Fluctuating Temperatures Means Extra Vigilance

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The weather thus far has not been too out of the ordinary – warm with seasonal cooling and little mud. However, wide fluctuations in temperatures, as seen the second week of January, can trigger respiratory problems, such as pneumonia in cattle.

Pneumonia. Bronchial pneumonia. Fibrinous pleuropneumonia. Shipping fever. All of these terms describe the same costly disease: Bovine Respiratory Disease complex, or BRD. BRD is a very complex, multifactoral disease that involves several instigating factors.

All cattle are susceptible to BRD, but it usually begins when an animal is stressed. Common stressors include mixing cattle from multiple sources, weaning, crowding, transportation, nutrition, variations in temperature and humidity, poor ventilation, and the respiratory viruses (IBR, BVD, PI3, BRSV).

All of these factors tend to weaken the immune system, making the animal more susceptible to disease. When the animal is exposed to one or more of the common respiratory viruses, the viruses infect the upper respiratory tract. This sets the stage for infection with bacteria that can settle in the lungs and cause severe tissue damage.

Respiratory disease, especially Pasteurellosis, is most often seen in young stock that have encountered multiple stresses. Several species of bacteria have been isolated, but the most commonly isolated species are Mannheimia spp. (formerly known as Pasturella haemolytica), P. multocida and Mycoplasma. Data suggests that Mannheimia spp. and P. multocida are the most important bacteria involved in BRD.

Early detection and treatment of BRD is a priority. Initial clinical signs include an elevated temperature, nasal and eye discharge, walking with a stiff gait, a crusty muzzle, salivation and mild diarrhea. Rapid shallow breathing and coughing are also early signs. Affected animals will hang their heads, look lethargic and often stand away from other cattle in the pen. Their unwillingness to eat is closely tied to fever and depression.

Depending on the organism(s) involved, death from BRD can occur within 24 to 36 hours. In other cases the infection can proliferate and become chronic, never causing death but instead producing widespread, permanent lung damage. Once the disease has progressed to the point that fibrosis, adhesions or abscesses have developed in or around the lungs, no treatment can satisfactorily correct the problem. The animal may survive, but will always carry some residual lung damage that will impact performance. Thus early detection and treatment of BRD is extremely important.

Obviously, prevention is a priority. A well planned vaccination program and efforts to reduce stress on the animal are keys to preventing respiratory disease. A respiratory vaccination should include: IBR, BVD, BRSV, PI3 and Mannhemia spp. (formerly known as Pasturella haemolytica). P. multocida and Haemophilus somnus can also be included if your veterinarian considers these diseases to be a problem in your area.

Also include management practices that reduce stress – handling animals quietly, minimizing pen movements and overcrowding and providing dry, clean bedding. It is also important to provide adequate nutrition, clean water and plenty of rest, especially for animals that have been shipped. Nutritional soundness not only helps prevent disease, it also improves the immune function.

There is no miracle answer for treating BRD because it is a disease complex and determining the correct treatment for each individual case is a complex process. There are a number of injectable antibiotics available for treating pneumonia and reducing fever caused by BRD infections. However, it is important to consult with your herd veterinarian to determine the appropriate course of action. Δ

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