

# Replace variability challenges with unmatched consistency.



## At Arm & Hammer Animal Nutrition we use science

to unlock the power of nature to create solutions that are designed to optimize animal productivity. Our expert team can help troubleshoot challenges and translate science into an action plan, always remaining focused on **Animals First. Productivity Always**.

### Make the uncertain certain.

With CELMANAX<sup>™</sup> animals get the benefit of multiple feed additives in one consistently high-quality formula, minimizing the risks of mixing errors and diet variation.

## What are RFCs?

CELMANAX yields highly bioavailable Refined Functional Carbohydrates<sup>™</sup> (RFCs<sup>™</sup>):

- Mannan-oligosaccharides—short sugar units of mannose
- Mannose—a monosaccharide
- Beta glucans—sugar units from the yeast cell wall

Our proprietary enzymatic process breaks these down into small bioavailable units.

## Why do RFCs matter?

They help animals cope with environmental challenges.

## Maintain health in the face of coccidiosis.

- CELMANAX was compared to coccidiostat supplementation in broilers given a moderate coccidiosis challenge
- CELMANAX effectively reduced *E. tenella* lesion score and was moderately effective against *E. maxima* and *E. acervulina*<sup>1</sup>

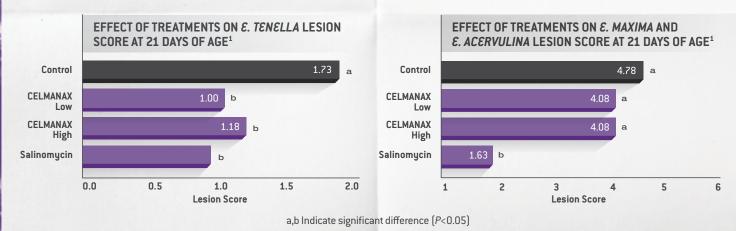
- The CELMANAX advantage:
  - Helps prepare the immune system ahead of a challenge so animals can respond quickly when challenged



Helps consistently meet target weight goals by minimizing feed quality variation<sup>2-14</sup>

Helps animals cope with environmental challenges

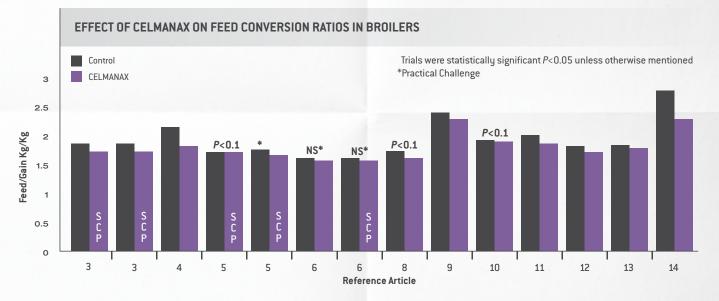
• CELMANAX demonstrated the capacity to maintain feed efficiency in the absence of a coccidiostat in grower finisher diets<sup>5</sup>



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## **Consistently meet target weights.**

Across numerous studies CELMANAX improved feed conversion ratio (FCR) by 5 points in broilers.<sup>3:14</sup>



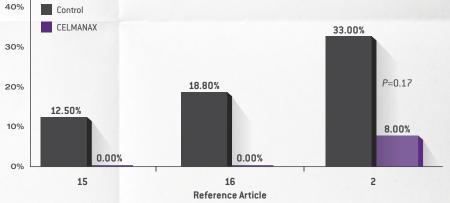
## Manage Salmonella.

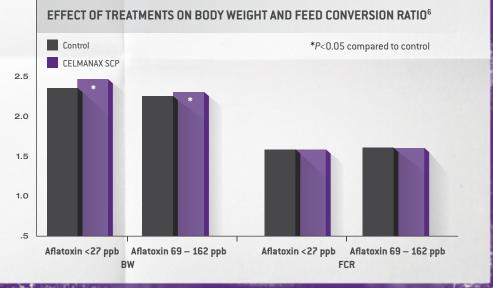
In two separate studies broilers supplemented with CELMANAX had zero cecal *Salmonella* prevalence compared to 12.5% and 18.8% prevalence in control fed broilers.<sup>15,16</sup> Similarly, turkeys supplemented with CELMANAX had 8% prevalence of cecal *Salmonella* compared to 33% in control fed turkeys (*P*=0.17).<sup>2</sup>

## Minimize feed quality variation.

Supplementing CELMANAX SCP to aflatoxin-contaminated broiler diets significantly improved body weight (P<0.05) and numerically improved feed conversion ratio (P>0.05) compared to the control.<sup>6</sup>

EFFECT OF CELMANAX SUPPLEMENTATION IN BROILER OR TURKEY DIETS ON CECAL SALMONELLA PREVALANCE





### An alternative to antibiotics.

In a study conducted under commercial conditions, the effect of CELMANAX<sup>™</sup> supplementation was compared to antibiotic growth promoter (AGP) Bacitracin on broiler performance. Broilers on CELMANAX SCP finished with 42 g higher BW compared to AGP-supplemented birds (P>0.05).<sup>17</sup>

 ON BROILER PERFORMANCE AT 36 DAYS<sup>17</sup>

 AGP

 3.00

 AGP + CELMANAX SCP

 CELMANAX SCP

 2.00

 1.50

 1.50

 1.50

FCR

COMPARISON OF AGP AND CELMANAX SUPPLEMENTATION

BW, kg

## Minimum recommended feeding rates.\*

	CHICKENS						TURKEYS					
	Chickens (kg/MT)			Chickens (lbs/ton)			Turkeys (kg/MT)			Turkeys (lbs/ton)		
	Layer	Broiler	Broiler/ Breeder	Layer	Broiler	Broiler/ Breeder	Breeder	Poults	Grow/ Finish	Breeder	Poults	Grow/ Finish
CELMANAX	0.5	0.5	0.5	1	1	1	0.5	0.5	0.5	1	1	1
CELMANAX SCP	0.05	0.05	0.05	0.1	0.1	0.1	0.05	0.05	0.05	0.1	0.1	0.1
ml/L							ml/L					
CELMANAX Liquid	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25



#### We're a global, multi-species, animal nutrition team.

We use scientific research to unlock the power of nature to create products that focus on your **Animals First. Productivity Always.** To learn more about CELMANAX contact your nutritionist, veterinarian or Arm & Hammer Animal Nutrition representative or visit AHanimaInutrition.com.

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- 11 Report on file. Research Bulletin P-57.
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- 16 Grayson et al. The Effect of Refined Functional Carbohydrates (RFCs) from Enzymatically Hydrolyzed Yeast on the Transmission of Salmonella spp. between Broilers and Proliferation in Broiler Housing, 2017. Report on file.
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