

Effect of disposition score on feedlot performance, carcass traits and profitability of beef calves fed in the Iowa Tri-County Steer Carcass Futurity. G.D. Fike¹, L.R. Corah¹, M.E. King¹ and W.D. Busby²,
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Beef calves (n=47,410) fed at 18 Iowa feedlots through the Iowa Tri-County Steer Carcass Futurity over eight years (2002-09) were used to evaluate the effect of disposition score (1=docile; 6=very aggressive) on feedlot performance, carcass traits and profitability. A common diet was fed and similar implant and health programs were administered to all calves. Calves were sorted and harvested when visually determined to have one cm of fat cover. Calves were divided into three groups based on disposition score: docile (DC), restless (R) and nervous to very aggressive (NVA). Unless otherwise stated, each of the three means for each outcome was different from all other means (P<.05). DC, R and NVA calves had similar feedlot delivery weights. Although disposition score significantly affected days on feed, the difference between the highest and lowest mean DOF was less than one day. As disposition score increased, final weights (537.9, 531.2 and 519.9 kg), hot carcass weights (330.7, 327.6 and 322.8 kg), ADG (1.46, 1.43 and 1.37 kg/d) and marbling scores (400=Sm⁰; 431.7, 422.1 and 401) decreased while cost of gain increased (1.33, 1.48 and 1.51 USD/kg). NVA calves were less efficient (6.97 kg/kg) compared with D (6.86 kg/kg) and R (6.84 kg/kg) calves. Rib fat was identical for DC and R calves (1.14 cm), but was lower for NVA calves (1.05 cm). Of the black-hided Angus-type calves eligible for the *Certified Angus Beef*[®] (CAB[®]) program, higher disposition scores lowered CAB[®] acceptance rates (20.65, 15.21 and 9.08% for DC, R and NVA calves, respectively; P<.0001). DC calves were the most profitable (46.63 USD/hd) followed by R calves at 26.16 USD/hd. NVA calves returned the least profit at 7.62 USD/hd. Docile calves had better feedlot performance, improved carcass merit and greater profitability than those calves that were more aggressive.

Key words: disposition score, feedlot performance, carcass traits