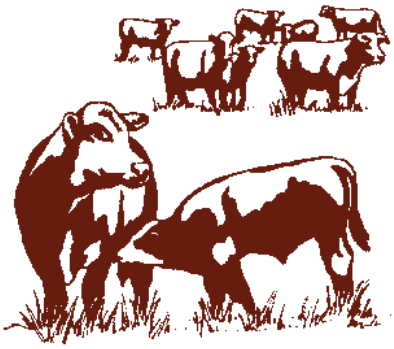
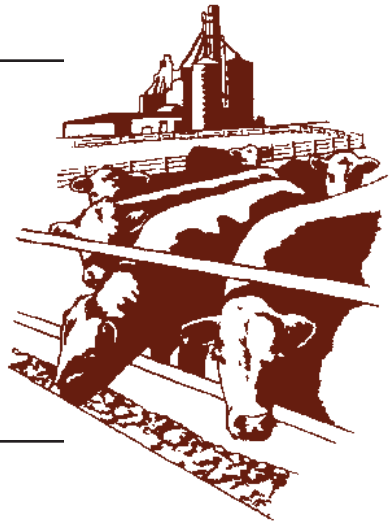


Beef Cattle Handbook



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Pasture Bloat—Prevention and Treatment

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Bloat is a form of indigestion marked by an abnormal distention of the rumen caused by accumulated gas. Gases produced in the normal rumen fermentation process are normally eructated or "belched up." When bloating occurs, these gases cannot escape. They continue to build up and cause severe distention of the abdomen, compression of the heart and lungs, and eventually death.

Contributing causes of bloat include, an inherited tendency for bloat; certain proteins in forage; the amount and rate of roughage intake; the coarseness of the roughage; the rumen microbial population; and enlargement of the lymph nodes between the lungs that compress the esophagus or interfere with the function of the vagus nerves after respiratory infection. Diagnosis can only be confirmed on necropsy.

Basically there are two kinds of bloat—gas and frothy. Frothy bloat occurs when certain plants such as alfalfa or clovers are ingested, usually under pasture conditions. It also occurs in some high grain fed animals due to the growth of certain slime-producing bacteria, and in animals fed green chop or hay. In frothy bloat, the gases normally produced in the rumen are mixed in with the rumen contents, forming a stable foam. This foam cannot be eructated.

Dry gas bloat is produced by interference with the normal eructation process, as with vagus nerve damage or esophageal blockage. In gas bloat, a tube placed into the rumen will allow the gas to be released. In a case of frothy bloat, passage of a stomach tube results in release of little or no gas and the passage of foam. Dry gas bloat usually involves only an individual animal, while frothy bloat is often a herd problem, with several animals involved.

Preventing Pasture Bloat

Many methods have been used over the years to reduce the incidence of pasture bloat, but the most effective method uses Poloxalene. Poloxalene is an antifoaming agent that prevents frothy bloat for 12 hours, if fed in adequate amounts. Poloxalene can be fed as a top dressing on feed, in a grain mixture fed free choice, or in molasses-salt blocks. The challenge with each of these methods is to get an adequate intake of Poloxalene by each animal each day to prevent bloat.

Use of Poloxalene for bloat prevention may seem expensive, but it is cost effective when compared to the outstanding gains of cattle grazing in improved alfalfa/clover pastures. Since it is difficult to obtain a precise intake of Poloxalene, a combination of bloat management methods should be used whenever possible. Here is a list of management techniques that are helpful in reducing the occurrence of bloat:

- Plant and manage pastures to obtain no more than 50 percent alfalfa or clover forage.
- Provide Poloxalene to animals 48 hours before turning them out on pasture to help ensure that sufficient product is in the rumen when they are exposed to the conditions causing bloat. Note: Feeding grain may increase weight gain slightly and reduce forage intake, and is a convenient way to administer Poloxalene. The timing of grain feeding should coincide with the need for protection.

Morning and evening is best, but if grain is fed only once a day, give it in early morning before the animals have an opportunity to fill on pasture.

- Fill cattle on dry roughage before turn-out onto legume pastures.
- At initial turnout, wait until the pastures are dry (midday after dew is gone).
- Once the cattle are turned onto the pasture, leave them out and prevent disturbances. The rumen microbes need time to adapt to a new diet. Putting animals in at night may be more harmful than useful.
- When feeding green chop, spread the forage intake over the whole day by feeding several times daily.

Treatment

Acute bloat must be treated promptly if death is to be avoided. In the stages of severe bloat a few seconds delay may result in death.

Plan with your veterinarian for emergency bloat treatment ahead of the pasture season. You will need (1) good handling facilities, (2) a rubber hose about 3/4 to 1 inch diameter and 8 to 10 feet long, (3) a supply of defoaming agent, (4) a large trocar, and (5) a sharp knife suitable for opening an incision into the rumen if the trocar fails to relieve the bloat. In addition, you'll need to know how to use the hose and antifoaming agent, and how to puncture the rumen.

In moderate cases, the tube should be used to provide relief, but with frothy bloat this may not be enough. If the tube does not provide immediate relief, the defoaming agent will frequently break down the foam and permit passage of large amounts of gas through the tube or by belching. The antifoaming agent can be administered through the tube or by intraruminal injection. Drenching is more likely to result in inhalation causing immediate death or pneumonia.

In severe cases, the use of a trocar or large gauge needle may help buy some additional time for treatment. Insert the trocar at a point halfway between the last rib and hookbone on the left side, 3 to 4 inches below the edge of the loin. If the foam is so viscous that the trocar opening is not large enough to give relief, and if the animal is in severe distress, a large opening must be made into the rumen as a last resort. Use a knife to open a slit about 3 to 4 inches long and spread it apart with your fingers. Keep at least one finger through the incision until the bloat is fully relieved. Otherwise, the rumen may move, causing the opening in the rumen to shift away from the opening through the belly wall and skin.

Large bloat needles may be adequate for relieving dry gas bloat. These needles are about 6 to 7 inches long and are supplied with a wire stylet to unplug them if necessary. They should be inserted high on the left side, the same as the trocar in frothy bloat.

Chronic bloat caused by enlargement of the lymph nodes between the lungs can be treated by having your veterinarian make a rumen fistula. This procedure consists of making an opening through the skin and muscle high in the left flank. The rumen is then sutured to the skin before it is opened to release the accumulated gas. The fistula is designed to remain open for 1 to 2 months. During this time, the lymph nodes should decrease in size and normal belching can resume. Normally, natural healing will close the fistula. If not, the veterinarian can surgically repair the opening. There are also "semipermanent" trocars that can be used.

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