

# Master Beef Producer





**Tennessee Beef Cattle Improvement Initiative** 

# Tennessee Master Beef Producer Marketing

Emmit L. Rawls
Professor
Agricultural Economics



# Teaching Objectives

- Producers will be able to state the sources of demand for feeder cattle and understand how feedlots decide what they can pay for feeder cattle.
- Producers will be able to describe the beef cattle cycle and understand how profitability of each beef cattle sector is affected by the cycle.

# 4

# Marketing Feeder Cattle

Returns = Price x Weight – Cost



# Marketing vs Selling

#### Selling

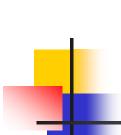
- Quality or grade easiest to produce
- Most convenient time
- Most convenient <u>place</u>
- Whatever offered <u>price</u>

#### Convenience Motivated

#### Marketing

- Quality or grade with most profit
- Most profitable time
- Most profitable <u>place</u>
- Some control over <u>price</u> and profit

#### Profit Motivated



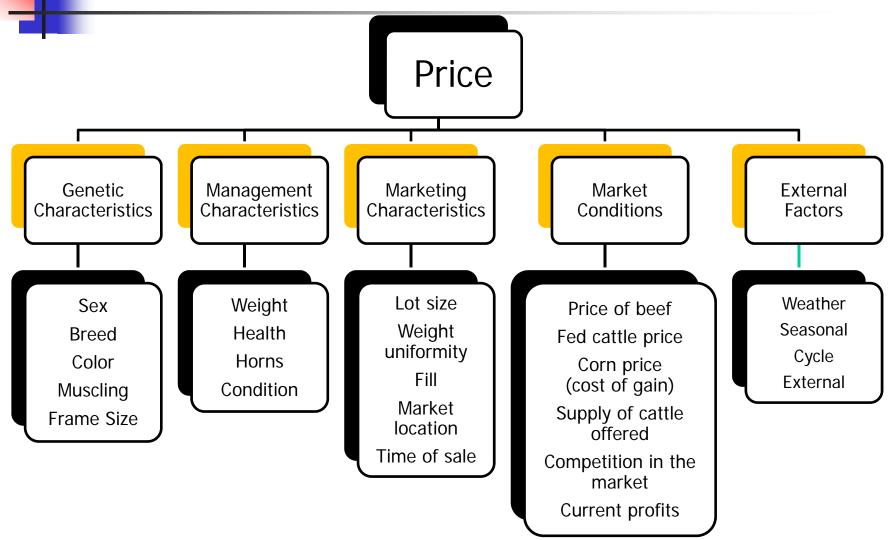
# Markets For Stocker Calves & Feeder Cattle

- Calves under 600 lbs.
  - Stocker Programs- add weight on grass plus supplemental feeds
  - Tennessee & wheat areas
- Calves/Yearlings over 600 lbs.
  - Farmer feeders in Midwest
  - Custom feedlots West Plains & South Plains



- Market calves weaned at marketing
- Market calves after preconditioning (post weaning) program
- Market cattle following backgrounding program (heavier weights)
- Market finished cattle from farm or from custom feedlot

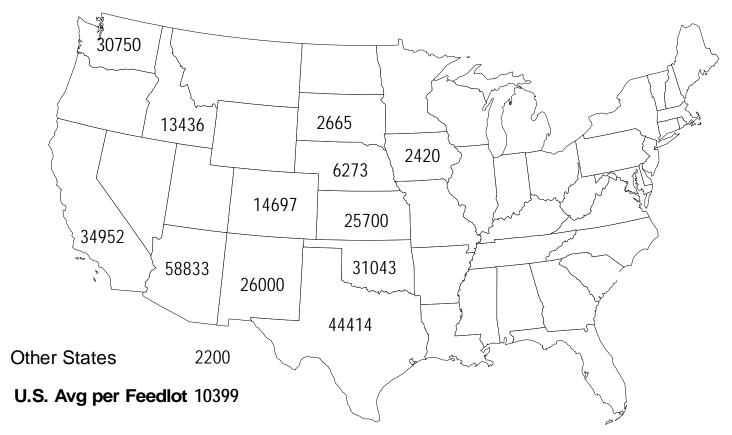






# Where Are The Buyers?

#### Where the cost of feed is lower

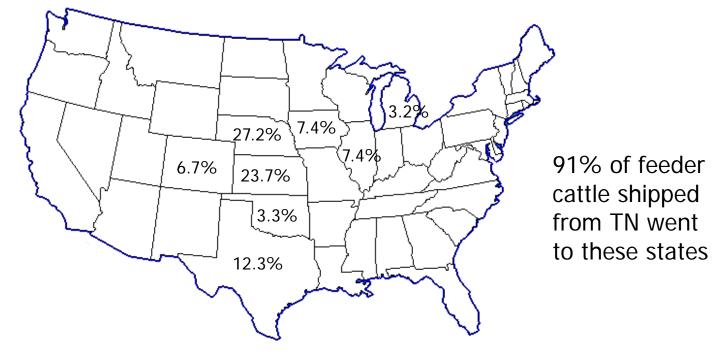


Number of Cattle Marketed in 2007 from Feedlots of 1000+ Head Capacity



### Where Are The Buyers?

- Freight and feed cost
- Feedlot packer infrastructure



Tennessee Movement of Feeder Cattle: Sept 2007 thru Sept 2008



# What Can A Feedlot Pay For 700 lbs. Steers To Be Sold At 1200 lbs.?

Expected Sale Price (\$/cwt)	\$90	\$85
Sale wt (lbs)	x 1200	x 1200
Gross Sale Value (\$/hd)	\$ 1080	\$ 1020
Cost of Gain @ \$0.75/lb – 500 lbs gain	- 375	- 375
Max Dollars for Feeder (\$/hd)	\$ 705	\$ 645
Return to Risk & Management (\$/hd)	- 25	- 25
Max Dollars for Feeder (\$/hd)	\$ 680	\$ 620
Max Price for Delivered 700 lbs Steer (\$/cwt)	\$ 97.14	\$ 88.57
Less Trucking (\$/cwt)	- 7.00	- 7.00
TN Price (\$/cwt)	\$ 90.14	\$ 81.57



# What Can A Feedlot Pay For 700 lbs. Steers To Be Sold At 1200 lbs.?

Expected Sale Price (\$/cwt)	\$ 90	\$ 90
Sale wt (lbs)	x 1200	x 1200
Gross Sale Value (\$/hd)	\$ 1080	\$ 1080
Cost of Gain @ \$0.75/lb (\$0.85/lb) – 500 lbs gain	-375	-425
Max Dollars for Feeder (\$/hd)	\$ 705	\$ 655
Return to Risk & Management (\$/hd)	- 25	- 25
Max Dollars for Feeder (\$/hd)	\$ 680	\$ 630
Max Price for Delivered 700 lbs Steer (\$/cwt)	\$ 97.14	\$ 90.00
Less Trucking (\$/cwt)	- 7.00	- 7.00
TN Price (\$/cwt)	\$ 90.14	\$ 83.00

### Some Rules Of Thumb

- What is the change in current feeder cattle prices when the expected <u>sale price</u> (futures price) changes by \$1 per cwt.?
- A function of the relationship between sale (finished) weight and purchase weight

$$Sale Wt. = 1200# = $1.71$$
  
Purchase Wt. 700#

Relationship is direct

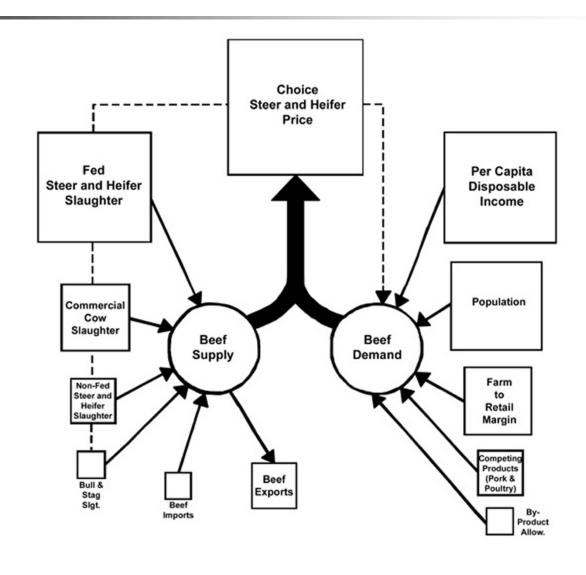
### Some Rules Of Thumb

- What is the change in current feeder cattle prices when the projected <u>cost of gain</u> changes by \$1 per cwt.?
- A function of the relationship between weight gain and purchase weight

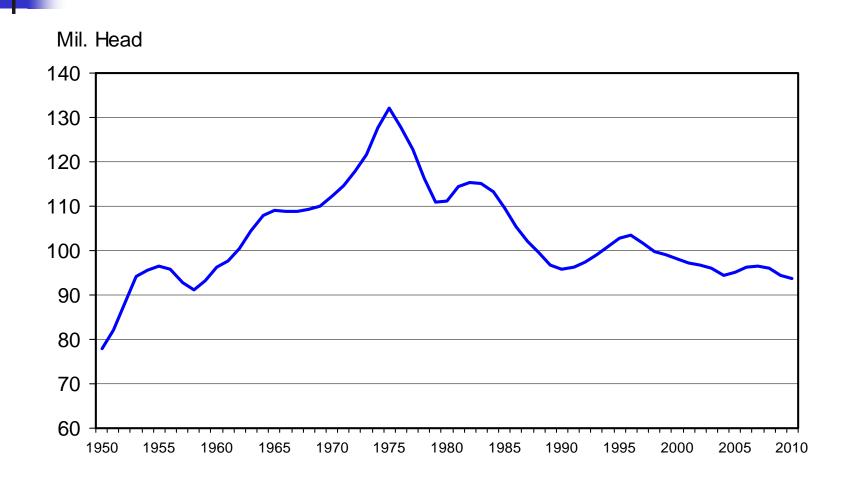
$$\frac{\text{Weight Gain}}{\text{Purchase Wt.}} = \frac{500\#}{700\#} = \$0.71$$

Relationship is inverse

# Factors That Affect Fed Cattle Prices





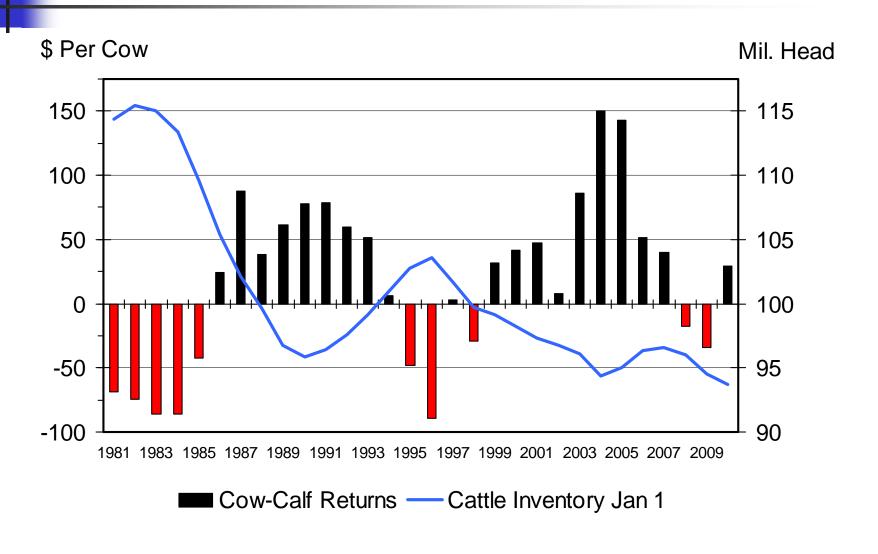




# Characteristics Of Cycles

- 10 years in length
- Begin early in decade
- Peak middle of decade
- Cause by profits and losses in cow-calf business

# Cow-Calf Returns and Cattle Inventory — U.S., Annual





- Cattle herd declines following period of losses. Large losses for feedlots, stocker/backgrounder, then cows
- Decline comes from harvest of cows, heifers & bulls
- Initially causes even lower prices due to increased harvest



 Windfall for stocker/backgrounder and cattle feeder, then cow-calf

 Positive returns eventually stimulate herd growth and positive returns for most sectors



# Teaching Objectives

Producers will be able to develop a marketing plan for their cattle herd.



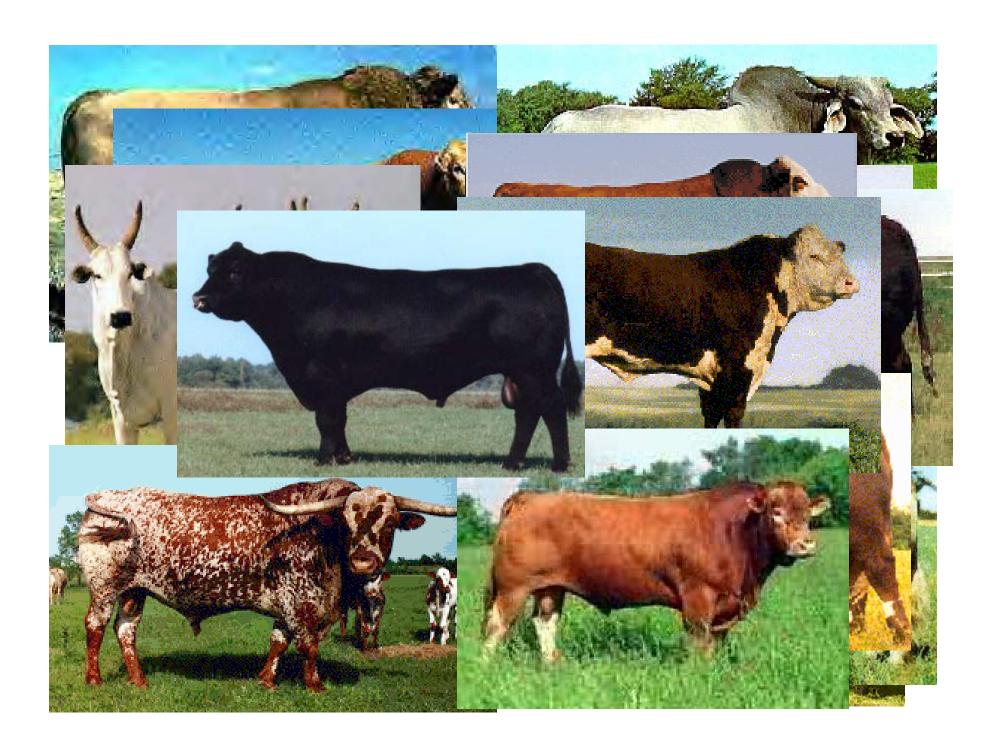
# Developing A Marketing Plan

- What to produce?
- When to produce & market?
- How/where to market?



### What To Produce?

- Crossbreeding
  - Increased pounds of calf per cow exposed +15%
  - Increased weight of crossbred calves +7-8%
- For most producers group marketing is necessary
  - Loads bring a \$4/cwt. premium compared to singles
- What breeds or crosses will help make uniform loads





# Targeting A Market

#### Feeder Cattle Need To Be Targeted

- Quality Market
  - English Breeds
  - English Continental Cross
- Lean "Select Grade" Market
  - Continentals & Crosses
  - English Continental Cross
- Natural/Organic
  - Mostly Continental
  - Some High Quality



# Teaching Objectives

 Producers will be able to name and identify feeder cattle by grade and understand the purpose of grading in our marketing system.

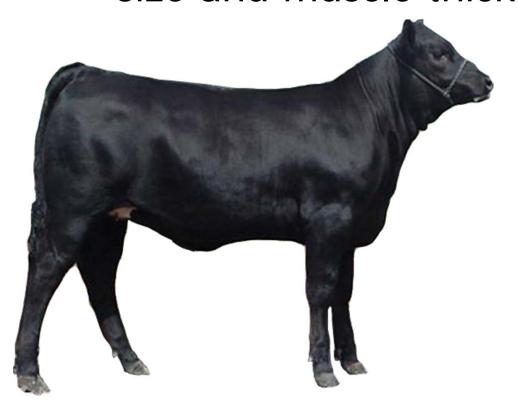


- A communication tool
  - Market News
  - Common trade language
- A sorting tool
  - Graded sales
  - Commingled cattle
- Planning guide for breeding management and marketing



### Feeder Cattle Grades

 Grades are based on evaluating frame size and muscle thickness



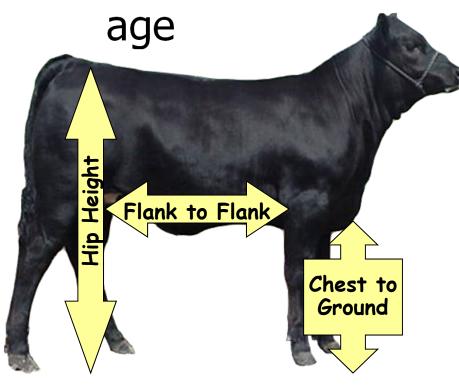




### Frame Size

Based on animal's skeletal size

Height and body length in relation to its



Refers to weight under normal feeding and management conditions an animal will produce a carcass which will grade Choice

### What are the frame sizes?

Small

Medium

Large



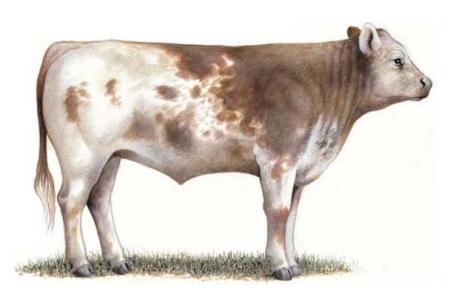


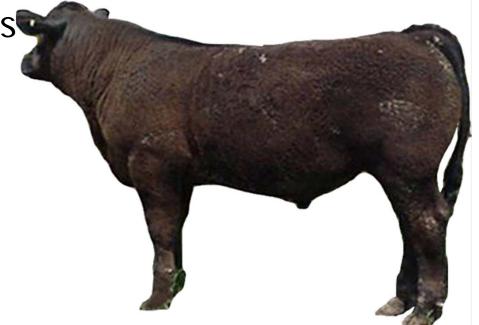
### Large Frame

- Tall and long bodied for their age
- Grade Choice

Steers > 1250 lbs

Heifers >1150 lbs

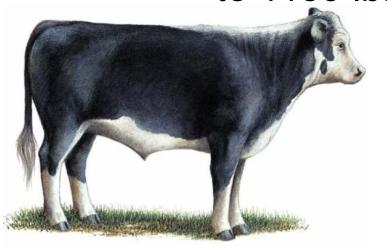


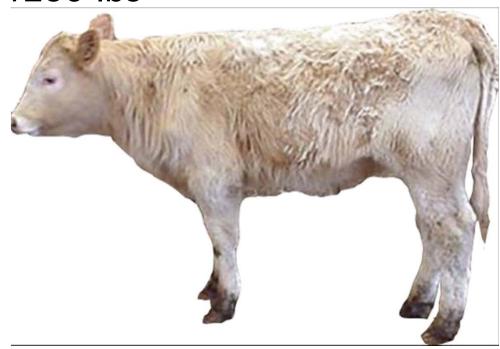




### Medium Frame

- Slightly tall and slightly long bodied
- Grade Choice
  - Steers 1100 to 1250 lbs
  - Heifers 1000 to 1150 lbs

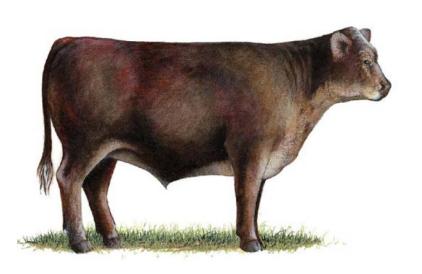


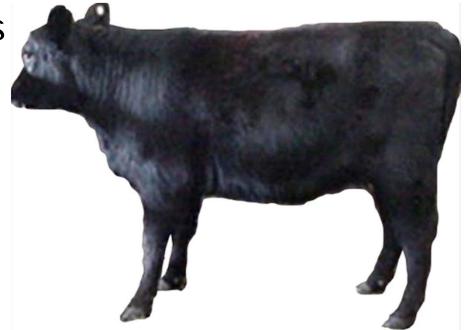




### **Small Framed**

- Not as tall as Medium and short bodied
- Grade Choice
  - Steers < 1100 lbs</p>
  - Heifers < 1000 lbs</p>







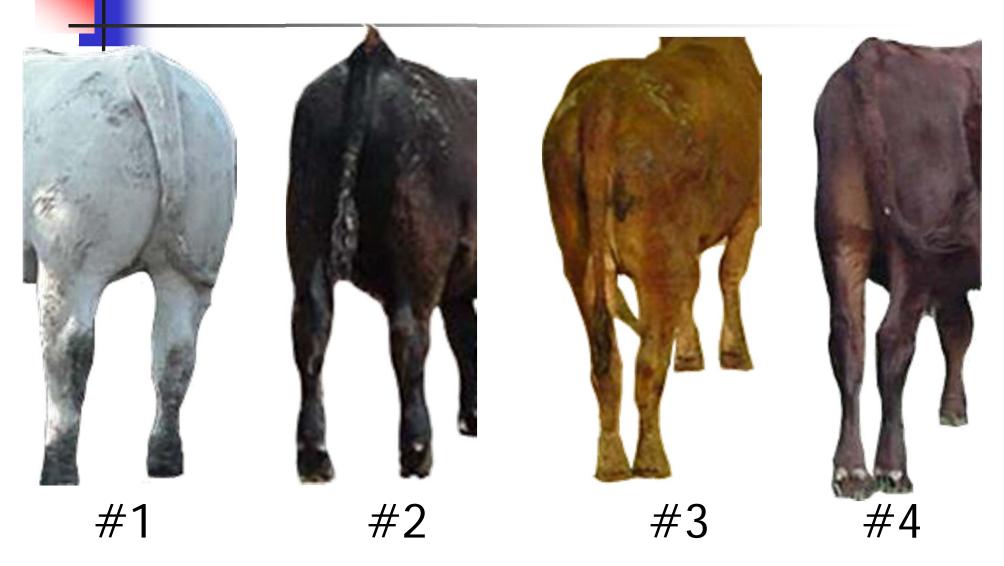
### Muscle Score



- Refers to the development of muscle system in relation to skeletal size
- Thicker animals will have a higher ratio of muscle to bone when fed to the same degree of fatness and will have higher yield grades



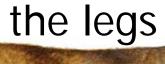
### What are the muscle scores?





Thick or heavy muscling

 Rounded appearance through the back & loin with moderate width between







- Average muscling
- Slightly thick

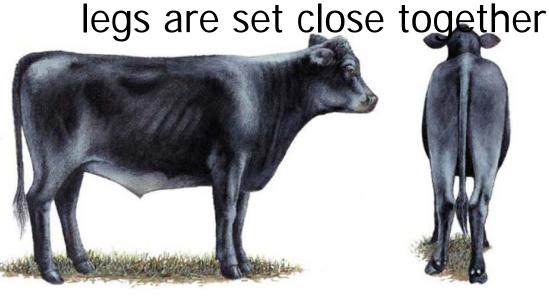
 Rounded appearance through the back & loin with slight width between the legs

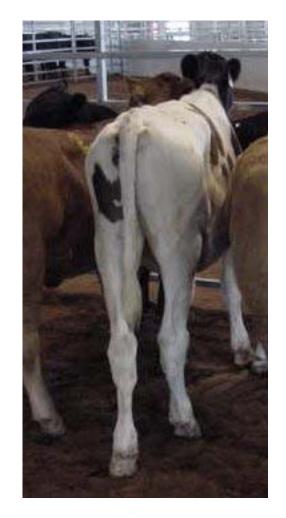


#### #3 Muscle

Thin or light muscling

 Thin through forequarter and middle part of the rounds; back & loin have sunken appearance; legs are set close together

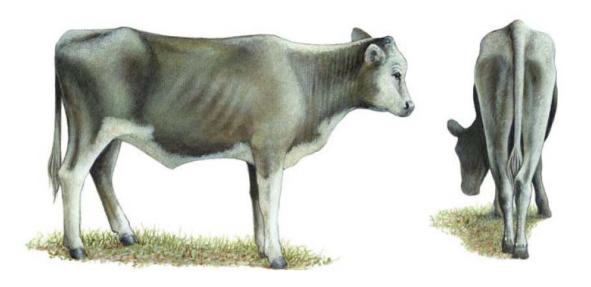






### #4 Muscle

- Extremely light muscling
- Less thickness than minimum requirements for #3



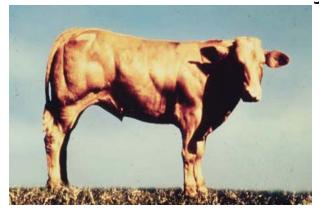


#### Possible Grades

Frame Size	Muscle Score			
Large	1	2	3	4
Medium	1	2	3	4
Small	1	2	3	4

#### Inferior

 Includes sick, unthrifty cattle and double-muscled cattle due to their inability to grade Choice

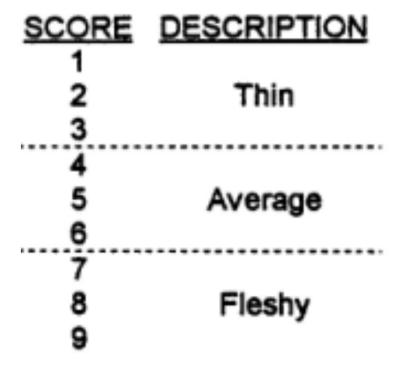






### Flesh Score

#### FLESH





#### Feeder Cattle Grades

- Market News reports
  - Medium and Large 1 & 2
  - Small 1 & 2
  - Medium and Large 3
  - Large 3 & 4 Holstein Steers

# 4

## Price Differences By Grade 2008

- L&M1&2 vs. L&M3
  - 400-500 lbs.
  - \$11 per cwt.
- L&M1&2 vs. S1&2
  - 400-500 lbs.
  - \$18 per cwt.



### Strive To Produce

- Calves medium to large number 1 muscle
- Avoid extremes



### Become Familiar With Grades

- Observe graders at feeder sales
- Observe market reporter at a reported market
- CD of feeder grades
- USDA website
  - http://www.ams.usda.gov/lsg/stand/st-pubs.htm



## Teaching Objectives

Producers will understand those cattle defects which cause price discounts as well as those factors which can add value in feeder cattle.



## Value Determining Factors

- Sex
- Weight
- Frame Grade
- Muscle Grade
- Flesh/Condition
- Fill
- Load Lots

- Color
- Background
- Breed/Genetics
- Pre Conditioned
- Vaccinations
- Castrated/Horns
- Health



#### **Avoid Price Discounts**

Tennessee study of 55,000 head – 1993

Age/old

-11%

Stag

-5%

Active pinkeye -14%

Sick

-22%

Crippled

-26%

Stale

-10%

Deformed

-18%

Warts

-13%

Horns

-2%

Wormy

-8%

Pregnant

-14%



## Teaching Objectives

Producers will understand marketing alliances for finished cattle and feeder cattle and be able to state what is necessary to develop an effective marketing alliance.



- Purpose to capture additional price/value on cattle
- To promote a breed, feed, feedlot or cattle having some unique characteristics
- Usually involves a negotiated set of premiums or grid to favor cattle desired by packer or being promoted by producers

## One Success Story Certified Angus Beef

- Basically requires
  - 51% Angus genetics
  - Under 30 months of age
  - Upper 2/3 of choice
  - Ribeye 10 to 16 sq. inches
  - Under 1,000 lb. carcass
  - Fat thickness less than 1.0 inch
  - No hump over 2 inches high



- Angus Association has worked to create demand for consistent, high quality beef
- Do not have to belong to an alliance to market cattle in CAB

## One Success Story Certified Angus Beef





- Many will fail
- Supply chain management will replace some



## Before Using An Alliance

- Find out or know how your cattle will perform in feedlot and carcass (quality and yield grade)
- Have a sample fed out Tennessee Beef Evaluation
- Study different alliances to find one that fits cattle



## Before Using An Alliance

- List is published in BEEF Magazine
- USDA AMS website
  - http://www.ams.usda.gov/lsg/certprog/industry.htm



- Can help increase returns from good genetics and management
- Do carry additional production and market price risk



 Goal - To make loads of feeder cattle which will return more net dollars to members

 Alliances are helpful since most producers are too small to market a uniform load of calves



- Examples
  - Graded feeder cattle sale
  - Video board auction sale
  - Tennessee Beef Alliance
  - Smoky Mountain Feeder Calf Association
  - Hawkins County Cattlemen's Association
- Producer involvement in decision making



- Objective
  - Uniform 60 day calving season
  - Uniform genetics using bulls with specified EPD's for growth and carcass traits
  - Uniform vaccination program
  - Uniform management program
    - Weaning, deworming, and feed
  - Some record of feedlot gain and carcass traits



- Suggestions
  - Use bonded marketing agency
  - Have alliance decision makers be members with cattle in sale
  - Advertise with potential buyers
  - Follow up with buyers on cattle performance and satisfaction
  - Make necessary changes to keep consigners and buyers satisfied



## Teaching Objectives

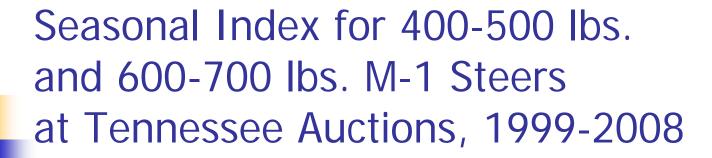
 Producers will be able to state when the highs and lows of prices occur for various classes of beef cattle.

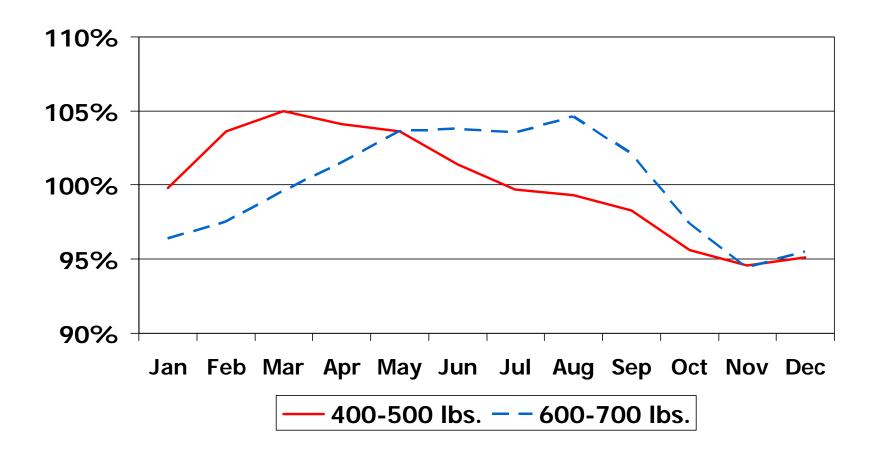


- Many producers only look at price in making marketing decisions
- Returns = Price x Weight Cost
- Attention to seasonal price movement can improve returns especially in the short term



- Prices for calves are highest in the spring and lowest in fall due mostly to supply marketed
- Spring demand "grass fever" also drives that market higher
- Yearling prices are more stable







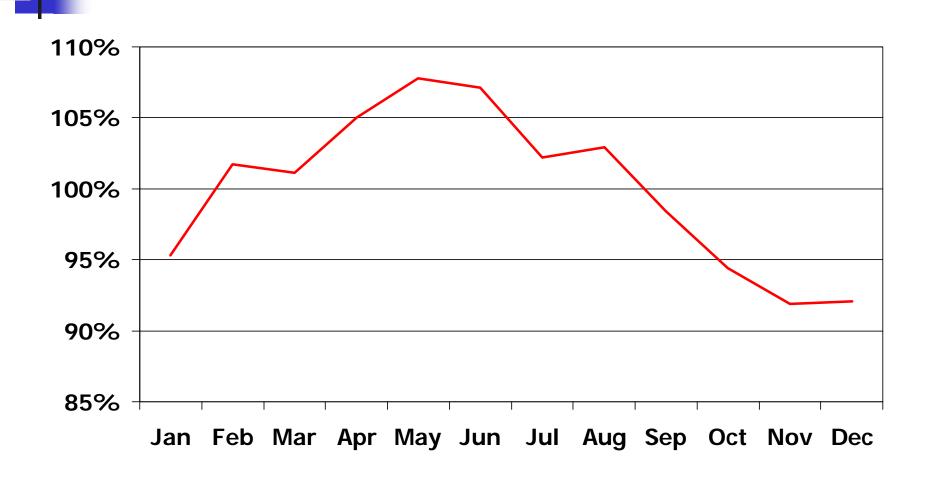
Price declines as weight increases

 Heifer prices decline less than steers as weight increases



- Cull cow prices are very seasonal
- 15 to 20 percent variation within a year due to culling and forage growth pattern





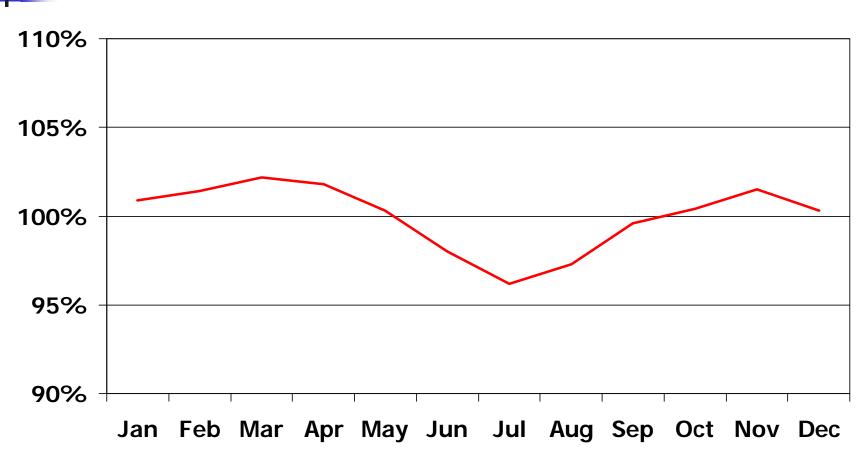


#### Fed Cattle Prices

- Reach a high in spring
- Decline in summer
- Make another high in fall



## Seasonal Index for Choice Finished Cattle, Southern Plains, 1999-2008





#### Feeding margin

Feeding margin = difference in selling price/cwt. and cost of gain/cwt.

#### Price margin

Price margin = difference in purchase price/cwt. and selling price/cwt.



## Teaching Objectives

 Producers will be able to name 4 marketing alternative for feeder cattle and some of the advantages and disadvantages of each.



# Marketing Alternatives for Feeder Cattle and Finished Cattle

# Market Alternatives Feeder Cattle

- Market at home (private treaty)
- Market at weekly auction
- Market at graded feeder sale
- Market through alliance
- Market through video sale
- Market through internet sale
- Retained ownership market as finished animals



# **Private Treaty**

#### Advantages

- Independence of seller cattle on the farm
- Seller can merchandise cattle (establish reputation)
- Price is certain
- Lower marketing and transportation cost
- Cattle are fresh (reduces disease)

### Disadvantages

- Seller totally responsible for success of sale
- Seller must stay abreast of market
- Seller assumes more risk
- Collection may be a problem
- Lack of competition
- No government control or supervision



### **Auction Markets**

- Advantages
  - Convenience
  - Competitive pricing
  - Lower transportation costs
  - Prompt payment
  - Source of price information
  - Supervised by P & S

- Disadvantages
  - Seller has little effect on price
  - May encourage trader activity
  - Competition varies among sales
  - As a collections point– may spreaddisease
  - Wide price variations for similar cattle



# Graded Feeder Sales (compared to weekly auctions)

- Advantages
  - Farm fresh cattle
  - Sell in large uniform groups
  - Prices usually higher
  - Weights 2% 3% heavier

- Disadvantages
  - Requires management
  - Poor quality cattle may sell cheaper



### Video Board Sale

- Combines some advantages of private treaty and competitive aspects of auction
- Cattle consigned to marketing agent
- Representative makes a personal visit to farm
- Writes a description of cattle
- Makes a video/photos of cattle
- Catalog/DVD sent to buyers
- Auction sale conducted perhaps with addition of teleconference and internet
- Delivery and settlement usually within 10 days unless later delivery specified



### Video Board Sales

- Advantages
  - Producer sets selling conditions
  - Competitive pricing
  - Large number of buyers
  - Cattle remain on farm until sold

- Disadvantages
  - Best suited for uniform loads 48,000-50,000 lbs
  - Works best for producers with similar production systems
  - Prices may be low on sale day



### Video Board Sales

- Advantages
  - Buyers know how cattle were handled
  - Fresh cattle = less stress
  - Lower marketing costs
  - Buyers do not need to be present
  - Buyer's costs reduced
  - No sale option

- Disadvantages
  - Requires consignment
  - Hard for buyers to estimate weight
  - Difficult for buyers to estimate flesh or condition



### Video Board Sales

- Combined with weekly auctions and graded sales
  - Cookeville
  - Knoxville
  - Savannah
  - Sweetwater
  - Unionville
  - Athens Bluegrass Sale



### Video Sales of Feeder Cattle

- Lower Middle Tennessee Cattle Association Video Board Sale
  - Managed by Tennessee Livestock Producers
  - Sales: January, March, April, May, June, August,
     September, October, November, and December
  - Commission \$13.00
  - Plus any weigh bill
  - No sale fee \$3/head
  - Sells mostly loads with some part loads
  - Uses mailed video tape plus telephone hook-up
    - (931) 388-7872



### Video Sales of Feeder Cattle

- Superior Livestock Auction
  - P.O. Box 38, Brush, CO 80723
  - Bi-monthly sales
  - \$2 video fee
  - Commission 2% (Includes \$2)
  - Sells mostly loads with some part loads
  - Broadcast via satellite with telephone hook-up
    - (405) 850-9497



### Video Sales of Feeder Cattle

- Wilson Livestock Network Newport,
   TN
  - Sale 1st. Thur. of each month
  - Commission 2%
  - No sale fee \$3/head
  - Sells mostly loads of 48,000-50,000 lbs.
     with some part loads
  - Uses mailed video tape plus phone hookup
    - (423) 623-7483 or (865) 414-7808



- Similar to video board sale
- Also used to list cattle for sale and to report sale prices
- Used to distribute catalog information and video clips



- Actual sale
  - List cattle with market price updated as market changes
  - Price may be negotiated
  - Company acts as marketing agent



- Real time auction
  - Only bidder and market agency know who is bidding
  - Market agency or its representatives handle sale
- Internet used to relay bids to auctioneer in a live auction
  - Similar to teleauction but lower cost



- Advantages and Disadvantages
  - Similar to video board sale
  - Most suited to loads
  - May get more buyer exposure
  - Still dependent on credibility of person describing cattle and market agency



# Retained Ownership

- Advantages
  - Greater potential profits
  - Elimination of some marketing costs
  - Production becomes more market oriented
  - Increases alternatives available

- Disadvantages
  - Delays income
  - Requires more capital
  - Subject to market price risk longer
  - Custom feedlots outof-state
  - Requires top management



# Finishing Cattle At Home

- Advantages
  - Avoid trucking, shrinkage and sickness
  - More control of situation
  - Better suited for smaller producers
  - Financing costs lower

- Disadvantages
  - Climate more wet and humid
  - Distance from packers/markets
  - Lower net market price
  - Higher cost of gain



# Finishing Cattle By Custom Feeding Out-of-State

- Advantages
  - Better markets
  - Cost of gain may be cheaper
  - Services offered
  - Professional management

- Disadvantages
  - Distance from operation
  - Less control over feeding/marketing
  - Some costs are higher



# Teaching Objectives

Producers will be able to name 5 ways to reduce shrinkage in cattle being hauled to market.

Producers will be able to compute how high prices must be to offset differences in shrinkage between two marketing alternatives.



# Economic and Production Considerations of Cattle Weighing Conditions

#### Additional Sources:

Managing Shrink and Weighing Conditions in Beef Cattle

Kent Barnes, Steve Smith and David Lalman, Oklahoma State University

Beef Cattle Shrink

Bayou Beef Tips by Tim Page, Louisiana State University Ag Center

# Shrink: What Is It?

- Weight loss when cattle are held off feed and water when they are gathered, worked, marketed, transported
  - Any change in environment that causes stress
- Another way to think about it...Output exceeds input



- Fill or excretory shrink
  - Loss of contents in rumen, digestive tract and bladder
  - Recovered in short amount of time when feed and water intake returns to normal
- Tissue shrink
  - Loss of fluid from body tissues (carcass, hide)
  - Recovery period can be days or even weeks
  - Increases chance of sickness and death



# Factors Affecting Shrink

- Length of time off feed and water
  - Delivered to market day before sale without feed and water, long haul to feedlot, excessive sorting and handling
- Extreme temperatures
  - Increases amount of tissue shrink which increases risk of sickness and death
  - High temps are even harder on cattle coming off endophyte-infected tall fescue



# Factors Affecting Shrink

- Feed prior to time off feed and water
  - Cattle coming straight off their mothers and those coming off lush, green grass will shrink more
- Dispositions
  - "Poor temperament of cattle and/or people can be costly."
  - "High strung", nervous, excitable cattle shrink more



# Factors Affecting Shrink

- Over/Under crowding trailer
  - Overcrowding causes stress, especially in high temps
  - Under crowding causes excessive movement and stress and can lead to injury
- Marketing process
  - Being gathered, sorted, hauled, sorted, commingled, in new environment, held off feed and water all increase stress which increases shrink
  - If coming straight off cow, stress and shrink increases even more

# Typical Shrink

- Greatest amount of shrink occurs early
  - Average shrink is 1% of body weight per hour for first
     3 to 4 hours
  - As low as 0.1% of body weight after 10 hours
- Shrink increases about 2% when being hauled vs. standing in a drylot
- Typical shrink on haul to feedlot from TN is 7-9 %
- Shrink and stress are cumulative the more stress you expose cattle to, the more they will shrink



### Pencil Shrink

- Deduction off net weight of lot/load due to weighing conditions, length of haul to scales, etc.
- Most often used when cattle are being weighed on the truck and have varying weighing conditions, lengths of haul, etc.
- Typical pencil shrink is 0-3% depending on feeding and weighing conditions and length of haul

# Why Is It Important to Understand Shrink?

- Know what cattle are worth
- Understand price differences
- Compare marketing alternatives
- Compare offers to buy cattle
- Buyers understand shrink and will not pay for cattle that have been filled or "tanked" and they understand the risk of sickness and death if cattle are excessively shrunk

# Weigh-in vs Weigh-out Markets

- UT Research by McLemore
  - Prices are 2% higher at weigh-out markets than weigh-in markets
  - Why?
    - Cattle have had time to shrink at weigh-out markets and are therefore lighter weight – price goes up as weight goes down
- Weekly auctions reported by USDA/TDA Market News reporters are weigh-out markets while graded feeder calf sales are weigh-in



	Base Price (\$/cwt)			
	75.00	80.00	85.00	90.00
% Shrink	Equivalent Price (\$/cwt)			
2	76.53	81.63	86.73	91.84
4	78.13	83.33	88.54	93.60
6	79.79	85.11	90.43	95.40
8	81.52	86.96	92.39	97.83

Marketing Alternative A: \$90/cwt

Marketing Alternative B: 2% additional shrink

What price would make the two alternatives equal?



### How Can You Reduce Shrink?

- Avoid holding off feed and water for long periods of time
  - Do not deliver cattle to market day before sale
- Reduce stress as much as possible when gathering, sorting and working cattle
  - Handle them gently and quietly
  - Do not overcrowd holding pens, chutes, etc.
  - Avoid working cattle during extreme temperatures



### How Can You Reduce Shrink?

- Reduce stress when marketing cattle
  - Wean and precondition prior to marketing
  - Feed hay/grain prior to marketing
  - Time delivery to market when wait is minimal
  - Do not deliver to market day before sale
- Reduce stress when hauling cattle
  - Handle gently and quietly when loading/unloading
  - Do not overcrowd or under crowd trailer
  - Avoid hauling in extreme temperatures



# Take Home Message

- Gain access to scales
- Use Market News Service
- Do not sell feeder cattle by the head
- In evaluating marketing alternatives consider all marketing costs (including shrink)



## Some Final Principles

- Loads sell higher
- Uniform cattle sell higher
- Healthy cattle in medium to thinner flesh sell higher
- Weaned cattle with good health program sell higher – especially under 600 pounds



# Some Final Principles

- Cattle with less fill, pencil shrink, or longer haul or more sorting before weighing sell higher
- Establish a good reputation for yourself and your cattle
- Some breeds sell higher, can change, uniformity of breed or color generally improves price



# Some Final Principles

- Do not deliver the day before sale overnight shrink greater than most realize
- Do not price on farm without competition or price by the head
- Consider all marketing alternative and true cost including commission, hauling and shrink



- Tennessee Department of Agriculture
  - **1**-800-342-8206
- Radio
- Internet
- DTN Date Transmission Network

# Sources of Marketing Information

- Internet
  - University of Tennessee Department of Agricultural Economics
    - http://economics.ag.utk.edu/market.html
  - The Tennessee Beef Cattle Improvement Initiative
    - http://www.tnbeefcattleinitiative.org/
  - The Tennessee Department of Agriculture
    - http://www.state.tn.us/agriculture/



- USDA Reports
  - Cattle Inventory January and July
  - Cattle on Feed Mid month
  - Price projections for fed cattle
  - http://www.usda.gov/nass/
  - http://www.nass.usda.gov/tn/
  - http://usda.mannlib.cornell.edu/reports/ erssor/livestock/ldp-mbb/



- Planned marketing yields rewards
- Study the market
- Set production/marketing goals
- Avoid fads in breeds
- Know where we are in the cattle cycle



## Summary

- Learn the feeder cattle grades and how they relate to your cattle
- Perform management practices that are cost effective
- Learn seasonal price patterns
- Plan marketing so that cattle sell in large uniform groups



## Summary

- Study the marketing alternatives
- Choose the one best suited to your operation
- Gain an understanding of how shrink impacts weights and prices
- Evaluate each stage of production to determine if retained ownership fits the operation



This Master Beef Producer Program is being partially funded by a grant from the Tennessee Department of Agriculture's Development Fund. Proceeds from this fund are derived solely from the sale of the Tennessee "Ag Tag" specialty license plate.