ARMOR ANIMAL HEALTH
DETECT. DEFEND. DELIVER.

THE PRODUCER'S *EDGE*

March/April 2021

Should I Add Electrolytes to Milk or Milk Replacer?



Rob Costello

Whole milk and milk replacers are not just complete feeds for calves, they are also an excellent medium for delivering many nutritional additives. Oral electrolytes, however, are not one of them.

Here's why...

It has to do with the concentration of particles in the liquid, measured as millimoles/liter (mmol/L). This concentration is referred to as the osmolarity of the liquid. Milk is about 300 mmol/L. Milk replacer, which contains an excellent source of supplemental minerals and vitamins, is more concentrated, and is typically between 450 and 550 mmol/L once it's mixed with water.

Now let's take a look at oral electrolyte products. To be specific, we're talking about powdered electrolytes. Their osmolarity ranges from around 300 to over 700 mmol/L once the powder is mixed with water.

Putting a packet of electrolytes into 2 quarts of milk increases its normal osmolarity from 300 to between 600-1000 mmol/L. In milk replacer, osmolarity jumps up between 750-1250 mmol/L. The change in osmolarity is not quite as big for calves receiving 3 quarts rather than two. In this case, the osmolarity of milk after adding electrolytes is between 450-700 mmol/L and between 600-900 mmol/L for milk replacer.

The reason all of this is important is that consuming liquids that are greater than 600 mmol/L can affect the calf's digestion. Rate of passage slows down, giving bacteria a chance to grow and overproduce resulting in production and accumulation of gas and toxins. In addition, the calf moves more water from its body into its digestive tract to help dilute the contents, which can lead to dehydration and worsen water loss.



Scouring calves are in serious need of additional water, and the sodium and glucose in electrolytes have a big role in enhancing water absorption in this critical situation. Adding electrolytes to milk or milk replacer does nothing to help! And don't assume that oral electrolyte products with instructions that encourage their addition to milk and milk replacer have somehow overcome these relationships.

NEW WEBSITE

The new Armor Animal Health website is LIVE! While the site is still being developed to offer you an efficient, easy shopping experience we would like to introduce you to a few features that are offered once your account has been linked:

- Quick Order list – A product list built from your previous 12 month purchases from Armor put together on an easy to order list. *Please allow 24 hours for this to generate after your account setup
- Real time product pricing specific to your account
- Check out quickly by using the payment terms we already have on file

Visit ArmorAnimalHealth.com today to create your account!



NEW WEBSITE!

Visit ArmorAnimalHealth.com and create your account today

ARMOR ANIMAL HEALTH

Product Review: Medic Booster Calf Powder

By Dr. Megan Tiffany, Armor Professional Services Veterinarian



Medic Booster Calf Powder is a supplement to take your calf health and growth to the next level. Used to fortify milk or calf starter, it provides a boost of microbes, vitamins and minerals to get the calf started for a productive life. It is best utilized in whole milk feeding systems to give the calf a boost of nutrition and microbial support where whole milk is lacking. Medic Booster Calf Powder can be added to raw or pasteurized whole milk. Another great place to utilize Medic Booster Calf Powder is to add it to calf starter. It smooths out the transition off milk and gets them on feed quicker.

Dosage

Feed one tbsp. (approximately ½ oz.) per calf/day, or one pound per 35 head/day for the first two weeks. Then feed one tsp. (approximately ⅙ oz.) per calf per day, or one pound per 100 head/day from two weeks of age until weaning or processing.



A nutritional supplement containing a source of live (viable) naturally occurring microorganisms, yeast cultures, vitamins and minerals for inclusion in feed, milk or milk replacers to support and enhance digestion and animal performance.

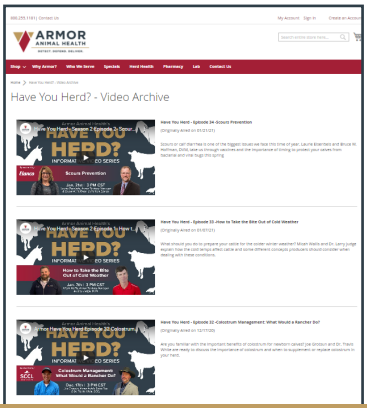
LIMITED TIME SPECIAL

$5 off/4 lb pail

$30 off/25 lb pail

Offer valid until 03/31/2021





Missed an episode? Check out the archive:

www.armoranimalhealth.com/haveyouherd



New Products



Quadrical Mini + Yeast
#24894 - 200 ct
Boluses are formulated with 4 types of calcium for rapid, intermediate and sustained calcium release.



Neonorm
#10668 - 240 ct
Given to pre-weaned calves to help reduce the severity of scours and speed up recovery time.



Boviderma Spray
#24705
Grooming aid administered to the animal's skin. Supports healing of digital dermatitis.



Boviderma Squeeze
#24704
Practical solution to maintain the interdigital space. Easy application and super adhesive product.

PRODUCT SPECIALS

WATER TREATMENT PROMO

Get 1 month of FREE water treatment products for your cattle operation.



Offer valid through 5/31/21.

CYDECTIN SPRING REBATE

Receive a rebate for $5 per liter of Cydectin Pour-On and $12 per bottle of Cydectin **Injectable.***



Offer valid through 5/31/21.
Minimum purchase of 10 liters of Cydectin Pour-On OR 4 bottles of Cydectin Injectable. Contract and competitive bid customers are excluded.

DRAXXIN REBATES

Non-Leader's Edge Producers receive:
$100 rebate on 100 mL of Draxxin
$200 rebate on 250 mL of Draxxin
$400 rebate on 500 mL of Draxxin



Offer valid through 12/31/21
LE producers are not eligible. Customers can claim the rebate on multiple purchases during the program period, but each individual purchase is eligible for the rebate one time.

For a full listing of product specials & rebates visit:
www.armoranimalhealth.com/specials

AUTOGENOUS PINKEYE VACCINE

Available at Armor!

Pinkeye is a common infectious disease affecting one or both eyes of cattle. Pinkeye is commonly caused by an infectious bacteria known as Moraxella bovis. Other emerging causative agents include Moraxella bovoculi and Mycoplasma bovoculi. Infection typically lasts 4 to 8 weeks, but can last longer.

Armor Autogenous Pinkeye Vaccine Contains:

- *Moraxella bovis,*
- *Moraxella bovoculi*
- *Mycoplasma*



Contact Armor to learn more about Autogenous Vaccines available and how you can get your approval!*

22362	Pinkeye Vaccine
24512	Bio One Pinkeye
23234	Pinkeye Vaccine with Myco
24513	Bio One Pinkeye with Myco

*Only available to Armor customers with a valid VCPR

Product Updates

Due to Covid-19, manufacturers are experiencing a higher number of allocated products and backorders than normal. The whole Armor team is working diligently to avoid stockouts to make sure you and your animals have what they need. Please contact your Armor sales representative for product availability and best substitutes. We appreciate your patience as we work through any delays.

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CONNECT WITH US!

Armor Animal Health is on several social media platforms.

Please like, follow, share and connect with us!

SALE!



Milk Bridge 25/10 w/ Clarifly

Easy to use, low inclusion supplement to be mixed with pasteurized milk. It is formulated to bridge the gap in nutrition and/or extend the available milk supply by adding protein and energy to achieve lean tissue growth in young calves.

#23252 - 50 lb bag

Product is non-returnable, prices good while supplies last.

There's always room for value.

Introduce Cefenil® RTU to your metritis-fighting toolbox.

Make Cefenil RTU your first choice to treat acute metritis in dairy cattle. This ready-to-use, broad-spectrum cephalosporin antibiotic is the first veterinarian-prescribed generic ceftiofur hydrochloride RTU injectable in the market, with:

- FDA-approved to treat acute metritis, as well as foot rot and BRD
- Approved for use in lactating cows
- Zero milk discard

Trust Norbrook to deliver the right tool for the job.
Contact your veterinarian or visit NORBROOK.COM

Norbrook®

Cefenil® RTU
(ceftiofur hydrochloride sterile suspension)



Observe label directions and withdrawal times. Not for use in calves to be processed for veal. As with all drugs, the use of Cefenil® RTU (ceftiofur hydrochloride sterile suspension) is contraindicated in animals previously found to be hypersensitive to the drug. See product labeling for full product information.

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