



Vaccination Vital to Prevent Blackleg and other Clostridial Diseases in Livestock

Several life-threatening livestock diseases are caused by bacteria called *clostridia*. These diseases are extremely aggressive and nearly always fatal. As a responsible animal owner there are many ways to provide the best care for your stock when it comes to clostridial diseases – among them, vaccination is the most important.

***Clostridia*: A sneaky bacteria**

Clostridia are anaerobic spores which means they don't need oxygen to grow and can wreak havoc in herds. The spores are highly resistant and can survive in the soil for long periods of time. They also form a protective covering in a dormant stage when exposed to heat or drying. Under certain conditions (i.e., change in the environment, stress, or injury), they will multiply and cause disease.

Clostridial diseases can be divided into two categories: Those in which the organisms actively invade or when locally dormant spores are activated and reproduce in tissues of the host, with the production of toxins that enhance the spread of infection (the gas-gangrene group, the clostridial cellulitides group). Those characterized by toxemia resulting from the absorption of toxins produced by organisms within the digestive system (the enterotoxemias), in devitalized tissue (tetanus), or in food or carrion outside the body (botulism). Clostridial diseases are not spread from animal to animal or from animals to humans.

Meet the clostridial family of organisms

The clostridial family of organisms cause a variety of diseases in cattle and other animals, such as sheep and horses. When the bacteria grow, a toxin is produced with devastating consequences. The top three clostridial diseases include:

Disease	Results	Signs
Black disease	Damage to the liver	Profoundly depressed and can have abdominal pain. Sudden death is common.
Blackleg	Damage to muscles, such as bruising	May be swelling of leg. The leg may crackle when touched.
Tetanus (lockjaw)	Damage to tissue	Usually muscle stiffness; the disease is called lockjaw because the animal can't open its mouth.

Choosing the right vaccine

Clostridial vaccines have proven to be very effective in the prevention of most clostridial diseases. However, they can be some of the most stressful vaccines given to cattle today, negatively affecting feed intake and weaning weights.

The BOVILIS® VISION® line of clostridial vaccines by Merck Animal Health reduces stress of vaccination and minimizes the negative impact on performance, while maintaining efficacy. In field trials, cattle vaccinated with VISION clostridial vaccines showed the following:

- Less post-vaccinal stress, appetite suppression, as well as swelling and inflammation at the injection site¹
- Better cost of gains and feed conversion¹⁻⁵
- Greater weaning weights

Prevention is crucial to protect your herd against many clostridial diseases. Look for the BOVILIS VISION line that offers combination protection against several of the most common clostridial diseases.

Prevention is key

Although clostridial organisms are normal inhabitants of the cattle environment and only become problematic on occasion, when disease does occur the consequences can be devastating. Even if the disease is caught early, the prognosis is very poor.

It's impossible to predict disease, so preventive measures, including vaccination, are emphasized. Your veterinarian can help you select not only which vaccines are important in your area, but the correct timing of these vaccinations.

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¹Merck Animal Health 1993 Field Trial Report 92-3 Vision 8 Injection Site Blemish Study

²Merck Animal Health 1993 Field Trial Report 93-9 Weaning Weight Comparison of Vision 7 and Ultrabac 7 in a Wyoming Beef Herd

³Merck Animal Health 1993 Field Trial Report 93-14 Vision Weaning Weight Trials (2-4250-93)

⁴Merck Animal Health 1993 Field Trial Report 93-15 Weight Comparison at Weaning in 5 Beef Herds Comparing Vision <2 ml> to 5 ml 7-way Administered at Spring Branding

⁵Merck Animal Health 1996 Field Trial Report 96-5 Weaning Weight Comparison of Calves Vaccinated with Vision® 8 vaccine or a 5ml 8-way Clostridial Vaccine