Feedlot and Carcass Data: Making “Cents” and Making Decisions

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Percent of operations by number of days weaned calves were held before sale

Pricing of Feeder Calves
Value at Finish Animal – Expenses = Available Price for Feeder Calf
Profit Margin

Proportion of slaughter cattle marketed on a cash or alternative basis

Calf Value Discovery
Tri-State Cattle Feeders Ranch to Rail
Retained Ownership Program

Program Similarities
• Feedlot Performance
• Carcass Characteristics
• Economics Parameters
Effect of Region of Origin on Feedlot Performance and Health

<table>
<thead>
<tr>
<th>Item</th>
<th>Southeast</th>
<th>Midwest</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Head</td>
<td>31,155</td>
<td>16,371</td>
</tr>
<tr>
<td>In wt., lb</td>
<td>649\textsuperscript{a}</td>
<td>620\textsuperscript{b}</td>
</tr>
<tr>
<td>Days of age</td>
<td>520\textsuperscript{a}</td>
<td>255\textsuperscript{b}</td>
</tr>
<tr>
<td>Final wt., lb</td>
<td>1,277\textsuperscript{a}</td>
<td>1,277\textsuperscript{a}</td>
</tr>
<tr>
<td>DOF</td>
<td>176\textsuperscript{a}</td>
<td>176\textsuperscript{a}</td>
</tr>
<tr>
<td>Harvest Age, d</td>
<td>488\textsuperscript{a}</td>
<td>420\textsuperscript{b}</td>
</tr>
<tr>
<td>Overall ADG, lb</td>
<td>3.18</td>
<td>3.18</td>
</tr>
<tr>
<td>Feed to Gain</td>
<td>6.02\textsuperscript{a}</td>
<td>6.79\textsuperscript{b}</td>
</tr>
<tr>
<td>Mortality Rate, %</td>
<td>15.81\textsuperscript{a}</td>
<td>22.11\textsuperscript{b}</td>
</tr>
<tr>
<td>Mortality Rate, %</td>
<td>1.35\textsuperscript{a}</td>
<td>1.81\textsuperscript{b}</td>
</tr>
</tbody>
</table>

Busby, 2014

Effect of number of times animals treated for disease conditions on performance

<table>
<thead>
<tr>
<th>Number of Treatments</th>
<th>0</th>
<th>1</th>
<th>≥2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADG, lb/d</td>
<td>3.06\textsuperscript{a}</td>
<td>2.93\textsuperscript{b}</td>
<td>2.87\textsuperscript{b}</td>
</tr>
<tr>
<td>Feed to gain</td>
<td>7.11\textsuperscript{a}</td>
<td>7.33\textsuperscript{b}</td>
<td>7.29\textsuperscript{b}</td>
</tr>
<tr>
<td>Quality Grade</td>
<td>6.45\textsuperscript{a}</td>
<td>6.65\textsuperscript{b}</td>
<td>6.87\textsuperscript{b}</td>
</tr>
<tr>
<td>Prime</td>
<td>1.86\textsuperscript{a}</td>
<td>1.05\textsuperscript{b}</td>
<td>0.87\textsuperscript{b}</td>
</tr>
<tr>
<td>Choice</td>
<td>70.27\textsuperscript{a}</td>
<td>62.89\textsuperscript{b}</td>
<td>57.58\textsuperscript{b}</td>
</tr>
<tr>
<td>Select</td>
<td>25.28\textsuperscript{a}</td>
<td>30.14\textsuperscript{b}</td>
<td>30.58\textsuperscript{b}</td>
</tr>
<tr>
<td>Standard</td>
<td>2.53\textsuperscript{a}</td>
<td>5.92\textsuperscript{b}</td>
<td>10.54\textsuperscript{b}</td>
</tr>
</tbody>
</table>

Busby et al., 2004

2014-2015 Ave Net Carcass Value by Producers

![Graph showing net carcass value by producers from 2014 to 2015.](image)
Our cattle are pretty uniform, but the carcass value of our calves varied by up to $150. We didn’t realize there was that much difference*

A to Z Retained Ownership, Inc

“I’ve been surprised at the profitability variation between the high calf and the low calf”*

A to Z Retained Ownership, Inc

Our cattle are pretty uniform, but the carcass value of our calves varied by up to $150. We didn’t realize there was that much difference*

A to Z Retained Ownership, Inc

I’ve been surprised at the profitability variation between the high calf and the low calf.”*
Today

Targets:
950 - 980 lb HCW
Prime Carcass
Yield Grade 3

USDA carcass grade traits from National Beef Quality Audit, 2011 & 2005

<table>
<thead>
<tr>
<th>USDA Yield Grade</th>
<th>2011</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>USDA Quality Grade</td>
<td>693</td>
<td>690</td>
</tr>
<tr>
<td>Adjusted fat thickness, in</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Hot carcass weight, lb</td>
<td>823</td>
<td>792</td>
</tr>
<tr>
<td>Ribeye area, in²</td>
<td>13.8</td>
<td>13.4</td>
</tr>
<tr>
<td>KPH fat, %</td>
<td>2.3</td>
<td>2.3</td>
</tr>
<tr>
<td>Marbling score</td>
<td>440</td>
<td>432</td>
</tr>
</tbody>
</table>

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Producer X (2012-2013)

<table>
<thead>
<tr>
<th>In WT, lb</th>
<th>Out WT, lb</th>
<th>DOP</th>
<th>ADG, lb</th>
<th>HCW, lb</th>
<th>Quality Grade</th>
<th>CTA</th>
<th>YC</th>
<th>WT, lb</th>
<th>FF, in</th>
<th>Feeding Profit, $</th>
</tr>
</thead>
<tbody>
<tr>
<td>638</td>
<td>1220</td>
<td>190</td>
<td>2.94</td>
<td>740</td>
<td>Choice</td>
<td>4.07</td>
<td>10.91</td>
<td>0.60</td>
<td>$838.66</td>
<td>CAB</td>
</tr>
<tr>
<td>554</td>
<td>1240</td>
<td>190</td>
<td>3.47</td>
<td>760</td>
<td>Choice</td>
<td>4.34</td>
<td>13.73</td>
<td>0.73</td>
<td>$873.52</td>
<td>CAB</td>
</tr>
<tr>
<td>584</td>
<td>1250</td>
<td>204</td>
<td>2.93</td>
<td>750</td>
<td>Choice</td>
<td>2.51</td>
<td>12.65</td>
<td>0.35</td>
<td>$799.02</td>
<td>CAB</td>
</tr>
<tr>
<td>676</td>
<td>1372</td>
<td>190</td>
<td>3.52</td>
<td>865</td>
<td>Choice</td>
<td>3.45</td>
<td>13.58</td>
<td>0.62</td>
<td>$1,189.38</td>
<td>CAB</td>
</tr>
<tr>
<td>624</td>
<td>1254</td>
<td>217</td>
<td>3.02</td>
<td>751</td>
<td>Choice</td>
<td>2.92</td>
<td>11.65</td>
<td>0.32</td>
<td>$794.42</td>
<td>CAB</td>
</tr>
<tr>
<td>504</td>
<td>1300</td>
<td>204</td>
<td>2.80</td>
<td>642</td>
<td>Select</td>
<td>2.64</td>
<td>10.73</td>
<td>0.17</td>
<td>$606.41</td>
<td>CAB</td>
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<tr>
<td>588</td>
<td>1282</td>
<td>190</td>
<td>3.51</td>
<td>782</td>
<td>Choice</td>
<td>3.49</td>
<td>12.00</td>
<td>0.55</td>
<td>$1,000.06</td>
<td>CAB</td>
</tr>
<tr>
<td>738</td>
<td>1460</td>
<td>190</td>
<td>3.65</td>
<td>915</td>
<td>Choice</td>
<td>3.38</td>
<td>14.43</td>
<td>0.54</td>
<td>$1,294.84</td>
<td>CAB</td>
</tr>
<tr>
<td>584</td>
<td>1230</td>
<td>217</td>
<td>3.08</td>
<td>759</td>
<td>Select</td>
<td>2.34</td>
<td>13.62</td>
<td>0.37</td>
<td>$731.36</td>
<td>CAB</td>
</tr>
<tr>
<td>578</td>
<td>1220</td>
<td>190</td>
<td>3.24</td>
<td>735</td>
<td>Choice</td>
<td>3.72</td>
<td>10.74</td>
<td>0.57</td>
<td>$898.14</td>
<td>CAB</td>
</tr>
</tbody>
</table>
Select bulls with more muscling.

Producer X

Estimated of Ribeye area by carcass weight

<table>
<thead>
<tr>
<th>Carcass Weight (lb)</th>
<th>Ribeye Area, in²</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>9.8</td>
</tr>
<tr>
<td>550</td>
<td>10.4</td>
</tr>
<tr>
<td>600</td>
<td>11.0</td>
</tr>
<tr>
<td>650</td>
<td>11.6</td>
</tr>
<tr>
<td>700</td>
<td>12.2</td>
</tr>
<tr>
<td>750</td>
<td>12.8</td>
</tr>
<tr>
<td>800</td>
<td>13.4</td>
</tr>
<tr>
<td>850</td>
<td>14.0</td>
</tr>
<tr>
<td>900</td>
<td>14.6</td>
</tr>
</tbody>
</table>

Ribeye area versus hot carcass weight – Producer X

91 pounds more

Producer X

Year In WT, lb Out WT, lb DOF, lb ADG, lb/d HCW, lb REA, in² QG YG
2013 607 1250 198 3.2 768 12.2 80% Ch 2.8 50% CAB
2014 731 1368 193 3.2 846 12.1 90% Ch 3.2 50% CAB
2015 756 1388 182 3.1 859 14.2 80% Ch 2.7 20% CAB
Marbling score versus hot carcass weight – Producer X

Marbling score versus hot carcass weight – Producer X

Producer X

- Carcass Weight
- Quality Grade
- Higher ADG

ADG – Producer Y

Ribeye area versus hot carcass weight – Producer Y

Marbling score versus hot carcass weight – Producer Y

2015 Range Beef Cow Symposium, Loveland, Colo.
Producer Y

What’s next??
A. Increase carcass weight
B. Improved Quality grade
C. Higher ADG
D. ??

Ribeye area versus hot carcass weight – Producer Z

Marbling score versus hot carcass weight – Producer Z

Producer Z

<table>
<thead>
<tr>
<th>Year</th>
<th>In Wt., lb</th>
<th>End Wt., lb</th>
<th>DOF</th>
<th>ADG, lb/d</th>
<th>HCW, lb</th>
<th>REA, sq in</th>
<th>RibFat, in</th>
<th>QG</th>
<th>YG</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>466</td>
<td>1,387</td>
<td>203</td>
<td>3.4</td>
<td>863</td>
<td>14.8</td>
<td>0.40</td>
<td>60% Ch</td>
<td>2.0</td>
</tr>
<tr>
<td>2013</td>
<td>612</td>
<td>1,327</td>
<td>199</td>
<td>3.5</td>
<td>801</td>
<td>13.8</td>
<td>0.35</td>
<td>57% Ch</td>
<td>2.4</td>
</tr>
<tr>
<td>2014</td>
<td>650</td>
<td>1,344</td>
<td>210</td>
<td>3.2</td>
<td>820</td>
<td>13.5</td>
<td>0.32</td>
<td>65% Ch</td>
<td>2.5</td>
</tr>
<tr>
<td>2015</td>
<td>645</td>
<td>1,341</td>
<td>197</td>
<td>2.9</td>
<td>823</td>
<td>14.1</td>
<td>0.40</td>
<td>66% Ch</td>
<td>2.6</td>
</tr>
</tbody>
</table>
What management decisions were made with the Cow/Calf Enterprise

- Changing cow size
  - Increasing vs Decreasing
- Selling bulls
  - More vs Less
- Sire selection based on quality grade

What makes money

- Fast growing animals
- Heavy carcasses
- High quality carcasses

Summary

- Baseline of calves
- Management decision within the cow herd impacts performance within the feedlot and carcass characteristics
- Pre- and post- weaning performance is important in making management decisions