



Bloat in Cattle

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Normal digestion in cattle creates large quantities of gases in the rumen. Under normal conditions these gases are removed by belching. Under certain abnormal conditions these gases can accumulate causing severe rumen distension. If not corrected quickly then this distension will exert enough pressure on the diaphragm that the animal cannot breathe and ultimately dies. Two general types of bloat occur in our area; one is legume bloat and the other is feedlot bloat.

Legume Bloat. Establishing legumes in pastures should be a long-term goal for most cattlemen in Alabama. With the current cost of nitrogen fertilizer legumes can provide significant economic benefits to the forage system. Although legumes increase the incidence of bloat, the advantages that legumes provide far outweigh the risk of bloat.

Bloat is a very complex problem that involves several factors. The first contributing factor is the type of forage being consumed. Generally legumes in early spring have a very high content of soluble protein which can form a stable membrane in the rumen that will trap gas. Some legumes have intrinsic factors such as tannins that

bind these proteins and thus they do not cause bloat, one such plant is *Sericea lespedeza*. Likewise there are individual animal differences. Some cows are prone to bloat while other are not very susceptible at all. It also appears that moisture may play a role in that bloat tends to be more common on a morning where there was a heavy dew versus a dry morning.

If a pasture contains more than 50% grass the incidence of bloat is minimal. Where bloat becomes a major factor is in newly established pastures because the perennial grasses are slower to establish than the clover. Feeding cattle dry hay and waiting until midday when the pastures are dry to turn the cows out has been shown to be somewhat effective for reducing bloat. Feeding poloxalene can significantly reduce the incidence of bloat. It is a mild detergent that reduces surface tension and has been approved for use in cattle. To be effective an adequate dose must be consumed thus it is very important to monitor consumption of the product that contains the poloxalene to ensure the cattle are receiving an effective dose. Ionophores such as Rumensin or Bovatec have also been shown to reduce the incidence of bloat.

Like the poloxalene it is important that the cattle consume the appropriate amount on a per head per day basis for the most effective results.

Feedlot Bloat. In Alabama, occasional instances of feedlot bloat occur in young, fast-growing calves that are being back-grounded on a high plane of nutrition. These calves are generally being primed to be sold into western feedyards or being developed as breeding stock, primarily pure-bred bulls. A by-product feed that has become very popular for this purpose is soybean hulls. Unfortunately, they can cause bloat.

A satisfactory method of preventing this bloat would be to feed a mineral supplement containing an ionophore such as Rumensin or Bovatec or mixing the ionophore straight into the feed. It is important that the calves consume 200 mg of the ionophore per head per day for the most effective prevention. Thus, the best method is a predetermined amount in the feed since daily mineral consumption is erratic in weaned calves.

In addition to using an ionophore, always provide some access to long-stem roughage. Quality of the roughage is not as important as particle size. If the calves are in a relatively small lot it is also a good practice to make the calves walk (exercise). Put the feed on the opposite end from the water or mineral source to require the cattle to move back and forth in the pen.

The final point is that if the calves are being fed in a free-choice manner then they should never run out of feed. If bloat is going to occur then this will certainly initiate the onset. The typical scenario is that a group of calves have been consuming soyhulls free-choice out of a self-feeder and the feeder runs out of feed and it is several hours before it is re-filled. The calves are quite hungry when the feeder is re-introduced and it is typically the biggest calf (because he is dominant at the feeder) that experiences the bloat.

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