

# Carcass Ultrasound: Applications for the Beef Industry



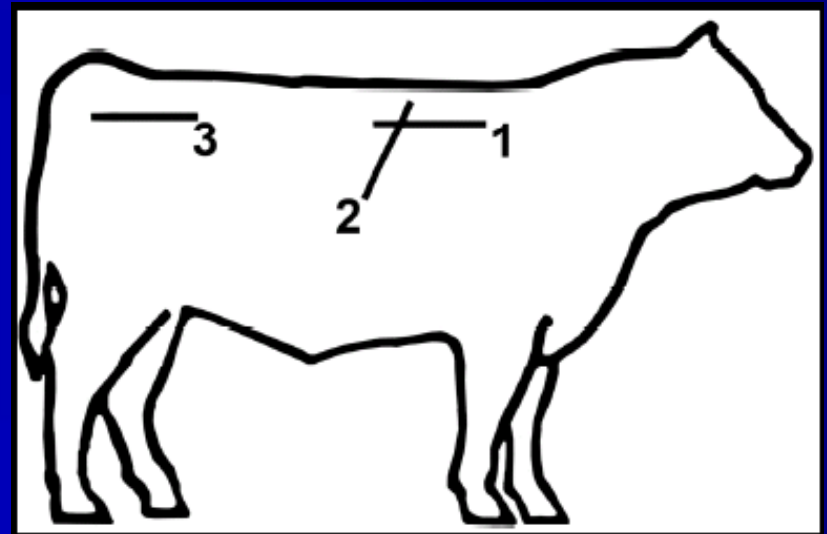
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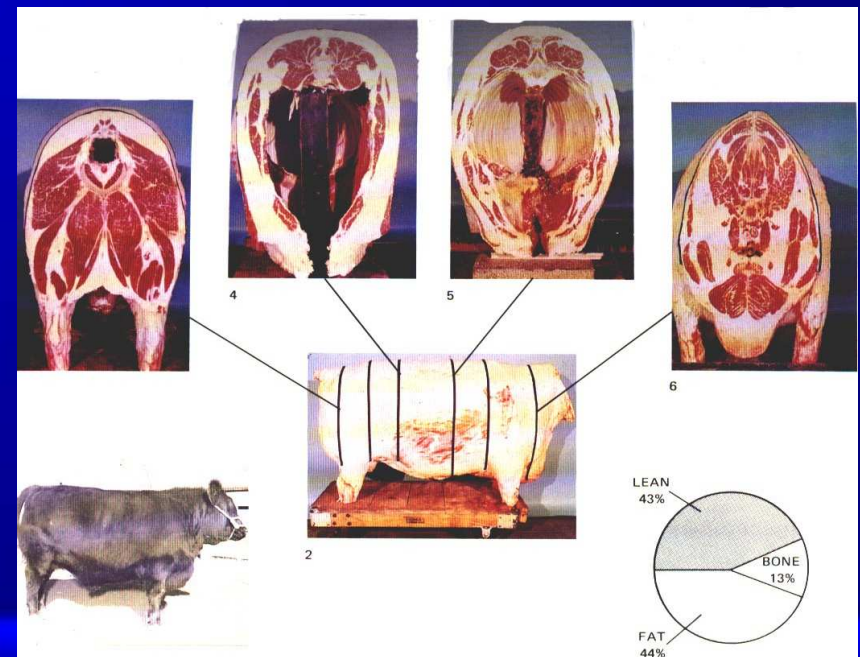
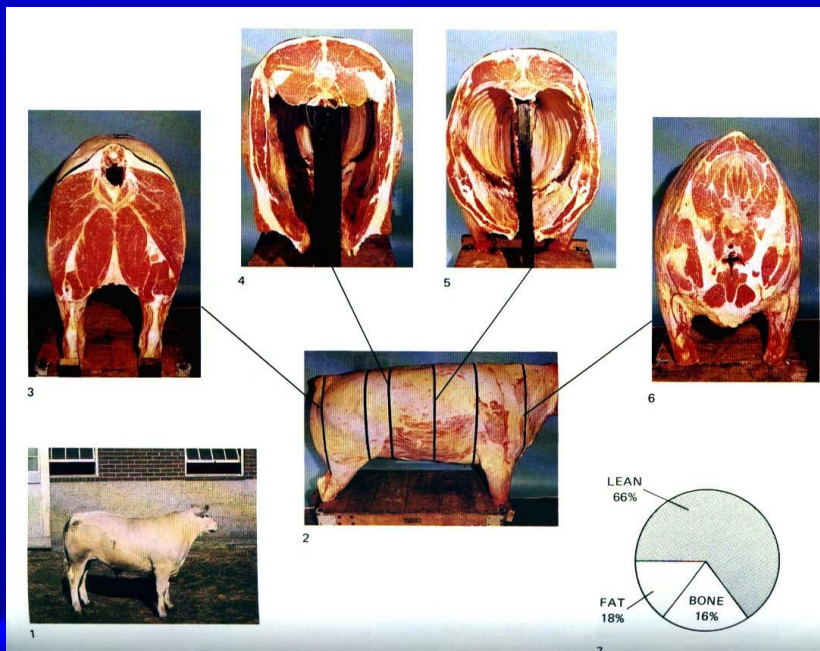
# What does Ultrasound Tell Us?

- Location
  - Between 12-13<sup>th</sup> rib
  - Across 12-13<sup>th</sup> rib
  - Rump (sometimes)
- Measurements
  - Ribeye area
  - Fat thickness
  - Intramuscular fat (marbling)
  - Muscle/fat indicator



# Yield Grade

- Predicts retail yield of carcass
  - Fat thickness
  - Ribeye area
  - Weight



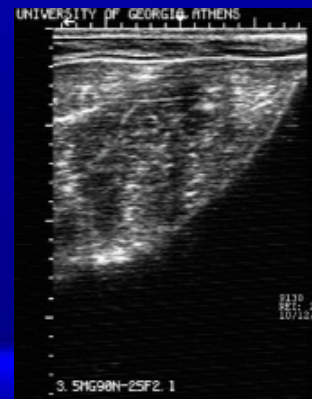
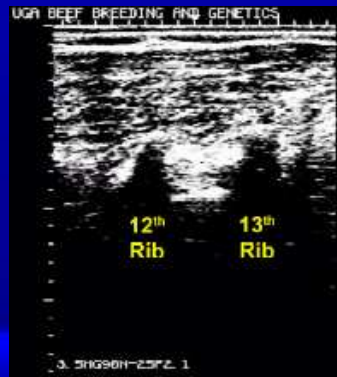
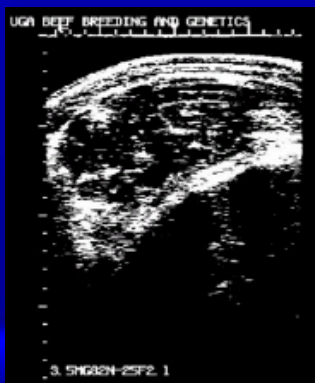
# Quality Grade

- Expected eating satisfaction or Palatability
  - Primarily Intramuscular fat (marbling)
  - Age



# Breeding Stock

- Seedstock – Selling (bulls and heifers)
- Commercial – Purchasing (bulls and heifers)
  - U/S at 1 yr is highly  $R^2$  to commercial sibs and half-sibs at harvest (15-20 months)
  - Inclusion of data in EPD's
  - Moderate to high  $h^2$



# Breeding Stock

- U/S is cost efficient
  - \$15-\$20 per animal
  - Accurate records for \$100-\$200 (sib data)
  - 1 – 2 years to collect
- Carcass data collection
  - \$100-\$200 per animal
  - Accurate records cost up to \$10000 (if able)
  - 4 – 5 years to collect



# Breeding Stock



- Seedstock or Commercial
  - Knowing information helps selection of breeding stock at 1 yr vs later
  - Industry push for high yielding, high quality animals
  - Knowing genetics allows for desired change
    - Quick = bulls, Long-term = replacement heifers and bulls



# Commercial/Terminal Stock

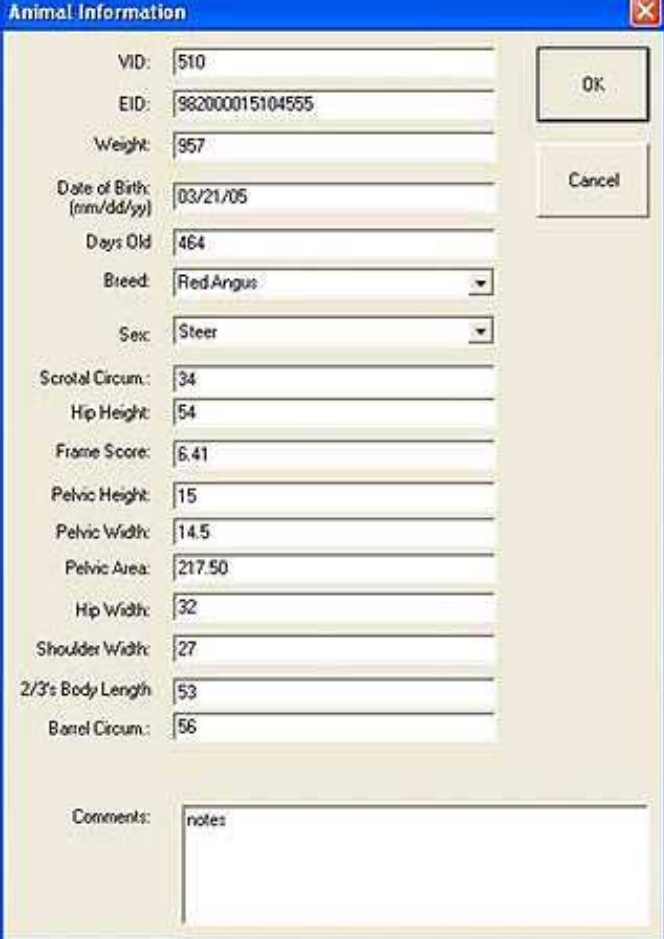
- Weaning applications
  - Few at the moment
  - Working on segregating cattle early
  - Tissue (muscle, fat) growth not great enough





# Terminal Stock

- Feed-lot applications
  - Integrated data collection
    - Weight, ID, EID, Frame, ADG
  - Sort incoming cattle
  - Resort at mid-point or re-implant
  - Sorting like cattle (up to 5 groups) can increase returns of \$15-25 per head
    - Feed efficiency for target end-points



Animal Information

VID:	510	OK
EID:	982000015104555	Cancel
Weight:	957	
Date of Birth: (mm/dd/yy)	03/21/05	
Days Old:	464	
Breed:	Red Angus	
Sex:	Steer	
Scrotal Circum:	34	
Hip Height:	54	
Frame Score:	6.41	
Pelvic Height:	15	
Pelvic Width:	14.5	
Pelvic Area:	217.50	
Hip Width:	32	
Shoulder Width:	27	
2/3 Body Length:	53	
Barrel Circum:	56	
Comments:	notes	



# Your Cattle

- Selling at weaning (weight)
  - Knowing what you produce can open marketing opportunities
  - More buyers willing to purchase direct from owner, co-op of known genetics
- Retained Ownership
  - Weight is still important
  - Allows greater marketing in YG or QG grids
  - Greater efficiency through U/S checks
  - Use obtained carcass data as an accuracy check
  - Georgia Beef Challenge



# Intemperate Thoughts

- Are we looking in the right places?
  - I think so
- We have made tremendous progress in improving end product quality and consistency
- We're not done yet, proper selection through information hastens achievement
- Increasing efficiency in the feed-lot is a must

