

Intensive Rotational Grazing of Steers on Highly Erodible Land at the Adams County CRP Project, 2000

Russell BreDahl, extension field specialist,
beef-forage

Chris Nelson, Adams County extension
education director

Rick Sprague, Adams County district
conservationist, NRCS

Brian Peterson, grassland conservationist,
NRCS

John Klein, NRCS project manager

A steer grazing demonstration was conducted in 2000 at the CRP Research and Demonstration Project farm near Corning, Iowa. The steers were born on farms in southwest Iowa in the spring of 1999 and were purchased between February 24 and March 1, 2000, at sale barns near Corning. While still at the sale barns, the calves were vaccinated for IBR, PI₃, BVD and BRSV.

The steers were backgrounded at a farm near the CRP project farm until the pastures were ready for grazing. When the steers were delivered to the CRP farm on April 24, they were weighed, individually identified with ear tags, injected with Dectomax®, implanted with Revalor-G® and given pinkeye shots.

On April 24, 2000, 88 yearling steers began grazing a 65-acre pasture that had been divided into 27 paddocks to facilitate rotational grazing. Except for a free-choice mineral supplement (3.03 oz. costing 5.37 cents per animal-day), pasture was the sole source of feed for the

steers. The average weight of the 88 steers at the beginning of the grazing season was 613.3 lb. Steers were marketed off the pasture in two different groups. Table 1 summarizes the performance of each group and both groups together.

During the grazing trial, the 88 steers gained a total of 14,453 lb from 7,906 animal-days of grazing. The average live weight gain per animal-day was 1.83 lb, and the average live weight gain per acre was 222 lb. The average cost of live weight gain on pasture was \$61.67 per cwt. The cost per animal-day of grazing was \$1.13.

In general, two rules guided the grazing management 1) during each grazing cycle, graze no more than half the standing forage in each paddock, and 2) let each paddock rest approximately 30 days between grazing cycles. There were 94 moves from one paddock to another during the 128-day grazing season. Most of the moves (68.1%) followed only 1 day of grazing in the paddock that was being left. No paddock was ever grazed more than 3 days in succession.

Table 2 summarizes the results of the 2000 steer grazing trial and similar trials beginning in 1994 and continuing through 1999. Table 3 gives detailed information about the expenditures incurred during the demonstration.

Table 1. Performance by market group

Group	No.	Days	Animal Days	Start Weight	End Weight	Total Gain	ADG	Ave. Start Wt	Ave. End Wt
Sold 6/17/00	46	55	2530	30140	35220	5080	2.01	655.22	765.65
Sold 8/29/00	42	128	5376	23834	33207	9373	1.74	567.48	790.64
Combined	88	128	7906	53974	68427	14453	1.83	613.34	777.58

Table 2. Summary of steer grazing project by years, 1994 – 2000

Item	Year							Ave.
	1994	1995	1996	1997	1998	1999	2000	
Date grazing started	4-29	5-4	5-10	5-3	5-2	4-24	4-24	4-30
Date grazing ended	11-3	9-14	10-15	10-10	8-19	8-16	8-29	9-22
Number of days grazed	188	133	158	160	109	114	128	141.4
Animal-days of grazing	9912	9975	13114	8794	8175	8664	7906	9505.7
Animal-days grazing per A	152.5	153.5	201.8	135.3	125.8	133.3	121.6	146.3
Stocking rate, steers per A	0.81	1.15	1.28	0.85	1.15	1.17	0.95	1.05
Average beginning weight	488.2	495.7	333.3	633.9	605.9	622.7	613.3	541.9
Average ending weight	731.5	647.7	488.3	842.7	808.3	829.7	777.6	732.3
Total gain	18003	11403	12872	15862	15182	15732	14453	14787
Gain per animal-day	1.82	1.14	0.98	1.80	1.86	1.82	1.83	1.61
Pounds of gain per A	277	175	198	244	234	242	222	227

Table 3. Expenditures of the 2000 steer grazing project

<u>Animal purchases</u>	
88 steers, (47,425 lbs.)	47,680.66
Vet work at sale barn	458.50
Trucking and handling	280.00
Buyer's commission	474.25
Cost to backgrounder's lot	48,893.41
<u>Backgrounding costs</u>	
5,147 animal-days @ \$1.00	5,147.00
Trucking to CRP farm	90.00
Total backgrounding costs	5,237.00
Total costs at delivery to CRP farm, (53,974 lbs.)	54,130.41
<u>Pasture costs (65 acres)</u>	
Land	2,943.85
Seed	201.44
Machine, & fuel	75.00
Fencing	895.87
Water	418.65
Total pasture costs	4,534.81
<u>Other operating expenses</u>	
Interest	1,993.76
Trucking	698.00
Pest control	549.18
Labor	430.00
Mineral supplement	424.50
Implants	104.15
Check-off	88.00
Eartags	60.54
Equipment rental	30.00
Total operating expenses	4,378.13
Grand total expenses	63,043.35
Necessary selling price per cwt., (68,427 lbs.)	92.13