

ABSTRACT

**Effect of biotin supplementation on meat quality of F1 Wagyu/Black Angus feedlot steers of known genotype.**

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Biotin (D-biotin) was supplemented to F1 Wagyu/Black Angus steers fed a wheat-based ration to evaluate the effect on meat quality. One hundred and eight steers of known Wagyu sire lines were assigned to three biotin treatments (0, 10 and 20mg/head/day) with each treatment replicated four times using an unfasted liveweight of 410.5kg ( $\pm 24.42$  SD). Biotin supplementation had no effect ( $P > 0.05$ ) on beef marbling standard at either the 5/6th or 10/11th rib quartering site, 10/11th rib intra-muscular fat percentage, intra-muscular fat fatty acid composition or adipose melting points. Wagyu genotype had an effect ( $P < 0.05$ ) on beef marbling standard and intra-muscular fat percentage at the 10/11th rib, inter-muscular and intra-muscular melting point and fatty acid composition of intra-muscular fat. A significant ( $P < 0.001$ ) but poor correlation existed between beef marbling standard and intra-muscular fat percentage ( $R(2) = 0.198$ ). Total conjugated linoleic acid had a highly significantly ( $P < 0.0001$ ) positive correlation to intra-muscular fat percentage ( $R(2) = 0.446$ ).

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