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

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

Abstract
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 eartags, injected with Dectomax®, implanted with Revalor-G® and given pinkeye shots.

Disciplines
Agricultural Science | Agriculture
Intensive Rotational Grazing of Steers on Highly Erodible Land at the Adams County CRP Project, 2000

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Brian Peterson, grassland conservationist, NRCS
John Klein, NRCS project manager

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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

<table>
<thead>
<tr>
<th>Group</th>
<th>No. Days</th>
<th>Animal Days</th>
<th>Start Weight</th>
<th>End Weight</th>
<th>Total Gain</th>
<th>ADG Start Wt</th>
<th>Ave. Start Wt</th>
<th>Ave. End Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sold 6/17/00</td>
<td>46</td>
<td>55</td>
<td>2530</td>
<td>30140</td>
<td>5080</td>
<td>2.01</td>
<td>655.22</td>
<td>765.65</td>
</tr>
<tr>
<td>Sold 8/29/00</td>
<td>42</td>
<td>128</td>
<td>5376</td>
<td>23834</td>
<td>9373</td>
<td>1.74</td>
<td>567.48</td>
<td>790.64</td>
</tr>
<tr>
<td>Combined</td>
<td>88</td>
<td>128</td>
<td>7906</td>
<td>53974</td>
<td>14453</td>
<td>1.83</td>
<td>613.34</td>
<td>777.58</td>
</tr>
</tbody>
</table>
Table 2. Summary of steer grazing project by years, 1994 – 2000

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

Table 3. Expenditures of the 2000 steer grazing project

- **Animal purchases**
  - 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

- **Backgrounding costs**
  - 5,147 animal-days @ $1.00 5,147.00
  - Trucking to CRP farm 90.00
  - Total backgrounder costs 5,237.00
  - Total costs at delivery to CRP farm, (53,974 lbs.) 54,130.41

- **Pasture costs (65 acres)**
  - Land 2,943.85
  - Seed 201.44
  - Machine, & fuel 75.00
  - Fencing 895.87
  - Water 418.65
  - Total pasture costs 4,534.81

- **Other operating expenses**
  - 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