CELMANAX™

High stress in the receiving period can lead to more pulls and mortality.

#ScienceHearted

At ARM & HAMMER™ we think big on a microscopic level to deliver safe feed and food solutions that drive business forward. We're your #ScienceHearted, local-and-global, animal and food production team.

Receiving period stress weakens the immune system.

Bovine Respiratory Disease (BRD) is the most prevalent disease of stocker and feedlot cattle, accounting for up to 80% of feedlot morbidity.[1]

The receiving period is one of the most stressful times in an animal's life, putting them at increased risk for disease and mortality and performance losses. The receiving diet is crucial to maintaining health during this time of high stress.

BRD ACCOUNTS FOR 80% OF FEEDLOT MORBIDITY.

What if you could prepare animals for the stressors of the receiving period?

MAINTAIN INTAKE.

What if you could keep cattle eating throughout this stressful period?

BOOST DAILY GAIN.

What if you could support average daily gain even in times of stress?

REDUCE COSTS.

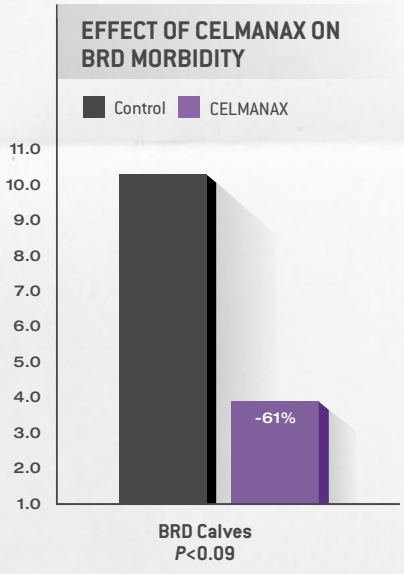
What would fewer cases of BRD mean for your bottom line?

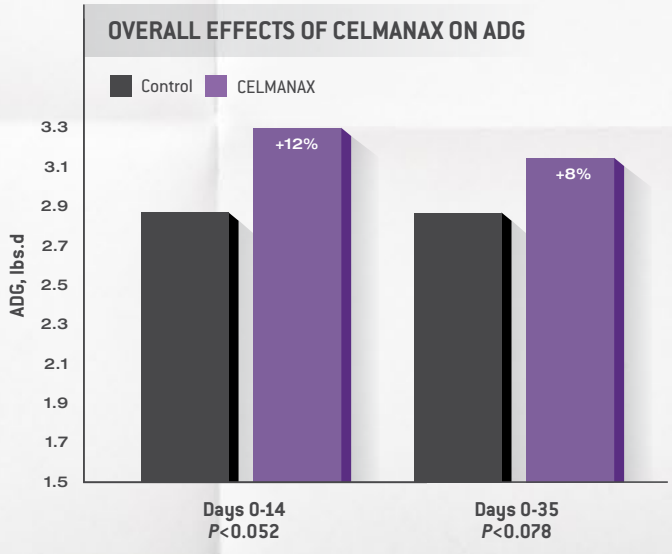
CELMANAX™ delivers the benefits of highly bioavailable Refined Functional Carbohydrates™ (RFCs™) and A-MAX™ yeast culture in one formula to help animals cope with environmental challenges.

The proof is in the research.

Transport tested.

One research trial evaluated the effect of CELMANAX on two truckloads of beef heifers fed receiving diets; one group was fed a control diet and the second was fed the control diet plus CELMANAX SCP. Heifers fed CELMANAX experienced greater average daily gain (ADG) and 61% fewer cases of Bovine Respiratory Disease[2].

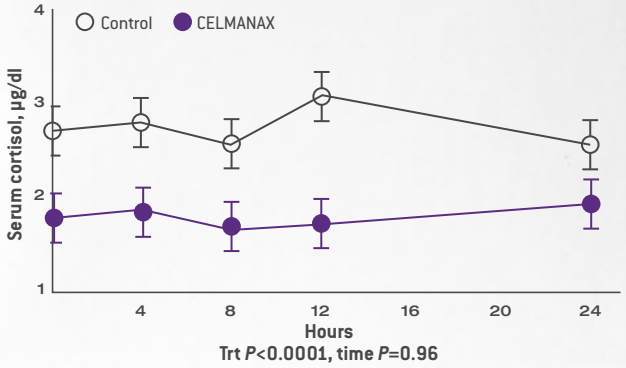


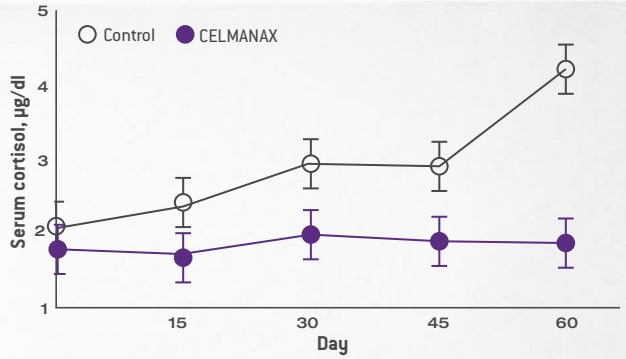


Less stress.

A trial[3] evaluated the effects of CELMANAX on performance, stress response and immune function of heifers when fed immediately after weaning. Heifers were abruptly weaned at 227 days of age and penned into groups of four. Pens were assigned either the CELMANAX or control diet. Two heifers per pen were randomly selected for a transportation challenge and fecal samples were collected before and after transport.

- Body weight gain increased and feed efficiency improved in the groups fed CELMANAX.
- Serum cortisol concentration, used as an indicator of stress, was lower in heifers fed CELMANAX both before and after transport.
- CELMANAX also reduced *C. perfringens*, *Salmonella* and total *E. coli* in heifers one day after transport compared to the control.





PARAMETER	CONTROL, N=9	CELMANAX, N=9	*P* VALUE
Initial BW, lbs.	532.4	534.6	0.983
Average Daily Gain, lbs.	1.47	1.58	0.04
Total BW gain, lbs.	88	94.6	0.04
Total feed intake/head, lbs.	1250.2	1249.6	0.987
Feed conversion, lbs. intake/lb. gain	14.21	13.21	0.036

Gains across the board.

One trial compared the productivity and health of weaned steers assigned to one of three groups: control, CELMANAX fed from days 14 – 69 (preconditioning) or CELMANAX fed from days 31 – 69 (receiving). On day 30, steers were road transported for 24 hours and returned to their original pen assignments.

Steers fed CELMANAX during preconditioning experienced fewer incidences of BRD[4]. Both groups fed CELMANAX tended (*P*=0.07) to have a greater ADG over the control.

HEALTH PARAMETER	CONTROL	CELMANAX	*P* VALUE
Morbidity, %	16	0	0.03
Bloat	0	0	
Respiratory	16	0	0.03
Mortality, %	0	0	

		CELMANAX Preconditioning	CELMANAX Receiving		Single df contrasts*
	CONTROL	CELPREC	CELRECV	1	2
Final BW, lbs.**	664.4	679.8	668.8	0.47	0.44
ADG, lbs./d	3.32	3.54	3.56	0.07	0.89

*Single df orthogonal contrasts: 1=CON vs. CELPREC and CELRECV and 2=CELPREC vs CELRECV
**Steer shrunk BW was recorded after road transport (1,500 km for 24 hours) on day 31, and after 16 hours of water and feed withdrawal on day 70 (final BW)

Minimum recommended feeding rates.*

	BEEF (GRAMS/HEAD/DAY)				BEEF (OUNCES/HEAD/DAY)			
	Adult Cow	Calf	Grower	Feedlot	Adult Cow	Calf	Grower	Feedlot
CELMANAX™	28	7	14	18	1	0.3	0.5	0.6
CELMANAX SCP**	3	1	2	2	0.1	0.04	0.07	0.07
CELMANAX Liquid**	14	8	10	9	0.5	0.3	0.4	0.3

*Consult your nutritionist for your optimum feeding rates.
**For conversion purposes 1 ml equals 1 gram.

We're #ScienceHearted and we're here for you.
We're ever-curious farm kids turned nutritional innovators, microbial pioneers and food safety game changers. We use scientific research to unlock the power of nature to create products that focus on you, your animals and worldwide food security. To learn more about CELMANAX ask your nutritionist, veterinarian or ARM & HAMMER™ representative or visit AHfoodchain.com

1 BRD: Back to basics. *Drovers* September 22, 2014. Available at: https://www.drovers.com/article/brd-back-basics-0
2 Ponce CH, Schutz JS, Elrod CC, Anele UY, Galyean ML. Effects of Dietary Supplementation of a Yeast Product on Performance and Morbidity of Newly Received Beef Heifers. *Prof Anim Sci* 2013;28:618-622.
3 Long NM. The effects of a yeast derived feed supplement in limit fed weaned beef heifers on animal performance and endocrine regulation and selective microbiology of fecal samples. [*Submitted for Publication 2018*].
4 Schubach KM, Cooke RF, Silva LGT, Brandão AP, Lippolis KD, Marques RS, Bohnert DW. Supplementing a yeast-derived product to enhance productive and health responses of feeder steers. *American Society of Animal Science* 2017;68:141-146.