

Table 1. Impact of Phosphorus (P) Source on Performance Traits and Excretion Rates (Experiment 1^a)

	Normal Corn-Soy			Low-Phytate Corn-Soy		
	Diet 1	Diet 2	Diet 3	Diet 4	Diet 5	Diet 6
Added P, %	0.20	0.10	0.10	0.10	0	0
Total P, %	0.59	0.49	0.49	0.47	0.37	0.37
Phytase			+			+
Average daily gain, lb. ^b	1.65	1.54	1.59	1.74	1.51	1.56
Feed:gain	1.80	1.95	2.01	1.86	1.87	1.88
Bone strength, relative ^b	100	73	98	103	78	97
Fecal P excretion, g./day ^c	4.49	4.45	3.67	2.79	2.11	1.45

^aSix pigs per treatment, 33 to 93 lb. body weight, 40-day experiment.

^bThe reduced-phosphorus diets without phytase differed from the normal corn-soy control diet ($P < 0.05$).

^cEffect of phytase and type of corn-soy ($P < 0.05$).

Table 2. Impact of Phytase, Low-Phytate Feed on Phosphorus (P) Excretion (Experiment 2^a)

	Normal Corn-Soy		Low-Phytate Corn-Soy	
Added P, %:	0.19	0.09	0.04	0
Total P, %:	0.57 ^b	0.47	0.39	0.35
Bioavailable P, %	0.27 ^b	0.27	0.27	0.27
Phytase:		+		+
P intake, g./day ^c	9.95	8.05	7.65	6.88
P digested and absorbed, g./day ^c	3.71	4.46	5.03	5.36
P digestibility, % ^c	37	56	66	78
P retained, g./day ^c	3.63	4.34	4.84	5.16
Total P excreted, g./day				
Feces ^c	6.24	3.58	2.62	1.51
Urine ^d	0.07	0.13	0.19	0.20
Total ^c	6.31	3.71	2.81	1.71
Reduction in P excretion, % ^e		41	55	73
Soluble P excreted, g./day ^d	0.13	0.17	0.23	0.23

^aTwo balance experiments with six pigs per treatment and averaging 114 lb. body weight.

^bThe phosphorus (P) level in the normal corn-soy control diet is slightly in excess of the NRC (1998) requirements of 0.47% total P and 0.20% bioavailable P for pigs of this body weight.

^cSignificant ($P < 0.05$) effect of diet.

^dNon-significant ($P > 0.50$) effect.

^eCompared with pigs fed the normal corn-soy control diet.