



ADCA Should I Vaccinate for Pneumonia?

Vets Corner Fall 2009

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The best way to help prevent pneumonia in cattle is to implement a good herd vaccination protocol, ideally with your local veterinarian. Pneumonia in cattle is a rather generic term for Bovine Respiratory Disease and involves viruses and/or bacteria that infect the trachea/airways and the lung itself. The bovine lung is quite small for its body size, especially when compared to the equine lung. For that reason they are more prone to pneumonia, and when they get pneumonia it can get bad fast, leaving long-term, chronic damage. If a calf comes down with even a mild case of pneumonia at a young age they are at a much higher risk of coming down with it later in life. Stress suppresses the immune system, and allows their lung to be compromised, setting them up for infection. Adverse weather, weaning, dehorning, castrating, and shipping are various stressors that effect cattle. A vaccination protocol is kind of like an insurance policy. It aids your herd's immune system, so that when a pathogen arrives, they can fight it off with little or no effect on their health.

The must in any vaccination protocol is a 5-way viral vaccine, that includes BVD (Bovine Viral Diarrhea) type 1 & 2, BRSV (Bovine Respiratory Syncytial Virus), IBR (Infectious Bovine Rhinotracheitis), and PI3 (Parainfluenza).

All of these viruses can cause respiratory disease, and should be vaccinated annually to the cowherd. Calves should be vaccinated prior to weaning, to allow them to build up immunity for the stress of weaning. Timing will depend on the type of vaccine used. The viral vaccines will either be MLV (modified live virus) or Killed virus. Most MLV vaccines will not need a booster for 12 months, while Killed vaccines require a booster approximately 3-6 weeks after the initial dose, and an annual booster (may vary among actual products). While MLV are typically cheaper and easier (1 dose), they come with some risks. Most MLV vaccines require that the dam be vaccinated with the same MLV vaccine within the last 12 months (pre-breeding), before you vaccinate her calf and let it suck the cow again. The risk is that a naive cow that has not seen a MLV vaccine may abort her current pregnancy if she is either vaccinated or suckled by a vaccinated calf. Killed vaccines don't pose this risk, but require an additional dose.

The three most common bacterial causes of pneumonia include *Mannheimia haemolytica* (formerly *Pasteurella haemolytica*), *Pasteurella multocida*, and *Histophilus somni* (formerly *Haemophilus somnus*). *Mannheimia haemolytica* is typically the only one that can cause respiratory disease by itself, although it usually follows a virus. The other two are typically secondary to a viral pneumonia or occur after lung damage has already occurred. There is a variety of bacterial vaccine combinations out there; some combine *M. haem.* & *P. multocida*, some keep them separate. *H. somni* can either be given separate, or in combination with a 7-way *Clostridium* vaccine.

In the Midwest, I would recommend vaccinating calves with a 5-way viral vaccine, a *Mannheimia Haemolytica* vaccine, and a 7-way *Clostridium* with *Histophilus somni*. For the adult herd I would vaccinate with a 5-way viral vaccine either prebreeding or in the fall at weaning time, depending on if a MLV or Killed vaccine is used. Again, these are my recommendations, but your local veterinarian would be the best source for your area. Even the best vaccination protocol will fail in the face of nutritional deficits, poor conditions, or an outbreak of pneumonia. Don't wait until your cattle are sick to vaccinate!