Steven M. Jones
Associate Professor - Livestock

BEEF CATTLE PRODUCTION – COW/CALF
432 lbs Retail Beef

Variety Meats
- Liver
- Brains
- Tongue
- Ox Joints
- Kidneys
- Tripe
- Sweetbreads

Pharmaceuticals
- Epinephrine
- Insulin
- Heparin
- Cholesterol
- Estrogen
- Thyroid Extract

Edible By-Products
- Oleo oil
- Gelatin
- Marshmallows
- Canned Meat
- Candies
- Natural Sausage Casings

Inedible By-Products
- Leather
- Sports Equipment
- Surgical Sutures
- Soap
- Buttons
- Sandpaper
- "Camel hair" brushes
- Explosives

1,000 lb STEER
COW/CALF ENTERPRISES

- Purebred (Registered Cattle)
  - Seed stock for commercial operations (Bulls)
  - Retail beef – calves, cows, bulls

- Commercial (Crossbred)
  - Calves for retail beef
  - Cull Cows
  - Cull bulls
COW/CALF PROFIT IS DETERMINED BY:

1. Reproductive Efficiency
2. Early Growth
3. Maternal Ability
4. End Product Merit
BASIC HUSBANDRY PRACTICES

- Weighing
- Ear tagging
- Feeding
- Watering
- Vaccinating
- Implanting
- Dehorning
- Castrating
- Branding
Need to generate profits and provide opportunities for other producers

How to assess profitability:

- Calf-crop percentage weaned
- Average weight of calves at weaning
  - 6 to 8 month old calves
- Annual cow cost
  - Cost to keep a cow each production year
Good Management

- Know what affects calf-crop
  - Weaning weight and annual cow cost
- Goal:
  - Improve number of lbs weaned per cow
  - Reduce or control annual cow costs
ManagemenT for low annual cow costs

Top five ways to reduce costs

1. Reduce supplemental feed costs
2. Rotational grazing
3. Use of good genetics
4. Reduce labor costs
5. Strong herd health program
BARRIERS TO PROFITABILITY IN COW/CALF OPERATIONS

- No controlled calving season
- Low reproductive efficiency
- High feed costs
- Non uniformity of calves
- High capital investment
BASIC “MUST DO” MANAGEMENT PRACTICES

- Controlled calving season
- Reproductive management
- Pasture management
  - soil fertility, proper grazing, stockpiling
- Effective nutrition program
- Planned breeding program
- Minimize the equipment
WHAT IS THE BROOD COW’S JOB?

- Calve at 2 years of age
- Calve within defined season regularly
- Wean a marketable calf
- Match environment
- Be available for long-term production
MATERNAL TRAITS

- Milk Production
- Fertility
- Early Puberty
- Calving Ease
- Longevity
- Moderate Frame Size
- Fleshing Ability
- Disposition
IDEAL FEEDER CALF

- Medium/large framed
- US number 1 muscling
- Finished weight of 1100 lbs. to 1350 lbs.
USDA FEEDER CATTLE GRADES

✓ Frame
✓ Muscling
### USDA FEEDER CATTLE GRADES

#### FRAME SIZE

Relates to finished weight –

given degree of fatness to grade Choice

Skeletal size (height & length) in relation to age

<table>
<thead>
<tr>
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<th>Steer (lbs.)</th>
<th>Heifer (lbs.)</th>
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<tr>
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<td>1000 - 1150</td>
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<tr>
<td>Small</td>
<td>&lt; 1100</td>
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USDA Feeder Cattle Grades

Muscle Thickness Score

US No. 1
(moderately thick)

US No. 2
(TTB slightly thick)

US No. 3
(Thin)

US No. 4

Relates to muscle to bone ratio at a given degree of fatness and hence yield grade

October 2000
THE NEED FOR OPTIMUM FRAME SIZE

Large framed cows
- Increased maintenance costs
- Potential reproductive complications
- Potential calf marketability problems

Small framed cows
- Risk of calving difficulty increased
- Potential decreased calf performance
- Potential calf marketability problems
NEED FOR PERFORMANCE RECORDS

- Excellent to track bull and cow performance
- Identifies ideal traits
- Need minimums for
  - Age
  - Weight
THE NEED FOR OPTIMUM FRAME SIZE

- Large framed cows
  + Increased maintenance costs
  + Potential reproductive complications
  + Potential calf marketability problems

- Small framed cows
  + Risk of calving difficulty increased
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NUTRIENT REQUIREMENTS OF IMPORTANCE

- Energy
- Protein
- Minerals
- Vitamins
- Water
BEEF PRODUCTION PHASES

- Breeding
- Gestation
- Calving
- Weaning
- Replacement Breeding Stock
- Market Animals
BREEDING

- **Spring vs. Fall calving**
  - Management decision depending on which scenario works best for the operation
  - If calving in Spring, breeding is done in late spring to early summer
  - If calving in Fall, breeding is done in late fall
- **Cow rebred 45-90 days after calving**
- **Estrous cycle 21 days**
Natural vs. Artificial Insemination vs. Embryo Transfer

- Depends mainly on the purpose of the operation
- Cost also plays a large part in this decision
NATURAL BREEDING

- Bull is turned out with cows and allowed to naturally service them
- Bull is usually turned out for approximately 3 months to ensure cows are bred
- Less labor involved
- Must own or lease the bull
ARTIFICIAL INSEMINATION

- More labor intensive
- Able to use the best bulls available at a cheaper rate
- Disease control
- Details of A.I.
  - Synchronization may be used
  - Cow is inseminated by technician 12 hours after first signs of heat.
  - Semen is placed in the uterine body
GESTATION

- Gestation lasts 283-285 days (9 months)
- During gestation the cow is fed to maintain her weight until the last trimester when nutrition is increased.
WEANING

- Standard weaning age is 7 months.
- Weaning weight is 500 pounds.
- Creep feed may be done between calving and weaning to increase weight.
- Many calves are processed at this time.
  - Castration of males intended for feedlot*
  - Vaccination
  - Dehorning*
  - Implanting of castrated males

*Castration and Dehorning is typically done as early as possible
EPD’s are very important in the cattle industry and are an important part of retaining breeding stock.

EPD’s give the producer an idea of how the animal’s offspring will genetically perform.

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$Values

Can Value ($), Lot Value ($), Grid Value ($), Beef Value ($B)

24.7 | 16.56 | 14.51 | 30.85