

## Effects of Forage Treatments on Feedlot Performance (ABSTRACT)

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North Dakota cattlemen are exploring ways to finish more cattle in the state and to convert a very seasonal industry into a consistent beef supply. Increasing the amount of grazed forage in the production of a consistent and wholesome supply of beef could be one option to achieve this goal. The feedlot industry is also trying to develop ways to put heavier cattle in the feedlot at cheaper costs. Forage grazing of yearling cattle can increase the weight of cattle substantially prior to entry in a finishing lot. High quality pasture grazing allows stocker cattle to grow at an accelerated pace without the high inputs of confinement and grain feeding. The objective of this study was to compare carcass and feedlot performances of yearling beef steers that grazed birdsfoot trefoil and alfalfa during the summer and standing corn in the fall prior to entering a conventional feedyard. Yearling beef steers were grazed on forage treatments of birdsfoot trefoil and alfalfa from June to early August. Following the forage treatments, steers were grazed on standing corn until fall. Steers were commercially finished at Decatur County Feedyard, Oberlin, KS. Carcass and closeout data was provided by Decatur County Feedyard. There were no meaningful differences between yearling steers that grazed alfalfa or birdsfoot trefoil prior to entry in the feedlot. There was a tendency for birdsfoot trefoil steers to gain slightly faster in the feedlot (3.4 vs. 3.0 lbs/day; P= .11) and for alfalfa steers to have slightly larger ribeye area (13.9 vs. 12.9 in<sup>2</sup>; P= .17). Average performance of yearling steers was body weight at feedlot arrival, 993 lbs; days in the feedlot, 94 days; body weight at harvest, 1,293 lbs; hot carcass weight, 827 lbs; backfat thickness at harvest, 0.67 in.; ribeye area, 13.4 in<sup>2</sup>; total cost of gain, \$63.40; and overall net return per head, \$37.50. Birdsfoot trefoil, alfalfa, and corn are viable forages for cattle producers to add carcass weight to yearling beef cattle prior to sending them to a feedlot. These forages put on carcass weight and cut down on the amount of time spent in a feedlot before cattle are ready to be harvested. There is an opportunity for cattle producers to increase the amount of forage used to finish cattle in Southwest North Dakota.