Effects of Duroc genetic proportion on the growth performance, carcass characteristics and sensory evaluation of crossbred black pigs [1]

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Abstract

The objective of this study was to investigate the growth performances, carcass characteristics and sensory evaluation of crossbred black pigs with various proportions of Duroc genetic background, including crossbred K (Meishan ♀ × Duroc ♂, 50% Duroc), DK (Duroc♀ × KHAPS black pigs ♂, 75% Duroc) and DKD (DK♀ × Duroc ♂, 87.5% Duroc) pigs. Totally 36 black pigs, 12 (6 barrows and 6 gilts) for each crossbreed were used in the present study. Feed and water were provided *ad libitum* from 70 to 180 days of age before the pigs were slaughtered. The growth performance and carcass characteristics were analyzed. Results indicated that DKD had a significantly ($P < 0.05$) higher average daily gain (ADG) when compared to K and DK. In addition, the slaughter rate, lean meat percentage and of loin eye area DKD pigs were the best among the three crossbreeds. The results showed that muscle moisture content was significantly ($P < 0.05$) higher in K. A significantly ($P < 0.05$) greater muscle firmness score was found in the K than the DKD. Compared with DKD and DK, K had a significantly ($P < 0.05$) smaller muscle marbling score. In addition, the DKD produced significantly ($P < 0.05$) smaller muscle L value than those others. Moreover, the muscle a value was significantly ($P < 0.05$) smaller in K than those others. However, the back fat a and b values were significantly ($P < 0.05$) greater in DKD while K had the highest ($P < 0.05$) muscle sensory panel score of aroma, flavor and tenderness. In conclusion, the growth performance (ADG) and carcass characteristics (dressing percentage, lean, loin eye area and fat percentage) increased with Duroc genetic proportion improvement, but sensory evaluation (flavor and tenderness) of K for the most good.

Key words: Duroc genetic proportion, Growth performance, Carcass characteristics.

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