

# Comparison of barrows and gilts on the carcass cutability ratio, meat compositions and qualities for Duroc crossbred KHAPS black pigs<sup>(1)</sup>

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## Abstract

An experiment was carried out to compare growth performance, hematological traits and muscle postmortem changes of barrows and gilts in finishing Duroc x KHAPS black pigs. Twenty-four healthy crossbred black pigs from finisher, were used as experimental animals, with similar body weight, were selected and randomly assigned to either barrows or gilts groups, which were allocated into triplicates with 4 pigs in each pen (384 × 256 cm). All pigs were provided with the same finisher diets. Feed and water were provided and feeding was *ad libitum* for 9 weeks experimental period. The results showed that the fat and lymph weight or ratio in the carcass front part, belly, leaf lard and fat weight or ratio in the carcass central part and fat and pork leg chopped weight or ratio in the carcass end part were significantly higher ( $P < 0.05$ ) in barrows whereas the gilts had significantly higher ( $P < 0.05$ ) shoulder weight or ratio in the carcass front part, loin tenderloin and chopped weight or ratio in the carcass central part and pork leg sinew and bone weight or ratio in the carcass end part. However, no treatment differences were associated with hand and hock, pork neck, forelegs sinew, forelegs chopped meat and bone weight or ratio in the carcass front part, lymph and bone weight or ratio in the carcass central part and pork leg weight or ratio in the carcass end part between the barrows and gilts. Also, fat content of *Longissimus dorsi* in barrows was significantly ( $P < 0.05$ ) greater than the gilts, but the moisture, protein and ash contents was not affected by the treatments. Compared with gilts, barrows had a significantly higher ( $P < 0.05$ ) firmness and marbling scores in the *Longissimus dorsi*. However, no treatment differences were associated with color scores and  $L^*$ ,  $a^*$  and values in the *Longissimus dorsi* and loin muscle area between the barrows and gilts. In addition, the  $C_{14:0}$ ,  $C_{16:1}$ ,  $C_{18:1}$  and total saturated fatty acid (SFA) were significantly higher ( $P < 0.05$ ) in barrows whereas the gilts had significantly higher ( $P < 0.05$ )  $C_{18:2}$ , total polyunsaturated fatty acid (PUFA) and PUFA/SFA ratio in the *Longissimus dorsi*.

Key Words: KHAPS crossbred black pigs, Sex, Carcass cutability ratio, Meat compositions, Meat qualities.

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