Supplementing lysolecithin with emulsifier and monoglycerides to diets reformulated to lower energy on performance and lean-fat deposition in fattening pigs

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Minimizing feed costs while maintaining performance remains a key objective for pig producers. By improving nutrient absorption, supplementary lysolecithin has been shown to improve growth performance of growing pigs. Therefore, a study was designed to demonstrate the efficacy of supplementing a combination of lysolecithin, synthetic emulsifier and monoglycerides (LEX) to diets reformulated to lower net energy, on the performance parameters and the deposition of fat and lean meat. Five hundred and sixty piglets (10-12 weeks of age) were assigned to two experimental treatments, with 20 pens of 14 pigs each: 1) control, fed a commercial diet; 2) experimental, fed a commercial diet reformulated to lower energy-cost (-60kcal NE/kg feed) by replacing 1% of added fat by wheat and supplemented with LEX at 500g/t. Body weight (BW) and feed intake (FI) per pen were recorded at d6, 28, 60 and 88. The individual final BW of pigs at d88 was measured and the intra-pen coefficient of variation (CV) was calculated. The individual live weight, BFT (back fat thickness) and BLT (back lean thickness) at P2 the day prior to the departure of each animal to slaughterhouse were also measured. The replicate pen was the experimental unit. Data were analyzed by ANOVA (JMP 15), with significance set at P<0.05. No differences were seen for BFT and BLT. Overall, the control had a lower FI (p<0.001) and tended to have a lower FCR (2.100 vs. 2.136; p=0.051) than the experimental treatment. The intra-pen CV of final BW was lower (9.260% vs. 10.731%; p=0.01) for supplemented pigs, which led to a reduction of 5 days in the duration of the fattening cycle. In conclusion, the supplementation of LEX with feed reformulation to lower energy-cost impaired feed efficiency and improved BW homogeneity of the pigs, reducing the number of days to reach target slaughter weight.