

The effect of exit velocity at receiving and re-implant on average daily gain and weight at re-implant.

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The objective of this study was to explore the relationship between temperament, as measured by exit velocity at receiving and re-implant, and weight (**IW**) and average daily gain (**ADG**) after 75 d in the feedlot. Crossbred steers (n=1,551) from a single source were shipped from western Nebraska to southeast Colorado. Cattle from 3 ranch units within that source were received in shipments occurring over 3 separate days. Steers were housed overnight in feedlot receiving pens before being processed and allocated to their lots (n=6). Exit velocity was measured at receiving (**EV**; m/s) and approximately 75 d later at re-implant (**EV_RI**; m/s) using 2 infrared electronic triggers to start and stop an electronic time recording device, the first as the steer left the chute and a second 2 m away from the first to finalize the exit velocity. Analyses were conducted using the MIXED procedure of SAS. In the first 2, EV_RI was evaluated as to its influence on IW and ADG (calculated as IW minus receiving weight divided by the number of days on feed). A third analysis evaluated the effect of EV on IW. All 3 models included the fixed effect of ranch-lot class, along with a random animal effect. An increase of 1 m/s in EV_RI resulted in a decrease in IW and ADG of 2.68 kg (P<0.001) and 0.03 kg (P<0.01), respectively. Similarly a 1 m/s increase in EV decreased IW by 2.89 kg (P<0.01). The ranch-lot class effect was significant in all 3 models (P<0.05). These results suggest that cattle with calmer temperaments gain better in the first 75 d of feeding.

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