UT REPRODUCTIVE RESEARCH PROGRAM

Animal Science
Reproductive Strategies to Increase Marketing Potential
Defining Today’s Beef Community

- Professional cattleman – info. driven, brand friendly
- Professional cattleman – tradition, commodity focused
- Professional farmer – cattle as a by-product of land
- Professional in other industry – cattle as 2nd income
- Recreational producer – life style, $$ not an issue
- Lifestyle cattle producer – margin operator
- Cause driven landowner (Nature Conservancy, etc.)
- Service provider (educators, vets, consultants, etc.)

Lemenager, 2006
The Goal
Vertical Integration (Coordination) of the Beef Industry – Consumer Driven
What is Vertical Integration?

- Producers
- Feedlots
- Packers
- Consumers
How are these related?

Producers

JBS
Tyson

McDonalds
Consumer
Walmart
Are You Prepared?

- Defined Calving Season?
- Known genetics?
- Records?
- Herd Health Plan?
- Knowledge/ Source verification?

All traits of most feeder calf sales
Putting the Puzzle together
For Today’s MANAGEMENT
Building the Foundation

Nutrition
BODY CONDITION SCORING SYSTEMS

1 - 9: Beef

Most common for Producers:

✓ Thin (Under Condition)
✓ Just Right (Optimum)
✓ Fat (Over Condition)
<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Severely emaciated. Bone structure of shoulder ribs, back, and pins is sharp to the touch and easily visible. Little evidence of fat deposits or muscling.</td>
</tr>
<tr>
<td>2</td>
<td>Emaciated. Little evidence of fat deposition but some muscling in the hindquarters. The backbone feels sharp to the touch.</td>
</tr>
<tr>
<td>3</td>
<td>Very thin, no fat on ribs or brisket, and some muscle still visible. Backbone easily visible.</td>
</tr>
<tr>
<td>4</td>
<td>Thin, with ribs easily visible but shoulders and hindquarters. The backbone feels sharp to the touch.</td>
</tr>
<tr>
<td>5</td>
<td>Moderate to thin. Last two or three ribs can not be seen unless animal has been shrunk. Little evidence of fat in brisket, over ribs or around tailhead.</td>
</tr>
<tr>
<td>6</td>
<td>Good smooth appearance throughout. Some fat deposits in brisket and over tailhead. Ribs covered and back appears rounded.</td>
</tr>
<tr>
<td>7</td>
<td>Very good flesh, brisket full. Fat cover is thick and spongy and patchiness is likely. Ribs very smooth.</td>
</tr>
<tr>
<td>8</td>
<td>Obese, back very square, brisket distended, heavy fat pockets around tailhead. Square appearance.</td>
</tr>
<tr>
<td>9</td>
<td>Rarely observed. Very obese. Animal’s mobility may actually be impaired by excessive fat.</td>
</tr>
</tbody>
</table>
Too Thin, Just Right, Too Fat
Building the Foundation

Nutrition  Genetics
Building the Foundation

Nutrition  Genetics
Building the Foundation

Nutrition  Genetics  Facilities
Considerations When Selecting a Commercial Squeeze Chute


Clyde Lane, Jr.
Professor - Animal Science
University of Tennessee
Constructing a Beef Cattle Handling Facility

http://animalscience.ag.utk.edu/beef/pdf/Facility%20dimensions%20-%20shirt%20pocket.PDF

Clyde Lane, Jr. and Warren Gill
Professors - Animal Science
University of Tennessee
Reproduction
Nutrition Genetics Facilities
Calving Season Herd Health
Management and Health Calendar for Spring Calving Commercial Beef Herd

Fred M. Hopkins and F. Neal Schrick
The University of Tennessee

January 1
Begin heifer calving season
Tag calves at birth
Castrate and implant male calves at birth
Dip navel with disinfectant at birth
Dehorn calves at birth
Begin feeding high magnesium mineral

January 22
Begin calving cows

http://animalscience.ag.utk.edu/beef/pdf/Management andHealthCalendarforSpringCalving-FMH-FNS.pdf
Calving Season  
Herd Health  

Nutrition  

Will Cover Today
Where do I start?

Changing From Year Round Calving to January, February, March

Calving Year Round

Year One

Remove Bull June 1

Pregnancy Check Sept. 15

Cows Calving

MONTHS

J F M A M J J A S O N D
Are You Prepared?

- Defined Calving Season?
- Known genetics?
- Records?
- Herd Health Plan?
- Knowledge/ Source verification?

All traits of most feeder calf sales
How can WE get to a 90-day Calving Season?

Pros, Cons and “How To” of Defined Calving Seasons
Why a Defined Calving Period?

✓ Uniformity in age (size?)
✓ Improve Marketing Potential
✓ Reduce “Year-a-Round” Labor!
✓ Aid in Herd Health Management
✓ Nutritional Management (Pastures)
✓ Did I say increase $$$$?
Percent Of Calves Born By Month In United States And Southeast

<table>
<thead>
<tr>
<th>MONTHS</th>
<th>PERCENT OF CALVES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UNITED STATES</td>
</tr>
<tr>
<td>JAN</td>
<td>7.1 %</td>
</tr>
<tr>
<td>FEB</td>
<td>15.2</td>
</tr>
<tr>
<td>MAR</td>
<td>27.2</td>
</tr>
<tr>
<td>APR</td>
<td>21.5</td>
</tr>
<tr>
<td>MAY</td>
<td>7.6</td>
</tr>
<tr>
<td>JUN</td>
<td>2.3</td>
</tr>
<tr>
<td>JUL</td>
<td>1.4</td>
</tr>
<tr>
<td>AUG</td>
<td>1.6</td>
</tr>
<tr>
<td>SEP</td>
<td>3.7</td>
</tr>
<tr>
<td>OCT</td>
<td>4.5</td>
</tr>
<tr>
<td>NOV</td>
<td>4.2</td>
</tr>
<tr>
<td>DEC</td>
<td>3.7</td>
</tr>
</tbody>
</table>

NAHMS
## Calving Distribution of Tennessee Cow-calf Herds

<table>
<thead>
<tr>
<th>MONTHS</th>
<th>PERCENT OF CALVES BORN</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAN, FEB, MAR</td>
<td>38.1%</td>
</tr>
<tr>
<td>APR, MAY, JUN</td>
<td>8.4</td>
</tr>
<tr>
<td>JUL, AUG, SEP</td>
<td>2.8</td>
</tr>
<tr>
<td>OCT, NOV, DEC</td>
<td>21.1</td>
</tr>
</tbody>
</table>

NEEL, 1996. TENNESSEE BEEF COW-CALF SURVEY, AGRICULTURAL EXTENSION SERVICE, THE UNIVERSITY OF TENNESSEE
# Most Common Factors Used To Determine Calving Season

<table>
<thead>
<tr>
<th>FACTORS</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEATHER</td>
<td>39.4%</td>
</tr>
<tr>
<td>TRADITION</td>
<td>29.7</td>
</tr>
<tr>
<td>FORAGE AVAILABILITY</td>
<td>9.3</td>
</tr>
<tr>
<td>MARKET CYCLE</td>
<td>5.7</td>
</tr>
<tr>
<td>INCREASING WEANING WT.</td>
<td>5.3</td>
</tr>
<tr>
<td>TIMING OF HERD</td>
<td>4.5</td>
</tr>
<tr>
<td>MOVEMENT</td>
<td>3.8</td>
</tr>
<tr>
<td>LABOR AVAILABILITY</td>
<td>2.3</td>
</tr>
</tbody>
</table>

NAHMS
Why Is A Definite Calving Season Not Followed By Producers?

1. “It is too much trouble.”
2. “Too hard to keep bull out of herd.”
3. “I can breed more cows to a bull.”
Why Is A Definite Calving Season Not Followed By Producers?

4. Producers fear they will miss some calves if they go to a controlled calving season.

5. Don't want to cull cows that would be “open.”

6. They want to have calves for sale year-round.
Why Is A Definite Calving Season Not Followed By Producers?

1. “It is too much trouble.”

2. “Too hard to keep bull out of herd.”

3. “I can breed more cows to a bull.”
Where do I start?

- The BULL (where do I put him?)
- Marketing Date
  - One or Two or Three or ???
- Commit to Culling
  - Pregnancy Check (facilities)
- Replacement Heifers
Changing From Year Round Calving to January, February, March - Heifers

- Breed Replacement Heifers Mar. 1-May 1
- Replacement Heifers (Calve Dec. 10-Feb. 8)
Changing From Year Round Calving to January, February, March - Cows
Distribution of Calving of a 40-cow Herd
Distribution of Calving of a 25-cow Herd

The graph shows the distribution of calving across the months of the year for a 25-cow herd. The months are represented horizontally, and the number of calvings is shown vertically. The graph indicates a significant peak in calving in August, with relatively fewer calvings in other months.
Where do I start?

Changing From Year Round Calving to January, February, March

Year One

Cows Calving

Calving Year Round

Remove Bull June 20

Pregnancy Check Sept. 15

MONTHS
Distribution of Calving of a 25-cow Herd
Changing From Year Round Calving to January, February, March

Second Year

March 30

Remove Bull June 20

Pregnancy Check Sept. 15

Breed Replacement Heifers Mar. 1-May 1

Replacement Heifers (Calve Dec. 10-Feb. 8)
Changing From Year Round Calving to January, February, March

Third Year
March 30

Cows Calving

Dec. 28

Remove Bull June 20

Pregnancy Check Sept. 15

Put Bull Back In March 20

Pregnancy Check Sept. 15

J F M A M J J A S O N D
MONTHS
Changing From Year Round Calving to January, February, March

WHAT HAPPENS IF YOU MOVE TOO QUICK!
WHICH CALVING SEASON?

SPRING CALVING SEASON

FALL CALVING SEASON

MONTHS

J   F   M   A   M   J   J   A   S   O   N   D
Why a Defined Calving Period?

- Uniformity in age (size?)
- Improve Marketing Potential
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- Aid in Herd Health Management
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Questions???