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# DAIRY NEWSLETTER

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## **Calf Scours and Electrolyte Solutions**

Scouring calves is a common problem seen in both dairy and beef calves which can lead to set backs in growth and increased mortality. Scours can be caused by a number of pathogens (often multiple working together) such as Ecoli, Rotavirus, Coronavirus, Cryptosporidium and others. A fecal test can be performed in clinic to determine which pathogens are contributing to scours in an individual calf.

Regardless of which pathogen is causing the scours, the goals of treatment are always the same:

### **1) Correcting dehydration**

Calves with scours lose a considerable amount of fluid with diarrhea and often have reduced fluid intake. Clinically we see calves with sunken eyes, prolonged skin tent and tacky gums.

### **2) Correcting acidosis and electrolyte abnormalities**

Calves with scours almost always have a lower blood pH than normal due to loss of electrolytes, mainly sodium, in diarrhea. Clinical signs of acidosis include loss of suckle reflex, depression and weakness.

### **3) Reversing negative energy balance**

Calves with diarrhea have reduced intestinal absorption and poor appetites which can lead to a negative energy balance. This means that the energy that a calf is expending is greater than the energy that the calf is consuming. The calf then has to draw from fat stores to be able to meet its energy needs.

### **4) Preventing the overgrowth of bacteria in the intestinal tract**

Harmful bacteria such as E.coli and Salmonella can take advantage of the disruption to the normal population of bacteria in the intestines and colonize, leading to worsening of scours, and potentially systemic infection.

### **5) Reduction of intestinal pain**

Diarrhea leads to considerable gut pain and inflammation, clinically seen as arched backs, reluctance to stand and stiff postures. Pain and inflammation is often overlooked in scour treatment decisions, but should be addressed in every calf with scours.

Oral electrolyte solutions address the above treatment goals by: providing a source of fluids for rehydration (1), restoring acid base balance with an alkalinizing agent (2), correcting electrolyte abnormalities by providing a source of sodium and other electrolytes (2) and providing a source of



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energy to reverse negative energy balance (3). We recommend the use of **Calf Lyte II** as an electrolyte solution for scouring calves. There are a large number of oral electrolyte solutions on the market and not all of them are appropriate for scouring calves. Electrolyte solutions with unbalanced levels of sodium or energy, such as those products labelled “**HE**” or “**High Energy**” may draw water from the calf’s gut, aggravating dehydration. Your herd health veterinarian can evaluate the suitability of an electrolyte solution for calf scour treatment.

The use of electrolytes is appropriate when the calf still has a suckle reflex. In calves with an absence of any suckle reflex, electrolyte solutions are not as effective, as they will pool in the stomach and may lead to rumen acidosis and bloat. In this case, IV fluids are more appropriate to correct the dehydration and electrolyte imbalance.

Oral electrolyte therapy should be combined with an NSAID (Non-Steroidal Anti-inflammatory Drugs), and antibiotics when appropriate. NSAIDs, such as Metacam, are useful in reducing pain associated with scours and gut inflammation (5). Antibiotics are only indicated if the calf is at risk for secondary bacterial overgrowth, or affected with a primary bacterial pathogen, such as E.coli (4). Bringing in a fecal sample to determine which pathogens are present in an individual calf can aid in making these treatment decisions – this is the best course of treatment for the calf, as well as being the most appropriate use of antibiotics.

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### ProAction Update

Next In class ProAction Training Session:

**Friday, May 19<sup>th</sup> at 9:30am at the St. Marys Veterinary Clinic**

We have had a number of successful in class training sessions over the past few months – thank you to all those who have attended. We hope they have been informative and have answered any questions that you have had.

If you have not attended a ProAction in class training session, or if another member of your farm team is interested in attending, please call the Kirkton Veterinary Clinic at 519-229-8911 to reserve your spot.

If you are unable to attend the training session on the 19<sup>th</sup>, but are still interested in obtaining ProAction training, please call the Kirkton Vet Clinic. Future training sessions will be made available as required. Once again, training is not mandatory, but it is highly recommended to ensure you are able to meet and exceed all of the ProAction requirements.

Please call the clinic if you have additional questions with regards to any aspect of the ProAction program.