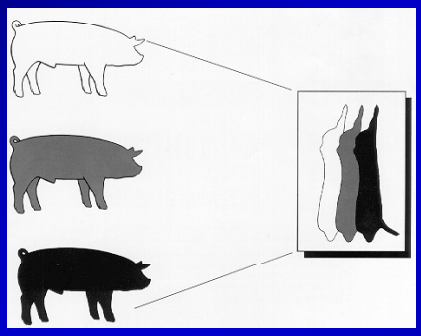
DISASSEMBLY LINE FOR ANIMALS



Objective

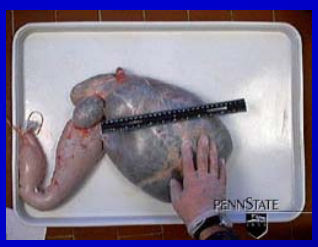
1. Show the disassembly line
2. Examine price relationships

Disassembly starts with a steer at the farm, ranch or feedlot

Most cattle come from the feedlot

Definitions

- Drift (Shrink) – Amount of weight lost during transportation
  - Can vary from 0% to 10%
  - Highly dependent on travel and species
    - Long haul more lost weight
    - Monogastrics lose more than ruminants



- Why is shrinkage faster in hogs than cattle or sheep?
  - Rumen

Definitions

- Drop - Everything from the animal except the carcass
  - Also known as:
    - Offal
    - By-products
    - Dress-off items
    - Variety meats
- Why are by-products called "drop"?

Definitions

- Slaughter
  - Process of killing the animal
  - Usually from blood loss
- Dressing
  - Refers to the steps needed to remove all of the drop items, leaving the hot carcass hanging on the rail.

Live Animal

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Transportation to slaughter
4% average drift

↓

Pay Weight (Packer Payment)

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Slaughter and Dressing

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Hot Carcass and Drop

Wholesale cuts

↓

Fabrication Loss (25% loss)

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Retail cuts + Fat trim + Bone trim

↓

Sales loss (4% loss)

↓

Retail cuts sold in supermarket

Definitions

- Cooler shrinkage –
  - Average 2% of hot carcass weight
  - Spray chillers decrease shrink to 1%
- Breaking loss
  - Sawdust loss (bone and meat dust)
  - Moisture evaporation
  - Tissue loss on belts and employees

Definitions

- Cutting loss
  - Average 25%
  - Cutting boneless retail cuts greatly increases cutting loss
- Fat and Bone trim
  - Results of breaking and fabrication
  - Much of this trim becomes edible by-products

Supermarket Loss

- Sales loss
  - Results from theft and reworks
- Most frequently shoplifted items
  - Rib eye steak
    - Small
    - High value
    - Expensive
    - Largest item ever stolen
      - Whole turkey

Retail cuts sold

↓

Cooking loss (30% loss at home)

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Cooked retail cuts (15% loss)

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Plate waste (X% highly variable)

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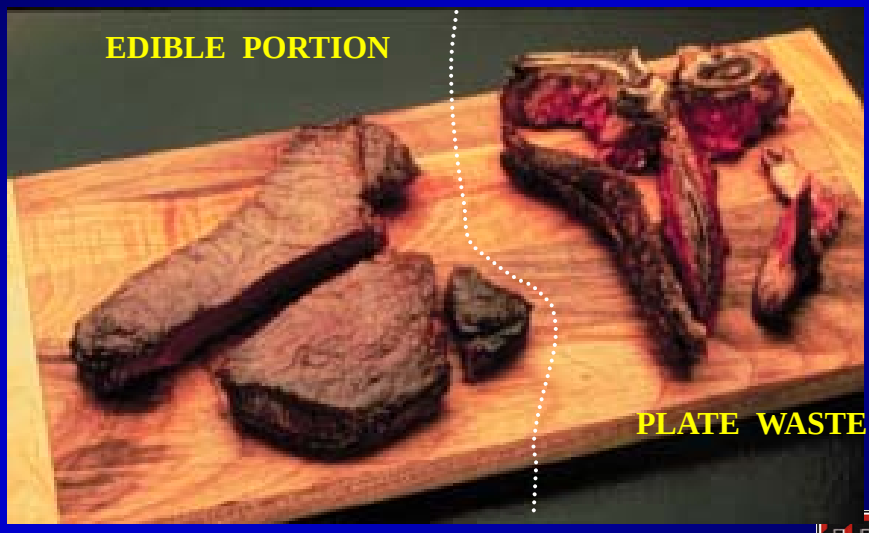
Edible portion (consumption)

PLATE WASTE FROM A PORTERHOUSE STEAK



Amount of Steer that is for sale

- Live steer 1,225 lbs
- Drift (4% loss)
  - 1,225 * .04 = 49 lbs
- Pay weight
  - 1,225 – 49 lbs 1,176 lbs
- 435 lbs of drop
- Hot carcass weight
  - 1,176 – 435 741 lbs
- Cold carcass weight
  - 741 * .01 = 7 lbs
  - 1% cooler shrink (741 – 7) 734 lbs

What did this steer dress?

- Dressing percentage (dp) is very important to the packer.
- DP is the percentage of pay weight (what packers buy) that is represented by the carcass (what packers sell).
- Higher DP, more meat to sell.
- DP originally based on cold carcass weight, but today most packers use hot carcass weight.

Dressing Percentage and Yield

- People in the meat and livestock industries often refer to Dressing Percentage as "Yield" –
  - "This pen of steers should yield 62%"
- Do not confuse yield with the USDA yield grade or yield of wholesale cuts

Dressing Percentage Calculations

- Cold carcass weight basis
  - DP = (Cold Wt. / Pay Wt.) *100
  - (734 / 1,176) *100 = 62.4%
- Hot carcass weight basis
  - DP = (Hot Wt. / Pay Wt.) *100
  - (741 / 1,176) *100 = 63.0%

Why do packers want to use hot carcass weight?

Why are packers so interested in Dressing Percentage?

- Assume 3,600 head are killed per day
- Animal average = 1,150 lbs and dressed 62.8%
- How much meat would they be able to sell?
  - 1,150 lbs * .628 = 722.2 lbs
- If they dressed only 61.8%
  - 1,150 lbs * .618 = 710.7

11.5 lb difference

Dressing Percentage Continued

- 3,600 hd/day *11.5 lbs/hd = 41,400 lbs/day
- 41,400 lbs * $1.15/lb = $47,610 / day
- How do packers use this info?
  - If the packer believes that your animals will have lower DP, they will offer you a lower amount of money for your animals.
    - Leads to trickery by producers

What Affects Dressing Percentage?

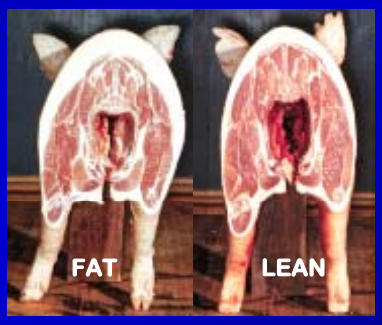
- Fill –
  - Contents of the GI tract
  - Has the greatest effect on DP
  - The GI tract of large dairy cow contains a 55-gallon beer vat.

Effect of fasting on Dressing Percentage and Slaughterer

- Dressing percentage?
  - Increases DP if paid on fasted weight
  - Decrease DP if paid on arrival weight
- Price/lb paid by slaughterer?
- Bleeding?
  - Decreases bleeding efficiency
- Ease of visceration?
- Cuts in guts?
  - Decreases cut guts
- Microbial contamination?
  - May increase microbial contamination

What Affects Dressing Precentage?

- Fill
  - Increased fatness will increase dressing percentage.
  - Why?



What Affects Dressing Percentage?

- What is the affect of heavy hide on DP?
- Do animals differ in hide thickness?
- Does sex of animal effect hide weights?

What Effects Dressing Percentage?

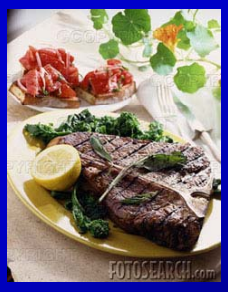
- What effect do mud balls (dingle berries) have on DP?
  - Are producer prices affected by muddy hides?
- South plains feedlots receive higher prices per animal due to mud condition in Midwest

Sex and Class Affect on DP

WHICH IN EACH SET WOULD DRESS HIGHEST AND LOWEST?

BULL	STEER	HEIFER	COW
BOAR	BARROW	GILT	SOW
RAM	WETHER	EWE LAMB	EWE

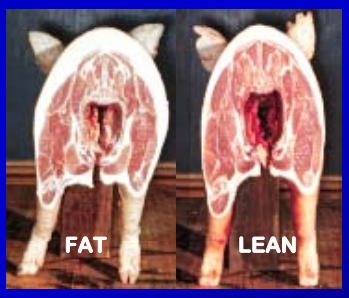
Species Differences in Dressing Percentage



- Approximate Dressing Percentages
  - Sheep 50%
  - Cattle 60%
  - Broilers 60%
  - Swine 70%
- Why do sheep dress so low and hogs so high?
- How do dressing percentages affect meat prices?

Muscle Effects on Dressing Percentage

- If these pigs had same amount of fat, who would dress higher?



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