

Bloat Caused by Legumes


[Home](#)
[Legumes](#)
[Grasses](#)
[Newsletter](#)
[Useful Links](#)
[Publications](#)

Certain legumes can create serious bloat problems in ruminants. Bloat is caused by the formation of a stable foam in the rumen. If not relieved, the pressure created by the entrapment of rumen fermentation gases in the foam can lead to death by suffocation in as little as one hour or less.

Avoiding using forage legumes because of the fear of bloat results in more losses than the real loss of livestock from bloat. Understanding bloat and practicing ways to minimize its effects is important for livestock producers.

In addition to diet, environmental aspects may also play a contributing role in bloat. Cattle have been observed to stop foraging prior to passage of a weather front and gorge themselves following the inclement weather. Cattle should be moved to a non-bloating forages and provided a bloat preventative during such times.

Frost can also increase the incidence of bloat by disrupting plant cell walls and increasing their rate of fermentation in the rumen. Delay grazing those legumes that are known to cause bloat for a few days following a hard frost. Legume bloat usually occurs during the lush growth period associated with spring. When using a legume known to cause bloat, the number of problems can be minimized with proper management (Table 1).

Poloxalene, a bloat preventative, must be consumed by cattle daily, both prior to turning cattle onto legumes and thereafter, to be effective. Feed poloxalene at 1 to 2 grams/100 lbs. of body weight per day. Cattle should be accustomed to consuming a mineral mixture, and a feeding strategy that reduces the likelihood of bloat.

Table 1. Management strategies to minimize bloat potential in livestock.

- **Never turn hungry cattle into a lush legume pasture. Allow cattle to fill on grass hay first.**
- **Provide a bloat preventative to livestock several days prior to and while grazing legumes of known bloat potential.**

- When first turned into lush legume pastures, watch cattle closely for several days for distended rumens indicating bloat.
- If possible, fill cattle with hay or other roughage immediately before or after the passage of a weather front.
- Delay grazing bloat-causing legumes for a few days following freeze damage.
- Allow livestock to have free-choice access to grass hay while grazing lush legumes.
- Closely watch animals several times a day, at first when grazing lush legumes.
- Give them a choice of eating dry feed or fairly mature grass when grazing near pure alfalfa or white (ladino) clover.
- Some producers use a "chronic bloater" in the herd as an indicator.
- Remove all animals from the forage legumes field at the first sign of bloat and watch them closely.
- Do not put hungry cattle on lush legumes.
- Do not begin grazing lush legumes early in the morning. Fewer problems occur when starting in the afternoon.
- Do not turn cattle onto legumes wet with dew. Wait until it dries completely.
- Do not graze forage legumes that are lightly frosted. This is probably the most risky time in Oklahoma.

There are many stories about how to avoid bloat, and many of them have some validity (at least under some circumstances). The list above includes some of the most widely accepted ways to lessen the problems with bloat. (If you have others, please let me know.)

[Comparison of Forage Legumes](#)

(You choose seed, seed pods, flowers, or leaves)

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