Efficacités comparées de la L-méthionine et de la DL-méthionine chez le porcelet

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Comparative efficacy of L-methionine and DL-methionine in piglets

Methionine (Met) is an essential amino acid involved in several physiological functions. Methionine can be provided by dietary protein or by isomers (DL-Met) or analogues (DL-HMB) of L-Met, the biologically active form of Met. Although a large number of studies have been carried out comparing the efficiencies of DL-Met and DL-HMB, little information is available on the efficiency of L-Met. The objective of this study was to compare the efficiency of L-Met (obtained by fermentation) relative to that of DL-Met (obtained by chemical synthesis) in piglets. The study was carried out with seven treatments including a basal diet deficient in Met and three diets with three levels of additional L-Met or DL-Met. Feed intake, daily gain and feed efficiency increased curvilinearly with increasing levels of both sources of Met and attained a plateau at the highest levels of supplementation with no effect of the source of Met. A bent-stick model was used to estimate the efficiency of L-Met utilization. The model was parameterized to allow for different response trajectories between L-Met and DL-Met. The estimated efficiencies of L-Met relative to that of DL-Met were 1.15 (± 0.12), 1.12 (± 0.09), and 0.99 (± 0.12) for feed intake, daily gain and feed efficiency, respectively. None of these values differed significantly from 1, indicating L-Met and DL-Met can be used equally efficiently as a Met source for growth in piglets.