

# Breeding of prolific swine: The performance improvement and estimation of genetic parameters on KHAPS black pigs in recent years <sup>(1)</sup>

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## Abstract

After Kaohsiung Animal Propagation Station black pigs (KHAPS black pigs) were approved certification of new breed officially, the strategies of mating system in KHAPS black pigs were adopted by mating with different generation rather than mating with the same generation. This study was conducted to investigate the improvement of growth performance and body conformation and estimation of genetic parameters on KHAPS black pigs after certification. The results showed that the growth performance of boars and gilts on weight at the 70 day (W70), weight at the 210 day (W210) and average daily gain from 70 to 210 day (ADG) were 20.6 kg, 112.2 kg, 0.66 kg and 20.2 kg, 97.1 kg, 0.55 kg, respectively. The body conformation of boars and gilts on body length (BL), shoulder width (SW) and hip width (HW) were 126.0 cm, 34.3 cm, 30.7 cm and 120.8 cm, 30.9 cm, 29.1 cm, respectively. If we divided the date of 210-day measurement into cool and hot seasons, the W210, ADG, BL and SW of cool season were higher than hot season significantly ( $P < 0.05$ ) in boars. In gilts, the W210, ADG, chest circumference (CC), SW, chest width (CW), HW and chest deep (CD) of cool season were higher than hot season significantly ( $P < 0.05$ ). The estimation of genetic parameter showed that the heritability of W70, ADG, backfat thickness (BF), BL and SW were 0.39, 0.56, 0.68, 0.71 and 0.58, respectively. The genetic correlations between ADG and BL, ADG and SW were 0.70 and 0.87 and the other values between two traits were low to moderate positive genetic correlation. By analyzing the test data and genetic parameters of KHAPS black pigs in recent years, we expect to understand the improved condition and adjust our selection.

Key words: KHAPS black pigs, Growth performance, Body conformation, Genetic parameter.

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