

Bovine Bloat

By Dottie Love, 2010

Bloat is an emergency condition that can develop within a few hours and can kill without quick treatment. When we humans feel bloated from a large meal, the digestive process soon relieves the discomfort. Same thing with cattle—most of the time. But when things go awry, your zebu can die in minutes while you watch helplessly.

However, there are some simple treatments that will successfully treat bloat quickly in almost all cases. Anybody can do them using household-type supplies and equipment.

The Process of Bloat

(If you're not familiar with bovine digestion, please read "Quick Guide to Cattle Digestion")

Bloat is what happens when gas becomes trapped in the rumen. If the gas isn't released through normal belching, it has no place to go. The rumen swells from the gas; you can see it enlarge minute by minute. The rumen begins to press on the cow's lungs. Eventually the cow falls over on its side with its legs straight out. The cow suffocates.

At any point in this quickly-progressing condition you can save your cow—if you know what to do and you have the supplies. It happened to me just the other day with my bull. I'll tell you the symptoms to diagnose it, and then I'll describe the treatment options. Later we'll talk about the preventable causes of the different types of bloat.

Symptoms

A round, distended belly, especially on the rumen side--that's on the left side--the cow's left, not your left. Perhaps labored breathing. Obvious distress. Standing with back legs stretched out. Maybe drooling or sweating.

What's Not a Symptom: anything happening at the back end of the cow.

Treatments for Gas Bloat (Dry Bloat, Feedlot Bloat)

Option One: Liquid Treatment

This treatment is for an animal able to stand. Get a box of baking soda (bicarbonate of soda). Mix it with water, about 1/2 box to 32 oz (1 quart) water. Or you can use straight vegetable cooking oil. Fill a 12 oz. long-necked bottle. If you're alone, get at her neck, where you're both facing the same direction. Hold the cow's head with one hand and force the bottle sideways through the gap between front and back teeth. Pour the whole 12 oz. bottle down her throat. I do it slowly, with their head not too far up—this avoids aspiration into the lungs. If it's a calf, use 6-12 oz. I really don't think you can overdose them. Oil and/or baking soda will dissolve the foam that's filling up her rumen.

Advice: Hopefully your cow is tied up. Restrain her the best you can. If you don't get the bottle through her teeth the first time, she'll clench her teeth. If you have a helper, get them to grab the cow's upper front gums and pull up hard—that usually opens their mouths. Um, don't tell your helper they can still bite pretty hard without top teeth... If you have a clip-on nose ring, use that to pull up the head. Don't be a baby about it—you gotta get that into her. The longer you hesitate, the harder she'll fight you.

What kind of bottle? Find any bottle in the shape of Worcestershire Sauce—the bigger the better. Buy a bottle of any bloat treatment and reuse the bottle. I'm scared of glass bottles for the slight danger of breakage, but aluminum longneck beer bottles will certainly do. If you have a drenching tube, you can use that. This is a tube with a funnel top; a goat size will do fine for zebus. Pour the liquid in, and remove the tube.

After you give the liquid, the cow needs to burp. A lot. A whole lot. Massage your cow's rumen area with firm long strokes from the abdomen towards her spine.

Option Two—Needle Treatment

This treatment works faster and is much easier. You'll use a 1 1/2" needle; yes, I said one and one half inch. A large bore, like 14-16 gauge. Attach it to a syringe—the bigger the better—a huge one gives you a better grip. Needles and syringes are readily available at the farm supply store. Stand at the cow's left flank, holding the syringe in your left hand like a dagger (I'm left-handed; it might be easier for you to stand near her shoulder, facing her tail).

Pull the plunger out of the syringe; you don't need it. Locate the sublumbar fossa; that's the (normally) soft triangle between the ribs and the pelvic hooks. You've probably noticed this on a healthy cow—it's what looks "hollow" when

they're thirsty—when you press on it you can feel the springy, elastic rumen. When a healthy cow is full of feed, it feels like a basketball. When they're bloated, it's really, really firm. Now you'll aim a few inches in front of the sublumbar fossa—kind of under the last big rib. You have to stab the needle in with no hesitation; the rumen can "bounce" away from you. Keep a good hold on the syringe; the cow will probably shift around at this point. The gas will start hissing out. If it stops before the cow is down to a normal size, readjust the needle. Also try putting the plunger back in and pushing a little air in—it might be plugged with a little liquid or foam or grass. It took my bull fifteen minutes to release all the gas. Hopefully you won't have to stick her again, but you might. When she stabilizes, follow the post-treatment directions below.

Option Three: Tubing Treatment

You can also pass a tube down the cow's esophagus. For a miniature zebu you'll need a tube about 4-5 feet long. A goat size will work or you can buy tubing at the hardware store; mine is clear vinyl with an outside diameter of $\frac{3}{4}$ ". It actually tends to crease in storage (like a cheap garden hose)—I think I'll shop for a more rigid type and get two sizes, for calves and adults. That way you can use it to tube-feed weak newborns. Use a fingernail file to round off the edges on both ends.

I used a tube to feed a weak, dehydrated calf and it was very easy. Get at the side of the cow's head. Have someone hold the mouth open; you can even use a block of wood to prop it open. Stick it down the cow's throat. Make sure you know where you're going with the tube. Use the curve of the tube to guide you over the tongue. Experts on the web say it's hard to get into the windpipe, which is ribbed and stiffer than the esophagus. If you get liquid into the lungs, your cow can get pneumonia—especially if you're using oil—or she can drown.

As you pass the tube down—hand over hand—the cow will swallow the tube. Don't let them just chew on the tube. Use the tube's length to estimate how far you're in. If you're using liquids you don't have to go to the rumen. If you're trying to release gas, you'll go to the top area of the rumen. You know you're there when the gas reaches your nose—ooh, it's bad! Let it all come out. You might have to adjust the tube in and out a little. You're done. Watch the animal closely for 24 hours. Cows can become chronic bloaters.

Treatments for Frothy Bloat (Wet Bloat, Pasture Bloat)

Frothy Bloat is a more serious form of Bloat. If you've tubed or needled the cow and you see foam, you have frothy bloat. If the foam is minor and drains easily, use the Dry Bloat Treatments to disperse it. The foam may be thick and won't dissolve; that's called "stable foam." It can clog up in the tubing. If the foam

isn't flowing out easily, it's blocked from any treatment you can do. Get to the vet immediately--this can quickly turn life-threatening.

Post Treatment

Keep her standing. Walking helps. When you start hearing and feeling the gas, your cow's OK. Watch her for the next 24 hours. Make sure she's chewing her cud and burping. Give her only dry grass hay or average grass and plenty of water, heated to tepid if it's cold outside.

Trocars, Pocketknives, and Garden Hoses

When I first heard about bloat, I mail-ordered a cattle trocar, a ghastly giant Dracula-like stake. It has two parts; a piercer within a tube. After you stab them, the tube keeps the hole open. When you use that intrusive of a treatment, it's very easy for the cow to develop a secondary infection. The rumen contents can spill into the peritoneum, causing peritonitis. I would never use it on a miniature zebu. But recently I heard that there's a smaller trocar available; I don't know the source though.

I've also heard of ranchers using pocketknives to create a hole, then sticking a piece of garden hose in; the rushing gas causes the hose to fly up in the air. Other times there would be so much foam that the rumen had to be cut open to allow the foam to be scooped out by hand.

The Worst-Case Scenario: A Twisted Abomasum

With either Dry or Wet Bloat, the rumen can get so distended that it presses on the heart and lungs, and the animal will die without treatment. Another usually fatal result is a twisted abomasum. This can cause bloat or develop during the bloat episode. The abomasum is the last chamber of the stomach; it's also called the "true stomach," as it's the only chamber with acids in it. It is kind of suspended—like a hammock--on two "connectors" between the omasum and the intestine. The abomasum can rotate or twist. It can even float up during bloat, being displaced by the extension of the rumen. Digestion is stopped. The animal usually dies.

Causes of Gas Bloat (Dry Bloat, Feedlot Bloat)

- Overfeeding (at absolute maximum, a zebu should not eat more than 3% of their body weight per day)
- Overfeeding grain

- Underconsumption of forage (forage should be 75% of diet)
- Introduction of new feed too quickly
- Feeding soft-textured forage such as alfalfa
- Consumption of hay cubes or lawn-grass trimmings (these are too short-fibered and will pack down in the rumen)
- Stress, travel, unfamiliar feeds, refusal to drink strange water, pain from other problem

Cause of Frothy Bloat (Wet Bloat, Pasture Bloat)

Feeding in lush spring pastures

Almost exclusively, the problem is overfeeding in green, rich springtime pastures. Wet Bloat can be prevented by using commercial anti-bloat products such as "Bloat Blocks." Place these in the pasture before allowing the cattle access to the new grass. Other important measures include feeding hay to cattle before allowing them in the green pasture, and limiting grazing to short periods at first. Vary the times and locations you do this, or the cows will learn your routine and will "hold out" for the pasture.

© 2010-2014 Dottie Love. All rights reserved. Please contact info@fanherloveranch.com