

From Discovery to Development

Proceedings of the 16th International Symposium
on Digestive Physiology of Pigs (DPP2025)

Lake Geneva, WI, USA
20–23 May 2025



These proceedings comprise review papers related to keynote presentations and abstracts related to short oral and poster presentations, presented at the 16th International Symposium on Digestive Physiology of Pigs held in Lake Geneva, WI, USA, 20–23 May 2025

The abstracts were peer-reviewed and edited to maintain the scientific standards set by the Co-Chairs and Scientific Organizing Committee of DPP2025. Abstracts not meeting these standards were rejected and not included in the proceedings. The contents of all contributions are the responsibility of the authors and do not reflect the views of the committees involved in the organization of this symposium.

© 2025 The Authors. Published by Elsevier B.V. on behalf of The Animal Consortium



animal



104. Standardized ileal amino acid digestibility increased with body weight of growing pigs fed faba beans, dehulled faba beans and peas, while unaffected by body weight when fed soybean meal, sunflower meal and rapeseed meal

U.P. Krogh*, S.K. Boldsen, P. Tybirk, N.M. Sloth, K. Blaabjerg

Seges Innovation, Aarhus N, Denmark

* Corresponding author: U.P. Krogh.

The objective was to investigate how bodyweight (BW) of pigs between 40 and 60 kg affect their ability to digest amino acids (AA) from different protein sources. Two experiments (Exp) were conducted. In each Exp, eleven growing pigs were ileal cannulated at a BW of 33 kg. After a recovery period, the pigs were used in a Youden square design with five groups and 8 periods. In Exp-I, pigs were fed a nitrogen-free diet (NF-1, $n = 18$) or one of four cornstarch-based diets with either standard soybean meal (SBM-1, $n = 15$), faba bean (FB, $n = 15$), rape seed meal (RSM, $n = 16$) or peas (PEA, $n = 15$) as the sole amino acid (AA) source. In Exp-II, pigs were fed a nitrogen-free diet (NF-2, $n = 20$) or one of four cornstarch-based diets with either standard soybean meal (SBM-2, $n = 16$), high protein soybean meal (SBM-3, $n = 15$), dehulled faba bean (DFB, $n = 15$) or sunflower meal (SFM, $n = 15$) as the sole AA source. Pigs were fed 43 g/kg BW and Yttrium was used as indigestible marker (0.4 g/kg). In each period, pigs were adapted to the diets for 5 days followed by two days of continuously ileal digesta collection for 9 h per day. The standardized ileal digestibility (SID) of AA was calculated using average basal endogenous losses (16.2 g AA/kg DM intake) from the two Exp and a previous study conducted in the same facilities ($n = 7$). Statistical analysis was conducted in R and included group and BW within group as fixed effects and pigs and period as random effects. The initial and final BW of pigs was 36 and 57 kg in Exp-I and 38 and 64 kg in Exp-II. The SID AA increased with BW by 0.27 %/kg in DFB, 0.35 %/kg in FB and 0.55 %/kg DFB ($P < 0.05$). In contrast, SID of total AA was not affected by BW when fed SBM-1, SBM-2, SBM-3, RSM and SFM ($P > 0.10$), likely because these sources were exposed to a higher degree of processing. In conclusion, BW did not affect SID AA of processed oil by-products, while SID of AA increased linearly with BW in growing pigs fed PEA, FB and DFB.

Keywords: Ileal amino acids digestibility, Protein sources, pigs.

doi: [10.1016/j.anscip.2025.07.105](https://doi.org/10.1016/j.anscip.2025.07.105)