

Correlations among measures of temperament, weight and gain of steers at placement and reimplant in a commercial feed yard.

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Single source, crossbred steers (n=1,551) were shipped from western Nebraska to southeast Colorado. Cattle from 3 ranch units were received over 3 separate days. Steers were housed overnight in receiving pens before processing and allocation to feedlot pens. In some cases, initial processing did not occur until the second day after arrival due to time limitations. Two data sets were collected to determine the relationship between measures of temperament and weight traits of steers at 1) placement into a commercial feedlot and 2) at reimplant approximately 75 d later. All body weight (BW) and temperament measures were recorded in a single processing facility at initial processing and at reimplant (RI). Beef Improvement Federation Chute Scores (CS; 1=gentle, 6=aggressive), collected by 4 independent trained observers (2 at each processing), and exit velocity (EV; m/sec) were used to measure temperament during both processing events. Processing time (PT) and EV were measured using an infrared triggered electronic time recording device as a steer entered the squeeze chute then traveled a fixed distance upon exit. Two CS collected for each animal within each processing were averaged (AVGCS and AVGCS_RI). Partial correlation coefficients were computed using the MANOVA features of SAS PROC GLM. Day of initial processing (n=5) and reimplant processing (n=4) were included as class variables. EV had correlations with EV_RI, AVGCS, AVGCS_RI, BW_RI, and PT of: 0.44, 0.12, 0.15, -0.06, and -0.07, respectively (all P<0.04). EV_RI had correlations with AVGCS, AVGCS_RI, BW_RI, gain, and average daily gain of: 0.15, 0.25, -0.08, -0.06 and -0.06, respectively (all P<0.03). AVGCS was correlated with AVGCS_RI (r=0.24, P<0.01) and PT (r=0.13, P<0.01). AVGCS_RI was correlated with PT_RI (r=0.09, P<0.01). Correlation between CS collected by observers 1 and 2 was 0.73 (P<0.01). The correlation between CS_RI collected by observers 3 and 4 was 0.85 (P<0.01). Increases in EV and EV_RI were associated with increases in AVGCS and AVGCS_RI. Trained observers assigned similar CS within a processing event. EV at reimplant was inversely associated with average daily gain.

Key Words: Temperament, Exit Velocity, Beef Cattle