_____ ABSTRACT _____

Prediction of carcass composition and individual carcass cuts of Japanese Black steers

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The objective of this study was to develop equations to predict carcass tissue weights and percentages and boneless carcass non-trimmed cut weights by using the cold carcass weight (CCW) and three other traits at the 6–7th rib section, which are routinely collected in carcass markets in Japan. Carcasses from 94 Japanese Black steers were used for the multiple regression analysis with a stepwise procedure and a novel Least Absolute Shrinkage and Selection Operator (LASSO). The accuracies of prediction (R^2) and RMSEs for the carcass tissue and cut weights were similar between the two procedures. In contrast, LASSO appeared to be the better procedure for predicting carcass tissue percentages. The longissimus muscle area and subcutaneous fat thickness were the important predictors for the lean percentage in the stepwise procedure, and CCW was additionally selected when the LASSO procedure was used.

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