



CEDAR GROVE VETERINARY SERVICE NEWSLETTER



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CALF PNEUMONIA: THE DISEASE THAT WON'T GO AWAY

Calves: they are cute, they are the future of your herd, and sometimes it seems that no matter what you do they get sick. The drastic changes in weather we have had this winter have made the challenge of keeping calves healthy even harder. Therefore, it seems like a good time to review the causes of calfhood pneumonia, the treatment strategies that farmers should use, and how to prevent future outbreaks.

Have you ever wondered why calves seem to get pneumonia more than you or your horse or your dog? Cows, in general, are awesome, but their lungs are relatively small compared to their size. An adult cow has a lung capacity that is only 2.5 times greater than that of an average adult man, but they are nearly 8 times greater in size. Also, consider that a horse's lung, which is similar in size to a cow, can hold 42 liters of air while a cow's lung can only hold 12 liters. Therefore, if a cow or calf has even a small section of damaged lung, it can be very destructive to its overall health.

Because of a calf's limited lung capacity, it is best to prevent pneumonia issues before they start.

As with most calf health issues, it all starts with colostrum. Colostrum provides a calf with its immunity. Colostrum needs to be administered in a timely manner, within 6 hours of calving, and should only be used when it has been tested to be of the highest quality. It is hard to assess colostrum quality from sight alone. It is recommended that a colostrometer or Brix refractometer be used to assess quality.

Did you know that other factors can impair a calf's early immunity, even in the presence of adequate colostrum? Colostrum absorption may be compromised in calves born in extreme heat or cold, calves that have difficult deliveries, abnormal gestation lengths and those that show signs of respiratory distress at birth. Other factors that impair the immunity in calves are inadequate caloric intakes, crude protein deficiency, selenium deficiency, low levels of Vitamin A, C, or E, reduced stores of copper, manganese, zinc, iron, and coccidiosis.

Stress is also a risk factor for calves. The common factors that can cause stress in a calf's life are feed changes, weather changes, pen changes and overcrowding.

DO YOU KNOW YOUR ANTIBIOTICS?

Draxxin

Use: Draxxin is on label to treat:

- Bovine respiratory disease due to *M. haemolytica*, *P. multocida*, *H. somni*, and *M. bovis* in **CALVES** and **BEEF Animals**
- Foot Rot in **CALVES** and **BEEF Animals**
- Pinkeye in **CALVES** and **BEEF Animals**

Dose: 1.1 mL per 100lbs body weight SQ

Dosing: Inject subcutaneously as a single dose in the neck at a dosage of 2.5 mg/kg (1.1 mL/100 lb) body weight (BW). Do not inject more than 10 mL per injection site

Special Notes:

- 18-day meat withhold
- Do not use in female dairy cattle 20 months of age or older

When it comes to reducing stress, simplicity is key. For feed, it is best to feed a calf its colostrum and then start the calf on the milk source she will be on till weaning. That milk

source should be delivered at the same times each day as consistently as possible. Housing changes can also be a significant source of stress and should be limited as much as possible. Ventilation is another aspect of housing that should also be optimized, but that issue deserves its own article due to its complexity.

It is easy to say to limit stress, but is much harder in practice. Farmers, as much as they try, cannot control the weather. Nor is it always possible to reduce pen changes as space may be limiting. In the case where stresses are unavoidable, careful monitoring of calf health is very important to catch disease early.

Areas where calves are housed should be monitored frequently by employees trained in disease detection. Any calves that seem off

should trigger a treatment intervention. The criteria that should be used to identify calves that might have pneumonia are:

- Morning rectal temp that exceeds 103°F for two successive mornings
- Slow, reduced or no milk/milk replacer intake
- Cough, nasal discharge, or labored breathing
- Head tilt
- Joint swelling
- Weakness or reluctance to rise

The exact protocols for treatment of these animals should be discussed with your veterinarian, but most likely will include supportive care and an antibiotic treatment. There are many options for antibiotics, but a vet who knows your herd would be the best to ask what should be used in your situation.

Overall, calf pneumonia is complex and involves many factors. But due to their small lung capacity, we need to prevent disease at all costs. Before a farmer gets frustrated that they have tried everything, they really need to go back through the risk factors to make sure that they are not reducing immunity or promoting stress in the animals unknowingly. As always it is good to work with a veterinarian to get to the bottom of your calf issues.



Antimicrobial Residues- How are we doing as an industry?

Many farmers may have noticed that consumers are becoming more vocal about the food they want to eat. Due to this new-found interest, veterinarians and farmers must make sure that drug usage on-farm is done in a prudent manner. So how are we doing as an industry in terms of residues in beef and milk products.

In the meat industry, the unfortunate truth is that cull dairy cows have the highest incidence of confirmed meat residue violations at slaughter of all food classes. The percentage of dairy cull cows with positive residues is approximately 10 times higher than in cull beef cows, which correlates to 90% of all the drug residues found in animals harvested for beef each year. The most common drugs discovered in the positive animals are ceftiofur (Excenel, Naxcel, Excede), penicillin, and sulfonamides. These statistics make it obvious why the USDA and FDA are so highly critical of the dairy industry in terms of antibiotic residues.

In the milk industry, trends are looking much better. Ordinances put into place that dictated that every load of milk that is shipped in the US is tested for antibiotic residues has reduced the incidence of a positive tank to 0.1% per year currently from 13% in 1962. For 2015, the percentage of samples positive for residues was 0.012%, the lowest in history. The most common cause of milk residues was due to mistakes in management such as cows not being marked as treated or misread ear-tags.

Overall, even though we are doing well on the milk residues, consumer demands and the rampant dairy cull cow residues mean that as an industry we cannot become lax about antibiotic use on farms. The best way to reduce the risk of causing residues in food products is to develop clear protocols and maintain accurate records. Both require working closely with a veterinarian. Together, we all can create an industry that allows us to continue using antibiotics responsibly and produce a product consumers will be satisfied buying.

