

PSVII-20 The extraphosphoric effects of *Citrobacter braakii*-derived phytase on carcass yield of pigs in grower and finisher phases, *Journal of Animal Science*, Volume 97, Issue Supplement_2, July 2019, Pages 219–220, <https://doi.org/10.1093/jas/skz122.387>

Claudia C Silva, Caio A Silva, Marco A Callegari, Ana M Bridi, Carlos R Pierozan, Cleandro P Dias, Rafael F Sens, Francine T Falleiros,

Abstract

A total of 120 barrows, 68 d-old with initial weight 23.21 ± 1.91 kg, were allocated in a block design with 5 treatments and 8 reps of 3 animals each. The diets were based on Corn/SBM, iso-nutrient and isoenergetic except for the Ca and available P: growing I (68-91 days of age), growing II (92-112d), finishing I (113-140 d) and finishing II (141-156 d) phases respectively: Positive Control (PC): 0.31, 0.27, 0.25 and 0.21% of avP and 0.64, 0.55, 0.51 and 0.47% of Ca; Negative Control (NC): 0.18, 0.14, 0.12 and 0.10% of avP and 0.53, 0.44, 0.40 and 0.36% of Ca; and three NC diets supplemented with 1,000, 2,000, and 3,000 FYT/kg respectively. Daily weight gain (DWG), daily feed intake (DFI), feed conversion rate (FCR), and live weight (LW) were measured at the end of each phase. Carcass yield, back fat height, loin depth, and lean meat yield were measured according to the European Carcass Classification (SEUROP) in the 156 d-old. Data were submitted to ANOVA, Tukey test ($P < 0.05$) and regression analysis. Diets with 1,000, 2,000 and 3,000 FYT increased DWG by +12% (quadratic, $P < 0.05$) in the growing I; +2.9, +2.9 and +10.5% (linear, $P < 0.01$) and in the growing II; +4.1, +5.1 and +8.2% (linear, $P < 0.001$) in the total period, respectively. Compared to the NC diet, the DFI was increased by 0, +2.8 and +4.3% (linear, $P < 0.05$), respectively, considering the entire experimental period and also increased the final LW by +3.2, +4.2 and +6.1% (linear, $P < 0.001$). The treatments did not influence ($P > 0.05$) FCR and carcass yield. The animals fed PC diets and with the three phytase levels had more carcasses classified as E (between 55–60% lean meat-SEUROP) when compared to the NC diet. The dose of 3,000 FYT improved DWG and final LW of growing pigs during all experimental period.

Issue Section:

[Nonruminant Nutrition](#)

© The Author(s) 2019. Published by Oxford University Press on behalf of the American Society of Animal Science. All rights reserved. For permissions, please e-mail: journals.permissions@oup.com.