



Introduction to Live Animal Evaluation

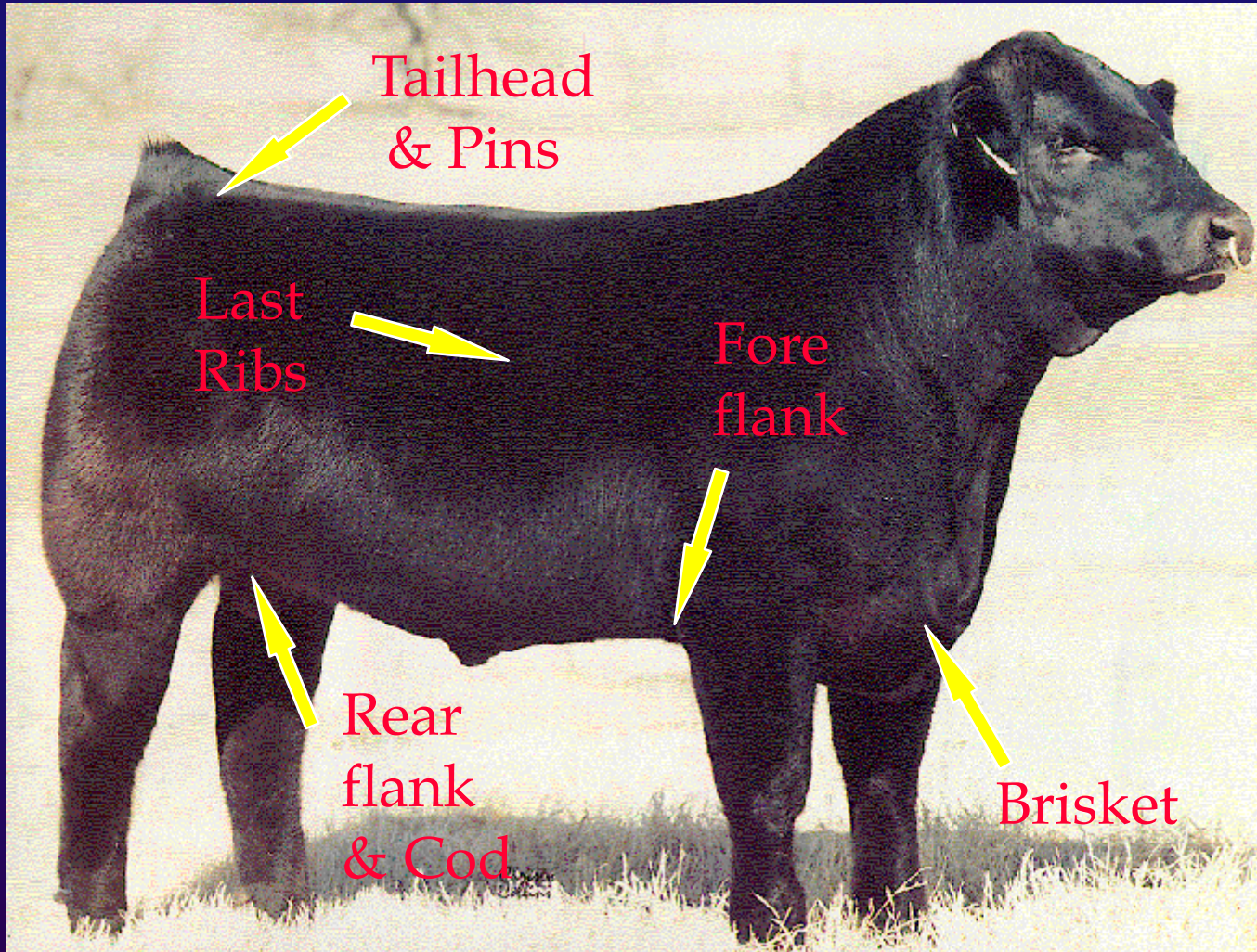
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*Introduction to Market
Beef Evaluation*

Market Beef Evaluation: Fat Indicators





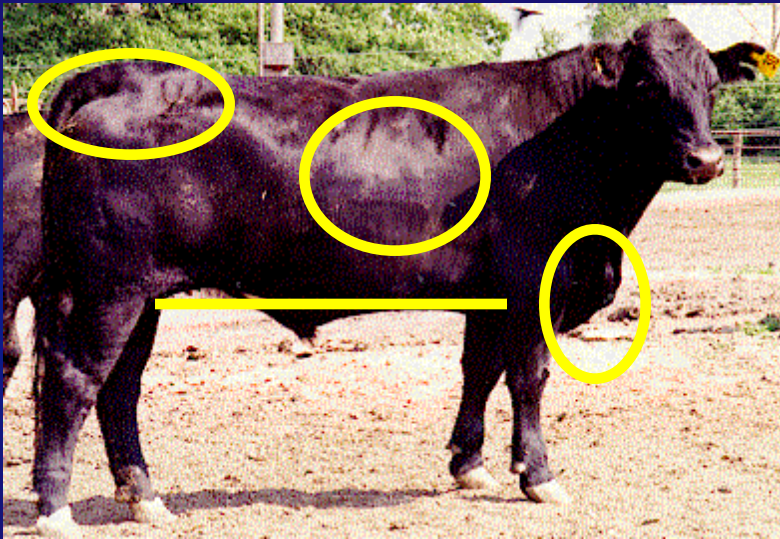
Steer A





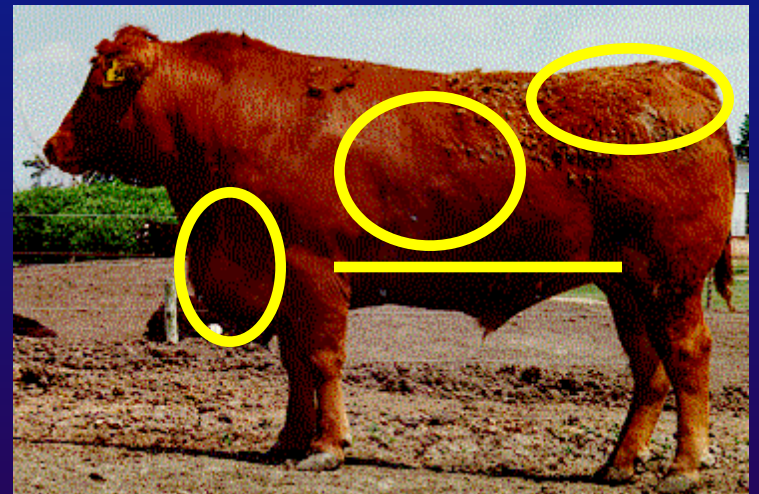
Steer B



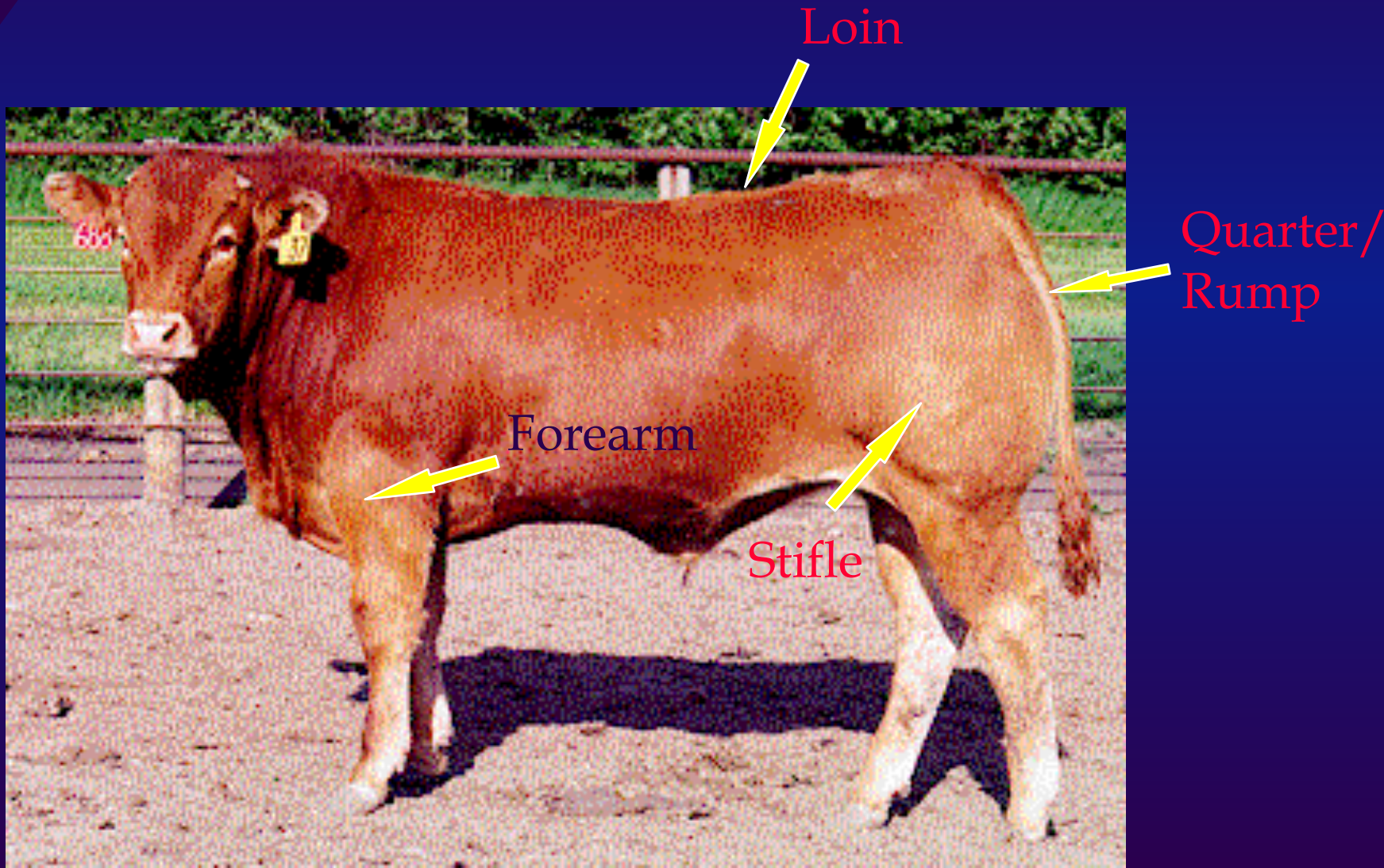


Steer A

Steer B



Market Beef Evaluation: Muscle Indicators





Live Cattle Evaluation

- ☐ Weight
- ☐ Dressing Percent
- ☐ 12th rib fat
- ☐ Ribeye area
- ☐ KPH
- ☐ Quality Grade
- ☐ Yield Grade



Weight

- ❑ Live or Carcass
- ❑ Live Weight range
 - ❑ 900 lb to 1500 lb
 - ❑ Avg: 1200 lb
- ❑ Carcass Weight range
 - ❑ 550 lb to 950 lb
 - ❑ 750 lb



Dressing Percent

- ❑ Proportion of live weight that ends up as carcass
- ❑ Example: 1250 lb steer with a 775 lb carcass has a dressing percent of 62%
- ❑ Range: 55 - 67%
- ❑ Avg: 62%



Factors Affecting Dressing %

☐ Gut Fill

☐ ↑ Gut fill = ↑ Body Weight = ↓ Dressing %

☐ Hide weight and/or mud

☐ ↑ Hide wt = ↓ Dressing %

☐ Muscle

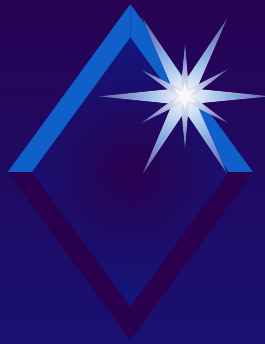
☐ ↑ Muscle = ↓ Dressing %

☐ Fat

☐ ↑ Fat = ↑ Dressing %

☐ Dairy influence

↑ ↑



12th Rib Fat Thickness

- ❑ Highly correlated to retail yield
- ❑ Predictor of total carcass fatness
- ❑ Range: .15 in. to .80 in.
- ❑ Avg: .40
- ❑ .25 in. considered minimum



Ribeye Area

- ❑ Highly correlated with lean yield
- ❑ Predictor of total carcass muscle
- ❑ Dependant of carcass weight
- ❑ Range: 9.0 - 18.0 sq. in.
- ❑ Avg: 12.5 sq. in. for 1150 lb steer
- ❑ Rule of thumb: 1.1 sq. in. for 100 lb live wt



Kidney, Pelvic and Heart Fat

- ❑ Internal fat as a percentage of carcass weight
- ❑ Continental cattle will tend to have less than British cattle

- ❑ Range: 1.0 - 4.5%
- ❑ Avg: 2.5%



Quality Grade

- ❑ Assigned according to amount of *marbling* and *bone maturity*
- ❑ Most influential component of pricing
- ❑ Range: Standard to Prime
- ❑ Avg: Low Choice



Factors Affecting Marbling

☐ Genetics

☐ Energy content of diet

☐ Age of cattle

☐ Fat cover

☐ Time on feed

☐ Continental/
Brahman influence



Yield Grade

- ❑ Calculated to predict yield of boneless, closely trimmed, retail cuts from the round, loin, rib and chuck
- ❑ Based on 4 estimations
 - ❑ 12th rib fat
 - ❑ Hot carcass weight (HCW)
 - ❑ Rib eye area (REA)
 - ❑ Kidney, pelvic, heart fat (KPH)



Yield Grade

☐ Range: 1 through 5

☐ 1 = Lean and/or Muscular; High cutability

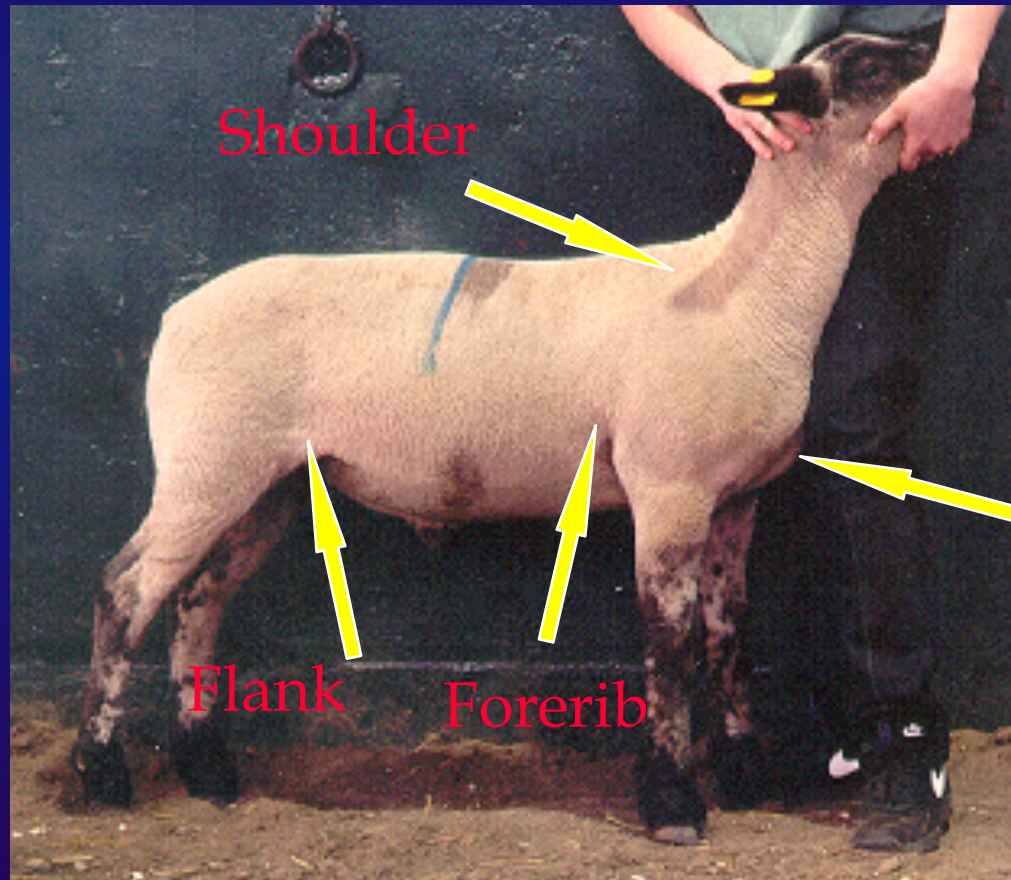
☐ 5 = Fat and/or Light Muscled; Low cutability

☐ Avg: 3.0



Introduction to Market Lamb Evaluation

Lamb Evaluation: Fat Indicators



Shoulder

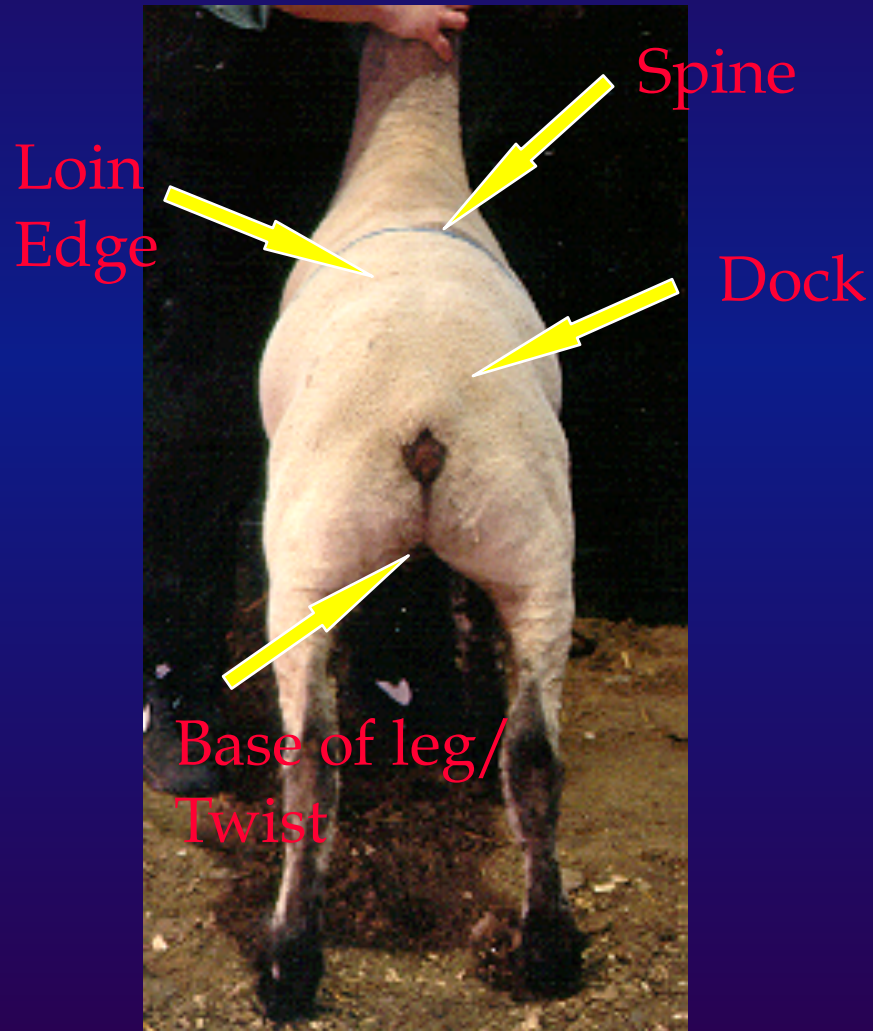
Breast

Flank

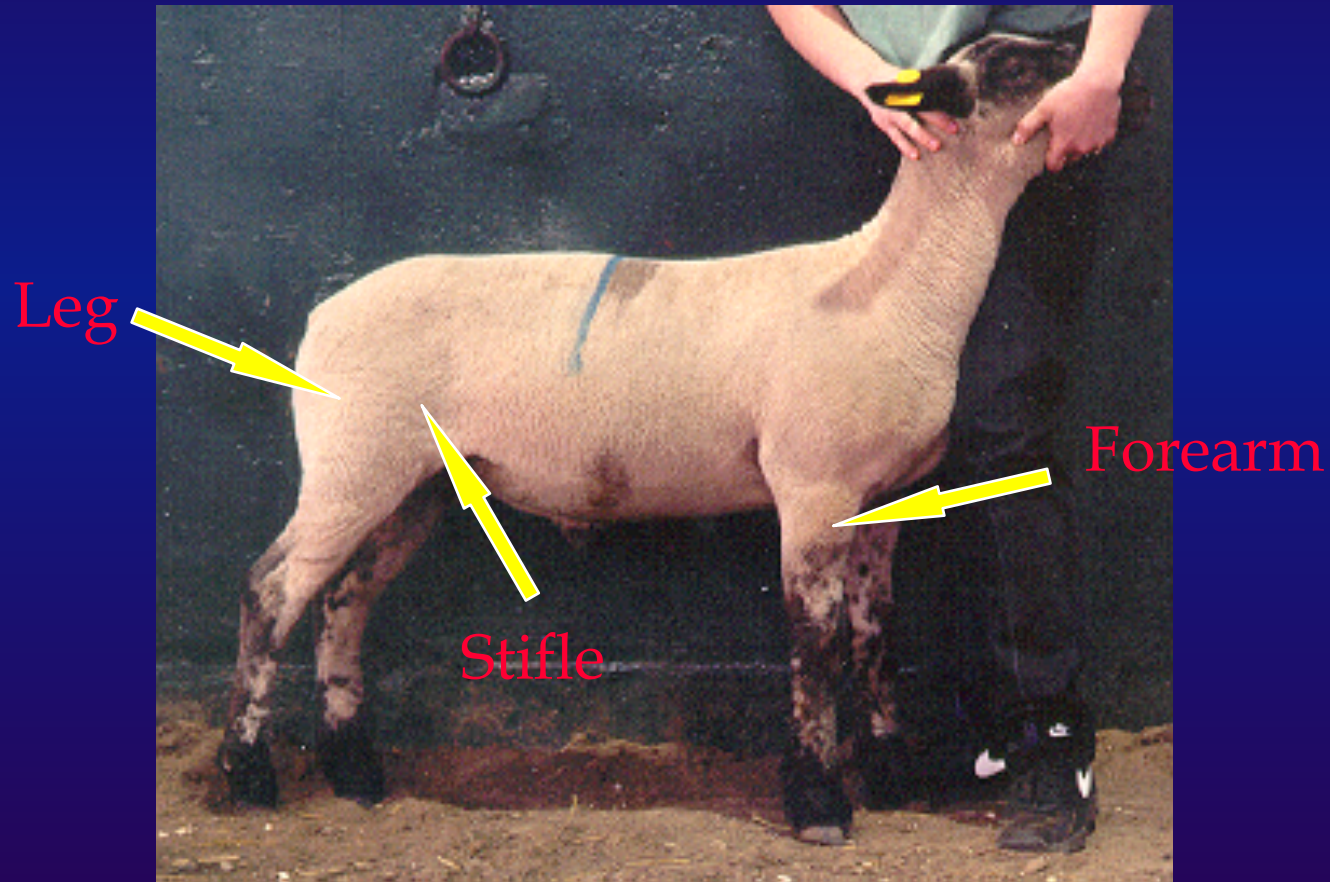
Forerib



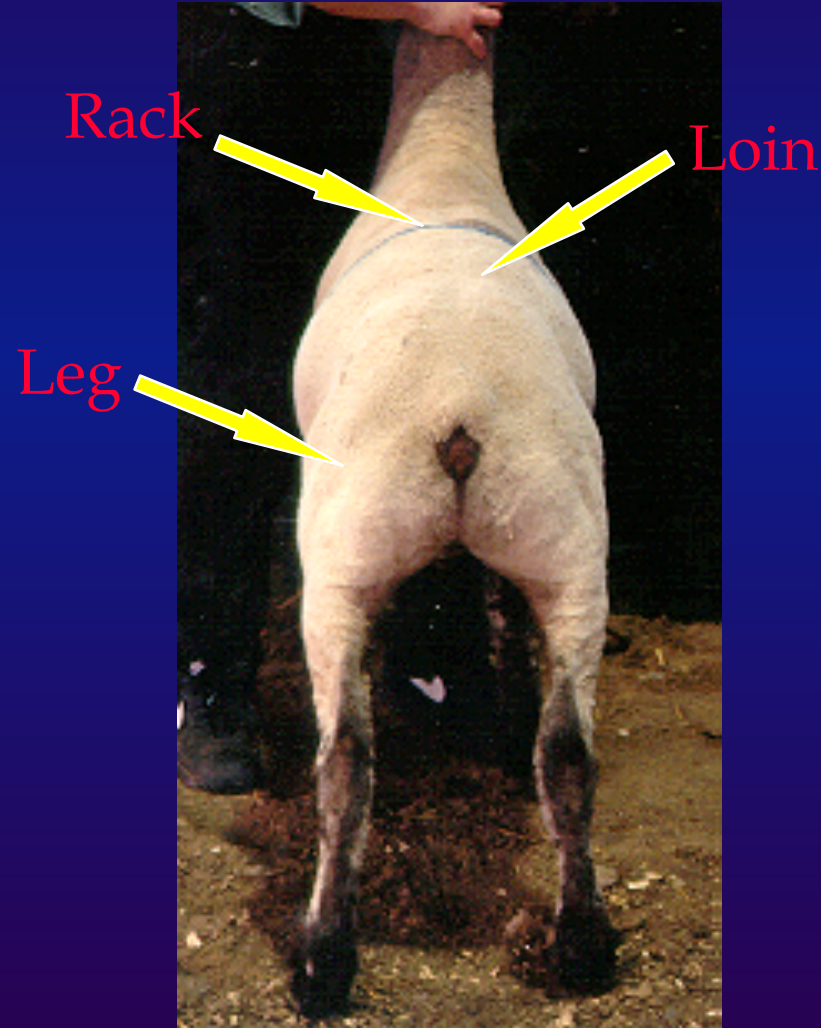
Lamb Evaluation: Fat Indicators



Lamb Evaluation: Muscle Indicators



Lamb Evaluation: Muscle Indicators





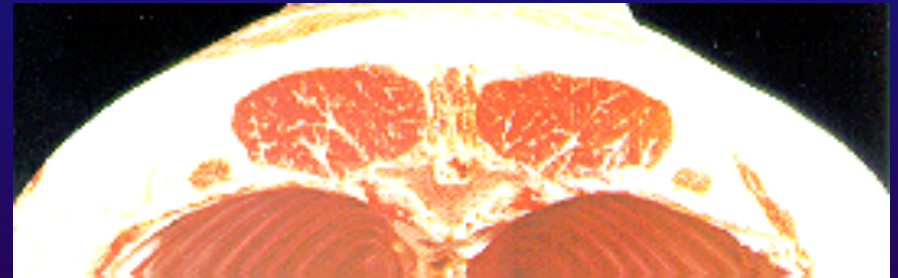
Reading Top Shape





Reading Top Shape







Live Lamb Evaluation

- ☐ Weight
- ☐ Dressing percent
- ☐ 12th rib fat
- ☐ Ribeye area
- ☐ Yield grade
- ☐ Quality grade



Weight

☐ Live weight

☐ Range: 90 - 150 lb

☐ Avg: 125 lb

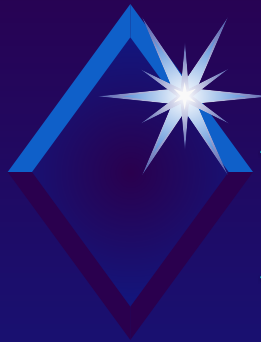
☐ Carcass weight

☐ Weight of dressed carcass with kidney and pelvic fat removed



Dressing Percent

- ❑ Percentage of live weight that ends up as carcass
- ❑ Range: 45 - 58%
- ❑ Avg:
 - ❑ 53% for shorn lambs
 - ❑ 50% for unshorn lambs



Factors Affecting Dressing Percent of Lamb

- ❑ Pelt weight

 - ❑ Unshorn lambs will dress 1-5% lower than shorn

- ❑ Fill

- ❑ Muscling

- ❑ Fat cover



Fat Thickness

- ❑ Taken at the 12th rib
- ❑ Normally adjusted up to a .1 inch due to body wall fat
- ❑ Used in YG equation
- ❑ Range: .05 - .50 in.
- ❑ Avg: .25 in.
- ❑ Minimum requirement: .15 in.



Ribeye Area

- ❑ Measured at 12th rib
- ❑ Indicator of total muscle in carcass but not used in YG equation
- ❑ Range: 1.5 - 4.5 sq. in.
- ❑ Avg: 2.5 sq. in.



Yield Grade

- ❑ Predicts the yield of boneless, closely trimmed retail cuts from the leg, loin, rib, and shoulder
- ❑ Only includes adjusted 12th rib fat thickness
- ❑ $YG = 0.4 + (10 * \text{Adj. fat thickness})$



Quality Grade

☐ Predictor of eating quality based on three factors:

☐ Maturity

☐ Lean Quality

☐ Texture

☐ Firmness

☐ Marbling

☐ Conformation



Lamb Quality Grades

☐ Range: Good to Prime

☐ Avg: Choice

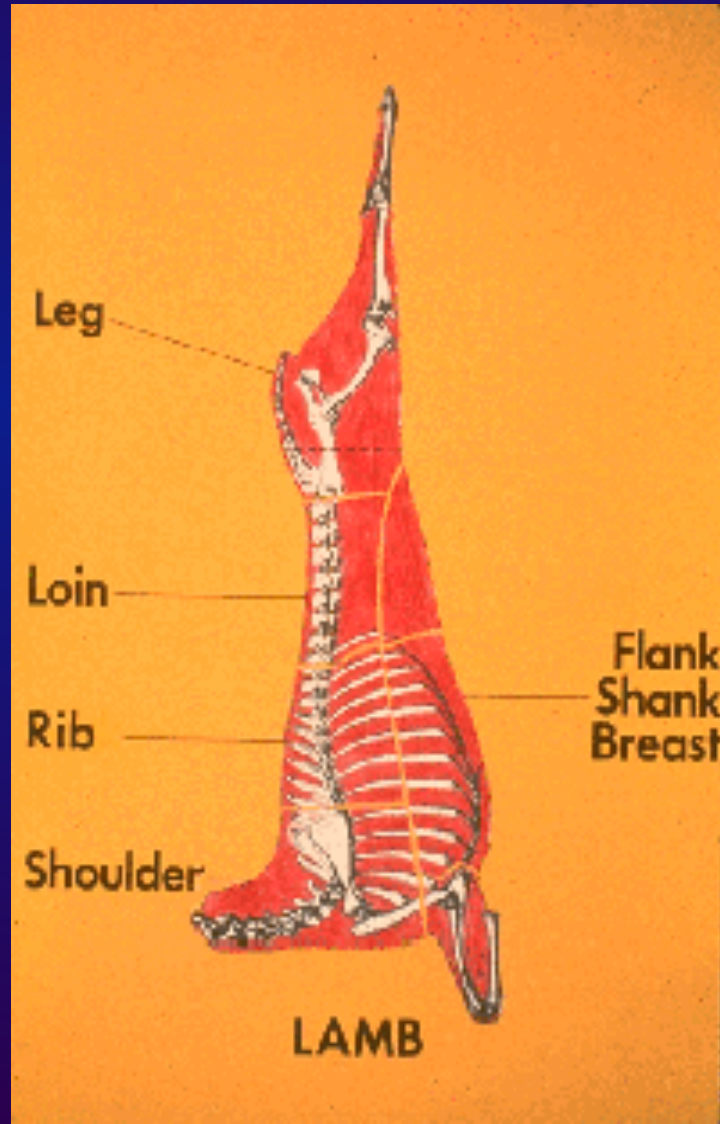
☐ Majority of market lambs will grade Choice



Lamb Quality Grade

- ☐ Superior conformation can compensate for inferior lean quality and vice versa
 - ☐ Good lean quality with Choice conformation = Choice
 - ☐ Prime lean quality with Choice conformation = Prime
- ☐ To qualify for Ch or Pr, lamb carcass must have at least .10 in. fat covering

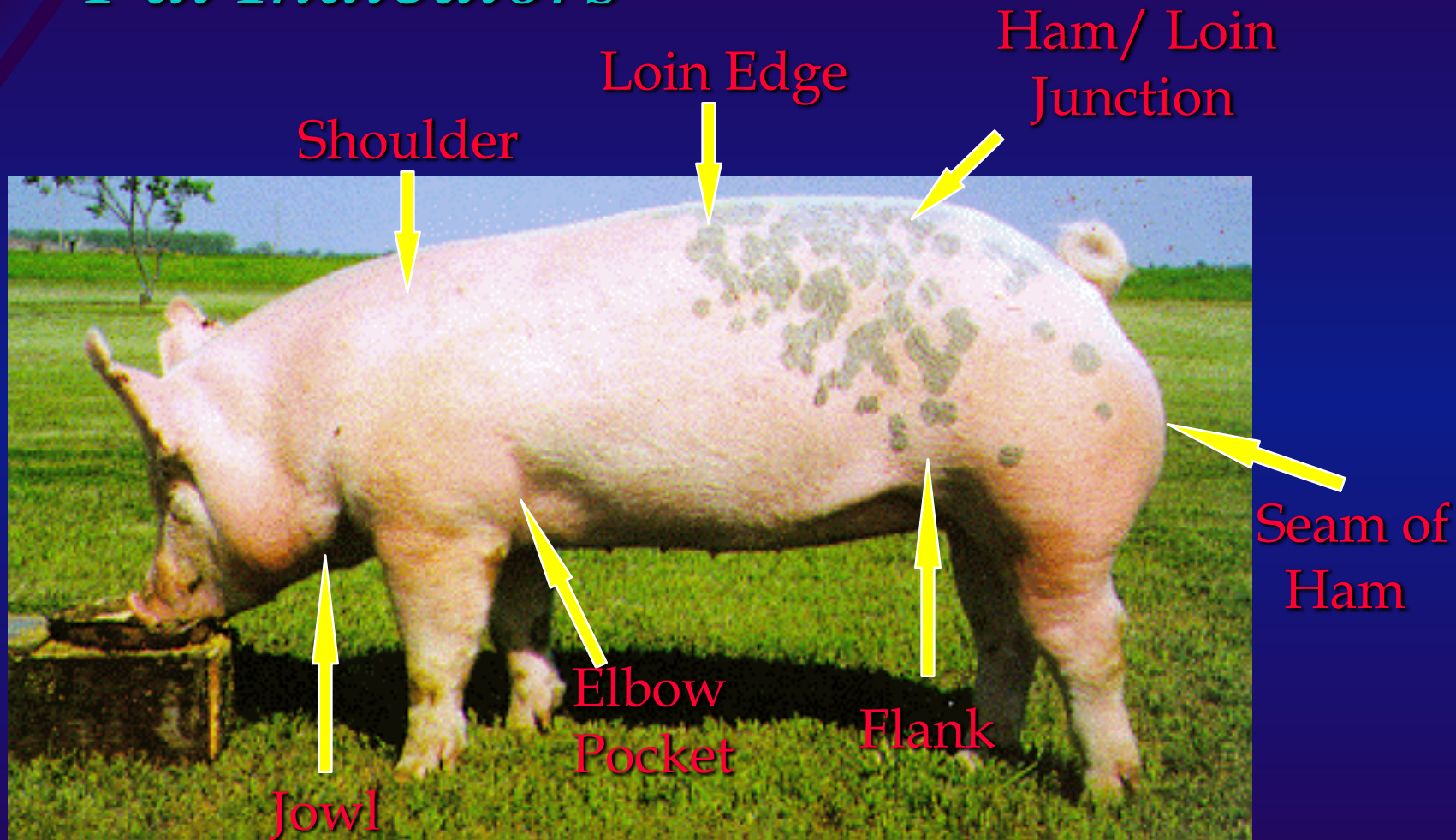
Primal Identification





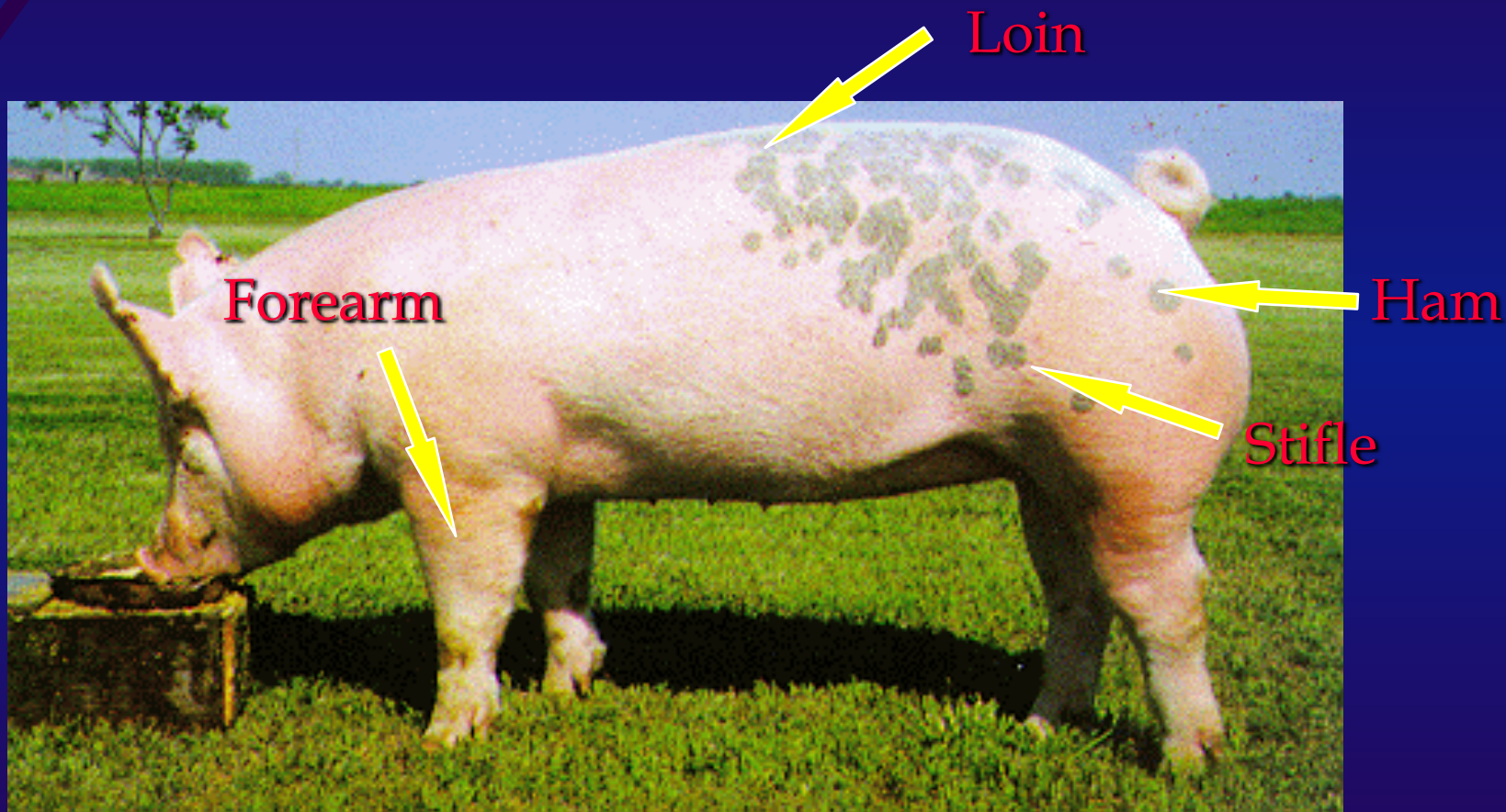
Introduction to Market Swine Evaluation

Swine Evaluation: Fat Indicators





Swine Evaluation: Muscle Indicators





Weight

☐ Live Weight

- ☐ Range: 210 lb - 300 lb

- ☐ Average: 250 to 260 lb

☐ Carcass Weight

- ☐ Weight of dressed carcass (hot or chilled)

 - ☐ Chilled 1.5% less than hot

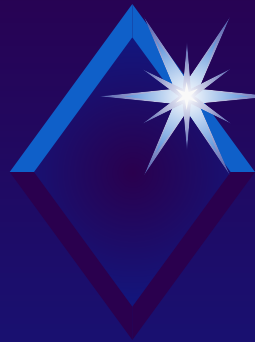
- ☐ Range: 150 - 215 lb

- ☐ Avg: 180 lb



Dressing Percent

- ❑ Proportion of body weight that ends up as carcass
 - ❑ Example: 255 lb live weight hog with 186 lb carcass = 73% dress
 - ❑ Some variation in dressing % across plants due to slaughter procedures and time of carcass weight measurement (hot or chilled)
- ❑ Range: 65 - 77%
- ❑ Avg: 72%



Factors Affecting Dressing Percent

☐ Gut Fill

☐ ↑ Gut fill = ↑ Body Weight = ↓ Dressing %

☐ Muscle

☐ ↑ Muscle = ↑ Dressing %

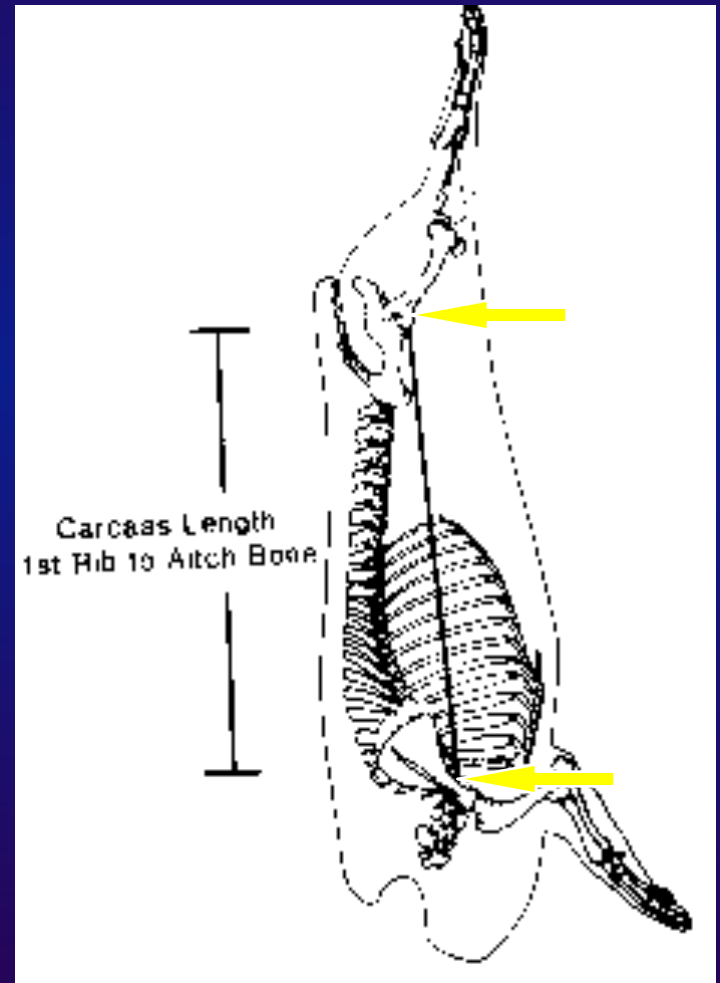
☐ Fat

☐ ↑ Fat = ↑ Dressing %



Carcass Length

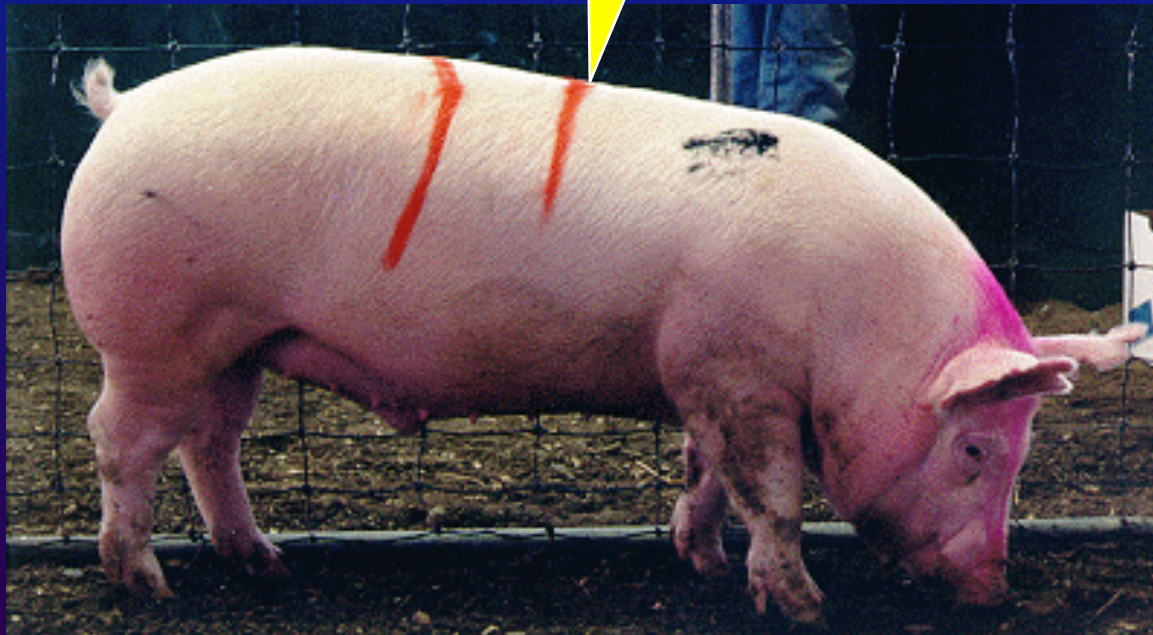
- ❑ Measurement taken from the First Rib to the Aitch Bone
- ❑ Not in calculations
- ❑ Range: 28 - 34 in.
- ❑ Avg: 31 in.





10th Rib Fat

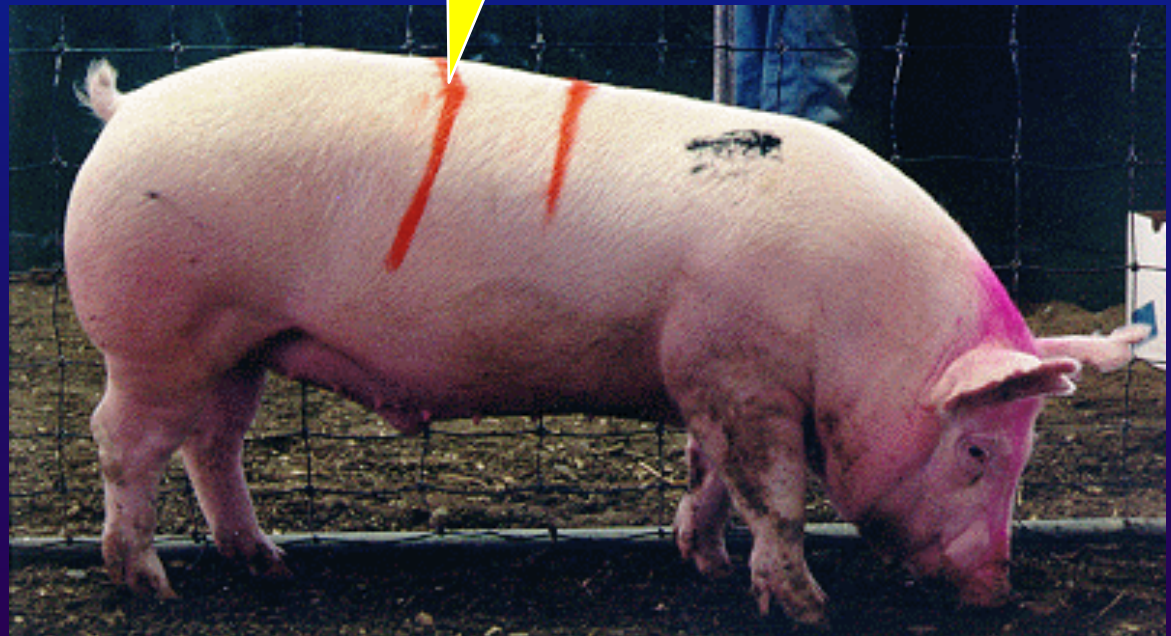
- ❑ Used in % Muscle Formula
- ❑ Range: .50 - 1.50 in.
- ❑ Avg.: .90 in





Last Rib Fat

- ❑ Used in USDA Grade calculation
- ❑ Range: .40 - 1.40 in.
- ❑ Avg: .80 in.





Loineye Area

- ❑ Estimated at the 10th rib
- ❑ Range: 3.8 - 9.0 sq. in.
- ❑ Avg: 5.5





Reading Top Shape



Reading Top Shape



BF = .90 inches

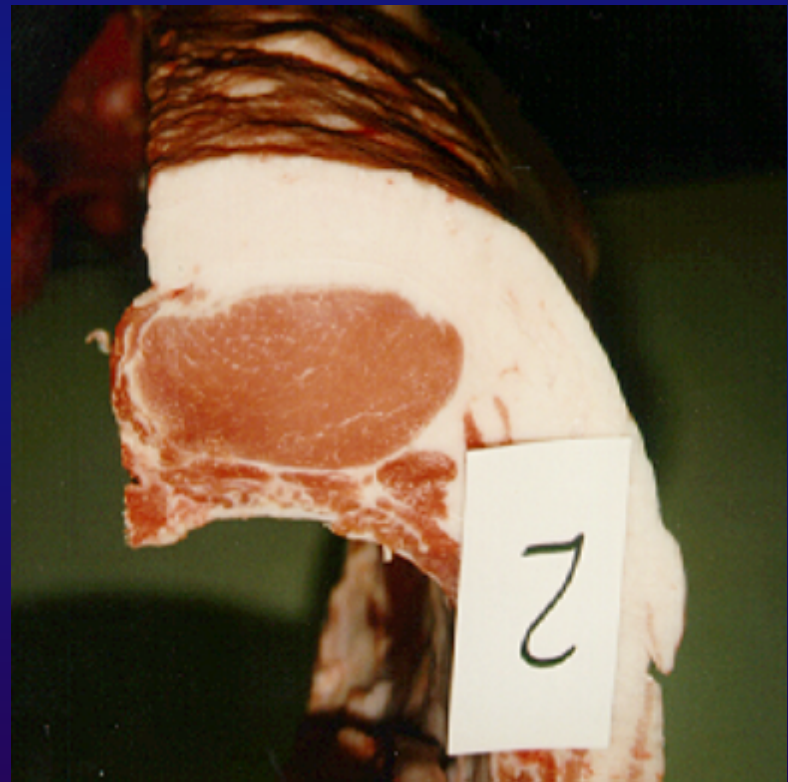




Reading Top Shape



BF = 1.5 inches



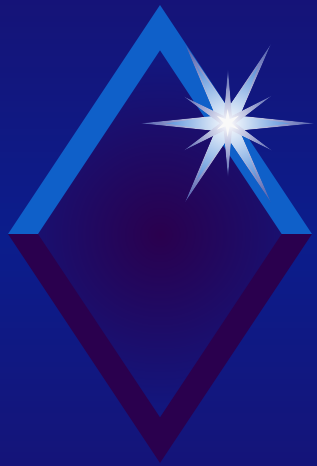


Reading Top Shape

BF = .20







The End!