Cattle Market Update: August 2014

Kenny Burdine
UK Agricultural Economics
Market Fundamentals

• Small cow-herd
  – Profit can’t make it rain, competition for ground
  – Has expansion begun?
• Domestic demand has improved
  – Exports still very strong
• Calf / feeder markets still adjusting to feed prices - $2.50, $3.50, $7.50, $5.00, $3.50
• A lot of uncertainty / volatility
Nearby CME Feeder Cattle Futures
(June 1994 - June 2014)

Source: CME© and LMIC
Nearby CME Live Cattle Futures
(June 1994 - June 2014)

Source: CME© and LMIC
JANUARY 1 TOTAL CATTLE INVENTORY
U.S., Annual

Livestock Marketing Information Center
Data Source: USDA/NASS
JANUARY 1 COW INVENTORY
U.S., Annual

Livestock Marketing Information Center
Data Source: USDA/NASS
CHANGE IN BEEF COWS NUMBERS
JANUARY 1, 2013 TO JANUARY 2014
(1000 Head)

Livestock Marketing Information Center
Data Source: USDA-NASS
SLAUGHTER STEER PRICES
5 Market Weighted Average, Weekly

$ Per Cwt.

Data Source: USDA-AMS
Livestock Marketing Information Center
Restaurant Performance Index

Values Greater than 100 = Expansion; Values Less than 100 = Contraction

Source: National Restaurant Association
The Last Three Corn Crops

• 2012 – Corn crop that kept getting smaller
  – 13 B bushels becomes 10.8 B bushels
  – Corn price jumps nearly $3 during season

• 2013 – Corn crop that kept getting bigger
  – Very inverted corn market
  – Old crop vs. new crop

• 2014 – following a large crop with another large crop – first estimate noon today
  – Market has taken nearly $1.50 off expected harvest time price
Corn Impacts on Feeder Cattle Markets

• Corn price inversely related to price slides
  – Value of pounds added
• Corn price effect smaller at high corn prices
  – Substitution affect
• Greater price impact on calves in fall
  – More corn needed to finish
• Less impact on calves in spring
  – Who is bidding on calves when?
Crop Information Timeline

- New crop prices
- Prospective planting
- Crop progress
- Acreage
- Weather conditions
- Crop production
- Harvest

- Harvest to planting
- Late March
- Spring / Summer
- Late June
- Through Summer
- Summer / Fall
- Fall
Some Thoughts on Expansion

• Profit can’t make it rain
  – Consider 2004-2006
  – Is there pent up expansion desire?

• Competition from other land uses
  – Reverse conversion?
  – Do we have the farmer / land base to do it?

• It’s more than heifer retention
  – Culling patterns
  – Impact on speed of expansion
Cow slaughter down over 400K through June, heifers down over 300K
Some Thoughts on Expansion

• Breeding stock is a long-term Capital Investment
  – Likely 8-12 years

• Current only matters so much
  – Danger with single annual budget approach
  – Expectations get bid into female values
  – Risk impacts desired returns

• Volatility equals risk
Hypothetical Cash Flow per Cow

<table>
<thead>
<tr>
<th>Now</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>($2,200)</td>
<td>$300</td>
<td>$275</td>
<td>$220</td>
<td>$200</td>
<td>$175</td>
</tr>
<tr>
<td>Year 6</td>
<td>$150</td>
<td>$125</td>
<td>$100</td>
<td>$75</td>
<td>$900</td>
</tr>
</tbody>
</table>

- **Now**: Purchase or development costs
- **Yrs. 1-9**: calf sales – expenses
- **Yr 10**: (Calf sales – expenses) + cull value
Assumptions of the Analysis

• Total fixed and variable costs
  – $550, $650, $750, $850, $950

• Bred heifer expected to have 10 productive years
  – 85% weaning rate

• Bred heifer costs
  – $1,750, $2,000, $2,250, $2,500, $2,750

• Calf prices start roughly at today’s levels
  – (1) flat prices, (2) 20% steady decrease, and (3) 40% steady decrease over the next 10 years
# Return for Bred Heifers Steady Price Scenario

<table>
<thead>
<tr>
<th>Bred Heifer Cost</th>
<th>Total Costs per Cow</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,750</td>
<td>$550: 25%</td>
</tr>
<tr>
<td>$2,000</td>
<td>$550: 21%</td>
</tr>
<tr>
<td>$2,250</td>
<td>$550: 18%</td>
</tr>
<tr>
<td>$2,500</td>
<td>$550: 15%</td>
</tr>
<tr>
<td>$2,750</td>
<td>$550: 13%</td>
</tr>
</tbody>
</table>

Assumptions: 10 year useful life; 85% combined calving/weaning rate; 550 lb steer/heifer and $2.15/lb combined price, $1000 cull value.
Return for Bred Heifers Moderate Price Drop Scenario

<table>
<thead>
<tr>
<th>Bred Heifer Cost</th>
<th>$550</th>
<th>$650</th>
<th>$750</th>
<th>$850</th>
<th>$950</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,750</td>
<td>19%</td>
<td>12%</td>
<td>4%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>$2,000</td>
<td>15%</td>
<td>9%</td>
<td>2%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>$2,250</td>
<td>13%</td>
<td>7%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>$2,500</td>
<td>10%</td>
<td>5%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>$2,750</td>
<td>8%</td>
<td>3%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Assumptions: 10 year useful life; 85% combined calving/weaning rate; 550 lb steer/heifer, start at $2.15/lb combined price and decline to $1.72 by year 10, $800 cull value.
## Return for Bred Heifers Large Price Drop Scenario

<table>
<thead>
<tr>
<th>Bred Heifer Cost</th>
<th>$550</th>
<th>$650</th>
<th>$750</th>
<th>$850</th>
<th>$950</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,750</td>
<td>12%</td>
<td>2%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>$2,000</td>
<td>8%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>$2,250</td>
<td>5%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>$2,500</td>
<td>3%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>$2,750</td>
<td>1%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

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<thead>
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<td>$1,750</td>
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</tr>
<tr>
<td>$2,250</td>
</tr>
<tr>
<td>$2,500</td>
</tr>
<tr>
<td>$2,750</td>
</tr>
</tbody>
</table>

**Assumptions:** 10 year useful life; 85% combined calving/weaning rate; 550 lb steer/heifer, start at $2.15/lb combined price and decline to $1.29 by year 10, $600 cull value.
Breeding Stock Investment

• Bred heifer prices much like land values
  – assume continued current profit levels
• What are producer expectations for price over next several years?
• For upper end of bred heifer price range…
  – Both continued high price levels and very low costs structure need
• How have the last few years impacted required returns?
• Keeping mature cows vs. purchasing heifers
Thoughts for Summer Backgrounders

• Market has forgiven many mistakes this year
• Price early – I would stay the course
• Unpriced – protect what you have made thus far
• Don’t get greedy
  – Years like this often followed by severe underpricing
Thoughts on Winter Backgrounding

• Board was on a roll through Wednesday, calf basis super strong
• Feeder futures now inverted, expect calf basis to weaken
• Spring 2015 futures suggesting 8wts in mid-$190’s, 7wts upper $160’s – low $170’s
  – March / April board around $205
• We usually take gross margins $350-450
  – Put 5wt steers in $215 - $235 range
• Re-evaluate at weaning / placement
## Sensitivity of Gross Margin
(Revenue minus calf expense)

<table>
<thead>
<tr>
<th>550# calf price</th>
<th>850# feeder price</th>
</tr>
</thead>
<tbody>
<tr>
<td>$235</td>
<td>$280</td>
</tr>
<tr>
<td>$225</td>
<td>$335</td>
</tr>
<tr>
<td>$215</td>
<td>$390</td>
</tr>
<tr>
<td>$185</td>
<td>$195</td>
</tr>
<tr>
<td>$205</td>
<td>$215</td>
</tr>
<tr>
<td>$390</td>
<td>$475</td>
</tr>
<tr>
<td>$475</td>
<td>$560</td>
</tr>
<tr>
<td>$560</td>
<td>$205</td>
</tr>
<tr>
<td>$505</td>
<td>$235</td>
</tr>
<tr>
<td>$450</td>
<td>$225</td>
</tr>
</tbody>
</table>
What do I expect for winter margins?
## Winter Backgrounding Budget est.

<table>
<thead>
<tr>
<th>Sales</th>
<th># units</th>
<th>unit</th>
<th>price / unit</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeder</td>
<td>851.5</td>
<td>lbs</td>
<td>$1.95</td>
<td>$1,660.43</td>
</tr>
</tbody>
</table>

### Expenses

<table>
<thead>
<tr>
<th>Item</th>
<th># units</th>
<th>unit</th>
<th>price / unit</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stocker Calf</td>
<td>550</td>
<td>lbs</td>
<td>$2.25</td>
<td>$1,237.50</td>
</tr>
<tr>
<td>Hay</td>
<td>1407</td>
<td>lbs</td>
<td>$0.04</td>
<td>$56.28</td>
</tr>
<tr>
<td>Hulls / Gluten</td>
<td>1,407</td>
<td>lbs</td>
<td>$0.10</td>
<td>$140.70</td>
</tr>
<tr>
<td>Feed 2</td>
<td>0</td>
<td>lbs</td>
<td>$0.04</td>
<td>$0.00</td>
</tr>
<tr>
<td>Mineral</td>
<td>0.25</td>
<td>lbs / day</td>
<td>$0.40</td>
<td>$13.40</td>
</tr>
<tr>
<td>Vet / Med</td>
<td>1</td>
<td>head</td>
<td>$25.00</td>
<td>$25.00</td>
</tr>
<tr>
<td>Commision</td>
<td>1</td>
<td>head</td>
<td>$15.00</td>
<td>$15.00</td>
</tr>
<tr>
<td>Hauling</td>
<td>1</td>
<td>head</td>
<td>$12.00</td>
<td>$12.00</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>head</td>
<td>$5.00</td>
<td>$5.00</td>
</tr>
<tr>
<td>Interest</td>
<td>6%</td>
<td>rate</td>
<td></td>
<td>$32.44</td>
</tr>
<tr>
<td>Death loss</td>
<td>2%</td>
<td></td>
<td></td>
<td>$25.26</td>
</tr>
</tbody>
</table>

Total Expenses: $1,562.58

Return to Land, Capital and Management: $98
A few things to remember…

• A $1 movement in futures is worth about $1.50 on calves
• Think through cost differences – owned calves vs. purchased
• Sometimes you make your money on the buy…
  – Budgets based on 550# @ $2.25
  – Each nickel is worth $27.50
• Manage downside sale price risk
  – 10% increase in feed costs – ($20) WINTER
  – 10% decrease in sale price – ($166.00)
My Predictions

• I expect cow numbers to grow slightly during 2014
  – Delay is less relevant this time - culling
  – Likely expand quicker in early stages
  – Slower growth after cow-herd stabalizes

• Prices more sensitive with tight supplies
  – Fed cattle prices peak in 2015
  – Prices decrease fall-over-fall in 2015 for calves and feeders
Contact Information

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