

Effects of dietary lysine/protein ratio and fat levels on growth performance and meat quality of finishing pigs

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ABSTRACT

This study aimed to evaluate the effects of dietary lysine/protein ratio and fat levels on the growth, carcass characteristics and meat quality of finishing pigs fed feed made from food waste, including noodles and chocolate. Four dietary treatments, 2 levels of lysine/protein ratio (0.035 and 0.046) and 2 levels of fat (3.3% and 6.0%), were adapted to a 2 × 2 factorial arrangement. Each diet for the finishing pigs contained the same levels of adequate crude protein (16%) and lysine (0.58–0.75%), and similar levels of high total digestible nutrients (90.2–92.6%). In total, 32 LWD pigs with an average body weight of 57.2 kg were assigned to 4 dietary groups. The pigs were slaughtered at about 115 kg. Growth performance was not influenced by the dietary treatments. Carcass characteristics were slightly influenced by the dietary fat level. As the dietary lysine/protein ratio decreased, the marbling score of *Longissimus dorsi* muscle increased and the intramuscular fat (IMF) increased from 6.82% to 9.46%. Marbling score was not significantly influenced by the dietary fat level. These results indicate that IMF increased without adverse effects on growth, carcass characteristics and meat quality, when pigs were fed a diet with low lysine/protein ratio.

Key words: intramuscular fat, lysine protein ratio, marbling, meat quality, pig.