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ABSTRACT

Increased intramuscular fat improves both 'chewiness' and 'hardness' as defined in ISO5492:1992 of beef Longissimus muscle of Holstein × Japanese black F1 steers.

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It is considered that high-fat beef is more 'tender' than low-fat beef in Japanese consumers. However, 'tenderness' which has been an important beef characteristic, has not been commonly defined. ISO5492:1992 provides internationally established items for sensory texture analysis with simple definitions, and the items classified under 'chewiness' and 'hardness' as defined in the international standard are characterized as useful texture descriptors for beef. The aim of this study was to investigate the effects of intramuscular fat on beef texture using the ISO5492 texture vocabulary. Longissimus muscles were harvested from Holstein × Japanese black F1 beef steers with different intramuscular fat levels and were subjected to sensory tests by a trained panel using ISO5492:1992 texture terms. Correspondence analysis indicated that the intramuscular fat level was related to both 'chewiness' and 'hardness' and the intensities of these characteristics decreased as intramuscular fat increased. These findings suggest that intramuscular fat improves both 'chewiness' and 'hardness' as defined in ISO5492:1992.

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