

Selection of heart-fatty acid binding protein gene on growth performance in black pigs

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KHAPS black pig (K) had better reproductive performance and stable genetic composition. To achieve better growth performance, the hybrid generation (DK, genetic composition D 50% and K 50%) was produced by mating Duroc (D) sow with HHaadd (HH6) haplotype of heart-fatty acid binding protein (H-FABP) gene and K boar with MM genotype of estrogen receptor (ESR) gene. Then generation was bred in a locked population and black color, porcine stress syndrome (PSS), H-FABP and ESR gene as the final goal of breeding. This study collected the daily weight gain (ADG) of DK generations, the feed conversion rate of boars (FCR), the thickness of backfat (BF), and the body length (BL), shoulder width (SW), chest width, hip width (HW), chest depth, body height, chest circumference, and tail circumference at 180 days. The results showed that the SW and HW of DK 5 generation (had higher than Kbred (33.4 ± 2.3 and 31.9 ± 1.7 cm vs 29.8 ± 2.7 and 27.6 ± 1.5 cm), respectively. Moreover, the boar of DK 5 generation on body weight, ADG and BF were had higher than DK 2 generation at 180 days (107.0 ± 10.7 kg, 0.80 ± 0.08 kg/d and 2.10 ± 0.30 cm vs 104.0 ± 11.2 kg, 0.74 ± 0.09 kg/d and 1.94 ± 0.39 cm), respectively. In the future, the selecting of AA-MM-HH6 genotype will complete in black pig, which improve of BL and SW of DK generation.

Key words: Black pig, H-FABP gene, growth performance