The Effects of Phytase Supplementation of Low-Available P Diets on Pig Performance and Bone Breaking Strength.

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ABSTRACT

An experiment was conducted in order to determine the effect of phytase supplementation in low-available P diets on pig performance and bone breaking strength. One hundred DxLxY crossbred pigs (sixty gilts and sixty barrows) with the approximate 22.2 kgs body weight were arranged in 3 dietary treatments. Each treatment consisted of 4 replications with 5 barrows and 5 gilts per replication. The pigs were randomly fed the experimental diets as following: Diet 1 (control diet) contained adequate level of available P, Diets 2 and 3 had lower available P levels than Diet 1 by 25 and 33 %, respectively and were supplemented with phytase 750 unit/kg. Pigs subjected to both low-available P diets but supplemented with phytase were not significantly different in ADG, ADFI and FCR from pigs fed adequate-P diet. Bone breaking strength and percentages of ash, calcium, and phosphorus were also not different among the dietary treatments. These

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results indicated that phytase supplementation at 750 unit/kg effectively liberated P in low-available P diets and optimized the pig performance and bone breaking strength.

**Keyword:** phytase, pig performance, bone breaking strength