

## NAVAN VETERINARY SERVICES – FEBRUARY 2014 NEWSLETTER

Neonatal Calf Diarrhea, also known as calf scours is a serious, costly disease that effects most dairy farms sooner or later. Despite our best attempts at prevention, most farms will have to deal with diarrheic calves.

Early recognition and prompt treatment of these calves will determine how effective your treatment will be. Regardless of cause (bacterial, viral, parasites or nutritional) left untreated scouring calves can quickly become dehydrated and enter a condition called metabolic acidosis. The acidosis is the life threatening condition that calves will eventually succumb to as vital organs begin to shut down.

It is critical therefore to quickly determine how sick these calves are. There are several relatively easy ways to determine the degree of dehydration (and then treatment protocol) a given diarrheic calf has. Generally mild dehydration (<5%) is expressed as a calf that is still standing and has good suck reflex. A pull and twist of the skin on the neck or upper eyelid of these calves will tent for 1-4 seconds. These calves tend to respond very well with oral fluids, typically milk plus several extra 1-2 L feedings of warm electrolytes through the day. It is important to not take these calves off of milk because the cells lining the intestines acquire much of their needed energy from the milk feed flowing past them. Usually only a small part of the calf's intestines are "sick". There is not enough energy in most electrolyte solutions to satisfy the requirements of the G.I. tract for any length of time. A careful look at the eyes of calves in this category will show that they are still glossy and fill the entire orbit. That is, there is not space between the eyelid and the eyeball.

Moderately dehydrated calves, (approx. 7%) are often down in a sternal position. These calves are dull and listless. Rectal temperatures will often show a reduced body temperature, and extremities are often cool to the touch. The same skin tent test will last for approx. 5 seconds. Again, eyes are the major clue to assessing these calves. A space will be present between eyelid and eyeball, particularly the lower eyelids. These calves are metabolically acidotic and require more aggressive treatment, including intravenous fluids. Oral fluids alone will usually not be enough to correct the level of dehydration and acidosis. Depending on the age of the calf in this category, the use of antibiotics and other medication may be helpful. Generally, moderately to severely dehydrated calves due to diarrhea will have a shift in normal gut bacteria towards more gram negatives. Antibiotics may help to keep this population of bacteria in check and will help if bacteria enter the bloodstream and the calf becomes septic. Flunixin meglumine is a drug in a family of NSAIDS and has been found to be very helpful in treating calves in this and worse categories. This drug has some toxin binding properties as well as being an excellent reliever of pain associated with the G.I. system.

Severely dehydrated calves (>9%) are the ones you discover in lateral recumbency. They are often comatose or barely responsive to stimuli with no suck reflex. These calves are often hypothermic and have cold extremities. Their mucus membranes are also cold and tacky. A look at their eyes show very deep, sunken globe with a major gap between eyeball and eyelids. The prognosis on these calves is poor, but the only hope is aggressive intravenous fluids.

Depending on the cause of the diarrhea calves can stay as mildly dehydrated or go from normal to severely dehydrated in as fast as 12 hours, therefore any signs of diarrhea in calves needs to be monitored frequently. Ability to stand, whether there is a suck reflex or not and the degree of "eye sinking" are the 3 main signs your can use to decide if the calf can be treated by oral fluids alone or need more aggressive treatment.

## **SPRING MEETING**

**On Wednesday March 26 we will host our client appreciation meeting.**

**This year we have Ev Thomas, who has worked as an agronomist at the Miner  
Institute in Chazy, NY.**

**His responsibilities there included field crop research and forage production.**

**He has written articles for Hoards Dairyman and Farming magazine.**

**Topics to be covered include**

- **Corn Silage Processing and shreddage**
- **High corn silage rations and their challenges**
  - **BMR versus conventional corn silage**
    - **Silo Management**
      - **Inoculants**
      - **Alfalfa varieties**
    - **Cereal/Pea mixtures**

**More info will be available in next month's newsletter and on our website.**

**If there is anything else you would like covered, let us know!**