



# Midcontinent Livestock Supplements

## PROVEN PERFORMANCE

mlstubs.com  
WINTER 2017

Ellendale, ND 800-450-8827

Valley Mills, TX 888-657-8827

Moberly, MO 800-406-4609

[Feeding RFCs For Healthier Calves](http://feedlotmagazine.com/feeding-rfcs-for-healthier-calves/) By: Heather Smith Thomas - Feedlot Magazine  
<http://feedlotmagazine.com/feeding-rfcs-for-healthier-calves/>

Producers often look for ways to improve calf health so young animals can withstand challenges to their immune systems. One such way that is gaining in popularity in the dairy industry and is also applicable to beef cattle is the use of refined functional carbohydrates, says Dr. Jeff Weyers, Stephenville, Texas, Technical Service Manager, Arm & Hammer Animal Nutrition.

Refined functional carbohydrates (RFCs) can help establish a healthy foundation for calves. “These are part of yeast cell walls harvested from a yeast called *S. cerevisiae*, using certain enzymes. This yields mannan oligosaccharides (MOS), beta glucans and D-Mannose,” says Weyers. These are some of the ingredients in supplements called pre-biotics, which in essence feed the probiotics—which are live bacteria that are normal inhabitants of the GI tract and needed for proper gut function. Several companies now market products containing prebiotics and probiotics.

MOS works in the small intestine against *E. coli*, *Salmonella*, *Klebsiella* and other nasty path-o-gens that can cause diarrhea and digestive issues. MOS is the prebiotic part of the RFC that provides food for beneficial bacteria, Weyers says. The beneficial bacteria must be able to outcompete the path-o-gens. The gut needs an adequate, healthy population of “good bugs” in residence, leaving less room for the “bad bugs” to come in and cause harm.

“Arm & Hammer makes an RFC product (from yeast) that includes MOS. We also utilize another enzyme that cleaves off the individual mannose sugar,” he says. This sugar is very beneficial in the gut because it binds to the pili (fingerlike projections) of *E. coli* and *Salmonella* and prevents pathogens from attaching to the intestinal lining. The pathogens then pass harmlessly out through the tract to be excreted.

“These pathogens want to attach to the small intestine, seeking out the mannose sugars that normally occur in the intestinal wall. This is how they bind to the wall and start their pathogenic activity and destruction of the lining. The mannose sugar from the RFC product is available in the gut, attracting the pathogens to attach to it instead of binding to the mannose in the gut wall.” The free mannose is like bait, keeping pathogens from attaching to the gut.

“The third component in our RFC product is beta glucans. There are two different kinds of beta glucans. One is derived from cellulose and the other from the yeast cell wall. The beta glucan liberated from the yeast cell wall has been proven to bind mycotoxins (which sometimes occur in feed), and also stimulate the immune system to get into a ready state. There has been a lot of research on this in human medicine, in cancer research. There is a human supplement containing beta glucans. The immune side of this is now the focus of research in many companies, looking at the benefits for cattle, poultry and swine,” says Weyers.

An additional component in some RFC products is another refined functional carbohydrate that binds *Cryptosporidium parvum* which is another pathogen (protozoa rather than bacteria) that baby calves sometimes have to deal with. RFCs make the calves less vulnerable to gut damage from *Cryptosporidiosis*.

Some products contain a full dose of yeast culture as well as the RFCs. “Calves that receive this combination not only gain immune enhancement with the RFCs, but also a more efficient use of feed, and thus more efficient production and a healthier gut. It binds pathogens, mycotoxins, etc. and has been very effective in calves that have a compromised immune system,” he says.

“These products are helpful for calves and are also being used in adult cattle and other species. They are especially useful for calves with scours or some other kind of gut issue. It’s not a cure-all but is very effective against most pathogens that damage the gut.” It can be helpful in supportive treatment, along with fluids, electrolytes, etc.

Various RFC supplements for calves come in liquid form, a soluble-concentrated powder (SPC) and a carrier form. “You can put the liquid into milk or milk replacer, or give it as a drench (such as with a dose syringe). If you are treating a calf with severe scours, some product labels suggest giving 2 to 3 times the recommended dose (to try to give that calf a jump start on fighting the pathogens),” says Weyers. Some products are geared for growing and finishing cattle and come in different forms.

Multiple peer-reviewed research trials have proven the efficacy of RFCs. Some of the research was done at Texas Tech, in New York (at Spruce Haven Farms), and in Canada. Research is ongoing in many places to uncover more of the benefits of RFCs.

“At this point the dairy industry is the main market for these products, but cow-calf producers and feedlot receiving yards are starting to look at this — as another tool in helping keep cattle healthy.” Research has shown that calves fed RFCs recover faster than calves that don’t receive RFCs. Healthier calves grow better, not having to expend energy fighting infections. Research studies have shown that RFCs can significantly improve health and performance (weight gain), compared to calves in control groups that received no RFCs. Jump-starting the immune system with these products definitely benefits the calves.

*Reprinted Courtesy of Feedlot Magazine*

Chad Holt (TX-NM) 903-272-5010    Kyle Latham (TX) 254-715-2162    Gary West (East US) 731-335-3023  
Jeff Anslinger (MO-KS-NE-IA) 816-244-7340    Joseph Woods (MO) 660-341-5413    Clyde Smith (Deep South) 601-540-6133  
Bryan Sundsbak (ND-SD-WY-NE-MT) 605-209-0559

## MLS #5 STRESS TUB

Formulated for calves to reduce the stress of weaning, shipping, and receiving. CELMANAX™ SCP from Arm & Hammer Animal Nutrition is a standard ingredient in the MLS #5 Stress Tub.

- Prepares immune system to respond quickly when challenged
- Improves feed conversion & efficiency
- Reduces calf scours caused by e. coli & salmonella
- Reduces bovine respiratory disease
- Quicker recovery and decreased severity of coccidiosis
- Healthier start = profitable finish



## MLS #1 Hi-Performance Supple-Lix

A balanced tub supplement for growing and mature cattle needing both protein and mineral supplementation. Adding CELMANAX™ SCP to the MLS #1 and feeding 30 days prior to and through calving will be effective in reducing the incidence of and/or severity of scours caused by *E.coli* or *salmonella*.



Animal Nutrition



---

**CELMANAX™ SCP is available in a wide range of MLS tub products.**

---

To learn more about Celmanax™ SCP, go to <https://ahanimalnutrition.com/species/beef/products/celmanax> or Contact an MLS Representative for more information!

## “APPRECIATION OF EXCELLENCE” ACKNOWLEDGEMENT



### THANK YOU ED

Ed Kreimier spent the past several years concentrating his efforts for MLS in the Colorado and New Mexico areas. All of his career has been in the feed and ag supply industry. As of July 31, 2017 Ed returned to the ag supply segment. We thank him for his effort and accomplishments in Colorado. Best of luck Ed, stay in touch.

*Go Irish.*

TEAM MLS



### THANK YOU JIMMY

For the past nine years, Jimmy Diel has been a vital part of the MLS team. Jimmy spent his entire working life in the livestock nutrition field and retired August 31, 2017. Through his efforts, MLS has developed a major presence the Oklahoma region. His hard work and friendship will be missed by everyone at MLS.

*Happy retirement Jimmy... enjoy the family.*

TEAM MLS