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Effects of sex and breed on meat quality and sensory properties in three-way crossbred pigs sired by Duroc or by a synthetic breed based on a Korean native breed

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This study was conducted to determine the effects of breed and sex on meat quality and sensory properties of the loin in three-way crossbred pigs: Landrace×Yorkshire×Duroc (LYD) and Landrace×Yorkshire×Woori black pig, as Korean native pig (LYW). Carcass traits did not differ by breed. Carcass weight and back-fat thickness were higher in castrates than in gilts ($p<0.01$). Fat content, cooking loss and water-holding capacity were higher in LYW than LYD ($p<0.05$). Redness and yellowness of the meat were higher in LYW than in LYD ($p<0.01$). Further, LYW had lower pH and shear force than LYD ($p<0.001$). Two sensory properties, color and flavor, were better in LYW than in LYD and in gilts than in castrates ($p<0.05$). However, other sensory traits did not differ by breed or sex. Capric acid (C10:0) was higher in LYD than LYW ($p<0.001$). However, stearic acid (C18:0) and saturated fatty acid (SFA) contents were higher in LYW than LYD ($p<0.05$). Eicosenoic acid (C20:2) and the n6/n3 ratio were higher in gilts than in castrates, whereas SFA content was higher in castrates than in gilts. These results suggest that certain physicochemical qualities of meat and sensory properties are improved in LYW as compared to LYD. This study provided basic data on meat quality of crossbred pigs with Woori black pig as a terminal sire.

Biography

Yongmin Kim has completed his PhD in Bioinformatics at Kangwon National University in Republic of Korea and works at National Institute of Animal Science as Junior Researcher. He is interested in animal breeding and meat quality of swine.

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