

Technical Bulletin #17

— FEEDING TRIAL PERFORMANCE REPORT —

SUMMARY: In a trial conducted in 1997, by Dr. Dean Zimmerman (Experiment No. 9707) at Iowa State University, Ames, Iowa, it was indicated that **Nutra-Flo CPS 21** can be used to cost effectively replace high protein (48% protein) soybean meal (SBM) in swine growing and finishing diets.

MATERIALS & METHODS: Ninety-eight pigs were fed from starting weight of 50 pounds until they reached market weight of 240 pounds. Two different treatments were used. Treatment One (control) used standard corn/SBM diets, with diets changing every 30 to 40 pounds as typical in the industry. Treatment Two used **CPS 21** at 5% inclusion to replace a portion of the SBM. **CPS 21** diets had lower densities for nutrients: energy, lysine, calcium and phosphorus. The diets are reviewed in the table below. There were 7 pens, with six pigs per pen for each treatment. Feed intake and growth data was collected every other week.

DIETS

DIETS	CONTROL (TREATMENT 1)				5% CPS 21 (TREATMENT 2)			
	50-80	80-120	120-180	180-240	50-80	80-120	120-180	180-240
WEIGHTRANGE	50-80	80-120	120-180	180-240	50-80	80-120	120-180	180-240
CORN %	74.54	78.46	83.65	87.44	72.30	76.30	81.39	85.17
SBM %	21.60	18.10	12.90	9.40	18.90	15.30	10.20	6.70
CPS 21 %	∅	∅	∅	∅	5.0	5.0	5.0	5.0

CALCULATED NUTRIENT ANALYSIS

Lysine %	.95	.85	.70	.60	.93	.82	.68	.58
ME K cal/kg	3358	3374	3376	3386	3253	3267	3269	3280
phos %	.60	.50	.50	.45	.58	.48	.48	.44

RESULTS & DISCUSSION: The ADFI was very similar for both treatments throughout the experiment. It was expected that pigs on **CPS 21** diets would eat more due to higher moisture content of **CPS 21** diets. The ADG was not significantly different between the two treatments, although there was a trend for control pigs to have higher ADG. The feed efficiency was greater for pigs fed control diets. Using costs of \$60.00 per ton for **CPS 21** and \$250.00 per ton SBM, shows a cost advantage for **CPS 21**. The **CPS 21** diets were 0.003¢ per pound (\$6.00/ton) less than SBM diets. Feed cost per pound of gain was less with **CPS 21** diets.

Control 5% CPS 21
Feed cost per pound of gain \$ 0.167 \$ 0.163

RESULTS TABLE

WEIGHT PERIOD	WEEKS	CONTROL	CPS 21	CONTROL	CPS 21	CONTROL	CPS 21
		ADG	ADG	ADFI	ADFI	G/F	G/F
1	1-2	1.11	1.06	2.63	2.65	.42	.40
C2 *	1-4	1.45	1.43	3.33	3.31	.44	.43
C4 *	1-8	1.71	1.65	4.23	4.22	.41	.39
C6 *	1-12	1.63	1.59	4.51	4.49	.36	.36
C8 *	1-16	1.72	1.69	4.97	4.99	.35	.34

*The duration of each period was two weeks and C designates cumulative data.

The Power of Peptides™