

# Tech Specs

Elanco

Scour Bos®

## Scour Bos®

### Protection Against the Leading Causes of Calfhooed Scours

#### Comprehensive Protection. Long Vaccination Window.

Scour Bos 9 is intended for use in healthy pregnant cattle to help prevent diseases in calves caused by three variants of Bovine Rotavirus, Bovine Coronavirus, *Clostridium perfringens* Type C and four isolates of K99 pilated *Escherichia coli*.

Scour Bos 9 provides the most comprehensive protection available against scours—the leading cause of calf mortality, accounting for 56.4% of pre-weaning calfhooed deaths in dairy cattle<sup>1</sup> and the most common cause of death in beef calves following weather and calving issues.<sup>2</sup>

#### COMPREHENSIVE CALFHOOD SCOURS PROTECTION

- Comprehensive protection against up to nine causes of scours
  - Only three-way rotavirus vaccine on the market
  - More coverage with four *E. coli* isolates, more than any other scours vaccine
- More protection for calves of Scour Bos 9-vaccinated dams through antibody-rich colostrum for long-lasting passive immunity against scours<sup>3</sup>
- Xtend® III adjuvant provides long-lasting immune system stimulation that helps release antigens over time

#### FLEXIBLE AND CONVENIENT SOLUTIONS

- At up to 16 weeks, Scour Bos provides the longest initial vaccination window of any scours vaccine
- Producers can enjoy peace of mind knowing calves are protected against the leading causes of calf mortality: scours
- A study showed that 97% of veterinarians who used Scour Bos said it met or exceeded expectations despite severe weather<sup>4</sup>

#### SCOUR BOS VACCINE OPTIONS

	Bovine Rotavirus G10, G8, G6	Bovine Coronavirus	<i>E. coli</i> (4 isolates)	<i>C. perfringens</i> Type C
Scour Bos 4	■	■		
Scour Bos 9	■	■	■	■

#### SCOUR BOS 4

**INDICATIONS:** This product has been shown to be effective for the vaccination of healthy pregnant cattle to provide passive immunity in calves against disease by Bovine Rotavirus and Bovine Coronavirus. The duration of immunity for this product has not been established. For more information regarding efficacy and safety data, go to [productdata.aphis.usda.gov](http://productdata.aphis.usda.gov).

**ADJUVANT:** Xtend III.

**DIRECTIONS:** Shake well before using. Administer 2 mL intramuscularly in the neck 8 to 16 weeks prior to calving. Repeat 4 weeks prior to calving. Revaccinate with one dose 8 to 10 weeks prior to each subsequent calving. It is essential that newborn calves receive colostrum from the vaccinated dam.

**PRECAUTIONS:** Store out of direct sunlight at 2° to 8° C (35° to 46° F). DO NOT FREEZE. Do not mix with other products, except as specified on this label. Use entire contents when first opened. Do not vaccinate within 60 days prior to slaughter. In case of human exposure, contact a physician. WARNING: THIS PRODUCT MAY CAUSE PERSISTENT SWELLING AT THE SITE OF INJECTION. Anaphylactic reactions may occur. Symptomatic treatment: Epinephrine. Contains amphotericin B, gentamicin, and thimerosal as preservatives.

**VLN/PCN:** 196/1935.20

#### SCOUR BOS 9

**INDICATIONS:** This product has been shown to be effective for the vaccination of healthy pregnant cattle to provide passive immunity in calves against disease by Bovine Rotavirus, Bovine Coronavirus, *Clostridium perfringens* Type C, and K99 pilated *Escherichia coli*. The duration of immunity for these antigens has not been established. For more information regarding efficacy and safety data, go to [productdata.aphis.usda.gov](http://productdata.aphis.usda.gov).

**ADJUVANT:** Xtend III.

**DIRECTIONS:** Shake well before using. Administer 2 mL intramuscularly in the neck 8 to 16 weeks prior to calving. Revaccinate with Scour Bos 4 4 weeks prior to calving. It is essential that newborn calves receive colostrum from the vaccinated dam. Revaccinate with one dose of Scour Bos 9 8 to 10 weeks prior to each subsequent calving.

**PRECAUTIONS:** Store out of direct sunlight at 2° to 8° C (35° to 46° F). DO NOT FREEZE. Do not mix with other products, except as specified on this label. Use entire contents when first opened. In case of human exposure, contact a physician. WARNING: THIS PRODUCT MAY CAUSE PERSISTENT SWELLING AT THE SITE OF INJECTION. Anaphylactic reactions may occur. Symptomatic treatment: Epinephrine. Contains amphotericin B, gentamicin, and thimerosal as preservatives.

**VLN/PCN:** 196/4570.20

## TECHNICAL DISEASE INFORMATION

Calfhood scours is the leading cause of heifer calf mortality accounting for 56.4% of pre-weaning calfhood deaths in dairy cattle<sup>1</sup> and is the most common cause of death in beef calves following weather and calving issues.<sup>2</sup> Common signs and symptoms that accompany moderate to severe scours include dehydration and depression which can lead to death if not prevented, controlled or treated.

Calves that experience scours have reduced performance compared to herdmates without scours.<sup>5</sup> Calves can quickly infect other newborn calves in close proximity.

Prevention is essential to any herd health strategy and to avoid the combined effects of scours that can add up to cost thousands of dollars in losses each year due to death loss, treatment costs and reduced performance.

### BOVINE ROTAVIRUS

Bovine Rotavirus diarrhea is found worldwide. Rotaviral diarrhea results from replication of the virus in villus enterocytes of the small intestine. Clinical signs range from mild to severe diarrhea, which results in dehydration, depression and sometimes death. A high incidence of rotaviruses has been detected in scouring calves on both beef and dairy farms. The disease occurs most frequently within the first 2 weeks of life. The severity of the disease is often worse in calves co-infected with other enteropathogens.

Rotaviruses are currently classified according to G and P serotyping (genotyping). G refers to one site on the outer surface of the virus, and P refers to another site. Field surveys have demonstrated that G6 and G10 are the most prevalent.<sup>6</sup> Another less common but emerging serotype is G8.

Scour Bos<sup>®</sup> incorporates three unique field isolates of rotavirus. Independent genotyping of these three isolates by the University of Nebraska–Lincoln in 2003 found that the G6, G8 and G10 serotypes are represented in Scour Bos 9.<sup>6</sup>

Efficacy of the Scour Bos rotavirus components has been proven in challenge of immunity studies. Calves from vaccinated dams withstood a mixed field challenge of G6

and G8 much better than calves that consumed colostrum from non-vaccinated dams.<sup>7,8</sup>

### BOVINE CORONAVIRUS

Bovine Coronavirus causes one of the most severe viral diarrheas in neonatal calves. It may produce complete villus atrophy of the intestine. It is found worldwide and produces a severe diarrhea with dehydration and moderate mortality. A dual infection with rotavirus or *E. coli* can escalate the disease. Affected calves are extremely depressed, but they often continue nursing. Coronavirus is also capable of infecting lung tissues and may produce respiratory signs. Calves most commonly affected with coronavirus diarrhea range in age from 5 to 21 days. Diarrhea usually lasts 4 to 5 days. Affected calves are the main source of infection to other calves, but evidence indicates that some recovered calves and cows will continue to carry the virus and serve as long-term reservoirs. Calves consuming colostrum from cows vaccinated with Scour Bos 9 withstood a coronavirus challenge better than non-vaccinates.<sup>9</sup>

### CLOSTRIDIUM PERFRINGENS TYPE C

*C. perfringens* Type C is commonly found in soil. It is also a common inhabitant of the intestinal tract in healthy animals. Engorgement with milk is often a predisposing factor to disease. Type C enterotoxemia is caused by an overgrowth of these bacteria in the calf's intestine. This results in severe toxemia and high mortality rates. Calves may show signs including bloating, abdominal pain, hemorrhagic diarrhea or extreme weakness, but they may be found dead without showing any symptoms.

### K99 E. COLI

Colibacillosis caused by *E. coli* is primarily an enteric disease of calves from birth to 7 days of age. It may cause severe diarrhea. Pathogenic *E. coli* are commonly found in the manure of healthy cows. This results in most calves being exposed shortly after birth. Unless the calf has received some type of newborn protection, it is very susceptible to developing colibacillosis. The bacteria attach to the lining cells of the intestine by means of projections called pili. After attachment, the bacteria produce toxins that cause the intestine to secrete large amounts of fluid which results in diarrhea, dehydration and possible death.

**To learn more about Scour Bos contact your herd health veterinarian, Elanco sales representative or technical consultant, or visit [ScourBos.com](http://ScourBos.com)**

**The label contains complete use information, including cautions and warnings. Always read, understand and follow the label and use directions.**

<sup>1</sup> Dairy 2014 Part III: Dairy Cattle Management Practices in the United States, 2014. United States Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services, National Animal Health Monitoring System, February 2016.

<sup>2</sup> Beef 2007–08 Part IV: Reference of Beef Cow-calf Management Practices in the United States, 2007–08. United States Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services, National Animal Health Monitoring System, February 2010.

<sup>3</sup> Elanco Animal Health. Data on file.

<sup>4</sup> Elanco Animal Health. Data on file.

<sup>5</sup> Donovan GA, Dohoo IR, Montgomery DM, Bennett FL. Calf and disease factors affecting growth in female Holstein calves in Florida, USA. *Prev Vet Med* 1998;33:1-10.

<sup>6</sup> Snodgrass DR, Fitzgerald T, Campbell I, et al. Rotavirus serotypes 6 and 10 predominate in cattle. *J Clin Microbiol* 1990;28:504-7.

<sup>7</sup> Elanco Animal Health. Data on file.

<sup>8</sup> Elanco Animal Health. Data on file.

<sup>9</sup> Elanco Animal Health. Data on file.