

Table 1. Effects of feeding 1,500 FYT/kg of phytase on growth performance and carcass characteristics of growing-finishing pigs

Item ¹	Treatment			SEM	Probability, P=
	Control	Grower phytase	Grow-finish phytase		
Growth performance					
Initial BW, kg	28.0	28.0	28.0	0.47	0.780
ADG, kg	0.88 ^a	0.88 ^a	0.85 ^b	0.008	0.016
ADFI, kg	2.25	2.26	2.24	0.021	0.651
G:F, kg/kg	0.391 ^a	0.389 ^a	0.379 ^b	0.0526	0.001
Carcass characteristics					
HCW, kg	100.4 ^a	100.7 ^a	98.4 ^b	0.93	0.097
Yield, %	72.63	72.82	72.27	0.337	0.406
Backfat, mm	15.98	16.66	16.46	²	0.509
Loin depth, mm	70.98	71.9	71.22	²	0.797
Fat-free lean, %	58.63	57.30	57.36	²	0.717

¹ADG = average daily gain. ADFI = average daily feed intake. G:F = gain-to-feed ratio. BW = body weight. HCW = hot carcass weight.

²SEM for backfat were 0.392, 0.479, and 0.385; SEM for fat-free lean were 0.287, 0.352 and 0.283; and SEM for loin depth were 0.668, 0.813, 0.652 for control, grower phytase, and grow-finish phytase, respectively.

Keywords: finishing pigs, growth performance, phytase

129 Effect of phytase on growth performance and carcass classification in growing-finishing pigs.

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The objective of this experiment was to evaluate the optimal dosage of phytase fed to growing-finishing pigs. One hundred and twenty barrows, 71 d old and initial body weight 25.16 ± 2.80 kg, were distributed in 40 pens according to a randomized complete block design and assigned to 5 treatments: 1. Positive control: diet formulated to meet or exceed the nutrient requirement of pigs (PC); 2. Negative control: PC diets formulated with 0,11% lower Ca and 0,13% lower available P (NC); 3. NC + 1,500 FYT of phytase; 4. NC + 3,000 FYT of phytase; 5. NC +4,500 FYT of phytase. The corn-soybean meal-based diets were formulated to be iso-nutrient and isoenergetic, except for Ca and av. P. The 4 diets were formulated according to a growing I (71-94 days of age), growing II (95-115d), finishing I (116-143 d) and finishing II (144-156 d) phases. Carcass traits were measured and submitted to the European Carcass Classification (SEUROP). Performance and carcass data were submitted to ANOVA, and regression analysis. There was a quadratic effect on FCR ($P < 0.05$) in growing I phase,; better FCR (quadratic, $P < 0.05$) on finishing II to 1,500 and 3,000 FYT (5.56 and 0.35%, respectively); an increase of 5.43 and 1.52% DWG in finishing II (quadratic, $P < 0.05$) and a reduced 6.60% to 4,500FYT; an improvement the total DWG and final weight (quadratic, $P < 0.05$) in 6.19 and 4.52%, and 5.27 and 3.57%, for 1,500 and 3,000 FYT, respectively. Phytase supplementation did not improve Carcass weight ($P > 0.05$). The animals fed with 4,500 FYT diet had more carcasses classified as E (between 55–60% lean meat-SEUROP) compared other groups. Doses between 1,500 and 3,000 FYT improve FCR, DWG and final LW of growing and finishing pigs.

Keywords: Phytase, swine, growing, finishing.