



# CEDAR GROVE VETERINARY SERVICE NEWSLETTER



NOVEMBER 2018

## CONTROLLING RESPIRATORY DISEASE IN DAIRY CALVES

Respiratory disease in dairy calves may seem like a topic that veterinarians and industry professionals talk about every year. Respiratory disease remains the #2 cause of mortality in calves prior to weaning. It is an important issue and one that is worth addressing so that calves can be prepared for the upcoming winter and spring.

It may come as no surprise that prevention is key to managing respiratory disease. It may also come as no surprise that prevention starts with colostrum. All calves need to get an adequate volume (goal would be 1 gallon) of good colostrum within 2-4 hours of birth. Colostrum needs to be followed with good nutrition. Studies have shown that calves fed waste milk have a decrease in incidence of pneumonia compared to herdmates fed a 20:20 milk replacer. This is due to nutritional benefits and protective factors in whole milk. However, before a switch is made to whole milk other disease considerations need to be considered such as Johne's disease and Salmonella incidence on the farm. If whole milk is used, it is also vital to

monitor pasteurizer performance and make sure milk is clean with low bacterial counts. This can be done with regular milk samples being submitted to labs for monitoring and regular cleaning of equipment.

Biosecurity and housing are also important. It is vital that sick calves be segregated from other animals if they are housed in group pens. It is also important to minimize contact among younger and older animals. This can be logistically hard when space is limited on a farm but is important to stop the spread of respiratory pathogens among a group of calves. Respiratory disease can spread from coughing, nasal secretions, and eating/drinking from the same places. Disinfection of all feeding equipment—bottles, buckets, water troughs, etc.—is also important.

Ventilation is also a key to preventing respiratory disease. Poor air quality can cause lung damage that allows bacteria/viruses to cause disease and it can also serve as means for disease to be spread. It is important to avoid overcrowding by making sure there is 30-35 ft<sup>2</sup> of space

## TEST YOUR DAIRY FARMING KNOWLEDGE

- 1) What year was the Farm and Industry Short Course (FISC) at UW-Madison established?
  - a) 1848
  - b) 1875
  - c) 1886
  - d) 1904
- 2) Due to the changes in trade over the past year, the US Agriculture Secretary announced a \$12 billion program to help farmers. How much does a 250-cow dairy expect to receive because of this program?
  - a) \$1,365
  - b) \$3,413
  - c) \$6,826
  - d) \$13,653
- 3) New goals in the Ag industry make it unlikely new antibiotics will be produced for animal agriculture. The last antibiotic released for use in cattle was in 2012. What was it?
  - a) Draxxin
  - b) Zactran
  - c) Resflor
  - d) Zuprevo

*Answers on back*

available per calf in group pens. Barns also need to be designed so that the air turnover occurs, and that air quality is good at the calf's level. This is most often accomplished with positive pressure tubes built into the calf area. There are many veterinarians that are trained to help design ventilation systems appropriate for whatever housing system is being used on the farm.

Adequate bedding is also important since calves are very vulnerable to cold stress. The thermoneutral zone for calves is 50-73°F. This means in Wisconsin there is a good chunk of the winter and spring in which calves will struggle without adequate bedding. A study showed that there is an important positive correlation in deep bedding and lower respiratory disease. The goal is that bedding is deep enough so that the calf's legs are not visible.

Finally, vaccination for respiratory diseases caused by viruses should be considered mandatory on all farms. New research indicates that Inforce 3 can be used successfully to provide local immunity in the calf without interference from maternal antibodies. The best way to include Inforce 3 is for it to either be given on the day of birth or to be given 7 days

after birth. The calf experiences a dip in immune competence from day 3-5 after birth. Giving Inforce 3 or any vaccine at this time can provide no protection or can possibly cause some illness in the calf. For Inforce 3 to also be effective in the pre-weaned calf, it needs to be boosted 3-4 weeks after the initial vaccination. Use of vaccines in calves for bacterial pneumonias is controversial. If it is being considered, it should be discussed with a veterinarian to see if it appropriate.

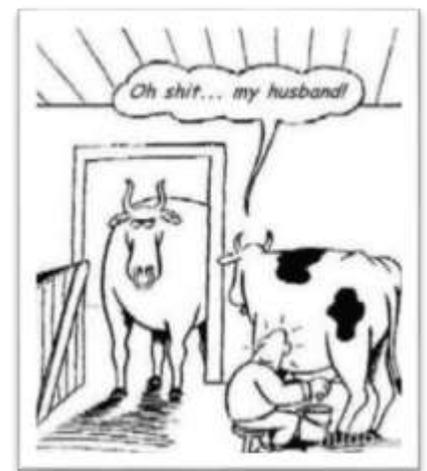
Prevention is the best way to reduce respiratory disease, but it is not always perfect. Prevention needs to be paired with a system that promotes early detection of disease since that is the best way to maximize treatment success. The University of Wisconsin-Madison has an easy respiratory scoring system for respiratory disease that can be used to identify calves that require treatment. Farmers should work with their veterinarians to utilize this or other early detection systems into their calf health protocols. Veterinarians should also be consulted for the antibiotics that would be best to use for treatment of respiratory disease in calves. They will often help farmers consider

things such as susceptibility of pathogens to antibiotics, drug pharmacokinetics, cost, withdrawals times, and extra-label drug use when making decisions about antibiotics.

So, what is the payoff from trying to prevent or reduce respiratory disease? In 2014, 24% of deaths in dairy calves were due to respiratory disease. There is strong evidence that respiratory disease results in reduced growth rates and reduced productivity. In fact, heifers diagnosed with pneumonia as young calves were 2X more likely to die before calving and more likely to have a calf at an older age as compared to unaffected herdmates. Finally, those animals that do survive to their first lactation will have on average a 513lbs decrease in ME305 for their first lactation. The bottom line is that respiratory disease matters and will affect calves at every stage of their life. It is worth trying to prevent this in every way possible.

**Fall Buying Show**

Cedar Grove Veterinary Services is planning on our Farmer Fall Buying show for the first week of November with a tentative date of November 7<sup>th</sup>, 2018 at noon at Pizza Ranch. Please pay attention to your mailboxes for the official invite and finalized details. We look forward to seeing everyone there!



Answers

- 1) C 2) B 3) D

