

Influence de la teneur en énergie et en lysine dans l'alimentation des porcs en croissance sur les caractéristiques du lisier et sur les émissions de gaz

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The influence of energy and lysine content of growing pig diets on slurry characteristics and gas emissions.

This study investigated the influence of the amount of dietary nutrients on manure composition and CO₂, NH₃ and CH₄ emissions. Twelve female pigs, weighing 103±3.2 kg, were housed individually and assigned to one of two diets: a diet high in energy and lysine (HD: 14.39 MJ digestible energy (DE) kg⁻¹, 0.77 g lysine MJ DE⁻¹) or a diet lower in energy and lysine (LD: 13.97 MJ DE kg⁻¹, 0.72 g lysine MJ DE⁻¹). Slurry was collected over 4 consecutive days and stored in six 30 L buckets (3 per treatment) for 76 days. Dry matter (DM), organic matter (OM) and pH at the top layer and at 10 cm deep were measured at the beginning of the storage period and on days 12, 27, 40, 54 and 76 of storage. Carbon dioxide, NH₃ and CH₄ losses were measured throughout the storage using a photoacoustic gas monitor. The slurry LD presented higher DM and OM levels at the beginning of the storage period and thereafter (P<0.05). The pH measured at 10 cm deep was higher in HD slurry on days 27 and 76 of storage (P<0.05). Carbon dioxide and NH₃ emissions were statistically higher in HD at the beginning of the study and on days 12 and 27; however, their cumulative emissions were not different over the experimental period. Regarding CH₄, cumulative production was significantly higher in the slurry from pigs fed the HD diet (P<0.05). In conclusion, the feeding strategy used in this study affected nutrient concentration in slurry and CH₄ emission.