

Calving Ease

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The “When” for Oral Electrolytes

- **Electrolytes are only helpful if the calf drinks them.**
- **The most important ingredient in an oral electrolyte feeding is water.**
- **As soon as a calf’s manure will no longer stay on top of her bedding she may be losing more fluid than she is consuming – it is electrolyte time!**
- **What other criteria make sense when deciding which calves receive electrolyte feedings?**
- **How does electrolyte feeding fit into the daily routine?**
- **Calves should still have access to free-choice water when receiving oral electrolytes and we should continue our regular milk feeding protocol.**

Electrolytes are only helpful if the calf drinks them.

This may sound foolish. Of course, the oral electrolyte solution cannot help the calf if it remains in the bucket or bottle. Nevertheless, factors such as timing, solution temperature, palatability and route of administration can affect willingness to drink. For example, we try to keep at least two brands of electrolytes on hand – if they will not drink one often they will drink the other one – maybe flavor plays a role here. Offering an oral electrolyte solution from a bottle sometimes overcomes the hesitancy to try “something new” when starting a calf on electrolyte therapy.

The most important ingredient in an oral electrolyte feeding is water.

Dehydration can be the most significant threat to a calf’s health when she starts losing more fluids than she consumes. The extra feeding(s) of oral electrolyte solution has the potential to prevent this problem. More water! Our recommendation is to offer electrolytes as a water solution. Avoid adding electrolytes to the milk ration of calves suffering from a deficit of body fluids. Depending on the extent of dehydration, oral electrolytes may not be the best answer to restore body fluids – check with your veterinarian about protocols for these extreme cases.

As soon as a calf’s manure will no longer stay on top of her bedding she may be losing more fluid than she is consuming.

Simple physical properties of manure can tell us a lot. When feces are too “soupy” to stay on top of shavings or straw we know that the fluid level is high. Thus, we do not have to be present to witness a calf having the “squirts” in order to see that she probably is losing more fluid in a day that she is

drinking. For those bedding with sand in the summer these feces have no profile – they often are spread out like colored water. For sure, these calves need supplementary fluids – we prefer oral electrolyte solutions to plain water in order to maintain a normal balance of blood components.

What other criteria make sense when deciding which calves receive electrolyte feedings?

Stress is the big word here. Here is a brief list of conditions where one or several days of electrolyte feeding may soften the impact of stress on calf health:

- Dehorning
- Extreme hot or cold environmental conditions
- Extreme changes in environmental conditions such as temperature (e.g., more than 30°F in one day), onset of high winds accompanied by precipitation
- Change in housing – from individual to group, introduction to automatic feeder from a bottle
- Vaccinations
- Respiratory infection (pneumonia) combined with any degree of scours

We suggest that when stress causes a drop in normal water intake just a little extra fluid as an oral electrolyte, beyond milk feeding, has the potential to support the calf's immune response.

How does electrolyte feeding fit into the daily routine?

Our job as a calf caregiver is to both diagnose the need for oral electrolytes and to deliver them. Some of our calves may need minimal supplementation. Others, however, may need more intensive care. We have found that marking either the calf or her pen can be a significant time saver, especially when caring for a large number of calves.

Excluding calves that need either IV or SQ fluids, we may have calves where twice-daily oral electrolyte feeding is the preferred protocol. It seems to make sense to slip one feeding in around mid-day – often just before going off to eat our own lunch. In the afternoon if there is no help to feed electrolytes in the evening the idea to spread out milk and electrolyte feeding as much as practical. For example, Sam used to feed milk to these sick calves at the very beginning of the PM feeding. Then after all calves are fed and all the equipment is cleaned up, he would feed oral electrolytes - about two hours later at the end of this shift. This worked fairly well with a few calves having to be bottle fed this PM.

Sam observed a 1,000-calf operation with a significant scours issue (cryptosporidiosis starting at 3-5 days, lasting for 3 to 5 days in at least 80 percent of the calves). Thus, they had many calves needing fluid therapy between the ages of 3 to 10 days. This dairy chose to deal with this challenge by bottle-feeding two quarts of oral electrolyte solution to all the calves in this age range just before noon every day. Here and there, a calf with severe scours received an additional feeding in the evening.

Calves should still have access to free-choice water when receiving oral electrolytes.

This is important. It is easy to overlook, especially among the very youngest calves. In spite of the challenges in freezing weather, at least once-a-day access to warm water is a best management practice.