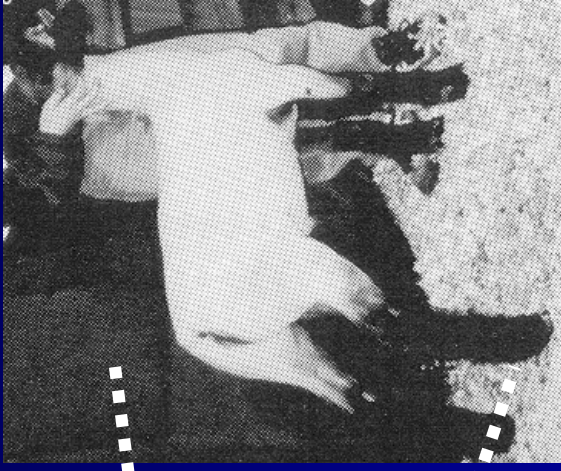
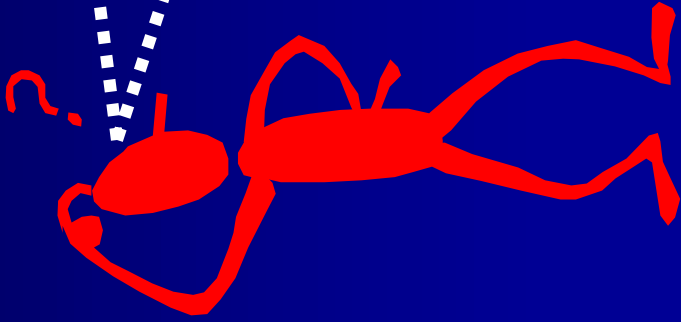


# Evaluating Fat and Muscle in Livestock



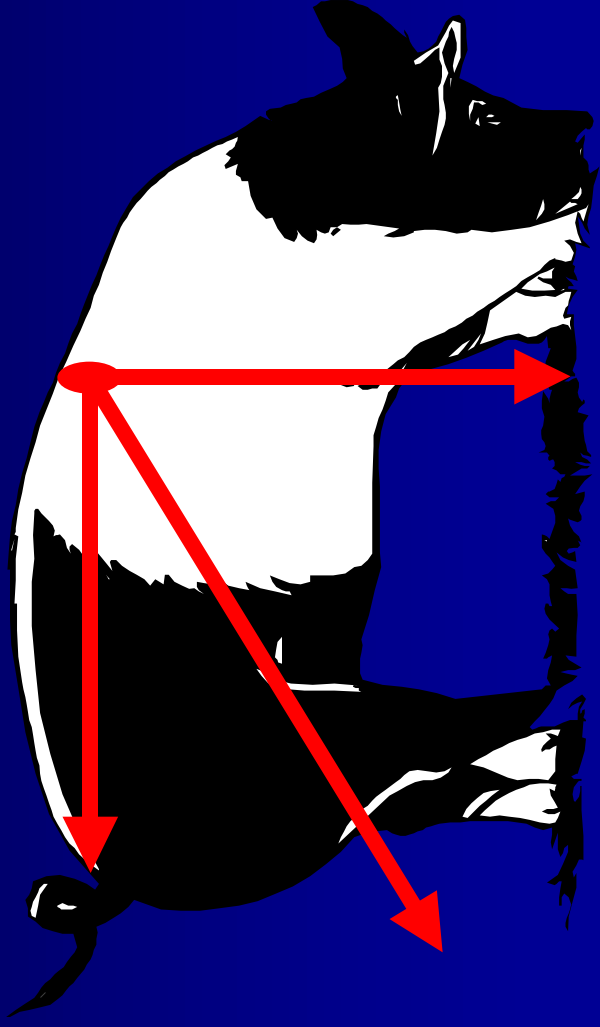
**Developed by:  
Celina Johnson  
University of Florida**

# **Why is it Important to Evaluate Fat and Muscle?**

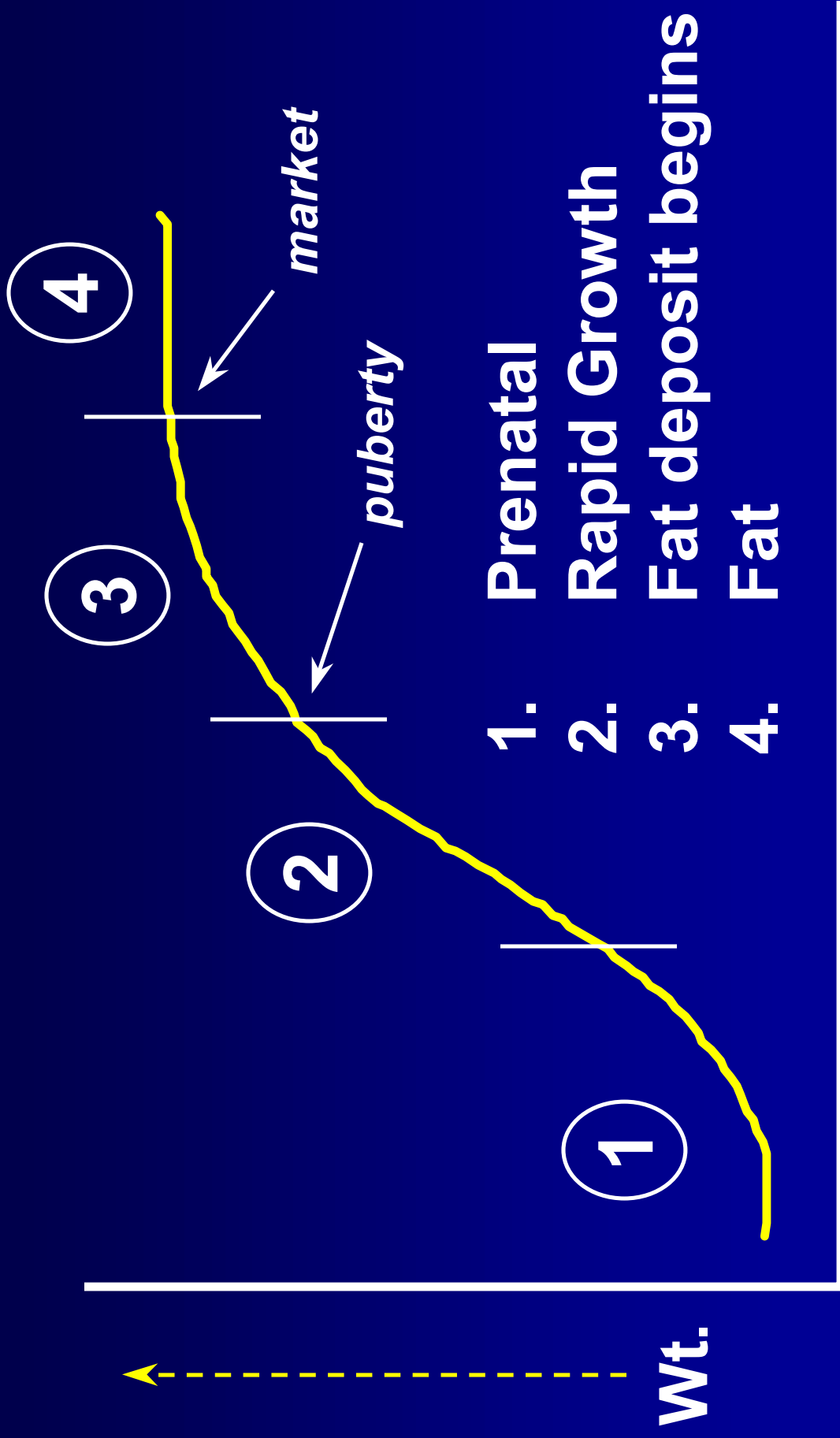
- **Meat Animals - we sell muscle**
- **All gender classes - important**
  - **Intact males, market animals and replacement females.**

# How Do Animals Get Fat?

- Top to Bottom
- Front to Rear



# Growth Curve



Time



Johnson, 1997

# Effects of Sex

Female usually deposits fat earlier than castrates or intact males.

Cattle: Heifers market at lighter wts.

Exception: Swine

boar → gilt → barrow

lean → fat

*Johnson, 1997*

# Effects of Frame Size

Small Framed animals:

Greater deposit of fat at lighter  
weights

At the same body composition,  
small animals will be lighter.

## **At Equal Body *Composition*:**

**Weights:** Lg > Med > Small

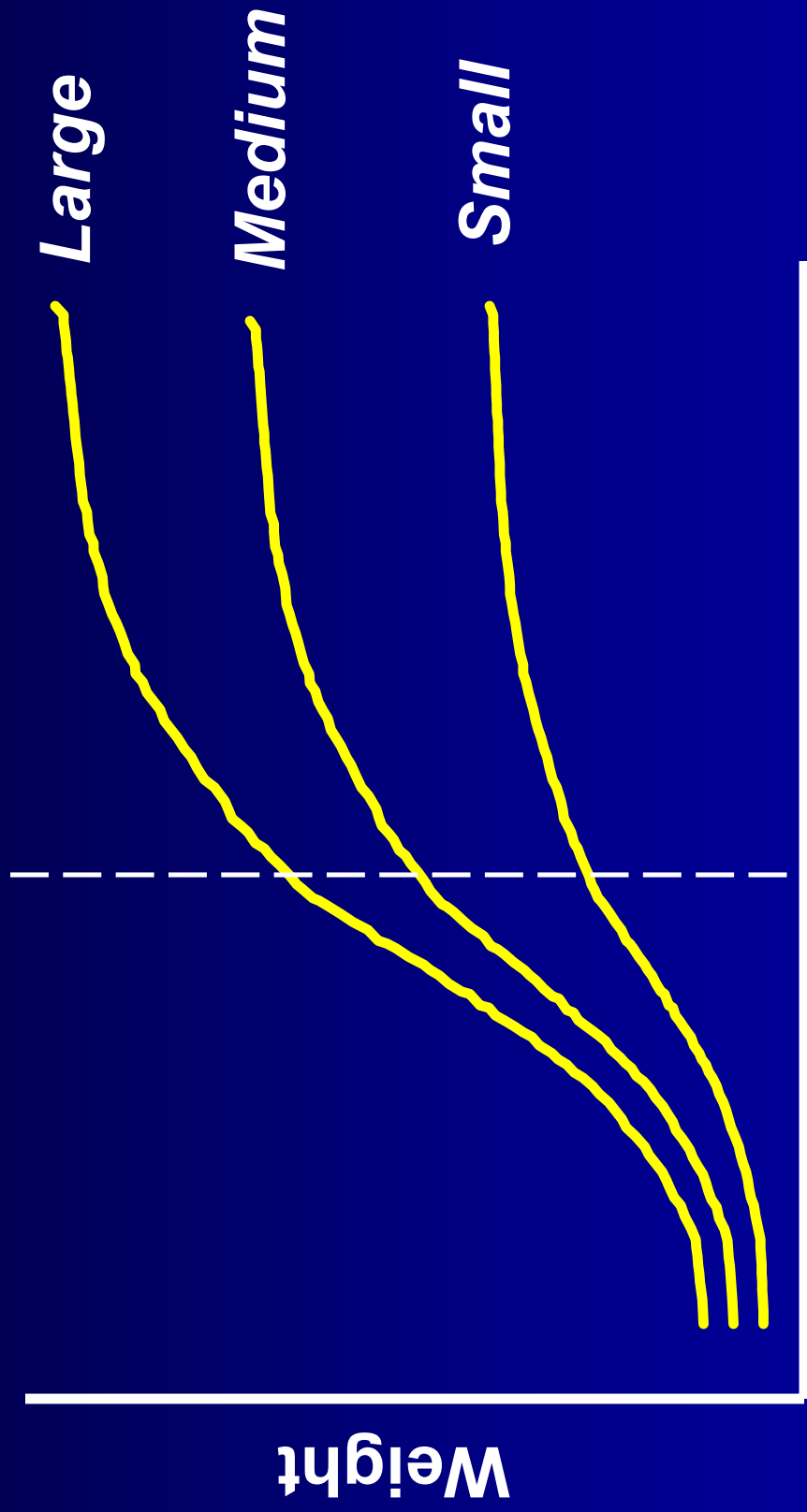
**Efficiency:** Equal, same point on growth curve

## **At Equal *Weight*:**

**Efficiency:** Lg > Med > Small  
why? Composition

# Effects of Frame Size

## Age Influences



Age

Weight

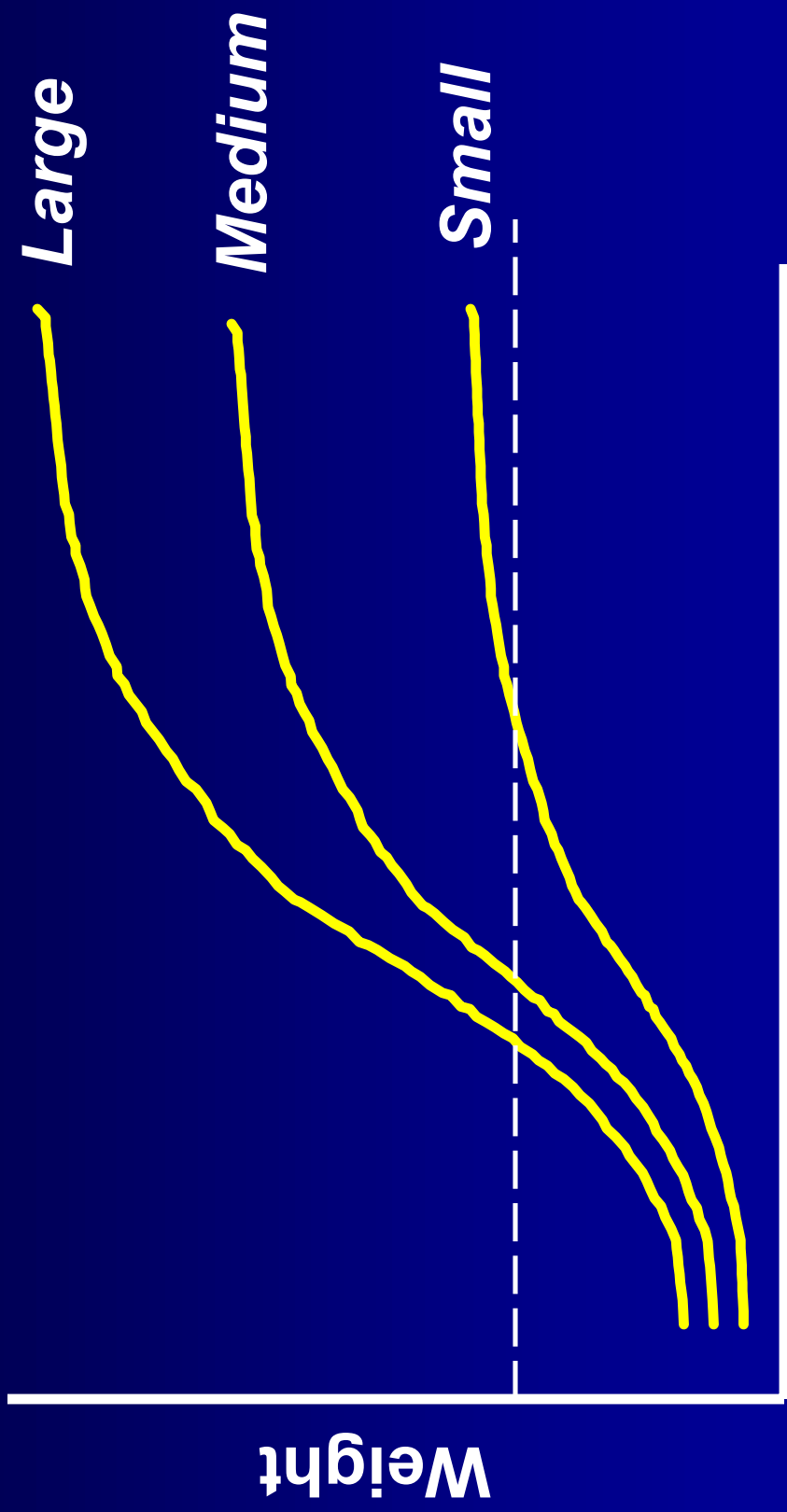
Large

Medium

Small

# Effects of Frame Size

## Weight Influences

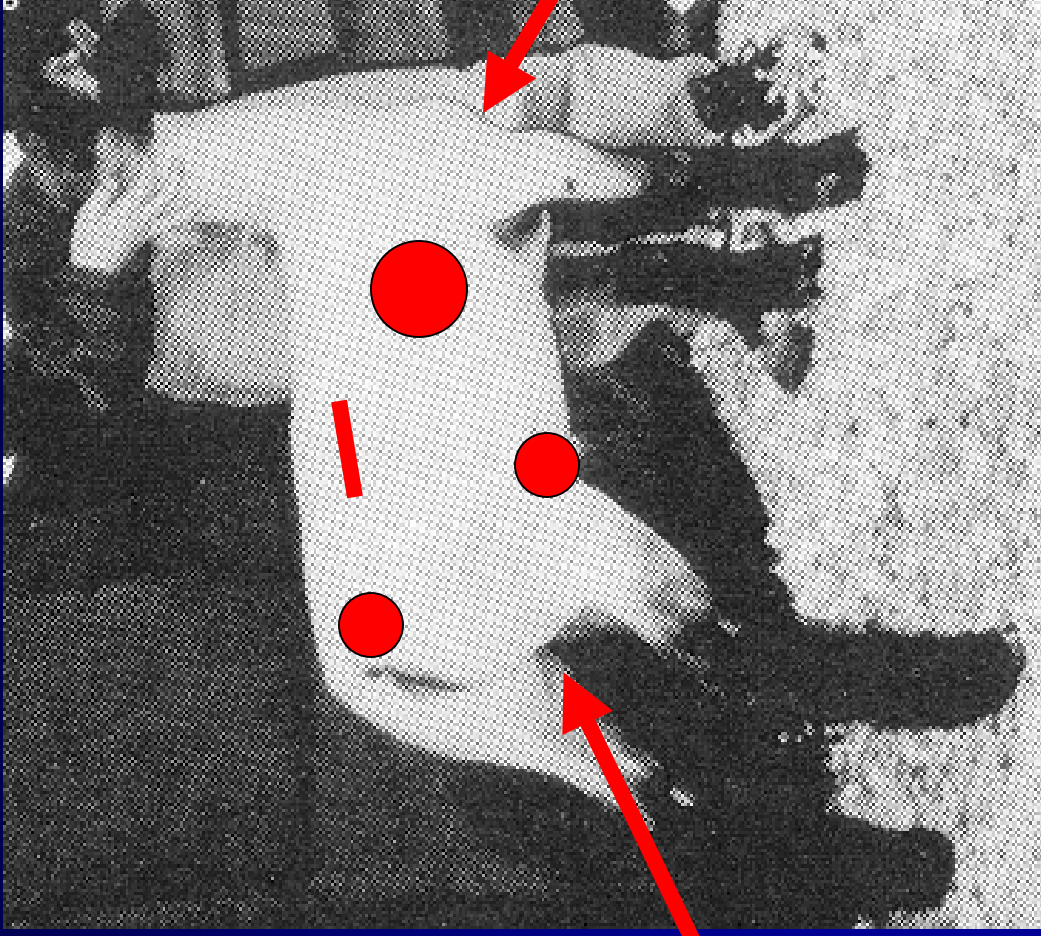


Age

# Fat Deposition Sites

- **Brisket (cattle), Jowl (hogs), Breast (lambs)**
- **Ribs**
- **Loin Edge**
- **Twist Area**
- **Flank**
- **Tailhead area**

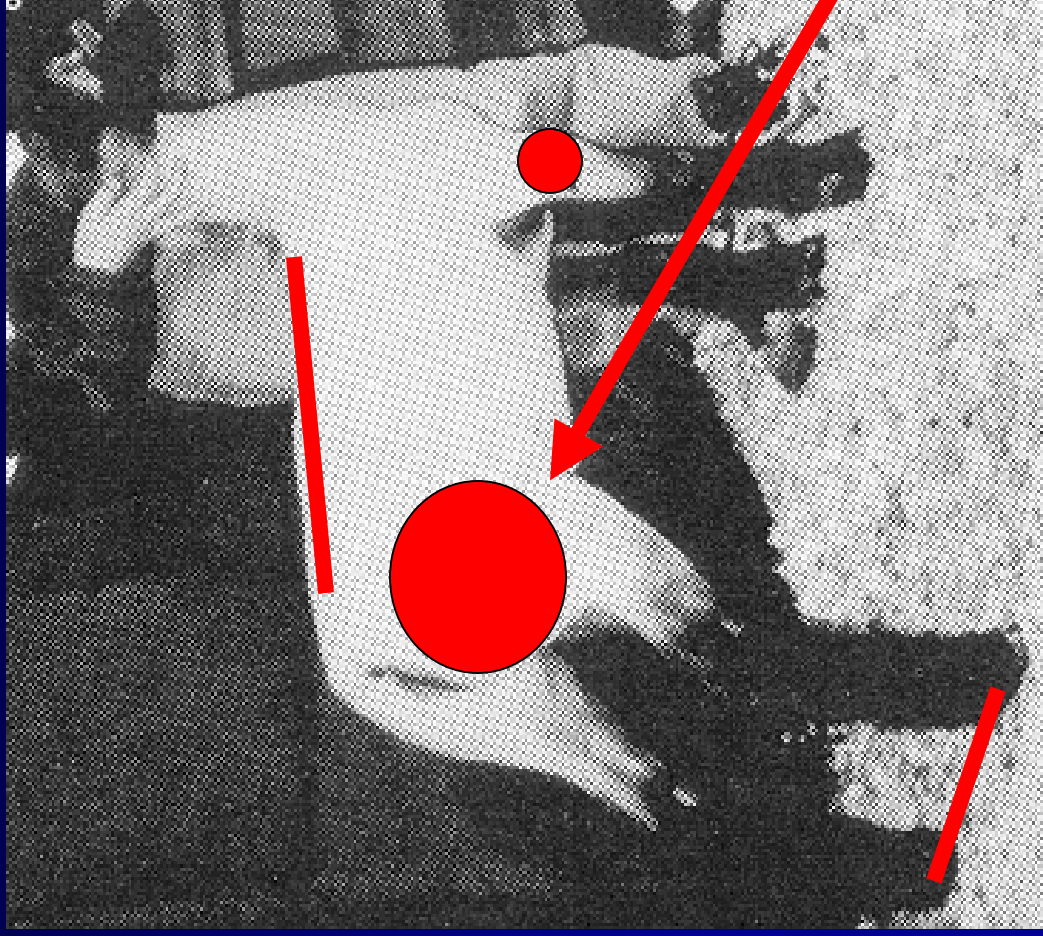
# Fat Deposition Sites



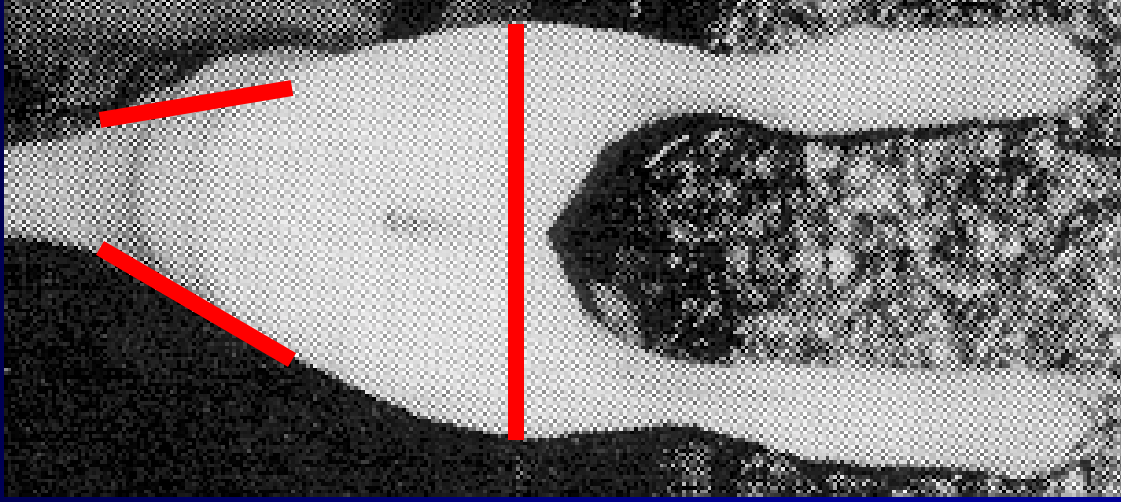
# **Muscle Evaluation Sites**

- **Hindquarter**  
(round - cattle; leg - lamb; ham - hog)
- **Stifle**
- **Forearm**
- **Over Top - loin and rump**
- **Width of Base**

# Muscle Evaluation Sites

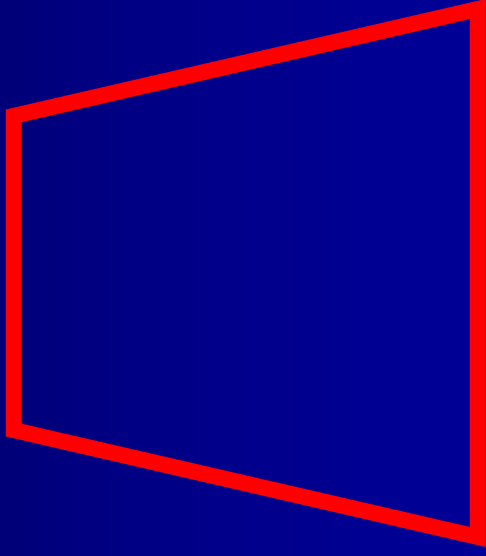


# Muscle Evaluation Sites

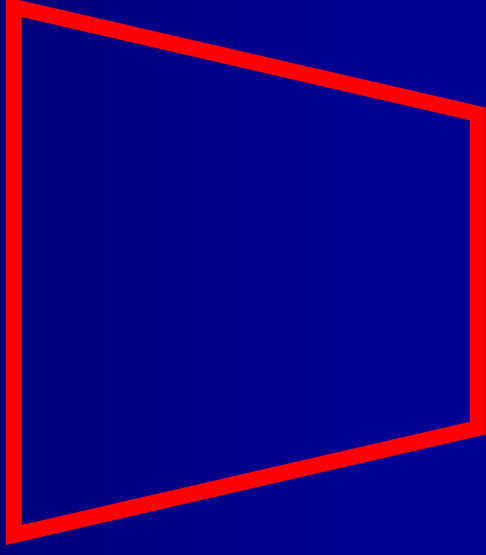


# Body Shapes

The widest part of the animal should be at the stifle, indicating lean, not fat

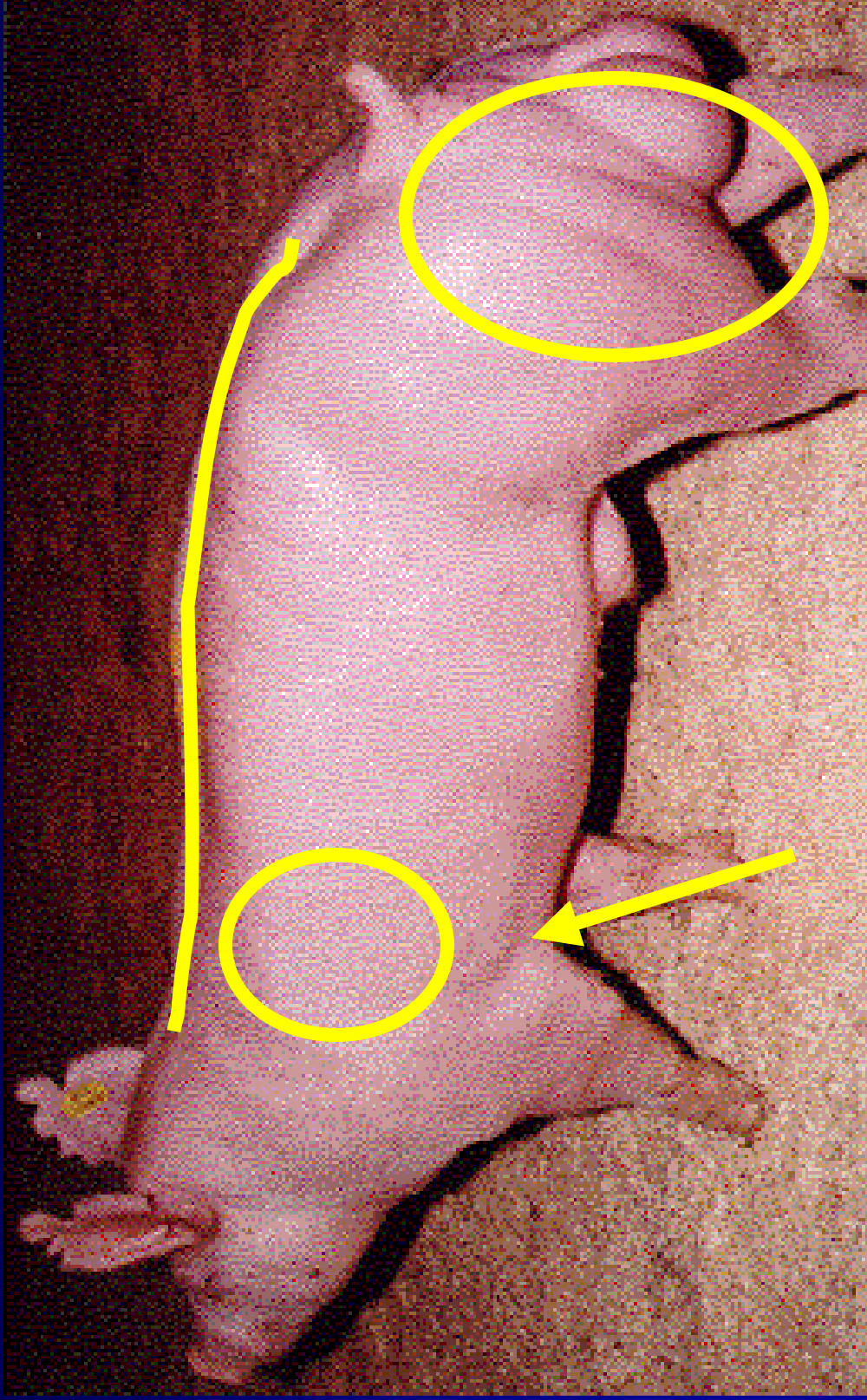


**Desirable**



**Undesirable**

# Lean Hog

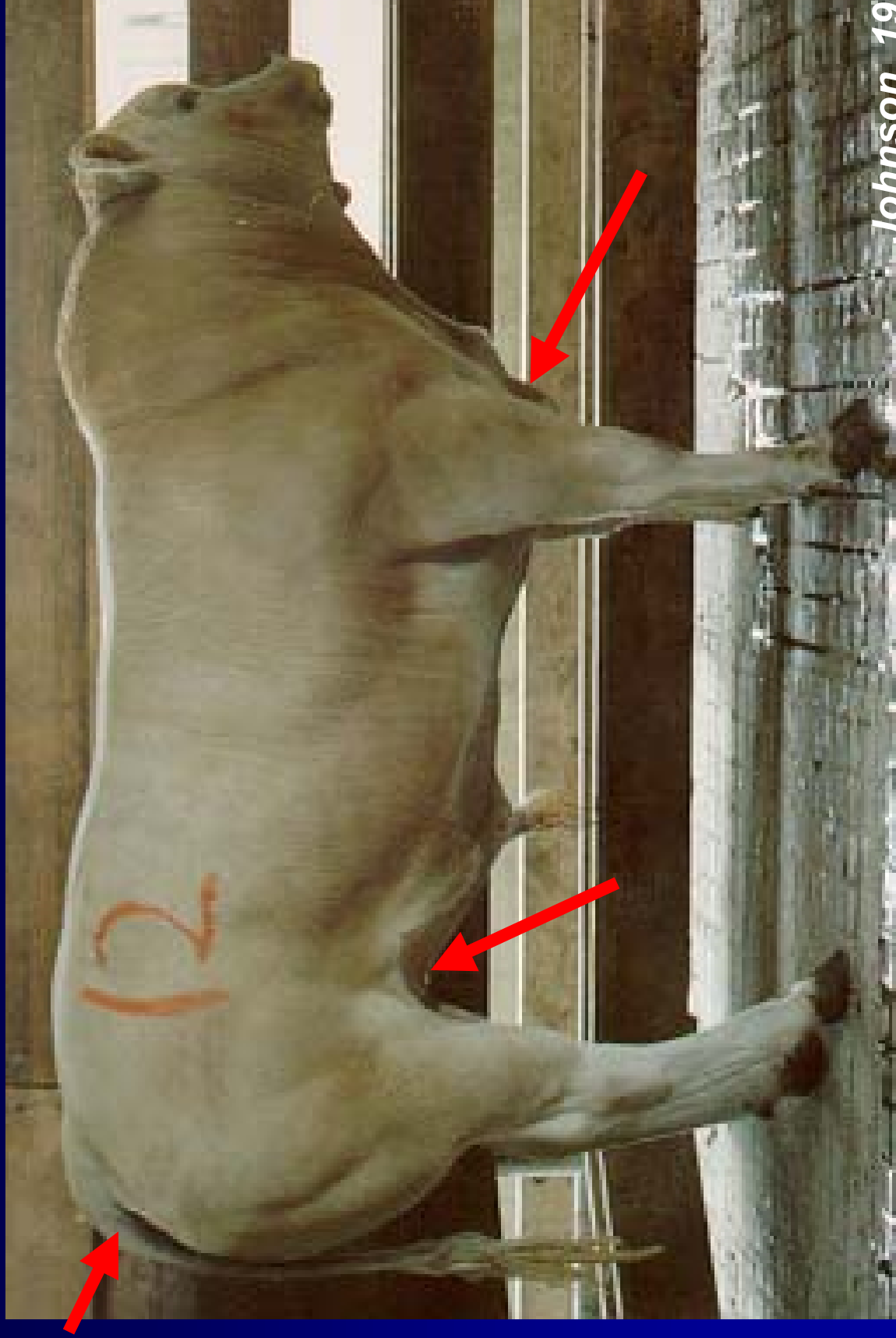


# Over Finished Hog



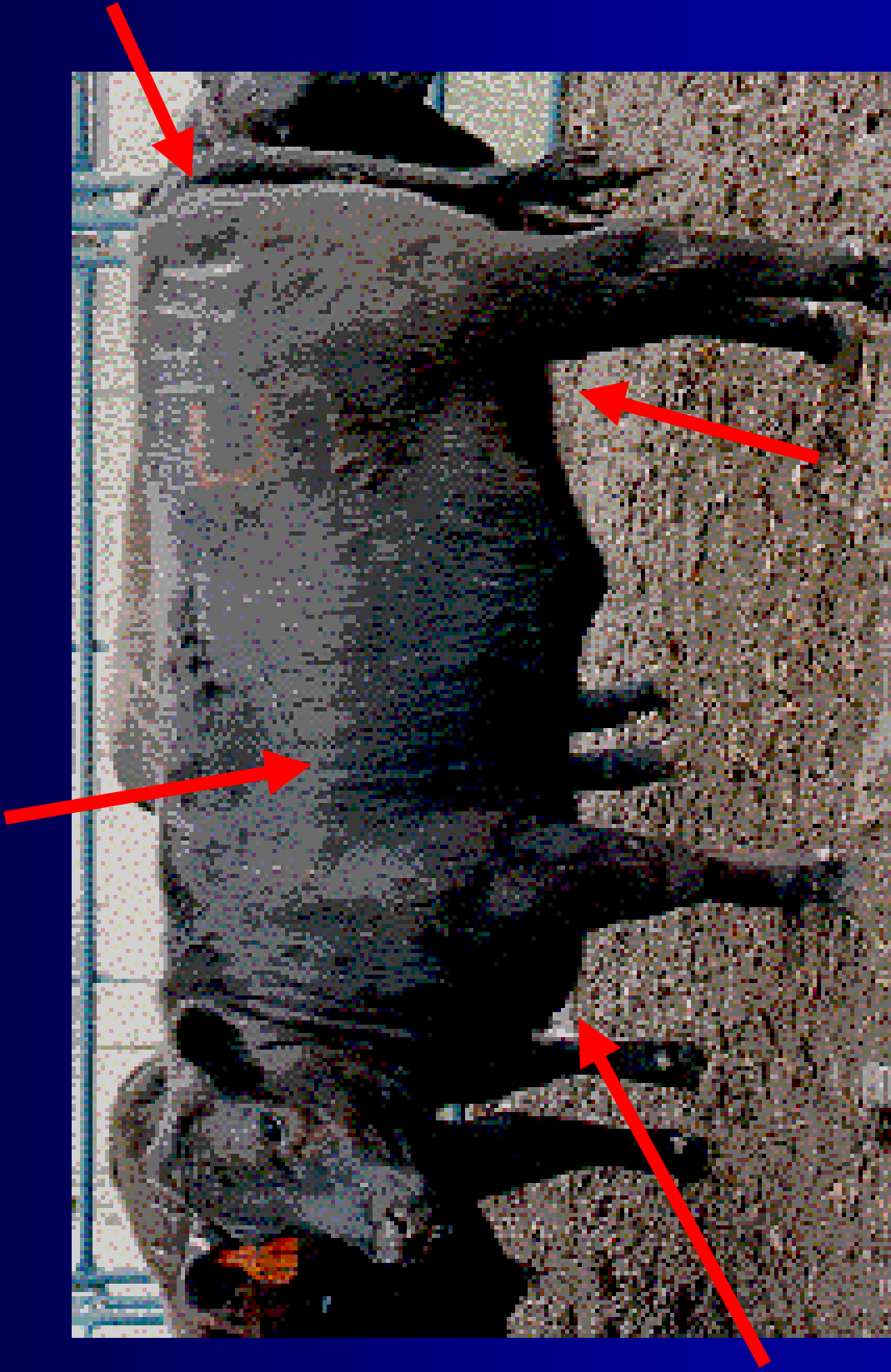
*Johnson, 1997*

# Under Finished Beef



Johnson, 1997

# Over Finished Beef



*Johnson, 1997*