Recommended Phosphorus in Grower and Finisher Diets

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Environmental stewardship and profitability are good reasons to minimize phosphorus additions to swine diets. Currently, many producers overfeed phosphorus as compared to NRC recommendations.

An experiment was conducted to compare animal performance of pigs fed the following levels (% of diet) of available phosphorus in the growing (50-80 kg) and finishing (80-110 kg) stages: 0.25/0.23, 0.25/0.16, 0.25/0.16 + phytase, 0.20/0.16 and 0.20/0.16 + phytase. All diets in each feeding phase were equalized for protein, digestible lysine and digestible energy. Average daily gain (ADG), average daily feed intake (ADFI) and feed conversion (F/G) were measured. Bone phosphorus content was determined to assess the phosphorus status of the pigs and carcass measurements were taken at slaughter.

There were no differences (P>0.05) in ADG, ADFI or F/G among treatments within each feeding phase for the entire period, nor were there carcass differences for dressing percent, backfat thickness or estimated lean yield. The addition of 500 FTU/kg of phytase to diets of grower/finisher pigs had no effect on animal performance. There were also no differences in bone phosphorus content among the treatment groups. Barrows had higher (P<0.05) backfat, lower lean yield and lower grade indexes.

Implication

From this trial it was concluded that NRC (1998) recommended levels of available phosphorus for grower and finisher pigs were adequate, sustainable and economical. The addition of phytase to diets containing NRC recommended levels of phosphorus showed no improvement in animal performance.