Supporting production of high-quality BEEF: THE MISSOURI BEEF PROJECT
Challenges & opportunities facing the beef industry...

**Challenges**
- A segmented industry, steeped in tradition, comprised of large numbers of small- to medium-sized farms
- Slow to adopt technology
- Rising input costs
- Declining inventory
- Increasing global competition
- Perceived lack of incentives

**Opportunities**
- On-the-shelf technology not being used (*that works*)
- Increasing domestic & global demand for high-quality beef
- Marketing incentives that will add value
Developing a plan

1. Create an understanding of the importance of heifer development based on reproductive outcomes.
2. Changes in heifer development spill over into the cow herd.
3. Importance of reproductive management becomes apparent.
4. Focus expands to genetic improvement.
5. Creation of a value-added product requires a re-evaluation of marketing strategies.
Implementation through an existing program....
The Missouri Show-Me-Select Replacement™ Heifer Program

<table>
<thead>
<tr>
<th>Since 1997.....Participation and sales</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>719 farms</td>
<td>113 sales</td>
</tr>
<tr>
<td>212 veterinarians</td>
<td>23,936 heifers sold</td>
</tr>
<tr>
<td>99,805 heifers</td>
<td>$27,348,050 in gross sales</td>
</tr>
</tbody>
</table>

Tier Two: Heifers are eligible to qualify for Tier Two in the Show-Me-Select Replacement Heifer Program based on minimum accuracies of the heifer’s sire at the time of sale.

<table>
<thead>
<tr>
<th>Trait</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calving ease (direct)</td>
<td>.65</td>
</tr>
<tr>
<td>Calving ease (maternal)</td>
<td>.30</td>
</tr>
<tr>
<td>Weaning weight</td>
<td>.75</td>
</tr>
<tr>
<td>Carcass weight</td>
<td>.20</td>
</tr>
<tr>
<td>Marbling</td>
<td>.20</td>
</tr>
</tbody>
</table>
Producers from 103 (90%) of 114 counties enrolled heifers in the Show-Me-Select Replacement Heifer Program from 1997-2011.
Since 1997, buyers from 18 states purchased heifers from the Show-Me-Select Replacement Heifer Program
Can producers make more money?  
(data from Fall ’10, Spring ’11, Fall ’11)

<table>
<thead>
<tr>
<th>Tier</th>
<th>n</th>
<th>Breed</th>
<th>(Baseline)</th>
<th>Profit</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier One</td>
<td>972</td>
<td>NS</td>
<td>(baseline)</td>
<td></td>
<td>$1492</td>
</tr>
<tr>
<td>Tier One</td>
<td>887</td>
<td>AI</td>
<td></td>
<td>+$162</td>
<td>$1654</td>
</tr>
<tr>
<td>Tier Two</td>
<td>50</td>
<td>NS</td>
<td></td>
<td>+$159</td>
<td>$1651</td>
</tr>
<tr>
<td>Tier Two</td>
<td>128</td>
<td>AI</td>
<td></td>
<td>+$259</td>
<td>$1751</td>
</tr>
<tr>
<td>Sire group</td>
<td>Maternal Grand Sire</td>
<td>No. of steers</td>
<td>Choice or higher (%)</td>
<td>CAB® (%)</td>
<td>Prime (%)</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------------</td>
<td>---------------</td>
<td>-----------------------</td>
<td>----------</td>
<td>-----------</td>
</tr>
<tr>
<td>High accuracy</td>
<td>High accuracy</td>
<td>118</td>
<td>100</td>
<td>52</td>
<td>33</td>
</tr>
<tr>
<td>High accuracy</td>
<td>Low accuracy</td>
<td>53</td>
<td>100</td>
<td>60</td>
<td>34</td>
</tr>
<tr>
<td>High accuracy</td>
<td>Natural service</td>
<td>27</td>
<td>100</td>
<td>56</td>
<td>19</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td></td>
<td><strong>198</strong></td>
<td><strong>100</strong></td>
<td><strong>55</strong></td>
<td><strong>31</strong></td>
</tr>
<tr>
<td>Natural service</td>
<td>High accuracy</td>
<td>39</td>
<td>95</td>
<td>54</td>
<td>15</td>
</tr>
<tr>
<td>Natural service</td>
<td>Low accuracy</td>
<td>12</td>
<td>100</td>
<td>42</td>
<td>25</td>
</tr>
<tr>
<td>Natural service</td>
<td>Natural service</td>
<td>23</td>
<td>96</td>
<td>26</td>
<td>9</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td></td>
<td><strong>74</strong></td>
<td><strong>96</strong></td>
<td><strong>43</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

Angus Carcass Challenge 1st place – 2nd quarter, Central Region
2010 = 87% CAB® & Prime
2011 = 89% CAB® & Prime
(Currently in the U.S., 1 in 5 carcasses qualify for CAB® and 3% of all carcasses grade Prime)
On-farm demonstrations
Fixed-time AI in postpartum beef cows

0  Treatment day  7 ..........66h

Fixed-time AI pregnancy rates
73 herds = 4327/7028 (62%)

Portable AI Barns
- MU Extension funding placed
8 barns across Missouri

Pregnancy determination with ultrasound
- Early diagnosis
- Fetal sexing
“As prices and costs increase, traits of efficiency and quality will become bigger drivers of profitability than ever before, and the commodity model of U.S. beef production will no longer be viable”

(BEEF Magazine, July 8, 2011)
Future

- The long-term sustainability of the U.S. beef industry must be focused.....

- We cannot compete globally on a commodity basis

- We need to identify our strengths and develop them
  - U.S. produces 82-84% of high-quality beef in the global trade

- No state is better positioned than Missouri and its two million cows to capitalize on this opportunity
CAB® tells us ….

- Missouri-source calves represent at least 10% of total CAB® supplies, and perhaps an even higher share of CAB® Prime

- 2011, CAB® moved 807 M pounds of beef

- 2020, demand will exceed 1B pounds

Could Missouri double its supply???
Moving forward….

- Organize progressive producers, regardless of herd size, to take advantage of value-added opportunities.
The Missouri Beef Project

College of Agriculture, Food and Natural Resources

A Partnership That Delivers Financial Incentives for Missouri’s High-Quality Cattle Producers
What’s at Stake Today?

- There are large premiums being paid for high-quality cattle
- Most Missouri cattle producers do not see quality-based premiums since they do not retain ownership
- Coordination among cattle market participants a must to get premiums back to Missouri producers
- Shrinking cattle numbers provide incentive for feedlots to share premiums
Members Partner With MU

• New MU relationships with other cattle market participants will allow market coordination
• Three major AI companies with quality genetics and access to producers using best management practices
• Two Kansas feedlots with access to premium pricing grids and knowledge in feeding high-quality cattle
• These groups willing to provide financial backing to the project
Cattle Premiums on the Rise
U.S. Cattle Inventories in Decline

Million Head

Source: FAPRI, March 2012
Weather Could Have a Big Effect Again in 2012

U.S. Drought Monitor

April 17, 2012
Valid 7 a.m. EDT

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

http://droughtmonitor.unl.edu/

Released Thursday, April 19, 2012
Author: Anthony Artusa, NOAA/NWS/NCEP/CPC
Premiums Add to Cattlemen’s Checks

• Cattle that grade prime gain an additional $450 - $500
• Other premiums exist – CAB, Black Canyon, etc.
• At times, choice provides additional premiums

• MU Thompson Farm shows phenomenal quality – 30% Prime and over 85% Choice or better
• The recipe for high-quality cattle is available!
2010 Thompson Research Center Steer Calves

- 11/16/2010 – 600 pound steers left for Kansas feedyard – 103 steers, $116 feeder price, $71,500
- May/June 2011 – 1,311 pound steers slaughtered – 98 steers, $115 average price, $148,136
- Feed, medicine, yardage, and other feedyard expenses - $65,030
- Net $83,106
- Total gain over selling feeder calves – another $113 per animal 15 percent return
A Unique Opportunity Exists For MU

• Leverage success of the Show-Me-Select Heifer Program
• Missouri is the number 3 beef cow state
• High-quality cattle produced already in Missouri
• MU Thompson Farm shows working results
• Animal Sciences faculty in place to provide future program development
• Multi-disciplinary collaboration underway in CAFNR
• MU Extension Livestock Specialists already on board
Long-Term Commitment Needed

- It takes time to convince producers of a new program – SMS Heifer program over a decade old
- Likely smaller cattle enrollments early as producers determine genetic potential of their herds
- Producers that lack quality herds will take years to increase quality and take advantage of high-quality premiums
- However, Dr. Patterson’s fixed-time AI approach provides a fast track to genetic improvement
More Details to Come

• Expect a full launch by August
• Details regarding participation will be coming
• Should complement the Show-Me-Select Heifer program