A two-year study was conducted on tall fescue-based pastures to evaluate three approaches to rotationally stocking stocker calves. Within each year, two sets (a spring set and a fall set) of crossbred steers were stratified by weight and randomly assigned to one of three treatments. The spring set (n = 72, 229 ± 11 kg), was on pasture from early April to mid August, and the fall set (n = 72, 248 ± 18 kg) was on pasture from early July to late October. The three treatments were: 1) rotationally stocked only (CONTROL), 2) rotationally stocked with distillers grains (DISTILLERS), and 3) rotationally stocked with round bale silage (SILAGE). Total gain ha$^{-1}$ over the entire grazing season did not differ between DISTILLERS and SILAGE ($P = 0.09$) steers, but both were greater than CONTROL ($P < 0.01$). Total gain ha$^{-1}$ for DISTILLERS, SILAGE, and CONTROL was 459, 402, 276 kg, respectively. Steer ADG for the spring set was equivalent for SILAGE and DISTILLERS ($P = 0.51$), but greater than CONTROL ($P = 0.01$). The ADG for steers in the spring set was 0.79, 0.81, and 0.62 kg for DISTILLERS, SILAGE, and CONTROL, respectively. For the fall set, ADG for all three treatments was different ($P = 0.02$). The fall set, steer ADG was 0.72, 0.53, and 0.29 kg for DISTILLERS, SILAGE, and CONTROL, respectively. The only treatment that had equivalent ADG between the spring set and the fall set was the DISTILLERS treatment ($P = 0.07$).