

Effects of reducing dietary lysine levels on growth performance, carcass characteristics and meat quality of Duroc x KHAPS crossbred black pigs

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This study was conducted to evaluate the effect of dietary reducing lysine (LYS) on the growth performance, carcass characteristics and meat quality of Duroc x Kaohsiung Animal Propagation Station (KHAPS) black pig in finishing period. Trials used fifty-four Pigs with 80 kg of weight and were assigned to one of the dietary treatments including High (LYS 0.75%), Medium (LYS 0.60%) and Low (LYS 0.45%) lysine. Each diets contained the same levels of crude protein (CP 10.5%) and metabolizable energy (3,250 kcal/kg). Pigs were slaughtered at about 120 kg. The results showed that weight at 8 weeks of trial, final backfat thickness on 10th rib, average daily gain, average daily feed intake, gain/feed and feeding days to 120 kg were not significantly different ($P > 0.05$) in treatments. The carcass weight, dressing percentage, backfat thickness of carcass, lean percentage and fat percentage were not significantly different ($P > 0.05$) in treatments. The bone percentage of L group was higher than H group ($P < 0.05$). Furthermore, the moisture, crude protein, crude fat and ash of *Longissimus dorsi* were not significantly different ($P > 0.05$) in treatments. But the crude fat levels of *Longissimus dorsi* tended to be higher in L group. In addition, the color, marbling, firmness, loin area and cooking loss of *Longissimus dorsi* were not significantly different ($P > 0.05$) in treatments. While the firmness of *Longissimus dorsi* tended to be lower in L group. The results indicated that reducing dietary lysine levels did not affect growth performance and meat quality of *Longissimus dorsi* but it increased bone percentage of carcass. Meanwhile, the crude fat of *Longissimus dorsi* increased from 3.4% to 4.2%.

Key words: duroc, KHAPS black pigs, carcass characteristics, meat quality