Maintaining Profitability with Higher Input Prices

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Oklahoma State University

New from Oklahoma State University!

Beef Cattle Manual
Manual de Ganado Bovino para Carne

https://secure.touchnet.com/C20271_uesto/web/ click Agricultural Economics
Key Cattle Market Factors

- Cattle numbers declining
- Demand
  - COVID Impacts
- Drought
- Feed Prices
SLAUGHTER STEER PRICES
5 Market Weighted Average, Weekly

$ Per Cwt.

JAN APR JUL OCT

Avg. 2015-19 2020 2021

Data Source: USDA-AMS Livestock Marketing Information Center

BOXED BEEF CUTOUT VALUE
Choice 600-900 Lbs., Carcass, Negotiated, Weekly

$ Per Cwt.

JAN APR JUL OCT

Avg. 2015-19 2020 2021

Data Source: USDA-AMS Livestock Marketing Information Center
SLAUGHTER COW PRICES
Southern Plains Auction, 85-90% Lean, Weekly

$ Per Cwt.

25 35 45 55 65 75 85

JAN APR JUL OCT

Avg. 2015-19 2020 2021

Data Source: USDA-AMS
Livestock Marketing Information Center

U.S. Drought Monitor
January 11, 2022
(Released Thursday, Jan. 13, 2022)
Valid 7 a.m. EST

droughtmonitor.unl.edu
### U.S. Cattle Inventory

**January 1**

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>% Change</th>
<th>2021</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1000 Head</td>
<td>1000 Head</td>
<td>1000 Head</td>
<td></td>
<td>1000 Head</td>
<td></td>
</tr>
<tr>
<td>All Cattle and Calves</td>
<td>94298.0</td>
<td>94804.7</td>
<td>93793.3</td>
<td>-1.1</td>
<td>93594.5</td>
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<tr>
<td>Beef Cows</td>
<td>31466.2</td>
<td>31690.7</td>
<td>31338.7</td>
<td>-1.1</td>
<td>31157.6</td>
<td>-0.6</td>
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<tr>
<td>Dairy Cows</td>
<td>9432.1</td>
<td>9353.4</td>
<td>9342.6</td>
<td>-0.1</td>
<td>9440.4</td>
<td>+1.1</td>
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<td>Beef Replacements</td>
<td>6108.2</td>
<td>5884.9</td>
<td>5808.9</td>
<td>-1.3</td>
<td>5812.1</td>
<td>+0.1</td>
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<td>Dairy Replacements</td>
<td>4768.3</td>
<td>4701.5</td>
<td>4684.0</td>
<td>-0.4</td>
<td>4604.5</td>
<td>-1.7</td>
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<td>Feeder Supply</td>
<td>26124.9</td>
<td>26553.3</td>
<td>25714.0</td>
<td>-3.2</td>
<td>25662.0</td>
<td>-0.2</td>
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<tr>
<td>Cattle on Feed</td>
<td>14146.0</td>
<td>14367.9</td>
<td>14657.7</td>
<td>+2.1</td>
<td>14707.4</td>
<td>+0.3</td>
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</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
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<tr>
<td>Calf Crop</td>
<td>35758.2</td>
<td>36312.7</td>
<td>35591.6</td>
<td>35135.5</td>
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<tr>
<td>% Change</td>
<td>-2.0</td>
<td></td>
<td></td>
<td>-1.3</td>
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</table>

### January 1, 2021

1000 Head (% of last year)

#### Beef Cows

- 1 TX  4,685 (103)
- 2 OK  2,189 (104)
- 3 MO  2,035 (98)
- 4 NE  1,900 (99)
- 5 SD  1,799 (101)
- 6 KS  1,477 (102)
- 7 MT  1,419 (99)
- 8 KY  983 (96)
- 9 ND  975 (98)
- 10 FL 928 (103)

#### Beef Heifers

- 1 TX  820 (103)
- 2 OK  410 (111)
- 3 MT  380 (97)
- 4 SD  370 (103)
- 5 NE  350 (95)
- 6 MO  335 (100)
- 7 KS  270 (108)
- 8 ND  204 (112)
- 9 AR  158 (105)
- 10 IA/WY 155
Slaughter Cow Price, 2020-2021
Boning, Average Dressing

Beef Cow Slaughter
1,000 head, 2021 Forecast

Estimated Drought Culling
Beef Cow Inventory
January 1, 1,000 Head

HEIFERS HELD AS BEEF COW REPLACEMENTS
January 1, U.S.

Data Source: USDA-NASS
Livestock Marketing Information Center
JANUARY 1 FEEDER CATTLE SUPPLIES
Residual, Outside Feedlots, U.S.

Data Source: USDA-NASS
Livestock Marketing Information Center

Average Feedlot Inventory
12 month moving average
OMAHA CORN PRICES
Weekly

$ Per Bu.

JAN APR JUL OCT

Avg. 2015-19  2020  2021  2022

Data Source: USDA-AMS
Livestock Marketing Information Center

G-P-02
02/16/21

NATIONAL AVERAGE CORN PRICE
Crop Year, Received by Farmers

$ Per Bushel


Data Source: USDA-NASS, Forecasts by LMIC
Livestock Marketing Information Center

G-NP-03
09/10/21
KANSAS FEEDLOT CLOSEOUTS
Feeding Costs per Cwt, Steers

Data Source: KSU Focus on Feedlots, Compiled by LMIC
Livestock Marketing Information Center

Price-Weight Relationship
Medium/Large No. 1 Steers, Oklahoma

Weight
$/cwt.
### Steer Price, Total Value and Value of Gain

#### January 7, 2022, Oklahoma Combined Auction

<table>
<thead>
<tr>
<th></th>
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<tr>
<td>400</td>
<td>$204.13</td>
<td>$817</td>
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<tr>
<td>450</td>
<td>$197.58</td>
<td>$889</td>
<td>$1.45</td>
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<tr>
<td>500</td>
<td>$190.78</td>
<td>$954</td>
<td>$1.37</td>
<td>$1.30</td>
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<tr>
<td>550</td>
<td>$181.63</td>
<td>$999</td>
<td>$1.22</td>
<td>$1.10</td>
<td>$0.90</td>
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<tr>
<td>600</td>
<td>$169.75</td>
<td>$1,019</td>
<td>$1.01</td>
<td>$0.86</td>
<td>$0.65</td>
<td>$0.39</td>
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<tr>
<td>650</td>
<td>$163.58</td>
<td>$1,063</td>
<td>$0.99</td>
<td>$0.87</td>
<td>$0.73</td>
<td>$0.64</td>
<td>$0.89</td>
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<tr>
<td>700</td>
<td>$161.99</td>
<td>$1,134</td>
<td>$1.06</td>
<td>$0.98</td>
<td>$0.90</td>
<td>$0.90</td>
<td>$1.15</td>
<td>$1.41</td>
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<tr>
<td>750</td>
<td>$159.52</td>
<td>$1,196</td>
<td>$1.09</td>
<td>$1.02</td>
<td>$0.97</td>
<td>$0.99</td>
<td>$1.19</td>
<td>$1.33</td>
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<tr>
<td>800</td>
<td>$157.57</td>
<td>$1,261</td>
<td>$1.11</td>
<td>$1.06</td>
<td>$1.02</td>
<td>$1.05</td>
<td>$1.21</td>
<td>$1.32</td>
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<tr>
<td>850</td>
<td>$156.24</td>
<td>$1,328</td>
<td>$1.14</td>
<td>$1.10</td>
<td>$1.07</td>
<td>$1.10</td>
<td>$1.24</td>
<td>$1.32</td>
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<tr>
<td>900</td>
<td>$153.97</td>
<td>$1,386</td>
<td>$1.14</td>
<td>$1.10</td>
<td>$1.08</td>
<td>$1.10</td>
<td>$1.22</td>
<td>$1.29</td>
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#### January 1 Stocker Ratio, 2012-2021

U.S. Ave., 73.7%
2021-2022 Cattle Price Forecasts

<table>
<thead>
<tr>
<th></th>
<th>5-600 lb.</th>
<th>7-800 lb.</th>
<th>5-mkt avg.</th>
<th>% chg from Last Year</th>
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<tbody>
<tr>
<td><strong>2020</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>IV</td>
<td>155.00</td>
<td>138.05</td>
<td>108.18</td>
<td>-5.8</td>
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<td>Annual</td>
<td>157.82</td>
<td>137.09</td>
<td>108.51</td>
<td>-6.8</td>
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<td><strong>2021</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td>172.17</td>
<td>158.62</td>
<td>131-132</td>
<td>+21.6</td>
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<tr>
<td>Annual</td>
<td>168.59</td>
<td>148.43</td>
<td>121-122</td>
<td>+12.0</td>
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<td><strong>2022</strong></td>
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<td></td>
</tr>
<tr>
<td>I</td>
<td>180-183</td>
<td>161-162</td>
<td>132-135</td>
<td>+18.2</td>
</tr>
<tr>
<td>II</td>
<td>180-185</td>
<td>158-162</td>
<td>135-139</td>
<td>+13.4</td>
</tr>
<tr>
<td>III</td>
<td>180-190</td>
<td>163-173</td>
<td>126-131</td>
<td>+4.0</td>
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<tr>
<td>IV</td>
<td>178-188</td>
<td>158-168</td>
<td>130-136</td>
<td>+1.1</td>
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<tr>
<td>Annual</td>
<td>182-183</td>
<td>163-165</td>
<td>132-134</td>
<td>+9.5</td>
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</table>

LMIC, January 6, 2021
ESTIMATED AVERAGE COW CALF RETURNS
Returns Over Cash Cost (Includes Pasture Rent), Annual

Data Source: USDA & LMIC, Compiled by LMIC
Livestock Marketing Information Center

ESTIMATED AVERAGE COW CALF COSTS
Total Cash Cost Plus Pasture Rent, Annual

Data Source: USDA & LMIC, Compiled by LMIC
Livestock Marketing Information Center
Difference between High and Low Profit Cow-Calf Operations, 2016-2020 (KSU, 2021)

**Returns over Variable Costs**
- **High Profit**: $215.31/cow
- **Low Profit**: -$196.15/cow
- **Difference**: $411.46/cow

- **Improved Revenue**: 43%
- **Reduced cost**: 57%

![Cow-Calf Variable Production Costs by Profitability Level](chart1.png)

- **Cow-Calf Variable Production Costs by Profitability Level**
- **$/Cow, KSU, 2016-2020 Average**
- **High 1/3**: $629.26
- **Middle 1/3**: $808.01
- **Low 1/3**: $862.58

- **Costs Breakdown**:
  - Other
  - Labor
  - Machinery
  - Mktg/Breeding
  - Vet/Medicine
  - Interest
  - Pasture
  - Feed

31
Cow-Calf Variable Production Costs by Profitability Level
$/Cow, KSU, 2016-2020 Average

- Other
- Labor
- Machinery
- Mktg/Breeding
- Vet/Medicine
- Interest
- Pasture
- Feed

Other Hay Production Per Beef Cow
Florida, Tons
Florida Other Hay Use per Beef Cow

- 1974-1983: 0.445 tons/cow 890 lbs.
- 2006-2020: 0.847 tons/cow 1,694 lbs.

Why 804 lbs of extra hay needed per cow?
- Bigger cows
  - Does not account for increased hay use (maybe 15-20%)
  - Should they be bigger? What size cow is most efficient?
- Wasted Hay (maybe 40%)
  - 50% storage and feeding losses
- Longer Feeding Time (maybe 40%)
  - 30-40 days extra feeding

Characteristics of High Profit Cow-Calf Operations

- Larger Herds
- Bigger calves and higher weaning percentage
- Higher calf sale price
- More pasture per cow and higher pasture costs
- Less non-grazing feed costs
- Other costs lower (vet, marketing, depreciation, machinery, interest, other)
Considerations for Maintaining Profitability

• Market Grass
  – Grazing management (grazing duration, pasture quality)

• Manage Feed Costs
  – Minimize hay costs
    • Reduce need (i.e. grazing management)
    • Quality, storage, feeding
  – Judicious use of supplemental feeds (nutritional management)

• Preconditioned calves?
• Retained ownership?
• Cull cow marketing
The Weekly Email Newsletter
From OSU Animal Science and Agricultural Economics

• Send Email to
  derrell.peel@okstate.edu

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Agriculture, Rural Culture, Food, History and More

Featuring Charlie Amos and Derrell Peel

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