Economic Importance of Iowa’s Beef Industry

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Objectives of the Study

- Describe the current state of the beef industry in Iowa
  - Production and marketing trends
  - Economic activity generated through each sector
- Provide estimates of the total economic contribution of beef cattle production in Iowa
- Provide estimates of the total economic contribution of cattle slaughter and beef processing in Iowa
- Identify opportunities for beef industry growth in Iowa
Iowa Cattle Operations, Inventories, and Sales
Iowa Cash Receipts, 2017

*32% of all Iowa animal and animal product cash receipts

- Cattle and calves, 15%
- Poultry and Eggs, 5%
- Dairy products, Milk, 4%
- Oil Crops, Soybeans, 19%
- Hogs and pigs, 27%
- Feed crops, Corn, 30%
- All other crops, 1%
- Food grains, Wheat, 0%
- Miscellaneous animals & products, 0%
2017 Cash receipts, billion $
1. Nebraska, $11.17
2. Texas, $8.93
3. Kansas, $8.25
4. **Iowa**, $4.06
5. Colorado, $3.45
United States, $67.35

2016 Value of prod., billion $
1. Texas, $7.24
2. Nebraska, $6.33
3. Kansas, $4.59
4. Oklahoma, $2.56
5. **Iowa**, $2.49
United States, $48.63
Cow-Calf Sector
Number of Iowa Livestock Operations with Sales, 2017

<table>
<thead>
<tr>
<th>Type</th>
<th>Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef Cow</td>
<td>19,171</td>
</tr>
<tr>
<td>Beef Feedlot</td>
<td>4,942</td>
</tr>
<tr>
<td>Swine</td>
<td>5,660</td>
</tr>
<tr>
<td>Sheep</td>
<td>2,801</td>
</tr>
<tr>
<td>Goat</td>
<td>2,400</td>
</tr>
<tr>
<td>Dairy</td>
<td>1,592</td>
</tr>
<tr>
<td>Egg</td>
<td>790</td>
</tr>
<tr>
<td>Turkeys</td>
<td>282</td>
</tr>
</tbody>
</table>
Iowa Beef Cow Inventory by County, 2012
Iowa Pastureland Changes

-21% decrease in Permanent Pastureland
-5% decrease in Woodland Pastureland

Number of Acres

- Permanent Pastureland
- Woodland Pastureland
- Other Pastureland
Beef Cows in Iowa

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>890,000</td>
</tr>
<tr>
<td>2012</td>
<td>860,000</td>
</tr>
<tr>
<td>2017</td>
<td>920,000</td>
</tr>
</tbody>
</table>

-3% to +6%
Feedlot Sector
Number of Feedlots >500 Head, by State (2017)

- Iowa: 30%
- Nebraska: 19%
- Minnesota: 10%
- South Dakota: 9%
- Kansas: 7%
- Texas: 3%
- Colorado: 3%
- Other States: 16%
# Changes in Iowa Feedlots 2012-2017

<table>
<thead>
<tr>
<th>Capacity</th>
<th>2012</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;200</td>
<td>3,959.0</td>
<td>3,405.0</td>
</tr>
<tr>
<td>200-500</td>
<td>1,180.0</td>
<td>1,011.0</td>
</tr>
<tr>
<td>500-1000</td>
<td>535.00</td>
<td>637.00</td>
</tr>
<tr>
<td>1000-2500</td>
<td>235.00</td>
<td>284.00</td>
</tr>
<tr>
<td>2500-5000</td>
<td>83.00</td>
<td>96.00</td>
</tr>
<tr>
<td>&gt;5000</td>
<td>44.00</td>
<td>52.00</td>
</tr>
</tbody>
</table>
Dairy Sector
Change in Dairy Cow Numbers, 2004 to 2017

Iowa cattle feeders typically place on feed:

- Beef-breeds, 91%
- Dairy-breeds, 8%
- Dairy × Beef, 1%

+47% in state X
+3% in state Y
-1% in state Z
+10% in state W
Cattle Slaughter and Beef Processing
Fed cattle packing plants
### Select State Share of US Fed Cattle Slaughter

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Nebraska</td>
<td>22.1%</td>
<td>21.2%</td>
<td>20.4%</td>
<td>23.9%</td>
</tr>
<tr>
<td>Kansas</td>
<td>20.8%</td>
<td>22.7%</td>
<td>19.0%</td>
<td>20.3%</td>
</tr>
<tr>
<td>Texas</td>
<td>18.5%</td>
<td>19.5%</td>
<td>20.3%</td>
<td>17.9%</td>
</tr>
<tr>
<td>Colorado</td>
<td>7.5%</td>
<td>6.4%</td>
<td>7.4%</td>
<td>8.1%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>68.8%</td>
<td>69.8%</td>
<td>67.1%</td>
<td>70.2%</td>
</tr>
</tbody>
</table>
10% Shift in Market Share in 15 years
(South-North)
Cattle Production Inputs and Costs
## Cost of Inputs used in Iowa Beef Cattle Industry, 2016

<table>
<thead>
<tr>
<th>Variable Costs</th>
<th>Units</th>
<th>Cost ($1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Feed Costs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corn</td>
<td>79,542,883</td>
<td>$264,963</td>
</tr>
<tr>
<td>Dried distillers grains</td>
<td>1,296,085</td>
<td>$157,017</td>
</tr>
<tr>
<td>Corn silage</td>
<td>2,349,109</td>
<td>$78,251</td>
</tr>
<tr>
<td>Supplement and minerals</td>
<td>2,560,055</td>
<td>$86,402</td>
</tr>
<tr>
<td>Alfalfa</td>
<td>317,816</td>
<td>$29,557</td>
</tr>
<tr>
<td>Other hay</td>
<td>1,778,689</td>
<td>$138,738</td>
</tr>
<tr>
<td>Cornstalks</td>
<td>265,675</td>
<td>$7,080</td>
</tr>
<tr>
<td>Pasture</td>
<td>2,357,321</td>
<td>$157,940</td>
</tr>
<tr>
<td>Other grazing</td>
<td>3,563,826</td>
<td>$42,766</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>$962,714</td>
</tr>
<tr>
<td><strong>Non-feed variable costs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Veterinary and health</td>
<td></td>
<td>$85,292</td>
</tr>
<tr>
<td>Machinery, equipment, fuel, and repairs</td>
<td></td>
<td>$79,401</td>
</tr>
<tr>
<td>Marketing and miscellaneous</td>
<td></td>
<td>$76,124</td>
</tr>
<tr>
<td>Interest on feed and other costs</td>
<td></td>
<td>$20,282</td>
</tr>
<tr>
<td>Labor</td>
<td>12,040,062</td>
<td>$156,792</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>$417,891</td>
</tr>
<tr>
<td><strong>Fixed Costs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machinery, equipment, and fences</td>
<td></td>
<td>$120,061</td>
</tr>
<tr>
<td>Interest and insurance on herd</td>
<td></td>
<td>$77,513</td>
</tr>
<tr>
<td>Bull charge and/or artificial insemination</td>
<td></td>
<td>$38,311</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>$235,886</td>
</tr>
<tr>
<td><strong>Total All Costs</strong></td>
<td></td>
<td>$1,616,490</td>
</tr>
</tbody>
</table>
Percent of Iowa’s crops fed to Iowa beef cattle

<table>
<thead>
<tr>
<th>Crop Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn grain</td>
<td>3%</td>
</tr>
<tr>
<td>Corn coproducts</td>
<td>11%</td>
</tr>
<tr>
<td>Corn acres</td>
<td>9%</td>
</tr>
<tr>
<td>Hay</td>
<td>65%</td>
</tr>
<tr>
<td>Pasture</td>
<td>84%</td>
</tr>
</tbody>
</table>
Contribution of the Beef Industry to Iowa’s Economy
### Iowa Cattle Production -- Farm Level Total Economic Contribution in 2016

<table>
<thead>
<tr>
<th></th>
<th>Jobs</th>
<th>Labor Income</th>
<th>Value Added</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>19,075</td>
<td>737,899,771</td>
<td>1,150,512,370</td>
<td>3,858,668,800</td>
</tr>
<tr>
<td>Indirect</td>
<td>6,111</td>
<td>333,545,562</td>
<td>574,882,877</td>
<td>1,336,999,254</td>
</tr>
<tr>
<td>Induced</td>
<td>6,077</td>
<td>235,481,595</td>
<td>440,698,086</td>
<td>780,337,849</td>
</tr>
<tr>
<td>TOTAL</td>
<td>31,264</td>
<td>$1,306,926,928</td>
<td>$2,166,093,332</td>
<td>$5,976,005,902</td>
</tr>
</tbody>
</table>

### Cattle Production by Select Iowa County -- Farm Level Total Economic Contribution in 2016

<table>
<thead>
<tr>
<th>County</th>
<th>Jobs</th>
<th>Labor Income</th>
<th>Value Added</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humboldt</td>
<td>92</td>
<td>$3,851,742</td>
<td>$6,383,855</td>
<td>$17,612,333</td>
</tr>
</tbody>
</table>
Combined Cattle Production and Cattle Slaughter and Beef Processing Total Economic Contribution in 2016

<table>
<thead>
<tr>
<th></th>
<th>Jobs</th>
<th>Labor Income</th>
<th>Value Added</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>19,528</td>
<td>760,394,292</td>
<td>1,179,863,471</td>
<td>4,089,227,623</td>
</tr>
<tr>
<td>Indirect</td>
<td>6,519</td>
<td>361,166,227</td>
<td>609,715,156</td>
<td>1,409,375,236</td>
</tr>
<tr>
<td>Induced</td>
<td>6,270</td>
<td>242,979,820</td>
<td>454,707,201</td>
<td>805,168,752</td>
</tr>
<tr>
<td>TOTAL</td>
<td>32,317</td>
<td>$1,364,540,339</td>
<td>$2,244,285,827</td>
<td>$6,303,771,610</td>
</tr>
</tbody>
</table>
Opportunities for Beef Industry Growth in Iowa

- Pasture availability is a limit to growth of the cow-calf industry

Land and Water Stewardship
Opportunities for Beef Industry Growth in Iowa

- Cattlemen are leading in the use of cover crops
  - 24% of Iowa feedlots (2014)
  - 65% of graziers with row crops (2017)
Opportunities for Beef Industry Growth in Iowa

Unequaled access to high moisture corn coproducts

Bioresnewable Resources and Crop Residues
Highly abundant supply for roughage, bedding, grazing and a forage base

Bioresnewable Resources and Crop Residues
Opportunities for Backgrounding

• Iowa is a net exporter of calves and a net importer of yearlings
Opportunities for Beef Industry Growth in Iowa

High Quality Beef Production
Opportunities for Beef Industry Growth in Iowa

Large, quality cow-calf and feedlot inventory willing to share information

Value Added Opportunities
Opportunities for Beef Industry Growth in Iowa

Farm Succession
• 24% of cow-calf & 17% of feedlot operators are >64
• 25% of cow-calf & 26% of feedlot operators are 55-64 years of age
• 4x more cow-calf and 3x more feedlot operators >54 than <35

• 15% of sales accounted for operators age ≥65, and 31% of sales accounted for by operators age 55-64
Obstacles and attractions for future generations entering cattle production

*38% of Iowa cow-calf producers & 39% of Iowa feedlot operators who expect to be raising cattle for ≤10 do not have a succession plan
Room for growth

- Abundant Feed Resources
- High Quality Cattle
  - Significant cow-calf and feedlot sectors conducive to information exchange
- Leaders in Environmental Stewardship
  - Cover Crops and Forages
  - Nutrient and Manure Management
- Opportunities for the next generation