



Beef Cattle Handbook



BCH-3510

Product of Extension Beef Cattle Resource Committee
Adapted from the Cattle Producer's Library

Feedlot 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 the 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.

Managing Feedlot Bloat

Feedlot bloat occurs infrequently and death losses are minimal in well-managed feedlots. Most cases are "sub-acute" rather than "acute" where distress symptoms such as frequent urination and defecation, labored breathing, and restless movements are evident. Quite often feedlot bloat is chronic, occurring repeatedly in only a few of the cattle in the lot. Under these conditions, Poloxalene does not appear to be effective in preventing feedlot bloat. Changes in feeding and management offer the best means for preventing feedlot bloat.

The ration most commonly fed by feeders seeking information regarding feedlot bloat has included finely ground milo and loose alfalfa hay fed in separate bunks, or finely chopped alfalfa hay mixed with the grain. Using these rations as a basis for discussion, the following are changes that may prove effective in reducing the frequency and severity of bloat. They are listed in order of preference:

1. Coarse chop the hay and mix with the grain.
2. Increase the ration dry matter.
3. Use a coarser roll on the milo.
4. Substitute low-quality legume or non-legume roughage for part or all of the alfalfa hay (adjust the protein, vitamin, and mineral supplement appropriately at the same time).
5. Feed 50 percent or more coarsely rolled corn or whole corn.

Feedlot bloat that occurs on high-concentrate or all-

concentrate rations can usually be reduced by adding coarsely chopped roughage. Separation of the grain from the roughage and/or supplement seems to be involved. When this is a problem, change the ration to minimize separation. Canadian studies have indicated that adding moisture to barley a few hours before rolling (tempering) reduced fines and also bloat. Feeding of an Ionophore is said to have a beneficial effect.

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. 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.

Perhaps the best way to eliminate problems from chronic bloaters is to send them for processing, particularly if they weigh 700 pounds or more.

Adapted from CATTLE PRODUCER'S LIBRARY CL625

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This publication was prepared in cooperation with the Extension Beef Cattle Resource Committee and its member states and produced in an electronic format by the University of Wisconsin-Extension, Cooperative Extension. Issued in furtherance of Cooperative Extension work, ACTS of May 8 and June 30, 1914.