

FINAL STOCKER WEIGHTS AND ECONOMIC SUMMARY OF RYE-RYEGRASS PASTURES AS INFLUENCED BY GRAZING METHOD AND STOCKING RATE

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Background. Marketing strategies should be used both at initiation and termination of a stocker grazing venture. Marketing strategies should include stocking rate and expected gains from animals based on animal sex, age, body condition, weight, breed-type, color patterns, etc., to allow for two opportunities at termination of grazing: (1) merchandise stockers in special sales, auctions, or private treaty, and/or (2) retain complete or partial ownership through the feedlot stage. This grazing experiment was described in a companion report. The objective of this report was to assess economic returns to stocker grazing scenarios which included an array of final off-pasture weights for cattle stocked continuously (CONT) or rotationally (ROTN) at three stocking rates.

Research Findings. The 2-year average off-pasture weights from this grazing experiment ranged from about 1025, 925, or 775 lbs, respectively, from low (LO), medium (ME), or high (HI) stocked pastures (Table 1). From a general, commercial stocker-feeder perspective, those steers from HI at 775 lbs and body condition score of 4 to 5 "fit" most feeder orders. Stockers that weighed from 925 to 1025 lbs had body condition scores of 6 to 8 may be subject to price discounts based on size and condition. A detailed economic assessment is presented in a companion report which presents all pasture, animal, and interest costs associated with purchasing 600-weight steers (\$70.60/cwt in fall 1997 and 1998). The analyses also accounts for variation in sale price from \$77/cwt for 775-lb steers to \$63/cwt for 1025-lb steers. Table 2 shows the pasture cost/lb gain, net returns to pasture as \$/ac, and percent annualized rate of return. It is noteworthy to examine each year's returns independently. In 1997-98, pasture costs ranged from about \$.15 to \$.20/lb regardless of stocking rate or grazing method. As a result, net returns per acre on the ME and HI pastures exceeded \$200/ac; however, annualized rate of return for all three stocking rates was relatively similar at 34% to 42%. In the second year, 1998-99, however, stocker ADG was significantly reduced on the HI stocking rate compared to 1997-98. Stockers on LO and ME had pasture costs of about \$.20 to .24 per lb gain. However, when stocker steers failed to gain more than 1 lb/hd/day on HI pastures, pasture costs accelerated to \$.35 to \$.90/lb gain with negative or near negative returns.

Application. Retained ownership options through the stocker-feeder periods should be carefully considered before purchasing cattle for winter pasture grazing. Stockers that finish off-pasture at heavy weights may have to be retained to prevent excessive price discounts at time of

grazing termination. This heavy weight steer dilemma may be avoided in a commercial operation by either purchasing lighter weight steers or by merchandising-selling steers at some "target" weight prior to pasture termination. Much like the heavy weight steers, those steers from HI pastures in this experiment were also likely candidates to retain ownership through the feedlot stage so that a more positive economic return may be realized since the grazing phase was not profitable in year 2.

Table 1. Off-pasture weights of steers stocked continuously (CONT) or rotationally (ROTN) at three stocking rates.

Grazing ¹ System	1997-98 ³		1998-99 ³		2-Year Avg.	
	Stocking ² Rate	Final Wt.	Stocking ² Rate	Final Wt.	Stocking Rate	Final Wt.
	(hd/ac)	(lb/hd)	(hd/ac)	(lb/hd)	(hd/ac)	(lb/hd)
CONT-LO	1.7	1046	1.5	1007	1.6	1027
ROTN-LO	1.7	1027	1.5	1010	1.6	1019
CONT-ME	2.3	970	2.1	847	2.2	909
ROTN-ME	2.3	988	2.1	898	2.2	943
CONT-HI	2.9	832	2.7	674	2.8	753
ROTN-HI	2.9	859	2.7	739	2.8	799

¹Rotational system was 8-paddock; Low = LO; Medium = ME; High = HI

²Initial steer weight was 600 lbs

³Grazing days for Dec-May in Year 1 = 159 days, and Year 2 = 156 days

Table 2. Pasture costs, net returns, and annualized rate of returns for steers stocked continuously (CONT) or rotationally (ROTN) at three stocking rates.

Grazing ¹ System	Pasture Cost/lb Gain (\$/cwt)		Net Return to Pasture (\$/ac)		Annualized Rate of Return (%)	
	1997-98	1998-99	1997-98	1998-99	1997-98	1998-99
	CONT-LO	17.68	20.20	173.48	100.19	42
ROTN-LO	18.64	19.69	134.63	85.53	32	23
CONT-ME	15.50	24.26	218.61	137.56	41	28
ROTN-ME	14.83	19.89	201.30	173.00	37	35
CONT-HI	19.58	89.74	221.59	-32.04	34	-5
ROTN-HI	17.35	35.00	227.89	23.49	34	4

¹Rotational system was 8-paddock; Low = LO; Medium = ME; High = HI