Research Notes S-13

Arm & Hammer Animal and Food Production

CELMANAX helps improve performance in swine starter diets.

STUDY OVERVIEW

- This trial was conducted at a private research center in the U.S. to determine the benefits of CELMANAX™ in swine starter diets.
- Weaned pigs between 17 and 22 days old were randomly assigned to one of two treatment groups. There were 16 pigs per pen with 6 pens per treatment.
- Control and treatment groups were fed the same diet, but the treatment group diet was supplemented with CELMANAX at the following levels:

	DAYS FED CELMANAX	CELMANAX FEEDING RATE
PHASE ONE	0 – 7	8 LBS/TON
PHASE TWO	8 – 14	4 LBS/TON
PHASE THREE	15 – 28	2 LBS/TON
PHASE FOUR	29 – 42	0 LBS/TON

- Pigs were weighed individually and by pens throughout the study, and feed disappearance was measured to determine feed intake and gain.
- Antibiotics were included in all diet phases of this trial.
- Trial was conducted in a high health research nursery barn; therefore, pigs were not stressed, had good health, and mortality was very low.

RESULTS

- Pigs fed CELMANAX had significantly higher average daily gain during Phase 2. While not significant, pigs fed CELMANAX showed numerically higher gain during the 28-day treatment period (Table 1).

TABLE 1 Average Daily Gain (lbs.)

Days	Control	CELMANAX	*P*-value
0 to 7	0.26	0.28	NS
8 to 14	0.62	0.80	<0.05
15 to 21	0.93	0.88	NS
22 to 28	1.11	1.18	NS
29 to 42	1.35	1.30	NS
0 to 28	0.73	0.78	0.06
0 to 42	0.93	0.95	NS

NS = Not Significant

- Pigs fed CELMANAX™ had significantly higher average daily feed intake in Phases 2 and 4, and for the duration of the treatment period (Table 2).

TABLE 2	Average Daily Feed Intake		
Days	**Control**	**CELMANAX**	***P*-value**
0 to 7	0.30	0.35	0.13
8 to 14	0.81	0.91	<0.05
15 to 21	1.21	1.30	0.08
22 to 28	1.64	1.77	<0.05
29 to 42	2.18	2.14	NS
0 to 28	0.99	1.08	<0.05
0 to 42	1.37	1.42	NS

- Pigs fed CELMANAX demonstrated improved feed/gain during Phase 2, while pigs on the control diet showed improved feed/gain during Phase 3 (Table 3).

TABLE 3	Feed/Gain		
Days	**Control**	**CELMANAX**	***P*-value**
0 to 7	1.21	1.25	NS
8 to 14	1.33	1.14	<0.05
15 to 21	1.31	1.51	<0.05
22 to 28	1.48	1.45	NS
29 to 42	1.64	1.66	NS
0 to 28	1.36	1.38	NS
0 to 42	1.48	1.50	NS

CONCLUSION

- Pigs supplemented with CELMANAX had improved average daily gain ($P<0.06$), and average daily feed intake ($P<0.05$) across the entire treatment period (days 0 to 28).
- During the second half of treatment (days 29 to 42), the control group performed numerically better than the CELMANAX group, so final performance results were similar for both groups.
- Overall, CELMANAX helped improved animal performance when added to the starter diet.

#ScienceHearted

AHfoodchain.com