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Effect of Gender on Chemical Composition, Shear Force, Cooking Loss, Boar Taint and Sensory Evaluation of Finishing Pigs Slaughtered at 110 kg

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ABSTRACT: The experiment was conducted in order to a study meat quality as nutritive values, shear force values, cooking loss and sensory evaluation of meat as well as skatole in backfat and testosterone in blood plasma concentration from different genders of finishing pigs. Twenty-four samples of each loin muscle, backfat and blood from 8 boars, 8 barrows and 8 gilts were used in this experiment. These samples were collected from left carcass of pigs slaughtered at 110 kg live weight. The chemical composition of loin chop of barrows had higher fat than of boars and gilts (2.55 vs 1.63 and 1.57 %, respectively; $P < 0.05$). For moisture and protein percentages were not significantly different, however boars tended to have higher than gilts and barrows, respectively. Shear force value of boars had higher than of gilts and barrows (Maximum force 35.84 33.92 and 26.45 N; Total energy 0.14 0.12 and 0.10 J, respectively; $P < 0.05$). Grilling loss was not significantly different, however boars tended to be higher than gilts and barrows, respectively. For sensory evaluation of boars had lower tenderness and juiciness than gilts and barrows (tenderness 2.86 vs 3.53 and 3.55; $P < 0.01$, juiciness 2.82 vs 3.11 and 3.41; $P < 0.05$). Overall acceptability of boars was lower than barrows (2.97 vs 3.41; $P < 0.05$) but no significantly different from gilts (3.31). Flavour was not significantly different, however gilts tended to have better than barrows and boars, respectively. Skatole concentrations from boars had higher than barrows and gilts (49.09 vs 37.60 and 32.85 $\mu\text{g/g}$; $P < 0.05$). Eating quality from sensory evaluation was significantly positively correlated between 0.76 to 0.92. Tenderness, flavour and overall acceptability were significantly negatively correlated with skatole ($r = -0.58, -0.48$ and $-0.58, n=24; P < 0.01$). Juiciness was negatively correlated with skatole ($r = -0.41, n=24; P < 0.05$). Flavour and overall acceptability were significantly negatively correlated with testosterone ($r = -0.52$ and $-0.52, n=24; P < 0.01$). Tenderness and juiciness were significantly negatively correlated with testosterone ($r = -0.44$ and $-0.41, n=24; P < 0.05$). Skatole concentration were tended to correlate positively with testosterone concentration ($r = 0.31, n=24; P > 0.05$)

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