

Comparison of Meat Quality of Hanwoo Beef Loin between White and Yellow Carcass Fat Appearance

Seungchul Lee^{1*}, Hye-Jin Kim¹, Sethukali Anand Kumar¹, Hoe-Yong Jung²,
Hak-Pil Kim², and Cheorun Jo¹

¹*Department of Agricultural Biotechnology, Seoul National University, Seoul, Korea,*

²*Korea Institute for Animal Product Quality, Sejong, Korea*

The yellow carcass fat in Hanwoo beef decreases consumer preference, leading to a decline in meat quality grade. However, the exact effect of yellow carcass fat on meat quality is still needed to study. This study aimed to compare the meat quality by carcass fat color using Hanwoo loins having white (white group; n=10) and yellow carcass fat color (yellow group; n=10). The color, fatty acid composition, and carotenoid contents in carcass fat and proximate composition, pH, color, cooking loss, shear force, and thiobarbituric acid reactive substances (TBARS) in meat were measured. Yellowness of carcass fat in yellow group was higher than in white group ($p < 0.05$). The carcass fat in yellow group had higher oleic acid, eicosenoic acid, and unsaturated fatty acid than that in white group ($p < 0.05$). β -carotene was only found in carcass fat of yellow group at 0.43 $\mu\text{g/g}$. However, proximate composition, pH, cooking loss, shear force, even color, and TBARS did not show significant differences in meats between yellow and white group. Although differences in yellowness, fatty acid, and carotenoid of carcass fat were found, meat quality was not different by carcass fat color. Therefore, the yellow carcass fat appearance does not adversely affect the meat quality.