

Accepted Manuscript

Title: A systematic view on the effect of microbial phytase on ileal amino acid digestibility in pigs

Authors: A.J. Cowieson, J.-P. Ruckebusch, J.O.B. Sorbara, J.W. Wilson, P. Guggenbuhl, L. Tanadini, F.F. Roos



PII: S0377-8401(17)30368-1
DOI: <http://dx.doi.org/doi:10.1016/j.anifeedsci.2017.07.007>
Reference: ANIFEE 13822

To appear in: *Animal Feed Science and Technology*

Received date: 17-3-2017
Revised date: 30-5-2017
Accepted date: 12-7-2017

Please cite this article as: Cowieson, A.J., Ruckebusch, J.-P., Sorbara, J.O.B., Wilson, J.W., Guggenbuhl, P., Tanadini, L., Roos, F.F., A systematic view on the effect of microbial phytase on ileal amino acid digestibility in pigs. *Animal Feed Science and Technology* <http://dx.doi.org/10.1016/j.anifeedsci.2017.07.007>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

A systematic view on the effect of microbial phytase on ileal amino acid digestibility in pigs.

A.J. Cowieson, J.-P. Ruckebusch, J.O.B. Sorbara, J.W. Wilson, P. Guggenbuhl, L. Tanadini, F.F. Roos

DSM Nutritional Products, Kaiseraugst, Switzerland

Corresponding author: Aaron J. Cowieson; aaron.cowieson@dsm.com

Highlights

- A systematic view on the effect of phytase on ileal amino acid digestibility in swine, based on a comprehensive meta-analysis of published work, is presented
- Key factors involved in promotion or demotion of the mean effect of phytase on amino acid digestibility in swine are discussed
- The effect of methodology is briefly discussed as related to the weight of the pig, the use of various digestibility markers and cannulation approach
- The anti-nutritional effects of phytate are confirmed and briefly discussed
- Recommendations for 'extra-phosphoric' matrix values for commercial phytases are suggested

Abstract

Data on the effect of microbial phytase on apparent ileal amino acid digestibility coefficients in pigs were transcribed from a total of 28 peer-reviewed papers in order to determine response patterns and overall effects. Transcribing the digestibility responses from the various papers resulted in a database with 925 observations from diets that were principally based on corn, soybean meal, canola meal and various co-products such as ricebran, wheatbran and distillers dried grains and solubles (DDGS). The majority of experiments utilized grower pigs of approximately 30kg live-weight fitted with ileal cannulas but pigs from 6 to 71kg in weight were represented as well as studies using post-mortem digesta collection techniques. Most papers were published between 2005 and 2016 but several were published prior to these dates. Phytase doses represented ranged from 250 FYT/kg to 20,000 FYT/kg feed though most observations

Download English Version:

<https://daneshyari.com/en/article/5538810>

Download Persian Version:

<https://daneshyari.com/article/5538810>

[Daneshyari.com](https://daneshyari.com)