Volume 123
June 2017

# ~Dairy Details~

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# All Calf Electrolytes are NOT Created Equal!

Calves with diarrhea lose an incredible amount of electrolytes and water, leading to dehydration, metabolic acidosis (blood's pH is lower than normal), electrolyte abnormalities and sometimes negative energy balance. The use of oral electrolytes is an easy and inexpensive way to restore fluids and correct the pH and electrolyte imbalances. But, which electrolyte product is best? There are many products on the market, and they vary greatly in quality and value. Product knowledge and reading the label are necessary to choose the best product.



#### **Top 5 Things a Calf Electrolyte Solution Must Do:**

- 1. **Correct osmolality (300-600 mOsm/L):** The definition of osmolality is basically the concentration of "stuff" (in this case electrolytes) in a solution (water). If osmolality is too high, the product can actually make diarrhea worse, causing a dehydrated calf to lose even more fluids, make dehydration worse, and cause gut motility issues.
- 2. **Supply sodium to correct losses:** Sodium levels should be 90-130 mM/L. Calves lose a lot of sodium when they have scours. Low blood sodium levels can interfere with the calf's ability to rehydrate itself.
- 3. **Include agents that encourage absorption of sodium and water:** Those ingredients can be glucose, citrate, acetate, propionate or glycine.
- 4. Provide alkalinizing or buffering agents: Ingredients like acetate, propionate or bicarbonate are necessary to correct acidosis. Larger amounts of acetate and propionate are more desirable then bicarbonate. Acetate and propionate help the gut absorb more sodium and also provide a source of energy. Excess bicarbonate can cause "abomasal stasis", meaning the stomach does not empty properly which then leads to a whole new set of issues.
- 5. **Provide some energy:** Calves with diarrhea are in a negative energy balance, so we want to include calories in our electrolytes if possible.

People often underestimate just how dehydrated scouring calves really are. If a calf will drink electrolytes on their own from a pail or bottle, don't be afraid to offer them electrolytes multiple times a day (between milk feedings), especially when it's hot. And, NEVER stop feeding milk to a scouring calf. The old theory that we should "rest the gut" and skip a few feedings of milk for scouring calves is no longer recommended. By not feeding milk, we can

actually make calves more dehydrated and energy deficient. Even "high energy" oral electrolytes do not have near as many calories as milk, and will not sustain a calf, so keep feeding milk!



Electrolyte labels often do not have all the information that you need to fully evaluate the product and know whether it is adequate for your scours treatment protocols. If you have questions about which products are best, please consult one of our veterinarians.

## **Cattle Handling Training a Success!**

Thank you to all who participated in our cattle handling training with put on with Elanco! Jorge Delgado did a great job explaining why cows behave the way they do and how us humans can keep their stress to a minimum!



Customer Appreciation Lunch: JUNE 7<sup>th</sup>!!!

Mark your calendar for our annual customer appreciation lunch on Wednesday, June 7 from 11:00 - 1:00. Join us for great food, socializing and door prizes! Hope to see you there!

## **Boehringer Ingelheim June Rebate Program**



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