E. coli
Interventions

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Slaughter Intervention Strategies

- Reassess current procedure
- Decontamination Strategies
- Validate that your method works
Reassess Current Procedures

- Consider feasibility of different methods
- Compare effectiveness of different procedures
Sources of *E. coli* Contamination

- Hide (shud)
- Stomach contents
- Workers hands
- Equipment
- Air & water
ELMO COLI'S HARD LESSON IN MARKETING...
Traditional Decontamination Strategies

- Hot Water
- Acetic Acid (Vinegar)
- Lactic Acid
- Dry aging/chilling
Hot Water
- 165°F minimum
- 176-185°F more effective
- Dangerous to employees
- May cause condensation

Acetic Acid (Vinegar)
- 2-2.5% (Vinegar – 5%) after warm (90-105°F) rinse
- 122-131°F most effective
- Easy to obtain & inexpensive
Lactic Acid

- 2% solution after warm (90-105°F) rinse
- Available in 88% solution
- 3.25 oz. per gal. (8.3 lbs.) water
- <130°F most effective

Dry aging/chilling

- Minimum of 6 days aging
- Cooler <90% RH & < 41°F
New Decontamination Strategies

- Peroxyacetic acid
- Activated lactoferrin
- Acidified sodium chlorite
- Mixture of ascorbic acid, sodium citrate, and erythorbic acid
- Mixture of saccharides, sodium chloride, and phosphates
- Peroxyacetic acid
  - Inspexx™ 200 (EcoLab)
  - 0.02% solution

- Activated lactoferrin
  - Activin™ (ALF Ventures LLC, National Beef Packing Co. & DMV Int’l)
  - 1% solution

- Acidified sodium chlorite
  - Sanova (Alcide Corporation)
  - 0.02% solution
  - Room temperature
Mixture of ascorbic acid, sodium citrate, erythorbic acid

- Fresh Bloom™ (Excalibur Seasonings)
  - 8oz/Gallon
  - 130°F

Mixture of saccharides, sodium chloride and phosphates

- Rinse & Chill™ (MPSC)
  - Vascular rinse and chill of carcasses
Suggested Critical Limits

- Temperatures (solutions, cooler, etc.)
- Chemical concentration
- Pressure
- Time of exposure to chemical
Using Multiple Interventions

- Hurdle Concept
- Synergistic or additive effects
- Pre-evisceration wash, chemical rinse (every 19 minutes), followed by terminal wash and rinse.
Validate That Your Method Works

- Using same procedure as validated study?
  - Concentration of solution (mixed properly)
  - Temperature of solution and/or carcass
  - Sprayer pressure
  - Good coverage (Rinse/spray carcass twice)
"...well done, medium... or E. coli?"
E. COLI VEGETABLES

EDDIE COLI COULDN’T UNDERSTAND WHY BUSINESS WAS BAD.
WARNING Consider grilling the chef before eating that burger today
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