

or decades there has been disagreement over how to best treat calf diarrhea (scours). One school of thought calls for withholding milk from scouring calves for one or two days while providing fluid with electrolytes as therapy. Then calves could be fed a 50:50 mixture of milk (or milk replacer) and electrolyte solution for another day or two before calves could return to a milk diet.

The opposing view says there is no advantage to withholding milk. This camp recommends calves receive electrolyte fluids in addition to consuming milk. It's the view advocated by University of Nebraska Health Stewardship Veterinarian

Halden Clark. He advises cow-calf producers dealing with scours to feed calves through it.

## **Faster recovery**

"This has been argued since the 1940s, as related to human babies, as well as calves," says Clark, who believes the lion's share of research supports continued feeding of milk or milk replacer.

"That's what I was taught," states Clark, "and the most recent studies suggest when scouring calves continue to receive milk, in addition to oral or intravenous fluid therapy, they recover faster and gain better."

According to Clark, the thought behind

Recent studies suggest scouring calves recover faster and gain more when they continue to receive milk in addition to oral or intravenous fluid therapy, says Halden Clark, University of Nebraska health stewardship veterinarian.

withholding milk was that its presence in the digestive tract made scours worse. Temporarily taking milk out of the diet would starve the bacteria that caused the diarrhea, rest the gut and promote quicker healing of the intestinal lining. It was also suspected the presence of milk in the gut might actually draw fluid out of body tissues, hastening dehydration. Increasingly, these theories have come under doubt.

#### **Hydration therapy**

What hasn't changed is the need to address dehydration of scouring calves. Clark emphasizes the importance of fluid therapy, warning that water alone isn't enough. A solution of electrolytes in water should be administered to rehydrate the calf and to correct low blood pH (acidosis) and abnormal electrolyte balance. Electrolytes are compounds — including sodium (Na), potassium (K), magnesium (Mg), calcium (Ca) and other elements — in body fluids that are necessary for normal body functions.

Producers may think one of the many commercially available electrolyte products is as good as another, but Clark says there are significant differences among various products. He recommends producers consult their veterinarian for advice when choosing an appropriate product.

## **Fuel recovery**

Rehydrating electrolyte products typically contain limited amounts of glucose and amino acids, which aid in absorption of electrolytes and also provide the calf with an energy boost. However, the energy these ingredients provide may not be enough to fuel recovery and maintain calf weight. That supports the argument for allowing a scouring calf to receive milk during the period rehydration therapy is administered.

Continued on page 196

Angus Beef Bulletin

## Scours: Feed Calves Through It continued from page 194

"I typically prefer that the calf receive both milk and electrolytes, with separate feedings of milk and electrolytes given two hours apart.

Producers should talk to their own veterinarian and follow his or her recommendation," says Clark.

"Get a plan in place, so you know whether a scouring calf needs oral or IV (intravenous) fluids. The calf that's still following its mother and still nursing may respond to oral electrolyte treatment, but the calf that's so weak it won't get up and nurse is in dire need of IV fluids," Clark adds.

A consulting veterinarian can also advise producers regarding additional treatment measures, such as administration of antibiotics. According to Clark, there is no research consensus suggesting any particular product or products will be most effective in all cases. Veterinarians' recommendations for product, timing and dosage vary by locale and specific circumstances.

Clark notes that young calves suffering from dehydration are in a fragile state and particularly susceptible to the ill effects (especially kidney damage) of using the wrong products — or using any product in a wrong way.

If they are in the cow business for any length of time, just about every producer will have to deal with calf scours, at least at some level. Still, Clark thinks the routine wrecks that some operations face can be avoided.

"Of the common diseases of cattle, I really don't know of a more reliably preventable condition than calf scours. With textbook application of the Sandhills Calving System, producers can sidestep the most

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Here are some tips for developing an action plan for preventing scours.

serious scour problems," opines Clark. "I know that's not logistically possible for every operation, but applying the concept as best you can — periodically moving heavy cows to clean ground so newborns aren't exposed to older calves — will make a difference. The herd veterinarian is in an ideal position to help beef producers plan this type of calving program for their operations." APB