
A total of 1,267 pigs (PIC 337 × 1,050; initially 26.4 kg) were used in a 120-d experiment to determine the effects of standardized ileal digestible (SID) Lys and added tribasic copper chloride (TBCC; Intellibond C, Micronutrients, Indianapolis, IN) on growth performance and carcass characteristics of finishing pigs. Pens of pigs were allotted to 1 of 8 dietary treatments in a randomized complete-block design with 26 to 27 pigs per pen and 6 pens per treatment. Treatments were arranged in a split-plot design. Whole-plot treatments included 2 SID Lys levels at 92.5 or 100% of the estimated requirement. Within each Lys level, there was a 2 × 2 factorial arrangement of treatments with either 0 or 150 ppm Cu from TBCC with 2 feeding durations (60 or 120 d). All diets were corn-soybean meal–based with 30% dried distillers grains with solubles (DDGS) and contained 17 ppm of Cu from copper sulfate (CuSO₄) provided by the trace mineral premix. There were no 3-way interactions or 2-way interactions for early TBCC × SID Lys, late TBCC × SID Lys, or early TBCC × late TBCC. Overall (d 0 to 120), TBCC did not affect growth performance; however, pigs fed 100% of the SID Lys requirement had increased (P < 0.05) ADG, G:F, and final BW compared with those fed 92.5% of the estimated requirement. A significant TBCC × SID Lys interaction (P < 0.05) was observed for carcass yield and backfat depth. Hot carcass weight and carcass ADG were improved (P < 0.05) when pigs were fed 100% SID Lys compared with those fed 92.5%, and tended (P < 0.10) to improve in pigs fed TBCC compared with those not fed TBCC. In conclusion, feeding TBCC did not affect whole body growth performance, but increased HCW and carcass ADG. Also, there was a TBCC × Lys interaction for carcass yield and backfat. Increasing SID Lys from 92.5 to 100% of the estimated requirement resulted in increased ADG, HCW, carcass ADG, and improved G:F.

Key Words: copper, finishing pigs, lysine