Rebuilding the Dream

Connee R. Quinn
Quinn Cow Company
Shannon County, South Dakota
Chadron, Nebraska
Quinn Cow Company

- Angus Simmental Cross 1300 lbs.
- Select Sires
  - Maternal & Carcass Traits
- Calve 60 days
  - Heifers Feb 14
  - Cow Mar 10
- Sell Replacement Heifers
- Retain Ownership
- Raise Own Bulls
- Majority lease land

Majority lease land

Av Rainfall 12 inches
Continuing the Dream
• Rebuild
  – Need
  – Strategy
  – Action
  – Lay of the Land
REVOLUTION AHEAD

- Population
- Resource Management
- Technology
- Information
- Economics
- Security
- Governance
“95% of beef is consumed outside of the US”

Mark Gustafson
VP International Sales
JBS Swift & Company

Angus Journal March 2012
U.S.

7% Cows
20% Beef
<table>
<thead>
<tr>
<th>Country</th>
<th>Consumption MT</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>11,000,000</td>
<td>310,000,000</td>
</tr>
<tr>
<td>EU-27</td>
<td>8,000,000</td>
<td>500,000,000</td>
</tr>
<tr>
<td>Brazil</td>
<td>8,000,000</td>
<td>195,000,000</td>
</tr>
<tr>
<td>China</td>
<td>5,500,000</td>
<td>1,400,000,000</td>
</tr>
<tr>
<td>Russian Fed</td>
<td>2,500,000</td>
<td>143,000,000</td>
</tr>
<tr>
<td>Argentina</td>
<td>2,000,000</td>
<td>40,000,000</td>
</tr>
<tr>
<td>India</td>
<td>2,000,000</td>
<td>1,200,000,000</td>
</tr>
<tr>
<td>Mexico</td>
<td>2,000,000</td>
<td>100,000,000</td>
</tr>
<tr>
<td>Pakistan</td>
<td>1,500,000</td>
<td>170,000,000</td>
</tr>
</tbody>
</table>
Brazil will provide:
• 2016 - 1/3 of all meat traded globally
As foreign economies improve, beef consumption is expected to increase...potential to expand export.....
<table>
<thead>
<tr>
<th>Country</th>
<th>Annual Consumption Growth Rate Beef &amp; Veal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Libyan Arab</td>
<td>21%</td>
</tr>
<tr>
<td>Singapore</td>
<td>14%</td>
</tr>
<tr>
<td>Georgia</td>
<td>12.5%</td>
</tr>
<tr>
<td>Jordan</td>
<td>12%</td>
</tr>
<tr>
<td>Jamaica</td>
<td>12%</td>
</tr>
<tr>
<td>Malaysia</td>
<td>10%</td>
</tr>
<tr>
<td>Honduras</td>
<td>9%</td>
</tr>
<tr>
<td>Paraguay</td>
<td>9%</td>
</tr>
</tbody>
</table>
• ...U.S. competitive advantage is that we produce the highest-quality grain-fed beef in the world. This is our niche...
U.S. Beef Industry Strengths
- Cost effective management
- Grain fed - taste & marbling
- Consistent product & supply
- USDA grading & scale
- Volume at a competitive price
- Customer service due to technology

Mark Gustafson
VP International Sales JBS Swift & Company
• We don’t compete
  • grassfed beef
  • lower quality beef
  • manufactured meat

Mark Gustafson
VP International Sales JBS Swift & Company
U.S. Beef Industry Threats
- Lack of traceability
- Lingering concern over BSE
- Political image
- Slowness to change to meet consumer demand
- Hefty import duties
U.S. Beef Industry Threats

- World Trade Organization ... U.S. won the hormone argument twice but the EU still refuses to import our beef....
• U.S. Beef Industry Threats
  • ...strides in efficiency and sustainability are not being translated to our international trade partners...
REVOLUTION AHEAD

- Population
- Resource Management
- Technology
- Information
- Economics
- Security
- Governance
“...because of computation advances we will witness 20,000 years of progress in this century”
COW/CALF PRODUCERS

“Need to know more than any segment of the beef industry ---yet tend to resist outside help”

Troy Marshall, Beef Magazine
FIVE MAJOR AREAS OF MANAGEMENT

Nutrition
Animal Health
Reproduction
Genetics
Marketing
INFORMATION

• Availability
• Analysis/Validation
  • Informational Professionals
  • University/Extension
  • Veterinarians
  • Nutritionists
  • Production Management
Board of Directors

1. University/Extension Specialists
2. State & National Cattle Organizations
3. Seed Stock Providers
4. Nutritionist
5. Consulting Veterinarian
6. Feedyard Manager
7. Other Producers
8. Banker/Accountant/Economists
9. Internet
10. Anyone that talks “cow”
The most successful man in life is the man who has the best information.

Benjamin Disraeli
Rebuilding the Dream

Compatible with the Environment
Rebuilding the Dream

Functional
Rebuilding the Dream

Excellent Foundation
Foundation
Functional
Unique set of resources
The Ideal Cow -
Jim Gosey, UN-L

- Hybrid vigor
- Conceive at 13-15 months of age and breed annually thereafter
- Calve, suckle, and raise her own calf to weaning unassisted and recoup body condition lost during lactation
• Eats the minimum of native forages and requires little or no supplemental purchased feedstuffs

• Excellent longevity with no decline in productivity through at least 12 years of age
• Produce healthy calves that gain fast and efficiently resulting in carcasses of:
  – high cut-ability
  – appropriate weight
  – appropriate marbling and tenderness
  – fit the market segments
• Replace herself with a functional heifer calf
Cow Size
Priority of Nutrient Use

Maintenance

Lactation

Growth

Reproduction
QUANTIFY RELATIONSHIPS

LEVEL OF PRODUCTION

\[ \downarrow \]

VALUE OF PRODUCTION

\[ \downarrow \]

COST OF PRODUCTION
Contribution of various traits to net income/cow ~ 1%

- Conception rate, 1% 6.32
- Winter feed, 1% -1.28
- Calving rate, 1% 3.59
- Birth weight, 1% 0.46
- Difficult calvings, 1% -1.80
- Weaning weight, 1% 3.30
- Price of steer calves, 1% 3.30
Reproduction is the single most important factor for profitable beef production.
Nutrition is the single most important cause of infertility in the cowherd.
<table>
<thead>
<tr>
<th>Year</th>
<th>Pregnancy Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>94</td>
</tr>
<tr>
<td>1995</td>
<td>93</td>
</tr>
<tr>
<td>2000</td>
<td>93</td>
</tr>
<tr>
<td>2004</td>
<td>93</td>
</tr>
<tr>
<td>2005</td>
<td>93</td>
</tr>
<tr>
<td>2006</td>
<td>94</td>
</tr>
<tr>
<td>2007</td>
<td>93</td>
</tr>
<tr>
<td>2008</td>
<td>94</td>
</tr>
<tr>
<td>2009</td>
<td>94</td>
</tr>
<tr>
<td>2010</td>
<td>94</td>
</tr>
</tbody>
</table>

Ringwall/DREC Benchmarks - 1
2012 ND Chaps

• % of cows pregnant  93.6
• % of cows calving    92.9
• 7% that were exposed did not calve

National Average % cows calving  85
Utilize the power of benchmarks...
<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average cow age</td>
<td>5.52 years</td>
</tr>
<tr>
<td>Pregnancy percentage</td>
<td>94.2 %</td>
</tr>
<tr>
<td>Calving percentage</td>
<td>93.6 %</td>
</tr>
<tr>
<td>Weaning percentage</td>
<td>92.0 %</td>
</tr>
<tr>
<td>Calving 1st 21 days</td>
<td>59.2 %</td>
</tr>
<tr>
<td>Calving 1st 42 days</td>
<td>80.5 %</td>
</tr>
<tr>
<td>Calving 1st 63 days</td>
<td>90.4 %</td>
</tr>
<tr>
<td>Average weaning age</td>
<td>197 days</td>
</tr>
<tr>
<td>Average weaning weight</td>
<td>561 pounds</td>
</tr>
<tr>
<td>Average frame score</td>
<td>5.6</td>
</tr>
<tr>
<td>Weight per day of age</td>
<td>2.86 pounds</td>
</tr>
<tr>
<td>Adjusted 205 day weight</td>
<td>610 pounds</td>
</tr>
<tr>
<td>Pounds weaned per cow exposed</td>
<td>512 pounds</td>
</tr>
<tr>
<td>Replacement percentage</td>
<td>16.3 %</td>
</tr>
<tr>
<td>Culling percentage</td>
<td>12.5 %</td>
</tr>
</tbody>
</table>
The dimmest ink is better than the best memory.

Old Chinese Proverb
Records

April 2012

<table>
<thead>
<tr>
<th>Sun</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
<th>Sat</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>16</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td>19</td>
<td>20</td>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>26</td>
<td>27</td>
<td>28</td>
<td>29</td>
<td>30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

November 2000
# COW HERD AGE

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Age of Cows Culled</td>
<td>5.72 Years</td>
</tr>
<tr>
<td>Average Age of Herd</td>
<td>4.78 Years</td>
</tr>
<tr>
<td>Replacement Rate</td>
<td>21.2%</td>
</tr>
</tbody>
</table>

Clyde R. Greer, Montana State University
Top Seven Reasons Cows Leave the Herd

1. Open/poor fertility - 5.0%
2. Old age - 2.3%
3. Sell as bred cows - 2.1%
4. Physical defects - 1.4%
5. Inferior calves - 1.3%
6. Unknown - 1.0%
7. Cow died - 0.8%

% = Percent of the total cow herd
<table>
<thead>
<tr>
<th>Cow Age</th>
<th>Weaning Weight</th>
<th>% of Cows</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>516</td>
<td>16.8%</td>
</tr>
<tr>
<td>3</td>
<td>522</td>
<td>15.1%</td>
</tr>
<tr>
<td>4</td>
<td>544</td>
<td>13.3%</td>
</tr>
<tr>
<td>5</td>
<td>555</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>557</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>557</td>
<td>49.6%</td>
</tr>
<tr>
<td>8</td>
<td>550</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>536</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>534</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>526</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>511</td>
<td>5.1%</td>
</tr>
<tr>
<td>Calving Interval</td>
<td>% Calves Born</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>--------------</td>
<td></td>
</tr>
<tr>
<td>21 Days</td>
<td>63.4</td>
<td></td>
</tr>
<tr>
<td>42 Days</td>
<td>88.9</td>
<td></td>
</tr>
<tr>
<td>63 Days</td>
<td>95.5</td>
<td></td>
</tr>
</tbody>
</table>

Cycle length equals 21 days and cycle 1 begins when the 2nd 3yr old calved. ***283 days after bull turn out.
<table>
<thead>
<tr>
<th>Calving Cycle</th>
<th>Actual Weight</th>
<th>Potential Wt Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early</td>
<td>570</td>
<td>+ 2</td>
</tr>
<tr>
<td>1</td>
<td>568</td>
<td>---</td>
</tr>
<tr>
<td>2</td>
<td>544</td>
<td>- 24</td>
</tr>
<tr>
<td>3</td>
<td>499</td>
<td>- 69</td>
</tr>
<tr>
<td>4</td>
<td>465</td>
<td>-103</td>
</tr>
<tr>
<td>Late</td>
<td>444</td>
<td>-124</td>
</tr>
</tbody>
</table>

Cycle length equals 21 days and cycle 1 begins when the 2nd 3yr old calved. ***283 days after bull turn out.
Replacement Heifer
The Second Calf Heifer
Unique Set of Resources
Forage Base
Genetic Base
Management Ability
1. Analyze Forage
2. Balance Forage Nutrients
3. Optimize Forage Usage
“Less than 10% of operations analyzed feed samples.”
Optimize standing forage utilization
The Relationship Between Yield of Dry Matter, Digestible Dry Matter and Stage of Plant Growth

Yield

Maturity

Optimum

Dry Matter

Digestible Matter
Use cow condition score to monitor nutrition program.
Importance of Cow Condition to the Cow

There are times when the cow cannot eat enough feed to supply her energy needs and body reserves are mobilized to supply the deficit.
The major genetic improvement in the herd will be made with the bull decisions.
CRITICAL FACTORS

• Reproduction
• Replacement Rate
• Market Weight
• Quality

Harlan Hughes, NDSU
GENETIC SELECTION

- EPD’S
- INDEXES
“As an industry, we have demonstrated our ability to follow trends and overdo things.
It’s getting us away from matching cows to their forage resources.”

David Lalman, OSU Extension Beef Specialist
• To breed for optimum means you have to have a target in sight beyond which you don’t want to go.
If your goal is to maintain an optimum level for any trait, the evidence of your accomplishment is not visible change but the lack of it.”
Quinn Cow Company

- Maternal
  - CE
  - Milk
  - SC
  - $EN

- Docility

- Carcass
  - CW
  - REA
  - Marbling
...U.S. competitive advantage is that we produce the highest-quality grain-fed beef in the world. This is our niche...
Widths
The Questions

1. Things we should stop doing.
2. Things we should start doing.
3. Things we don't track or measure - but should
“The future lies in our ability to give the next generation a reason to hope.”

Chardin