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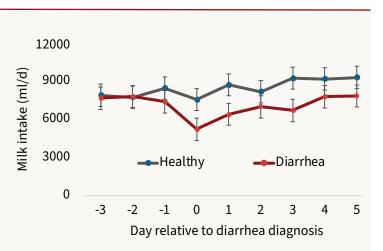
# **Diarrhea in Dairy Calves**

Most diarrhea in calves happens between 3 and 14 days of life. Be on the lookout for the following signs and symptoms in order to treat cases early and mitigate impacts.

## **Drinking Behaviour**

One of the first things to change as calves get sick is the amount of milk they consume or the speed at which they drink.

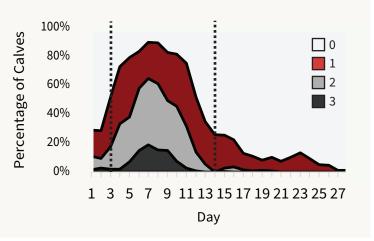
The figure on the right shows milk intake relative to diarrhea diagnosis. The amount of milk consumed typically declines one day before onset of diarrhea.



## **Fecal Consistency**

The best method to identify calves with diarrhea is to evaluate their feces. Calves with loose (*fecal score of 2*) or watery (*fecal score of 3*) feces have diarrhea.

The figure on the right shows daily fecal consistency scoring data from ~2,600 calves at Mapleview research facility. The highest peak of diarrhea occured between 3 to 14 days of age.



## Timeline of Diarrhea Causing Pathogens

|   |        | Clostridium pe | <b>rfringens</b> (bacter          | ia)     |         |         |         |
|---|--------|----------------|-----------------------------------|---------|---------|---------|---------|
| Cryptosporidium (parasite)                    |        |                |                                   |         |         |         |         |
| Enterotoxigenic Coronavirus/rotavirus (virus) |        |                |                                   |         |         |         |         |
| <i>E. coli</i> (bacteria)                     |        |                | Salmonella typhimurium (bacteria) |         |         |         |         |
| 0 days  | 5 days | 10 days        | 15 days                           | 20 days | 25 days | 30 days | 35 days |

## **Diarrhea Prevention**



### Colostrum

**Quantity:** Feed **200 g of IgG or 4 L of colostrum at first feeding** and provide a second colostrum feeding. Don't forget about feeding it quickly and minimizing bacterial contamination.

**Quality:** Ensure colostrum has **at least 50 g / L of IgG** by measuring with a Brix refractometer (22% or greater on Brix = 50 g or more of IgG per L of colostrum).



### **Clean Environment**

# **Transition Milk**

Feeding transition milk or small quantities of colostrum replacer mixed into milk from days 2 to 14 of life has been shown to reduce diarrhea and improve gut development and growth. Providing at least 8 litres per day of high quality milk or milk replacer has been shown to reduce disease, increase growth and improve feed efficiency.

## Diarrhea Treatment



### Fluid Therapy

#### The main therapy for calves with diarrhea is

**fluids!** Calves with diarrhea lose 3 to 6 L of fluid every day. Starting oral electrolytes at the onset of diarrhea helps prevent dehydration. If calves are unable to suckle, have difficulty standing, or are dull/ depressed, they may need IV fluids.



**Only 30% of diarrhea cases** result in bacteria entering the bloodstream, requiring antibiotics.



#### Inflammation & Pain

Managing pain and inflammation associated with diarrhea can help improve calf recovery. Discuss how to manage inflammation and pain in calves with your veterinarian, **including the use of non-steroidal anti-inflammatories.** 

> Work with your veterinarian to develop protocols to prevent and treat diarrhea to reduce its impact on your farm.