

# **The effect of sex on performance, ultrasonic measurements, and carcass characteristics of purebred Berkshire pigs exhibited at the National Barrow Show**

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The objective was to determine the effect of sex on performance and carcass composition of purebred Berkshire pigs exhibited at the National Barrow Show. Four barrows and 4 gilts, sired by the same boar, were fed the same basal diet and housed in single sex pens. Barrows were fed 7.4 mg/kg of ractopamine (RAC) for 21 days prior to slaughter. Gilts were fed 7.4 mg/kg of RAC for 7 days prior to slaughter. Pigs were weighed and scanned for ultrasonic measurements of 10<sup>th</sup> rib backfat thickness (BF) and loin muscle area (LMA) weekly. Pigs were evaluated on carcass value, skeletal build, and compositional uniformity. Three of each sex were selected for exhibition at the end of the feeding period. Sex was analyzed as the fixed effect using the MIXED procedure SAS. Barrows and gilts did not differ ( $P > 0.05$ ) in body weight or average daily gain throughout the feeding period. On day 0, gilts had greater ( $P < 0.01$ ) LMA (43.68 vs. 37.70 cm<sup>2</sup>) and predicted lean (40.36 vs. 36.79 %) than barrows. Backfat thickness (1.10 vs. 1.30 cm) did not differ ( $P > 0.05$ ). On day 35, gilts had greater ( $P < 0.01$ ) LMA (51.47 vs. 46.62 cm<sup>2</sup>), less ( $P < 0.01$ ) BF (1.45 vs. 2.30 cm), and greater ( $P < 0.01$ ) predicted lean (69.44 vs. 63.12 %) than barrows. After slaughter, no differences ( $P > 0.05$ ) were detected for objective loin color and loin pH. Predicted lean (62.43 vs. 60.12%) and index scores (113.78 vs. 99.22) were greater ( $P < 0.05$ ) in gilts than in barrows. Overall, gilts and barrows did not differ in performance, yet gilts were leaner and heavier muscled than barrows. Despite these differences in composition, the pigs were successfully exhibited as the reserve champion purebred truckload at the 2012 National Barrow Show.