

FEEDLOT MANAGEMENT

Feedlot Health Series: Part II – Respiratory Disease Management

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COMMON PROBLEM, BIG PROBLEM

Respiratory disease is one of the biggest thieves of profits in the beef industry. It is the cause of approximately 75% of all illness in feedlot cattle. It also is responsible for about 50% of deaths in the feedlot. And those are only the cattle that are caught sick. One particular feedlot study (Wittum et al, 1996) showed 38% of calves were pulled and treated for bovine respiratory disease. However, at the processing plant, 72% of the cattle in the study had lung lesions consistent with pneumonia. So, approximately 68% of untreated cattle had gone through a bout of respiratory disease, and were not picked up by visual observation.

EFFECTS OF RESPIRATORY DISEASE

Why is it important to get a good handle on bovine respiratory disease (BRD)? The cost of BRD goes far beyond just the cost of treatment of sick animals and the cost of dead animals. Cattle that develop BRD have notable decreases in growth performance. Studies vary in the total loss in average daily gain (ADG) from 0.17 lb/day to 0.30 lb/day, which translates to 30-54 lbs over a 180 day feeding period. With the cost of feeder calves these days, this unrealized weight may mean the difference between profit and loss.

Not only does BRD have a significant impact on growth performance, there is also a big decrease in carcass quality of cattle that are affected by BRD. One particular study (2002 Iowa Tri-County Steer Carcass Futurity), showed a 7.4% decrease in the percentage of cattle that graded choice when they were treated once for BRD. They also showed a 12.3% decrease in percent of cattle that graded choice after 2 treatments (as opposed to no treatments at all). This is especially important with a large choice-select price spread, as is typically seen in the early summer months (late May, June), when the market is flooded with fat cattle.

PREVENTION

The key to successfully combating BRD is prevention. Vaccination is an absolutely necessary part of effective prevention of respiratory disease in feedlot calves. Another important component of prevention is stress reduction. The best prevention for feedlot respiratory disease is by purchasing calves that have been properly preconditioned (which included weaning and bunk-breaking). One study has shown up to a 16% decrease in feedlot morbidity related to respiratory disease in calves that have been properly preconditioned prior to entry to the yard. Another study, published in the Journal of the American Veterinary Medical Association, showed that preconditioned calves were nearly 2 times less likely do develop

respiratory disease and were nearly 5 times less likely to require treatment.

ACIDOSIS AND BRD

Acidosis and BRD go hand in hand, because acidosis is actually a form of stress that the feedlot cattle have to deal with. If your calves are on too hot a ration, you will start to notice some coughing among the calves. Depending on how hot the ration is, you may start to see depressed calves, and when pulled, they have fevers. If you are starting to treat a bunch of calves from one pen, it may be prudent for you to back that group of calves off feed a bit, until they start to turn around again. It is important, not only to decrease the stress that the calves are experiencing from the acidosis, but sick calves aren't eating, and what feed they were supposed to be consuming, is now being eaten by the healthier calves in the pen, which is pushing them to a more severe state of acidosis.

WHAT TO DO IN AN OUTBREAK?

Pull cattle off feed for 12-24 hours and feed them decent quality, dry hay. This will decrease or eliminate the stress of acidosis that the calves may be experiencing.

Check temperatures of affected animals as well as a few random, apparently healthy cattle. In a "wreck", the majority of the calves will have a temperature over 104.0 F. If more than 20-30% of the cattle have a temperature over 104.0 F, treat all of the cattle in the pen with a long acting antibiotic, such as Tetradure[®], Micotil[®], Excede[®], Draxxin[®], or the long acting dose of Nuflor[®] or Baytril[®]. It may also be advantageous to administer a dose of flunixin meglumine (i.e. Banamine[®]) to the calves with extremely high fevers. This will decrease their temperature and help them feel better. Also, always remember to

follow label withdrawal times to ensure food safety.

In some cases, revaccination may not be helpful. If there is only one pen in the yard that is having major problems with BRD, it may be prudent to revaccinate the calves in neighboring pens, as they are next in line for the spread of disease, and will be facing a fairly significant pathogen load through fence-line contact. However, the goal of vaccination is to simulate an immune response, and the cattle currently fighting respiratory disease are already at peak immune system simulation. Often, revaccination is credited with resolution of a respiratory disease outbreak, when, in reality, the majority of the calves were already on the down swing of the disease curve, and the vaccine actually did very little in the way of effectively curing the calves.