

# Piglet Birth Weight has very Little Impact on Carcass or Pork Quality

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The birth weight (BW) of piglets born to large litters is, on average, smaller. Previous research has shown that at birth, the muscle composition of low BW pigs differs from their larger litter-mates. The objective of this study was to determine if the eating quality of pork obtained from pigs of low BW differs from larger BW pigs. BW, total born (n=1200) and born alive (n=1114) were recorded at farrowing for 98 litters. BW was divided into 4 quartiles (Q1 to Q4; 0.8 to 1.2, 1.25 to 1.45, 1.50 to 1.70 and 1.75 to 2.50 kg). Pigs < 800 g BW were excluded. Pigs were marketed at 120 kg. Meat composition data were obtained from a subset of 24 litters, including 1 pig per BW quartile per litter. Animals were slaughtered and dressed in a simulated commercial manner. Full grade and carcass dissection data were collected 24 h post-mortem. Eating quality was measured using a trained taste panel. Carcass data were collected from all remaining pigs.

Litter size ranged from 3 to 19 pigs born alive. Piglet BW ranged from 800 to 2500 grams. Dressed weight (94.4 kg), lean yield (60.4 %), loin (66.7 mm) and fat (19.9 mm) thickness was unaffected by BW. Pork from pigs in BW Q3 and Q4 contained more moisture (Q3, Q4, 75%; Q1, Q2, 74.5%; P<0.05); however, intramuscular fat was highest in Q1 (Q1, 3.51 %, Q2, Q3, Q4, 2.83%, P<0.05). Colour, pH and temperature of the pork at 24 and 48 h post-mortem were similar among quartiles. Flavour desirability was considered higher in the pork from low BW pigs (4.40) than from intermediate BW (Q2 or Q3) pigs (4.14; P<0.05) but similar to the pigs from Q4 (4.26). Pork tenderness, juiciness, flavour intensity and palatability were unaffected by BW.

**Implication:** Overall palatability of pork was not affected by BW. This implies that concerns regarding increased sow productivity resulting in poorer quality pork are not supported. Thus, efforts by producers to improve their financial returns by achieving increased sow productivity can proceed without concern.