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OptiPhos® The Advanced Phytase

Optiphos®

Focus: **Efficacy of OptiPhos®, Natuphos, Phyzyme XP, and Quantum in improving phosphorus bioavailability in young pigs**

Site: JBS United research farm at Frankfort, IN, USA

Animals: 80 gilts (PIC 337), starter weight 10,3 kg

Experimental design: Randomized complete block design with 10 treatments and 8 replicates.
The basal diet was formulated to be deficient in P, containing a calculated level of 0.37% total P and 0.07% estimated available P. Dietary treatments included three graded levels of inorganic P (iP; 0, 0.075, 0.150%) from monocalcium phosphate (20.0% P), three levels of OptiPhos® (300, 500, 750 OTU/kg), one level each of Natuphos and Phyzyme XP (500 FTU/kg), and two levels of Quantum (500 and 750 FTU/kg) added to a P-deficient basal diet.

Diet composition (basal diet):

Ingredient	%
Corn	61.92
Soybean meal	32.00
Fat	3.0
Limestone	1.36
Premix vit.+min., amino acid etc.	1.00
ME kcal/kg	3470
CP %	20.8
Ca %	0.70
P %	0.4
avP %	0.076

Recorded parameters: Body Weight, ADG, ADFI, F:G, Fibula ash.

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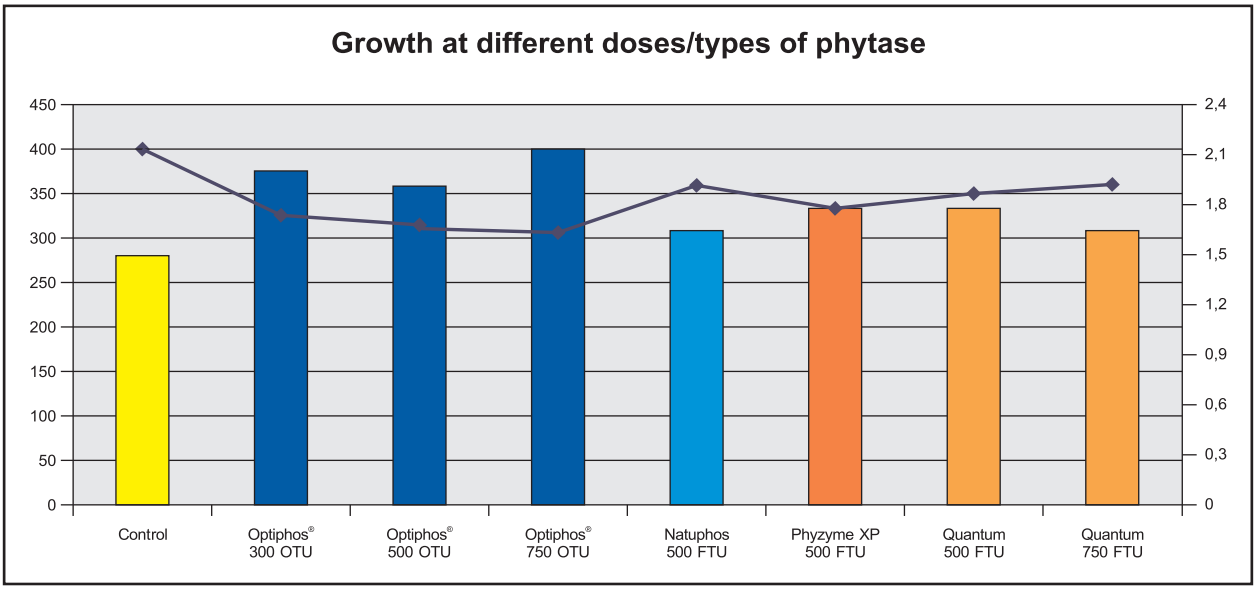
Trial results:



Amount of aP in % released by the different phytases

Phytase	Units/kg of feed	% P release based on Bone (fibula) ash %
Optiphos®	300	0.084^{bc}
Optiphos®	500	0.122^{ab}
Optiphos®	750	0.143^{a}
Natuphos	500	0.041^{c}
Phyzyme XP	500	0.076^{bc}
Quantum	500	0.066^{bc}
Quantum	750	0.043^{c}

^{abc}*Means within a column with different superscripts are different (P < 0.05)*

Conclusions

- Both growth and feed efficiency in the 21 day period were better in OptiPhos® groups compared to all the other phytase groups.
- Bone ash analysis demonstrated superior efficiency of OptiPhos® as compared to all the other phytases included in the experiment.

250 OTU Optiphos is equivalent to 50g of Optiphos 10,000 PF coated per tonne of feed