Custom Feeding or Cattle Feeders

Historical & Projected Returns, Marketing & Risk Management, Financing & Investment

Karl Hoppe
NDSU Carrington Research Extension Center
# Rockford Feeders Closeouts

## Closeout performance for a North Dakota cattle feeding club, March 1999-March 2000

<table>
<thead>
<tr>
<th>Report Number</th>
<th>Average sale date</th>
<th>No. head</th>
<th>no. dead</th>
<th>days on feed</th>
<th>Average Daily Gain</th>
<th>DM per lb. Gain</th>
<th>Feed cost per lb. Gain</th>
<th>Total Cost per lb. Gain</th>
<th>Breakeven, $/ Cwt.</th>
<th>Profit (loss) per head</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10-Mar-99</td>
<td>251</td>
<td>2</td>
<td>156</td>
<td>2.277</td>
<td>10.89</td>
<td>$0.44</td>
<td>$0.70</td>
<td>$69.97</td>
<td>($64.77)</td>
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<tr>
<td>2</td>
<td>25-Jun-99</td>
<td>274</td>
<td>0</td>
<td>157</td>
<td>2.686</td>
<td>8.04</td>
<td>$0.33</td>
<td>$0.54</td>
<td>$64.68</td>
<td>$7.06</td>
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<td>3</td>
<td>25-Jul-99</td>
<td>101</td>
<td>2</td>
<td>179</td>
<td>2.209</td>
<td>9.038</td>
<td>$0.45</td>
<td>$0.71</td>
<td>$69.49</td>
<td>($73.52)</td>
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<tr>
<td>4</td>
<td>22-Aug-99</td>
<td>122</td>
<td>3</td>
<td>145</td>
<td>2.636</td>
<td>8.941</td>
<td>$0.37</td>
<td>$0.58</td>
<td>$64.13</td>
<td>$13.34</td>
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<tr>
<td>5</td>
<td>17-Nov-99</td>
<td>64</td>
<td>0</td>
<td>152</td>
<td>2.913</td>
<td>8.167</td>
<td>$0.32</td>
<td>$0.52</td>
<td>$64.04</td>
<td>$64.09</td>
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<tr>
<td>6</td>
<td>25-Nov-99</td>
<td>344</td>
<td>1</td>
<td>59</td>
<td>1.992</td>
<td>6.235</td>
<td>$0.23</td>
<td>$0.42</td>
<td>$74.70</td>
<td>$50.68</td>
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<td>7</td>
<td>27-Dec-99</td>
<td>159</td>
<td>2</td>
<td>108</td>
<td>3.273</td>
<td>7.55</td>
<td>$0.29</td>
<td>$0.48</td>
<td>$65.06</td>
<td>$133.24</td>
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<tr>
<td>8</td>
<td>25-Mar-00</td>
<td>35</td>
<td>0</td>
<td>106</td>
<td>2.267</td>
<td>8.735</td>
<td>$0.34</td>
<td>$0.63</td>
<td>$74.23</td>
<td>($67.93)</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td>1350</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td></td>
<td>168.8</td>
<td>1.25</td>
<td>125.1</td>
<td>2.462</td>
<td>8.232</td>
<td>$0.33</td>
<td>$0.55</td>
<td>$68.79</td>
<td>$14.98</td>
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<tr>
<td><strong>Standard Deviation</strong></td>
<td></td>
<td>109.73</td>
<td>1.17</td>
<td>38.83</td>
<td>0.42</td>
<td>1.34</td>
<td>0.07</td>
<td>0.1</td>
<td>4.46</td>
<td>74.05</td>
</tr>
</tbody>
</table>

Closeout performance for a North Dakota cattle feeding club, March 1999-March 2000
History

- Cattle Fax – average $15 per head profit finishing cattle

- Texas Economics Study
  - Returns to Custom Cattle Feeding
    - Dodson and Elam, 1997 J of Agribusiness
    - Annual Return, 10 yr performance, 1980 - 1990
      - T bills – 8.50%
      - Common Stock US – 16.07%
      - Steers – 17.80%
      - Heifers – 23.52%
Records – Enterprise analysis

• Steve Metzger, Farm Business Management, Carrington REC Center

• [http://www.ndfarmmanagement.com/](http://www.ndfarmmanagement.com/)

• Also Fin Bin site
  • [http://www.finbin.umn.edu/LivestockEnterpriseAnalysis/Default.aspx](http://www.finbin.umn.edu/LivestockEnterpriseAnalysis/Default.aspx)
ND & MN Farm Business
Net Returns $$

- **Beef Cattle Finishing**
  - $25.11 $106.91 $115.97 $-16.51 $5.69 $16.39 $48.24

- **Beef Cattle Backgrounding**
  - $45.43 $47.95 $21.68 $9.67 $13.37 $18.38 $34.56
## NDSU Cattle Feedout Projects

<table>
<thead>
<tr>
<th>Year</th>
<th>DFCS</th>
<th>EDFC</th>
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</thead>
<tbody>
<tr>
<td>2008-09</td>
<td>$(0.46)</td>
<td>$(101.15)</td>
</tr>
<tr>
<td>2007-08</td>
<td>$(24.51)</td>
<td>$(33.92)</td>
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<tr>
<td>2006-07</td>
<td>$107.89</td>
<td>$153.95</td>
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<tr>
<td>2005-06</td>
<td>$(86.28)</td>
<td>$(74.86)</td>
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<tr>
<td>2004-05</td>
<td>$94.08</td>
<td>$135.24</td>
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<tr>
<td>2003-04</td>
<td>$116.76</td>
<td>no project</td>
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<td>2002-03</td>
<td>$112.27</td>
<td>no project</td>
</tr>
<tr>
<td>2001-02</td>
<td>$(19.26)</td>
<td>no project</td>
</tr>
<tr>
<td>Average</td>
<td>8yr $37.56</td>
<td>5yr $15.85</td>
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</tbody>
</table>
Budgets

• Each one is unique

• Business Plans are a guide

• Breakevens – Our goal is to make money -- not just do economic activity -- Build in a profit need
  • Story about Corey’s $30 / head
Breakevens

• Most Important Step in Feeding Cattle

• Don’t Feed cattle for just Breakeven

• Calculate your breakevens correctly and accurately
  • Computer software
Welcome to the North Dakota State University Extension Service's cattle feeding Internet site (CalfWEB). This site is designed to assist cattle feeders in evaluating the potential and actual profitability in feeding cattle.

To calculate the potential profitability of feeding cattle, the Break-even Calculator is used before calves are placed on feed. The Closeout Analyzer is then used to calculate profitability after the cattle are sold.

You have the option to become a member at no cost. As a member, you can then save your information at this site for later review. Also, by being a member, you can benchmark your results for comparison with other cattle feeders.

This Internet site also contains links to other sites for regional and national market prices, futures market prices, informational sites, and a listing of NDSU Extension Specialists involved in beef production.

For more information or comments, please contact Karl Hoppe NDSU Extension Area Specialist/ Livestock at 701-852-2951 or khoppe@nlotrust.nodak.edu
Breakeven Calculator
(all information must be completed)

- Your Zip Code
- Description (name, city)
- Cattle type (calves, yearlings, etc.)
- Sex
  - Bulls
  - Heifers
  - Steers
  - Mixed

- Purchase date (month/day/year)
- Head count
- Average in-weight (lb)
- Purchase cost per pound ($/lb)
- Projected sale weight (lb)
- Projected average daily gain (lb)
- Ration cost per ton, as fed ($/ton)
- Feed conversion, as fed (lb)
- Daily yardage cost per head ($/head daily)
- Percent death loss (%)
- Vet and Medicine expenses ($/head)
- Marketing expenses (Beef Checkoff, brand) ($/head)
- Trucking expenses ($/head)
- Miscellaneous expenses ($/head)

- Other expenses ($/head)
<table>
<thead>
<tr>
<th>Output</th>
<th>Per head</th>
<th>Per Pen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected Sale Date</td>
<td>12/20/02</td>
<td>12/20/02</td>
</tr>
<tr>
<td>Total pounds gained</td>
<td>200</td>
<td>20000</td>
</tr>
<tr>
<td>Days on feed</td>
<td>80.00</td>
<td>80.00</td>
</tr>
<tr>
<td>Cattle Cost ($)</td>
<td>$487.50</td>
<td>$46,750.00</td>
</tr>
<tr>
<td>Feed cost</td>
<td>$50.00</td>
<td>$5,000.00</td>
</tr>
<tr>
<td>Yardage cost</td>
<td>$20.00</td>
<td>$2,000.00</td>
</tr>
<tr>
<td>Vet cost</td>
<td>$8.50</td>
<td>$850.00</td>
</tr>
<tr>
<td>Marketing cost</td>
<td>$1.98</td>
<td>$198.00</td>
</tr>
<tr>
<td>Trucking cost</td>
<td>$4.95</td>
<td>$495.00</td>
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<tr>
<td>Miscellaneous costs</td>
<td>$1.00</td>
<td>$100.00</td>
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<tr>
<td>Interest cost</td>
<td>$6.35</td>
<td>$635.18</td>
</tr>
<tr>
<td>Price protection cost</td>
<td>$15.00</td>
<td>$1,500.00</td>
</tr>
<tr>
<td>Death loss cost</td>
<td>$5.13</td>
<td>$512.93</td>
</tr>
<tr>
<td>Total feeding costs</td>
<td>$112.35</td>
<td>$11,234.62</td>
</tr>
<tr>
<td>Total costs (animal and feeding)</td>
<td>$593.17</td>
<td>$59,317.27</td>
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<tr>
<td>Cattle cost per pound</td>
<td>$0.8500</td>
<td></td>
</tr>
<tr>
<td>Feed cost per gain</td>
<td>$0.3000</td>
<td></td>
</tr>
<tr>
<td>Feed and yardage cost per gain</td>
<td>$0.4000</td>
<td></td>
</tr>
<tr>
<td>Total cost of gain</td>
<td>$0.6129</td>
<td></td>
</tr>
<tr>
<td>Breakeven</td>
<td>$0.7909</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Marketing Alternatives</th>
<th>Alternate 1</th>
<th>Alternate 2</th>
<th>Alternate 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected Selling Price</td>
<td>$0.75</td>
<td>$0.79</td>
<td>$0.81</td>
</tr>
<tr>
<td>Gross sales per pen</td>
<td>$55,687.50</td>
<td>$58,820.85</td>
<td>$60,142.50</td>
</tr>
<tr>
<td>Profit or loss per head</td>
<td>($30.71)</td>
<td>$0.94</td>
<td>$14.29</td>
</tr>
<tr>
<td>Profit or loss per pen</td>
<td>($3,070.56)</td>
<td>$94.44</td>
<td>$1,429.44</td>
</tr>
<tr>
<td>Annualized return on equity (%)</td>
<td>-85.40%</td>
<td>10.87%</td>
<td>51.48%</td>
</tr>
</tbody>
</table>
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• Closeout analysis is just as important as Breakeven planning

• Use the Closeout Analyzer to evaluate performance and profit
Closeouts

• Measures profitability, return on investment and equity

• Cattle that are Custom Fed are easy to calculate closeouts

• It’s the “Score Card” for cattle feeding
Risk Management

Risk Tolerance:

How much can you afford to lose?
All?
Half of Equity Position?
$20.00 per head?

Is the Goal to make 20% return on equity?
Risk Management

What is an acceptable margin or return on equity?

Equity = $150.00 per head

Two turns of fed cattle yearly at $20.00 per head per turn

Net profit of $40.00 per head annual basis

Return on equity of 26.6%

usually a personal guarantee is needed so more is at risk than $150
Risk Management

Basis

Basis is the difference between local cash markets for a given weight and kind of feeder or fed animal and the applicable Chicago Merchantile Exchange futures contract.

Knowledge of current and historical basis levels is extremely important.
Mid-Month Futures Based Price Forecasts
700-800 Lb. Feeder Steers, Dodge City, KS

Source: CME & K-State Research & Extension
Forecasts = 1/12/07 Futures Price + Basis Estimates

KSU Dept. of Ag Econ
www.agmanager.info
Basis

- Hard to protect against basis moves
  - Fed cattle – forward contract with basis locked in

- One of my worst phone calls
  - Bought put, sold call, created a fence. Futures market went up, above the fence (call), cash market didn’t move up as much and stayed below the fence. Had to make margin calls and couldn’t make up the difference with the cash market.
Risk Management

Feeder Cattle Futures
50,000 pounds
Cash Settlement to feeder cattle index
No delivery possible
Index based on 700 to 850 pound steers.
Risk Management

Live Cattle Futures
40,000 pounds
Delivery at specified points possible with specifications
Most settlements made by offsetting futures positions
Risk Management

Feeder Cattle and Live Cattle Options

Puts and Calls

A **put** is the right but not the obligation to sell at a predetermined price.

A **call** is the right but not the obligation to buy at a predetermined price.
Risk Management

- Two newer Programs
  - LRP -- Livestock Risk Protection Insurance
  - LGM -- Livestock Gross Margin Insurance
Risk Management

The job of marketing begins the day before the cattle are bought.
Business Separation

Cattle Feeding has several profit centers
Custom Feeding makes a better feedlot operator

1) Feedyard is operating as a profit center
   - Mark up on feed and Yardage
   - Separate Feedyard Profit and Loss Statement
   - Record system and accountant in place
   - Good knowledge of operational costs

2) Owning cattle is a separate profit center
   - Buy sell margins
Important concept

- Sometimes a feedlot will purchase cattle at no profit potential -- just make money on yardage and feed -- because an empty feedlot sells no feed or yardage.

- If you have employees, their cost is present even with fewer or no cattle.
Financing cattle

Good plan needed

Or

Lots of Equity
Financing Cattle - Good Plan

- Breakeven analysis
- Closeout history
- Risk Protection – Futures, Option, LRP
- Feed Resources
- Facility Resources – ‘Approval to Operate’
- Labor Resources
Financing Cattle

• Lots of Equity - *What can you say?*

• Most large corporations use someone else’s money
  • Stockholders
  • Preferred stockholders
  • Borrowed debt
  • Walmart comment – you own it until we sell it
Financing Cattle

• Terms
  • Shop around – find out how much equity they need
  • It takes a lot of cash to feed and own cattle
  • ND is more conservative than southern cattle feeding States
    • They feel as a calf grows he has more value
      • Risk – drastic market swing
      • Risk – death loss or theft
Financing Cattle

- Bad image still exists in North Dakota
  - ‘So and so went broke feeding cattle’
  - ‘If he has the feed, labor and place to feed them, I think I’ll loan him half the money for the buying cattle’ --- *Why not just feed half the # of cattle??*
Financing Cattle

- Local Bank and Credit Unions
- Local Bank / Bank of North Dakota
- Cooperative – Farm Credit Services
- Specialized Lenders
  - CoFina (Cenex Harvest States)
  - Central Dakota Cattle Association
  - Canadian Feeder Cattle Clubs

Lower per head equity ~ Higher interest & per head fees
Financing Cattle - Elkhorn Valley Services

- **Lines of Credit**
  - **Long term debt**
    - land, facilities, equipment
  - **Operating capital debt**
    - feedstuffs, operating expenses, accounts receivable
- **Cattle line of Credit**
  - Company cattle
  - Customer cattle
  - Cattle for resale
  - Customer feedbills
  - Hedging Costs
Financing

- Bank of North Dakota used to have the:
  - Livestock Loan Guarantee Program
    - The Feedlot Loan Guarantee Program assists commercial feedlot owners who background or feed cattle to harvest-ready weight.
    - Loan Guarantee - 85% of the 85% value of the end feeding point cattle value
    - Guarantee Fee - .5% per year of the guaranteed portion
How to sell cattle?

- **Backgrounders**
  - auction barns, order buyers, direct sales
  - all go to feed yards

- **Finished Cattle**
  - Direct to packers
  - Auction barns/dealers working for packers

- **Cattle are liquid** – they can be easily sold
Why Finish Cattle?

- Backgrounding did all the work
  - Calves healthy, started on feed, minimal stress, withstood initial death losses
- Just feed daily, minimal sickness
- More feed Consumed / Sales
  - (both daily and overall)
- More days on Feed (more yardage)
- ‘Value Added’
Alternative investor ideas

• Cattle owner
• Feedyard owner
  • Needs cattle to feed
  • Doesn’t have enough capital to own everything
  • Return on investment for feedyard owner can be great if well managed, controls inventory, and feeds at capacity
Alternative investor ideas

• Cattle owner
  • Leveraged equity
    • $15 / hd profit
    • $150 / hd equity
    • 2 turns of cattle per year
      • $15 * 2 / 150 = 20% return on equity
      • Texas data 1980’s 14-17% ROE
  • Let’s partner
    • LLP – limited liability partnership
    • LLLP – limited, limited liability partnership
Summary

• Budgets – Important part of planning
  • Inputs prices change quickly
  • Market prices change quickly
  • Feed conversions depend on rations fed
  • Price protection comes at a cost
  • Use correct calculations
    • www.chaps2000.com/calfweb
Cattle Feeding

• Cattle Feeding can be profitable but does contain risk. Wise use of market protection, realistic budgets, and good feeding & health management will reduce risk drastically.

Karl Hoppe, NDSU-CREC, Jan 2000
# Feeder Cattle Thumb Rules

85% Dry Matter

## Backgrounding
- **1.0 ADG** 20 # feed/gain 90% hay diet
- **2.0 ADG** 10 # feed/gain 50% grain diet
- **3.0 ADG** 7 # feed/gain 80% grain diet

## Finishing
- **2.5 ADG** 11 # feed/gain 85% grain diet
- **2.7 ADG** 9.5# feed/gain 85% grain diet
- **3.2 ADG** 7.5# feed/gain 85% grain diet
- **3.5 ADG** 6.5# feed/gain 85% grain diet
Yardage Calculation per ton of Feed

- Assume $0.25/hd daily yardage cost

- Cost per ton =
  
  $0.25/hd daily / ADG / Feed per gain * 2000

- Example
  
  \[ \frac{0.25}{3.0} \times 8.5 \times 2000 = \$19.60 \text{ / ton feed markup for yardage} \]
Summary

• Cattle doesn’t always make money
• The teams – profit at each other expense
  • Cow calf vs Feedlot
  • Feedlot vs Packer
• Shrink is a silent profit ‘taker’ or ‘maker’
• Breakevens ARE important and true
• Closeouts are the ‘score card’