Three hundred and fifty three lactating sows were used to determine the effects of increased dietary lysine on sow and litter performance. One hundred and sixty growing pigs (PIC L326 x C22) with an initial weight of 63 kg were used in a 54 d growth trial to determine the effects of increasing dietary L-lysine HCl in corn-soybean meal-based diets for finishing pigs. Treatments consisted of a control diet, (no L-lysine HCl) or .15, .225, and .30% L-lysine HCl replacing the lysine provided by soybean meal. Dietary treatments fed in a grower (60 to 80 kg) and a finisher (80 to 110 kg) phase were formulated to contain .70 and .55% total lysine, respectively. During the grower phase increasing L-lysine HCl from 0 or .15% to .225% and .30% decreased feed efficiency (F:G). During the finishing phase, increasing l-lysine HCl from 0, .15 or .225% to .30% decreased (P < .05) ADG. Feed efficiency was decreased (P < .05) when L-lysine HCl increased from 0 or .15% to .225% or .30%. For the overall experiment increasing L-lysine HCl from 0 or .15% to .225% or .30% reduced (P < .05) feed efficiency (.30, .30, .28 and .26, respectively) and ADG (943, 912, 853 and 853 g, respectively). Carcass characteristics were not affected by dietary treatment, however, backfat depth numerically increased for the .30% L-lysine HCl treatment (15.5, 15.0, 15.0 and 17.1 mm, respectively). Based on the results of this experiment, no more than .15% L-lysine HCl should be added to replace lysine from soybean meal in a corn-soybean meal based diet to avoid deficiencies of other amino acids that limit the growth performance of finishing pigs.

Key Words: Lysine, Corn, Finishing pigs


A total of 156 high-lean-growth gilts were used in two experiments to evaluate the effect of reducing dietary CP level and adding synthetic amino acids (AA) on growth performance and carcass characteristics of finishing pigs. In Exp. 1, 96 pigs (initially 52.3 kg) were used in a 35 d growth trial to evaluate the effect of reducing CP and adding AA on early-finishing performance. There were 4 treatments in a RCBD design with six replicate pens/treatment containing 4 pigs/pen. The control diet was formulated with corn and soybean meal and 3% added fat to contain .76% true ileal digestible lysine (TDL) and 16.8% CP with no AA added. All the other diets were formulated to contain the same levels of TDL and NE as the control diet by adding variable levels of lys and fat. Protein levels in ttr 2 and 3 were reduced by 3% and 4%, respectively, with tht, trp, and met added to the ideal ratio. Trt 4 was similar to ttr 3, except ile and val were added to meet the ideal ratio.