Effect of health treatments on feedlot performance, carcass traits and profitability of beef calves fed in the Iowa Tri-County Steer Carcass Futurity. G.D. Fike[1], L.R. Corah[1], M.E. King[1] and W.D. Busby[2], [1]Certified Angus Beef LLC , Wooster, OH, and [2] Iowa State University, Ames, IA.

Beef calves (n=47,764) 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 the number of health treatments 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 the number of times the animal was treated for disease conditions: non-treated calves (NT), calves that were treated once (1T) and calves that were treated two or more times (2T). Unless otherwise stated, each of the three means for each outcome was different from all other means ($P < .05$). The mean delivery weights, final weights and hot carcass weights were 295, 280 and 273.8 kg; 536.8, 524.3 and 514.3 kg; and 330.6, 322.7 and 317.7 kg for NT, 1T and 2T calves, respectively. As the number of treatments increased, days on feed increased (167, 177.9 and 183.7 d), ADG decreased (1.46, 1.39 and 1.33 kg/d), F:G improved (6.89, 6.76 and 6.66 kg/kg) and cost of gain increased (1.36, 1.52 and 1.64 USD/kg). Calves with fewer treatments had more rib fat (1.14, 1.09 and 1.00 cm) and greater marbling scores (MS; 400=Sm^0; 429.4, 413.8 and 395.9). The number of health treatments significantly affected the *Certified Angus Beef ® (CAB®)* acceptance rate in black-hided Angus-type calves, and these rates were 18.71, 14.36 and 11.19% for NT, 1T and 2T calves, respectively. Profitability (USD/hd) was highest for NT calves, intermediate for 1T calves and lowest for 2T calves (52.45, -15.16 and -137.3, respectively). Calves that remained healthy during the feeding period had improved feedlot performance and carcass merit, and were more profitable compared with calves that were treated one or more times for disease conditions.

Key words: health treatments, feedlot performance, carcass traits