



Calf Management Research Management of Scouring Calves with Bacterial Enteritis

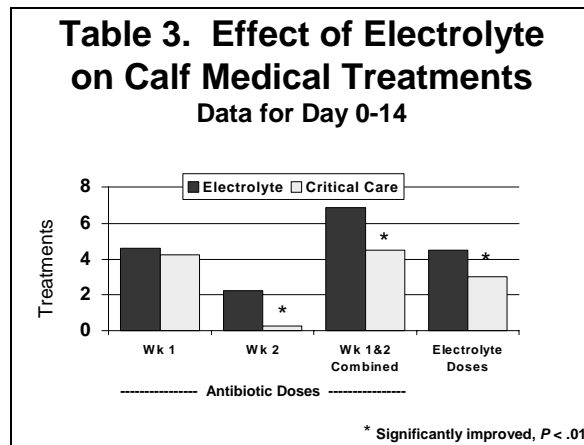
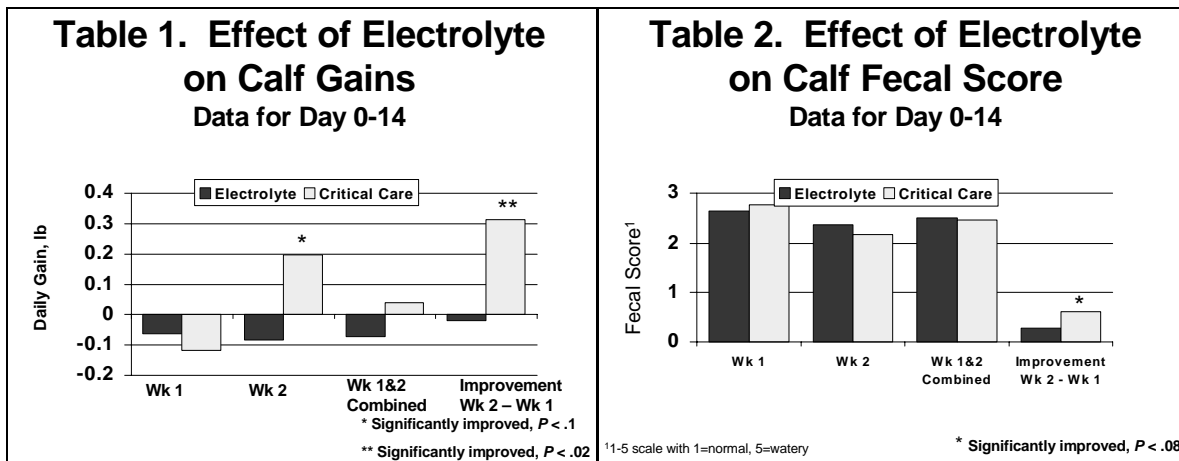
Management of the calf that is scouring with bacterial enteritis is a major challenge. Previous management strategies have recommended removing milk from the scouring calf and feeding electrolytes. The logic was based on field observations that fecal output and fluid losses were reduced when the milk was removed. However, more recent research and field experiences indicate that milk or milk replacer (MR) should continue to be fed to the scouring calf, with 2 – 4 doses of electrolytes to provide enough energy and protein to maintain some level of growth. There are extreme cases of calf scours where the manure is watery with the appearance of no solids for over 24 to 36 hours that milk or MR should be removed and only electrolytes fed. Removing the milk or MR, removes the lactose that feeds the bacteria and draws fluids into the gut, making scouring worse. Milk and MR also provides fat, which may not be digested well in a scouring calf. Because management time and resources for the neonatal calf is often limited, producers would benefit from a single efficacious nutrient and electrolyte product that could be fed in most all situations. This single, effective product could eliminate the need to identify the severity of scouring before determining what management approach to take or change the treatment protocol on a sick calf.

Over the course of 4 research trials we randomly treated 16 calves with watery scours with either 1) an effective electrolyte or 2) Akey Critical Care, which is a milk protein combined with electrolytes without lactose or fat. Watery scours were quantified using a fecal scoring system with a scale of 1 to 5. A fecal score of 1 was normal, firm manure. A fecal score of 4 or 5 was watery with some to no solid material visible. The calves used in the research had been transported from 10 hours away. In these trials, as in most of our trials, many of the calves developed bacterial scores by 7th day after arrival. In these trials, the calves with severe scours were treated with electrolytes and antibiotics during the first week after arrival. Calves were weighed on arrival and weekly thereafter. Scour scores and medical treatments were recorded daily. A treatment protocol outlined by a consulting veterinarian was followed which included the three doses of electrolytes daily for calves with fecal scores over 4 and antibiotics until fecal scores improved to less than a score of 3. Calves assigned to the electrolyte treatment received 3 doses of electrolyte along with their MR feedings. Calves assigned to the Critical Care treatment received 3 doses of Critical Care and did not receive their MR that day. All of the calves received a common 20% all milk protein, 20% fat MR containing 45.4 g decoquinatone per ton and a common 18% protein starter containing 22.7 g decoquinatone per ton.

Daily gain, fecal scores, and antibiotic treatments for both treatment groups were similar in week 1 (Figures 1, 2, and 3). Daily gains during week 2 were greater for calves fed Critical Care vs the electrolyte group (Figure 1). Similarly, the improvement in fecal score from week 1 to week 2 was twice as great for calves treated with Critical Care compared to the calves treated with the electrolyte (Figure 2). Six of the eight calves in the electrolyte

treatment group required antibiotic treatments during week two (average 2.25 treatments per calf; Figure 3) compared to only two of the eight calves in the Critical Care treatment group (averaged .25 treatments per calf; Figure 3). Four of the eight calves in the electrolyte group required a second day of three electrolyte doses because the severe scouring persisted compared to none of the calves in the Critical Care group (4.5 vs 3.0 doses; Figure 3).

Feeding calves 3 doses of Critical Care and removing their MR for 1 day resulted in similar to better performance and fewer antibiotic and electrolyte treatments than feeding 3 doses of a good quality electrolyte with MR.



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