

CALVING EASE

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USING ELECTROLYTES

WHAT IS AN ELECTROLYTE?

An electrolyte solution contains dissolved salts that replace those lost by a calf's body, usually through diarrhea. While there are many different formulations, nearly all of these solutions contain some concentration of sodium, potassium, calcium and magnesium. In addition, some electrolytes contain sources of energy and other additives that may or may not actually assist the calf. Some of these are homemade while others are purchased commercially prepared formulations.

WHEN DOES IT MAKE SENSE TO USE ELECTROLYTES?

Normal preweaned calves do a good job of balancing the intake and excretion of the minerals necessary for maintaining their body. This assumes they are being fed milk or a good quality milk replacer and have access to free-choice water.

But, when for any reason calves get sick with diarrhea (scours) they may begin to pass excessive amounts of minerals in their feces. The greater the volume of feces passed, the greater the chance that the calf's mineral balance has been upset. If the amount of feces remains normal even if the color is abnormal, there is a very good chance that she is not in need of an electrolyte solution.

Calves most likely to need supplementary fluids usually need electrolytes as well. That's why we watch calves for signs of dehydration caused by scours. They are less active than normal. They tend to be slow to get up at feeding time. A fold of skin at the neck will remain "tented" for three to five seconds before smoothing out again. As dehydration gets worse calves are unable to stand without assistance. These are the candidates for electrolytes.

HOW BEST TO USE ELECTROLYTES?

First, always remember that most of the benefit of an electrolyte solution is the supplementary fluid. The extra two quarts of water in which the ingredients are dissolved is the essential replacement for fluid lost in feces. The first rule of using electrolytes is to deliver them in supplementary fluids. That means in addition to the milk or milk replacer that is normally fed.

Second, think ahead so that you do more good than harm. That means the electrolyte solution needs to be delivered at or just above the calf's body temperature (102-105° F). In cold weather this may require carrying the bottle or tube feeder in a pail of warm water prior to feeding. And, it needs to be clean! The calf is already fighting off an intestinal infection. We don't need to make things worse by careless handling while mixing the solution or using feeding equipment contaminated with environmental bacteria. The second rule is to clean warm electrolytes.

Third, when electrolyte solutions are used to replace fluids lost in feces remember that the calf still needs nutrients. Only a very few of the most expensive electrolyte formulations contain significant energy. It's rare to find one that contains any protein or fat. The electrolyte solution should be extra fluid in addition to the milk. The third rule of using electrolytes is to maintain the normal milk or milk replacer feeding schedule for adequate nutrition.

Fourth, consider the calf's condition before force feeding an electrolyte solution. It is true that some dehydrated calves are unable to suck well enough to drink from a bottle. An esophageal tube feeder will effectively deliver the supplementary fluids to the calf's gut where they can be absorbed. But, why is the calf sick? The condition of her gut should be evaluated before more fluid is fed. Is her gut already filled with unabsorbed fluids? Is there an active bacterial infection that needs to be considered? The fourth rule is to consider all the health concerns of the calf before automatically tube-feeding electrolytes.

Fifth, don't automatically assume that fluids by mouth will be enough for severely dehydrated calves. Ask your veterinarian for her/his recommendation for these down and out calves. On the recommendation of their veterinarians many calf raisers keep bottles of lactated ringers solution on hand for sub-cutaneous administration. The fifth rule is to use all the necessary means to keep a calf adequately hydrated.

HOW OFTEN SHOULD I USE ELECTROLYTES?

If more than ten percent of the calves have scours badly enough to require the use of electrolytes a review of the calf management program is needed. That means looking carefully at the four areas of calving management, colostrum management, sanitation procedures and calf housing.

CALF FEEDER'S TIP

Prevent scours. Time spent feeding an adequate amount of good quality colostrum soon after birth will prevent spending much more time fighting scours in preweaned calves. Time spent carefully cleaning feeding equipment will prevent spending much more time fighting scours in preweaned calves.

If you know of someone that doesn't currently receive **Calving Ease** but would like to, tell them to **WRITE** to **Calving Ease**, 11047 River Road, Pavilion, NY 14525 or to **CALL** either 716-591-2660 (Attica Vet Assoc. office) or 716-343-8128 (Offhaus Farms Office) or **FAX** (716-591-2898) or **e-mail** sleadley@servtech.com . A limited number of back issues may be accessed on the Internet at www.calfnotes.com and clicking on the link, Calving Ease. PLEASE NOTE THE NEW WEB SITE ADDRESS FOR CALF NOTES.