Volume 2: The Processing Process

Jason Sawyer, Ph.D.
Associate Professor, Meat Science
Department of Animal Sciences
Auburn University
Focus of Today’s Discussion

• Selection of a Processor
• Meat Aging (Dry vs. Wet)
• Meat Processing Yields
MEAT PROCESSING is an ART

- A trade that has renewed INTEREST
- Can be an EXPENSIVE industry to tackle
- We need MORE passion for owning and operating small to very small facilities
- Difference between PROCESSOR and a BUTCHER
PROCESSOR SELECTION

• Questions to consider when identifying a Processor
  1. Form of Meat Inspection conducted at Facility
  2. Processing Fees
  3. Distance from Farm to Processor
  4. Available dates for processing
     a) 10 Days
     b) 30 Days
     c) 60 Days
     d) 90 Days
  5. Familiar with *unique* cuts
FORMS of MEAT INSPECTION

- Facilities will follow the Code of Federal Regulations
  - Title 9: Animals and Animal Products
  - Hazzard Analysis Critical Control Points
  - Good Manufacturing Procedures
  - Standard Operating Procedures

- USDA Federal Plant
  - Products can be transported/marketed across STATE boundaries

- State Inspected Plant
  - Products can be transported/marketed within STATE boundaries

- Custom Exempt
  - Products are RESTRICTED to customer only
  - Often designated NOT-FOR-SALE
Additional Processor Criteria

• Packaging Methods Available
  1. Vacuum Packaging
  2. Butcher Paper
  3. Bone-In vs Boneless Cuts
     a) Pricing Differences
     b) Packaging Charges Associated with cutting
  4. Additional Processing Charges
     a) Carcass Aging
     b) Tenderizing
     c) Stew Meat Cutting
     d) Patty Forming
     e) Jerky/Sausage/Snack Stick Manufacturing
     f) Roast Tying/Netting
PROCESSING FEES

• Demand for CUSTOM meat processing will influence processing fees

• Slaughter Fees
  • $50 to $75 per animal
  • $5.00 disposal

• Cutting and Packaging or Wrapping Fee
  • $0.60 to $0.95/pound of Hot Carcass Weight
  • $5.00 to $10.00 Tenderizing/Cutlets
  • $0.50 to $1.25 Patty forming
  • $0.25 to $1.00 Stew cutting
  • $5.00 to $10.00 Boneless
  • $5.00 Netting/Roast Tying
  • $0.25 to $0.75/pound Chili Grind
  • $1.00 to $2.00/day Additional Aging

• Additional Charges
  • Vacuum Packaged vs. Butcher Paper
  • Inventory of Cuts and Boxing
  • Custom Label Creation $150
  • Individual Packaged Weights $0.10 to $0.25/pound
  • Split Orders (Quarters, Thirds, Halves) $40 to $20 per carcass
  • Photos, Quality and Yield Grading $20 to $40 per carcass
SCHEDULING A PROCESSING DATE

• AVAILABILITY is **ALWAYS** limiting
  • Hours of Processing/Production
  • Number of Employees
  • Refrigerated and Frozen Storage Space
  • Does the processor close for BIG GAME periods?
  • Popularity of processor

• Current Processing Schedules Nationwide
  • September 2020
  • January 2021
  • April 2021
  • August 2021
PATIENCE and COMMUNICATION

• Processing of animals for Food is a DIFFICULT business
• Labor Shortages
• Limitations on Refrigerated Storage
• Variation in CUTTING instructions from customer to customer
• Comfort in creating SPECIALTY cuts
  • Vegas Steak  Tri-Tip  Asian BBQ Ribs
  • Flat Iron Steak  Mock Tender Steaks
MEAT and CARCASS AGING

• Depends upon available storage of processor
• Cost of additional aging time
  • 7 to 14 days Standard
  • Additional aging $1.00 / Day minimum charge
• Space is the GREATEST limiting factor for extended aging to customers
• Aging occurs NATURALLY
• Muscle proteins are broken down during aging to create a more tender product
DRY AGING

• Evaporation of moisture
  • 32 to 34°F
  • 80 to 85% Relative Humidity
• Historically used as a preservation method
• Currently limited application due to time, resources, and space allocation
• Often focused on a piece method vs. a carcass
• Duration varies from 14 to 240 days
  • Longer duration influenced by consumer preference
EATING QUALITY: Dry Aging

- A focus on concentration of flavor
- Research on Sensory (Taste) is inconsistent
- Smith et al. 2008 instrumental tenderness values declined 17% from 14 to 35 days
- Cutting Yields will vary from 3 to 10% of total weight
- Pricing should increase 19 to 25%
WET AGING

- Aging of meat in vacuum packages
- Refrigerated conditions
  - 32 to 34 F
  - Humidity is not a requirement
- Products can be aged from 3 to 90 days in a package
- Industry Guide for Beef Aging funded by the NCBA
  - Concluded
MEAT and CARCASS PROCESSING YIELDS

• Dressing percentage
  • Industry averages 60 to 64%
  • Percentage of live animal remaining after harvesting
    • Removal of the following:
      • Hide, Head, Feet, Viscera, Blood
  • Grain-Finished vs. Grass-Finished
    • Dressing Percent will vary CONSIDERABLY
    • Grain Finished = 60 to 65%
    • Grass Finished = 55 to 65%
    • Volume of food remaining in animal’s VISCERA

• Mud, Hide Thickness, Bone Density, Dairy vs Beef Influence

• Dressing Percent calculation = \[
\frac{\text{HOT CARCASS WEIGHT}}{\text{LIVE WEIGHT}} \times 100
\]

• Examples:
  • \([875 \text{ HCW} \div 1375 \text{ LW}] \times 100 = 63.6\%\]
  • \([950 \text{ HCW} \div 1570 \text{ LW}] \times 100 = 60.3\%\]
  • \([785 \text{ HCW} \div 1352 \text{ LW}] \times 100 = 58.1\%\]
YIELD GRADING

- Yield Grades
  - Used as a measure of determining the percentage of Boneless, Closely Trimmed, Retail Cuts (BCTRC)
  - Four factors influence YIELD GRADE calculations
    - Fat thickness opposite 12/13th rib (PYG-Preliminary Yield)
    - Kidney, Pelvic, Heart Fat (KPH)
    - Hot Carcass Weight (HCW)
  - Cutability can vary
    - 48 to 55%

Fat and Bone Weights of Carcasses Processed by a University Meat Laboratory
COOLER SHRINK

- Fresh Meat consists of 65 to 80% WATER
- Water loss occurs through evaporation
- Reduces TOTAL weight to be sold
- Excessive FAT cover on the carcass can reduce TOTAL moisture loss (Yield Grade 1 vs. Yield Grade 5)
HOW MUCH MEAT DO I GET

• Generally a standard range for cut and packaged product is:
  • 52 to 58% of the CARCASS WEIGHT

• Influencers include:
  • Aging duration of carcass
  • Carcass Weight
  • Fat and Bone Volumes
  • Bone-IN vs. Boneless Cuts
  • Cutting and Trimming Expertise

Final Product Yield of Carcasses Processed by a University Meat Laboratory
FOCUS ON YOUR MEAT MERCHANDISING GOALS

• Selling Sides, Quarters, Whole Carcass, Mixed Boxes, Vending Machines

• Direct Sales vs. Farmers Markets vs. Roadside Markets

• Minimize VARIETY or SPECIALTY Meat Products
  • Jerky
  • Smoked Sausage
  • Snack Sticks

• Consider these value-added meats as a completely different business model

• Greater Food Safety Risks
MISCELLANEOUS ITEMS to CONSIDER

- **Bones**
  - MAKE THEM EASY TO SELL $0.25 TO $1.00 per pound
  - 100 to 150 Pounds from each carcass
  - Soup Bones
  - Osso Bucco
  - BULK PACKAGE (5 to 10 lbs.)

- **Fat**
  - $0.10 to $0.50 per pound
  - 75 TO 125 Pounds Trimmed
  - Cooking
  - BULK PACKAGE (5 to 10 lbs.)
TIPS to CONSIDER for SELECTING the PROCESSOR

• What form of Meat Inspection do I want my products manufactured under?

• Call early to schedule a PROCESSING date
  • 150 to 200 days from MARKET Weight

• Communicate EARLY with your processor

• Minimize the Number of Special Requests
  • Custom Labels
  • Specialty Cuts or Products
    • Smoked Sausage
    • Jerky
    • Snack Sticks

• Does it pay for additional Carcass Aging?

• What Processing Costs Can I Eliminate
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- Alabama Cattlemen’s Association
- Alabama Beef
- Sweet Grown Alabama
- Alabama Cooperative Extension Service
- Auburn University College of Agriculture

- Jason Sawyer, PhD.
  Associate Professor, Meat Science
  Department of Animal Sciences
  Auburn University, Auburn, AL
  jts0109@auburn.edu
SAVE THE DATE: Volume 3, Friday June 5th

Getting Your Product to Market and Getting Paid for It

Ellie Watson (Sweet Grown Alabama)
Alex Tigue (Alabama Beef Extension Systems)
This is the WORK that makes the world work.