

# Research Notes D-49

Arm & Hammer Animal Nutrition



## The effect of CELMANAX on production performance in dairy cattle

### STUDY OVERVIEW

- This study<sup>1</sup> was conducted to evaluate the effects of supplementing CELMANAX™ on production performance in dairy cattle
- The study included 22 multiparous cows assigned to one of two treatment groups according to previous lactation performance:
  - Control – no supplementation
  - CELMANAX – control diet plus CELMANAX fed at 28 g/h/d
- Trial began at calving and lasted through 12 weeks postpartum
- An electronic feed intake system measured intake level and duration of each visit

### RESULTS

- Cows fed CELMANAX produced 3.97 lbs. more milk than non-supplemented cows, though results were not statistically significant ( $P>0.05$ )
- Efficiency of milk production was 3% higher for cows receiving CELMANAX
- Milk composition and yield were not affected by treatment
- Cases of clinical mastitis were 4 vs. 1 for control and CELMANAX, respectively
- Somatic cell count was numerically lower for cows supplemented with CELMANAX ( $P>0.05$ )
- There was no effect of treatment on feeding time, rate, number of feeder visits or mean group dry matter intake (DMI)

**TABLE 1** Effect of CELMANAX on DMI and Milk Yield

Item	Treatments			P
	Control	CELMANAX	SEM	
N	11.00	11.00		
DMI, lbs.	50.04	50.49	0.05	NS
Milk, lbs.	100.75	104.72	1.50	NS
Efficiency				
Lbs. Milk/lbs. DMI	2.01	2.07		

<sup>1</sup> Effects for all variables were not significant ( $P<0.05$ )

TABLE 2

Effect of CELMANAX on Milk Composition and Yield and Mastitis

Item	Treatments			P	
	Control	CELMANAX	SEM	Trt	
<b>Composition</b>					
Fat, %	5.04	4.88	0.12	NS	
Protein, %	3.17	3.14	0.05	NS	
Lactose, %	4.71	4.73	0.03	NS	
<b>Component Yields</b>					
Fat, lbs.	5.07	5.11	0.03	NS	
Protein, lbs.	3.20	3.28	0.02	NS	
<b>Clinical Mastitis</b>					
SCCx1000	Wk 1	47.00	23.00	19.00	NS
	2	42.00	26.00	14.00	
	3	38.00	39.00	22.00	
	6	149.00	46.00	58.00	
	8	51.00	50.00	15.00	
	10	130.00	41.00	23.00	
	Mean	54.00	37.00	25.00	
	<b>Clinical Mastitis</b>				
	4.00	1.00			
<b>Sub-Clinical (SCC&gt;200,000)</b>					
	3.00	1.00			

## CONCLUSION

Cows supplemented with CELMANAX™ had higher milk production, lower somatic cell counts and fewer instances of mastitis compared to cows fed the control diet. The results were not statistically significant.



### Animal Nutrition

<sup>1</sup> Adapted from the data of Proudfoot K, Von Keyserlingk M, Weary D, Nisbet JE, Ph.D. The effect of enzymatically hydrolyzed yeast on feeding behavior and immune function in early lactation dairy cows. J Dairy Sci 2009;92:E-suppl.1.

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