



**Blackleg, redwater, tetanus and other clostridial diseases are a constant threat to successful cattle production around the world.<sup>1</sup>**





## 13 facts to help prevent clostridial diseases in cattle

- 1. Clostridial spores are found in the soil and digestive tract of healthy animals.<sup>2</sup>** These spores can exist for decades in the soil. There is no way to eliminate clostridial spores from the soil.
- 2. Overgrazed pasture** can increase the probability of consuming clostridial spores. Any grazing pattern that increases the consumption of soil and roots can lead to more spores ingested by cattle.
- 3. Housed cattle** can also be at risk from soil contaminated with clostridial spores. Any forage stored on soil is a risk factor for clostridial exposure.<sup>3</sup>
- 4. Injuries or wounds** that create an area in the animal with poor blood supply can activate clostridial spores. These include **high-volume intramuscular injections<sup>3</sup>** and **bruising from transportation. Late castration banding of bull calves** increases the risks and **can lead to tetanus.<sup>4</sup>**
- 5. Clostridial perfringens is a common cause of morbidity and mortality in pre-weaned calves.<sup>5</sup>** *Clostridial perfringens* from unclean feeding and mixing utensils can cause mortality in pre-weaned calves.<sup>5</sup> Therefore, when feeding milk or milk replacer it is very important to assess the cleanliness of all feeding and mixing utensils. Using unclean feeding equipment or feeding excessive meals can lead to clostridial overgrowth and sickness/death may follow.<sup>6</sup>
- 6. Prostaglandin injections**, which are commonly used to improve reproductive performance of cattle, can cause short-term, localized areas of poor blood supply. These areas can lead to clostridial disease in rare situations.<sup>7</sup>
- 8. Optimal immunity** against clostridial diseases requires providing a **first vaccine followed by a booster** given no more than **six weeks apart**. For the BOVILIS® line of clostridial vaccines, please refer to the chart on the back for the recommended primary vaccination schedule.
- 9. Annual revaccination of cattle (including breeding stock)** after the primary vaccination is strongly recommended. Proper adherence to vaccination programs for all cattle can reduce the likelihood of clostridial diseases.
- 10. For cattle at risk of redwater disease, re-vaccinate every six months** after the primary vaccination. *Clostridium haemolyticum* is the organism that leads to redwater disease.<sup>8</sup>
- 11. Vaccinating pregnant cattle for clostridial diseases is safe** and recommended to maximize immunity transferred to the calf through colostrum.<sup>9</sup>
- 12. Not all vaccines contain the same antigens** (refer to the chart on the back to see the difference in the formulation of each BOVILIS® clostridial vaccine). Talk to your veterinarian to determine the vaccine that provides coverage against the relevant antigens for your herd.
- 13. *Histophilus somni***, which is sometimes added to a clostridial vaccine, is a gram-negative antigen. **Any vaccine with *H. somni* will increase the gram-negative load, which can lead to an adverse event.<sup>10</sup>** Talk to your veterinarian about the clostridial vaccination protocol for your herd.

**7. Vaccination** remains amongst the best methods to help prevent clostridial diseases.<sup>2</sup> The Merck Animal Health BOVILIS® line of clostridial vaccines includes extensive and flexible coverage against important clostridial pathogens.



Discover the BOVILIS® line of clostridial vaccines – the only one offering vaccines to help protect cattle against clostridial pathogens, including tetanus.

	Bovilis® Covexin® Plus	Bovilis® Tasvax® 8	Bovilis® Vision 8 with SPUR®	Bovilis® Vision 8 Somnus with SPUR®
<b>VACCINE ANTIGENS</b>				
<i>Clostridium</i>				
<i>C. chauvoei</i>	●	●	●	●
<i>C. septicum</i>	●	●	●	●
<i>C. haemolyticum</i>	●	●	●	●
<i>C. novyi</i>			●	●
<i>C. novyi</i> Type B	●	●		
<i>C. sordelli</i>	●		●	●
<i>C. perfringens</i> Type B	○*	●	○*	○*
<i>C. perfringens</i> Type C	●	●	●	●
<i>C. perfringens</i> Type D	●	●	●	●
<i>C. tetani</i>	●	●		
<i>Histophilus</i>				
<i>H. somni</i>				●
<b>ADMINISTRATION</b>				
Dose volume	2 mL	4 mL	2 mL	2 mL
Primary vaccination	2 mL, subcutaneously Administer another 2 mL dose in 3 weeks	Two 4 mL, subcutaneous injections, with an interval of 6 weeks between injections	2 mL, subcutaneously Repeat in 3 to 4 weeks	2 mL, subcutaneously Repeat in 3 to 4 weeks

○\* Immunity is derived from a combination of Type C (beta) and Type D (epsilon) *C. perfringens* fractions.

Contact your veterinarian for more information about the **BOVILIS® line of clostridial vaccines** and to discuss whether these vaccines are suitable for your herd.

Always read and follow the label instructions to ensure these products are suitable for the animal to be vaccinated. Vaccination may not protect every animal that gets vaccinated.

References

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