

# Prevent, Detect and Treat Scours

## A Step by Step Guide

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**Scours is the number one cause of calf health problems during the first four months of calf life – and the number one calf killer.<sup>1,2</sup> Scours also robs your bottom line by cutting income by up to \$35 a head.<sup>2</sup>**

**Protecting your calves and operation from scours requires a complete scours management program, including disease prevention, detection and treatment.**

**ScourGuard 4KC**

## KNOW THE ENEMY

Scours commonly results from infectious or non-infectious agents that cause calf diarrhea in a number of different ways, but the end results are the same:

- Dehydration
- Low blood volume
- Loss of electrolytes
- Death, if untreated

### Timing

Scours is an ever-present threat to calves and they can experience scours as early as the first three days of life.

### Transmission

Infected cattle spread scours in feces and can carry scours-causing agents on their hair, udders, feet and legs. Calves are exposed to scours through:

- Fecal – oral transmission
- Saliva secretions
- Nasal secretions
- Colostrum and milk
- *In utero* exposure

### Losses

Scours can cause:

- 18% of calf mortality<sup>1</sup>
- 20 lbs/calf weaning-weight loss<sup>2</sup>

## FIGHT BACK WITH COMPLETE SCOURS MANAGEMENT

The pervasive viruses and bacteria that cause scours are a chronic threat to calves – and fighting them requires a complete scours management program that focuses on preventing the disease, detecting signs of infection and treating sick calves.





## Complete Scours Management

A complete scours management program of prevention, detection and treatment can be best assured by working with your local veterinarian.

### PREVENTION

Prevent scours through dam nutrition, vaccinations, environmental practices, calving protocols and colostrum management.

### DETECTION

Examine calves for uncharacteristic appearance, unusual behavior and abnormal feces to detect scours before fluid loss becomes profound.

### TREATMENT

Rehydration is key to saving calves from scours. Isolate sick calves immediately, and administer fluid therapy as soon as possible.



## SCOURS PREVENTION

Some scours infections don't respond to antibiotic therapy and the agents that cause scours can be found everywhere. To fortify your herd, focus on key management areas that help prevent scours outbreaks before, during and after calving.

### **Pre-Calving**

#### *Dam Nutrition*

Adequate protein in the dam's feed increases the amount and quality of antibodies in the dam's colostrum – the most important tool to prevent scours. Your veterinarian or nutritionist can help you set up a comprehensive nutrition management program for pregnant cows and heifers.

#### *Cow and Heifer Vaccination*

Talk with your veterinarian about a vaccination protocol for your herd, including a broad-spectrum scours vaccine like ScourGuard® 4KC, to help reduce the incidence of scours.

ScourGuard 4KC provides the most complete rotavirus protection available. It is the only vaccine labeled to help protect against Rotavirus serotypes G6 and G10 – and up to 30 percent of all rotavirus scours cases are caused by Rotavirus G10.<sup>3,4</sup> Always follow label directions for dosing.

### **Environmental Management**

The likelihood of scours increases as the calving season progresses because pathogens are carried and shared, then replicate in the herd. The Sandhills Calving System is an example of an effective approach to managing the environment. The system helps prevent scours by separating the youngest and most susceptible calves in a series of clean pastures.

To use the Sandhills Calving System, follow these basic procedures:

- Place cows and the first calves in a pasture for 2 weeks
- After 2 weeks, move pregnant animals to the next pasture
- After 7 to 10 more days, move any cows and heifers that still haven't calved to the next pasture
- Continue moving pregnant cows and heifers to new pastures at 7- to 10-day intervals
- At 4 weeks of age, commingle the herd

Work with your veterinarian to determine the best practices to manage your calving environment.

## SCOURS PREVENTION

### Calving Day

#### *Calving Conditions*

A clean calving location is vital to preventing scours. In addition, calves born to heifers are more likely to get scours, so pay particular attention to heifer management. Work with your veterinarian and nutritionist to check cow and heifer scores to identify animals that may experience calving problems.

If calving conditions are less than ideal or you want to start the newborn calves off with an extra boost, talk to your veterinarian about ENTROLYTE.<sup>®</sup> It is a nutritional supplement that provides electrolytes and additional energy to newborn calves.

#### *Colostrum*

Because it carries antibodies that help provide immunity, colostrum is a calf's best defense against scours. Calves need a high concentration of colostrum within two hours of birth.

#### *Calf Vaccination*

If the cow herd was not vaccinated, consult your veterinarian about using an oral vaccine like CALF-GUARD<sup>®</sup> in newborn calves prior to nursing to help provide protection.

### Equipment Cleaning

Equipment cleaning is one of the most important ways to help prevent scours. Remember to pre-wash, wash, rinse and thoroughly dry all equipment, following the steps below.<sup>5</sup>

- **PRE-WASH.** Before washing remove milk, manure and dirt by rinsing in lukewarm water (under 110° F). This will remove organic material that could denature the washing.
- **WASH.** Use a detergent in hot water (140° F to 180° F). Brush the feed equipment to remove all debris. Do not use brushes or scouring pads that scratch the plastic because scratches create further cleaning difficulties.
- **RINSE.** Remove soap and cleansers by rinsing in 110° F to 150° F water.
- **DRY AND STORE THE EQUIPMENT.** The drying stage is critical because most disease organisms cannot survive on a clean, dry surface. Try to avoid humid environments, and supplement with heat and fans to aid in the drying process.
- **SANITIZE.** If the above steps are followed properly, sanitizing before the next use is optional. However, should the above steps not be followed or a scours outbreak occurs, commercial sanitizers, such as diluted chlorine, may be used.

Check the effectiveness of your sanitation program during calving season by testing "as-fed" colostrum for bacterial contamination.

Review biosecurity measures to ensure clothing, equipment and vehicles are not contaminated with manure prior to entering a separate calving environment or pen facility.



## SCOURS DETECTION

Protecting your calves means intervening as soon as possible when calf diarrhea strikes. Identify sick calves at each feeding by checking calves for abnormal appearance, behavior and feces.

### How does the calf look?

Use the neck skin tent test to help determine calf dehydration. Pull up a fold of skin in the neck region and immediately release it. If the skin rapidly returns to its original position, then the calf is normally hydrated. If the skin remains as a “tent” when released, even for a few seconds, the calf is dehydrated.

### How does the calf act?

Scouring calves often appear depressed, weak and may refuse to stand. Specific symptoms to look for include, but are not limited to, downed ears or head; sunken-in eyes; dry, tacky mouth and nose; reduced urine output and decreased appetite. The chart below details dehydration levels and symptoms.

Clinical Signs of Dehydration <sup>6</sup>	
0	
2	Mildly depressed
4	
6	Depressed – sunken eyes, light skin, dry mouth and nose, but still standing
8	
10	Previous signs worsen, cold ears and legs, unable to stand
12	Critically ill, shock and death
14	

May require intravenous fluid therapy

### Is the calf's feces abnormal?

To detect scours, look for unusual color and consistency in calf feces. Talk with your veterinarian about taking fecal samples from affected animals.





## SCOURS TREATMENT

If a calf shows symptoms of scours, isolate it from the herd immediately to avoid spreading the disease. Monitor both temperature and hydration.

### Examine Sick Calves

When examining sick calves, pay particular attention to hydration status:

- Normal hydration – bright eyes, not sunken, moist mouth
- Mild dehydration – slightly sunken eyes, moist mouth
- Moderate to severe dehydration – sunken eyes, dry mouth, cold extremities, not suckling

### Treat Sick Calves

Because the main problem in scouring calves is loss of body fluids and electrolytes, the primary treatment must be aimed at restoring water balance. The calves are thirsty, but they are too sick to drink.

Hydration through an oral electrolyte is the recommended first line of scours treatment. Pfizer Animal Health's RE-SORB® is a scours treatment that contains a combination of glucose, the amino acid glycine, key electrolyte salts and water. The combination of glucose and glycine help the treatment to be readily absorbed, helping to rehydrate calves that have scours caused by *E. coli* or viruses.

Typically, treat a mildly dehydrated calf by administering two liters of oral fluid solution one to three times per day. Consult with your veterinarian regarding the appropriate oral electrolyte product for your operation, and always follow the label directions.

For severely dehydrated calves, talk with your veterinarian about using intravenous fluids and electrolytes. Keep in mind that antibiotics may not be effective in treating scours because they do not kill many of the scours-causing agents.

IT DOESN'T TAKE A SHARP PENCIL TO SEE WHY  
YOU SHOULD CHOOSE SCOURGUARD 4KC.



SAVE UP TO 30% MORE CALVES FROM SCOURS.<sup>1,2</sup>

ScourGuard 4KC is the only scours vaccine labeled to help protect against Rotavirus serotype G10–Scour Bos<sup>®</sup> and Guardian<sup>®</sup> labels don't compare. And since up to 30% of rotavirus scours cases are caused by Rotavirus G10,<sup>3,4</sup> why risk leaving your calves unprotected?

Prevention, detection and treatment of scours can be best assured by working with your local veterinarian. To learn more about how ScourGuard 4KC can be used as part of a complete scours management program, contact your veterinarian or call **1-866-X-SCOURS**.



**ScourGuard 4KC**

1 NAHMS Beef Cow/Calf Health & Productivity Audit; Part III: Beef Cow/Calf Health Management, January 1994. Available at: <http://www.aphis.usda.gov/vs/ceah/ncahs/nahms/beefcowcalf/chapa/ChapaP13.pdf>. Accessed June 24, 2008.

2 Anderson DC, Kress DD, Bernardini TMM, Davis KC, Boss DL, Doornbos DE. The effect of scours on calf weaning weight. *Prof Anim Sci* 2003;19:399-403.

3 Lucchelli A, Kang SY, Jayasekera MK, Parwani AV, Zeman DH, Saif LJ. A survey of G6 and G10 serotypes of group A bovine rotaviruses from diarrheic beef and dairy calves using monoclonal antibodies in ELISA. *J Vet Diagn Invest* 1994;6(2):175-181.

4 Chang KO, Parwani AV, Saif LJ. The characterization of VP7 (G type) and VP4 (P type) genes of bovine group A rotaviruses from field samples using RT-PCR and RFLP analysis. *Arch Viral* 1996;141(9):1727-1739.

5 Adapted from The Babcock Institute, University of Wisconsin.

6 Adapted from Pat Hoffman's UW-Extension "Dairy Replacement" by Sheboygan County UW-Extension Dairy and Livestock, Dairy Calf Management Skills Module, 2002.

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