the prevention of acidosis through providing a balanced ration containing hay and grain. These rations can reduce grain engorgement; reduce the rate of feed fermentation and the rate of passage through the gut.

Rumen buffers commonly used to reduce acidosis risk include:

- Sodium bicarbonate (at 0.75 to 1.5% w/w)
- Magnesium oxide (at 0.5 to 0.975% w/w) plus sodium bicarbonate, and
- Calcium carbonate at 1-2% w/w (barley or triticale) or 3% w/w (wheat).

Treatment:

Grain should be removed from the diet and good quality roughage (hay) offered *ad libitum* until recovered.

Treat with 60 g Causmag (magnesium oxide) and 15 g sodium bicarbonate in 1 litre of water as a drench for each sheep.

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