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Dakotaland Feeds, LLC

A NEWSLETTER OF DAKOTALAND FEEDS

Bovine Congestive Heart Failure

In a Nutshell:

- **Packers are signaling that they want big cattle**
- **Bovine Congestive Heart Failure (BCHF) can be a problem**
- **Symptoms include bottle jaw, pulsating jugular, or swelling in the brisket**
- **The majority of cattle exhibiting BCHF are black-hided**
- **There is no effective treatment for the condition**
- **Cardiac load increases as animals get heavier**
- **Genetic testing may be possible to identify risk factors**

Since the time people started marketing cattle, producers have been paid by weight and pounds still pay. Right now, it seems every time you turn around, you hear about the low cow numbers in our country. And yet, we are producing record amounts of beef. How? We are making big cattle, *huge* cattle.

Much of the time, finished cattle sold on the rail are not discounted until the carcass weight is over 1100 lbs, meaning the animal was likely over 1700 lbs. Over the last 20 years, those heavy weight discounts have moved from 950 lbs to 1000 lbs and now to 1100 lbs. Sometimes, the discounts exist because carcasses will drag on the ground after they get that big creating a food safety problem for the packing plant so there is a physical limitation to how big some of the plants want cattle. However, the packers are obviously not signaling that they want you to supply them with smaller cattle. The discount is commonly higher for small carcasses (less than 650 lbs) than big ones.

There are challenges that come with getting cattle to weigh 1500-1600 lbs or more. One of the challenges that is becoming more prevalent is bovine congestive heart failure (BCHF) in cattle that have been on feed for a long time. This disease was once only associated with high altitude disease and was referred to as brisket disease, but is now seen more often in feedlots at low altitudes, as well. Investigations began because of unusually high death loss and the increased number of necropsies in feedlots at lower elevations that found significantly enlarged hearts. In one report, a pen of cattle exhibited 7.5% death loss due to BCHF. It is caused by failure of the right ventricle of the heart.

The Meat Animal Research Center in Nebraska has detailed some symptoms that need to be present for consideration of BCHF. In the case of congestive heart failure, cattle will exhibit a visibly pulsating jugular vein, bottle jaw (edema under the chin) or edema in the brisket area, abdominal swelling, and bug-eyes. Along with those symptoms, suspect cattle will also often exhibit open-mouth breathing, abducted elbows (elbows that stick out from their sides), depression, anorexia, weight loss, and exercise intolerance. A commonality in the cases examined by MARC showed a substantial correlation of BCHF with black-hided cattle as 93% of affected cattle in the study were solid black, 5% were solid red, and 2% were red/white faced. Their work also identified two specific genetic markers that were moderately predictive of BCHF disease development. Those markers were used to develop genetic testing, one of which is now commercially available.

With BCHF, there is no effective treatment. If you see an animal exhibiting the signs associated with BCHF, your best course of action is to get that animal to a slaughter facility as soon as possible. There is no medicine, vaccine, or treatment that will resolve heart failure. It results in dead cattle. Because sometimes cattle are open-mouth breathing and depressed, it could be confused with or treated as respiratory disease. However, the cattle do not respond to treatment and often die within several days to weeks.

As the animals get heavier, the cardiac load also increases. If you add heat stress on top of a bad heart, things can get ugly. Heat stress combined with insufficient cardiac output (and therefore a lack of oxygen) can lead to BCHF and a dead critter. If you are going to have heavy black-hided cattle during July or August, it would be wise to take some precautions to deal with the heat.

The genetic testing being developed will likely be most useful in the cow-calf and seedstock sectors of the business. Selectively breeding for cattle less susceptible to BCHF will be the most effective way to prevent the disease in the feedlot. In the feedlot, cattle could be tested and those identified as suspects for BCHF can be managed separately and potentially be marketed earlier to avoid taking the cattle to higher weights that cause increased stress on the heart.

The industry is likely several years away from widespread testing. In the Dakotas, the problem has not been identified as frequently as in some of the large commercial feedlots. However, that doesn't mean the problem doesn't exist. Being aware of the potential problem could help us make a better action plan should we happen to see it in our own cattle.

Roxanne Knock, PhD

What do you need to be thinking about this time of year?

- Use a good mineral program for breeding season—ask about Ultimate Breeder 8 or Availa-4® Tubs
- Get a **high magnesium mineral** to prevent grass tetany during early season grazing
- Implant cattle going to grass
- Start feeding **Altosid®** or **ClariFly®** to prevent horn fly populations
- Order wasps for feedlot fly control or add **ClariFly®** to your feedlot supplement
- Ask about using **Diamond V Yeast Culture for heat stress mitigation** for feedlot cattle during summer months
- Get the bulls in good body condition—they should be a BCS 5 or 6 at 60 d prior to breeding
- Make sure the bulls have mineral too! Stress Tubs or Ultimate Breeder mineral provide Availa-4® mineral
- Have a breeding soundness exam and semen test done on your bulls to help ensure high pregnancy rates
- Talk to your veterinarian about your spring vaccination and de-worming plans

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Dakotaland Feeds, LLC

674 W Park Ave
Huron, SD 57350