A 2 x 2 factorial study was conducted measuring the effects of unilateral castration and TDN level (90 versus 120% of NRC requirement) on the overall yields from twenty, 16-month old Holstein bulls. The mean live weight and standard deviation for the 20 bulls was 537.4 ± 54.5 kg. The mean dressing percentage was 58.6 ± 2.6. Neither testosterone level nor average daily gain showed any significance to treatment. Rib eye area and kidney, pelvic and heart fat, as well as overall yield and quality grades, were not affected by treatment. The twenty carcasses averaged traces plus in marbling and average Good conformation with a final USDA quality grade of Standard plus. The mean rib eye area was 73.81 ± .23 cm², fat cover 0.43 ± .18 cm and kidney, pelvic and heart fat 4.6 ± 1.4 percent. The mean USDA yield grade was 2.8 ± .60. Proximate analysis indicated no treatment effect, with the mean fat, protein and moisture being 15.12, 18.92 and 64.27, respectively. The interaction treatment effect on total cooking loss was significant (P < .05). The average cooking loss was 23.35%. Several independent variables were measured to determine their relationship to carcass yield. Eye lens weight as a percent of carcass weight was significant (P < .01) with rib eye area r = -.69 and with percent lean to fat r = -.64. Percent retail cuts from the hindquarter r = .48 and percent bone from the carcass r = .50 were also correlated with lens weight (P < .05). Tongue weights were significantly correlated with yield grade and with percent bone from the carcass with regression values of r = -.49 and r = +.46, respectively.


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