

# *E. coli*

# Interventions

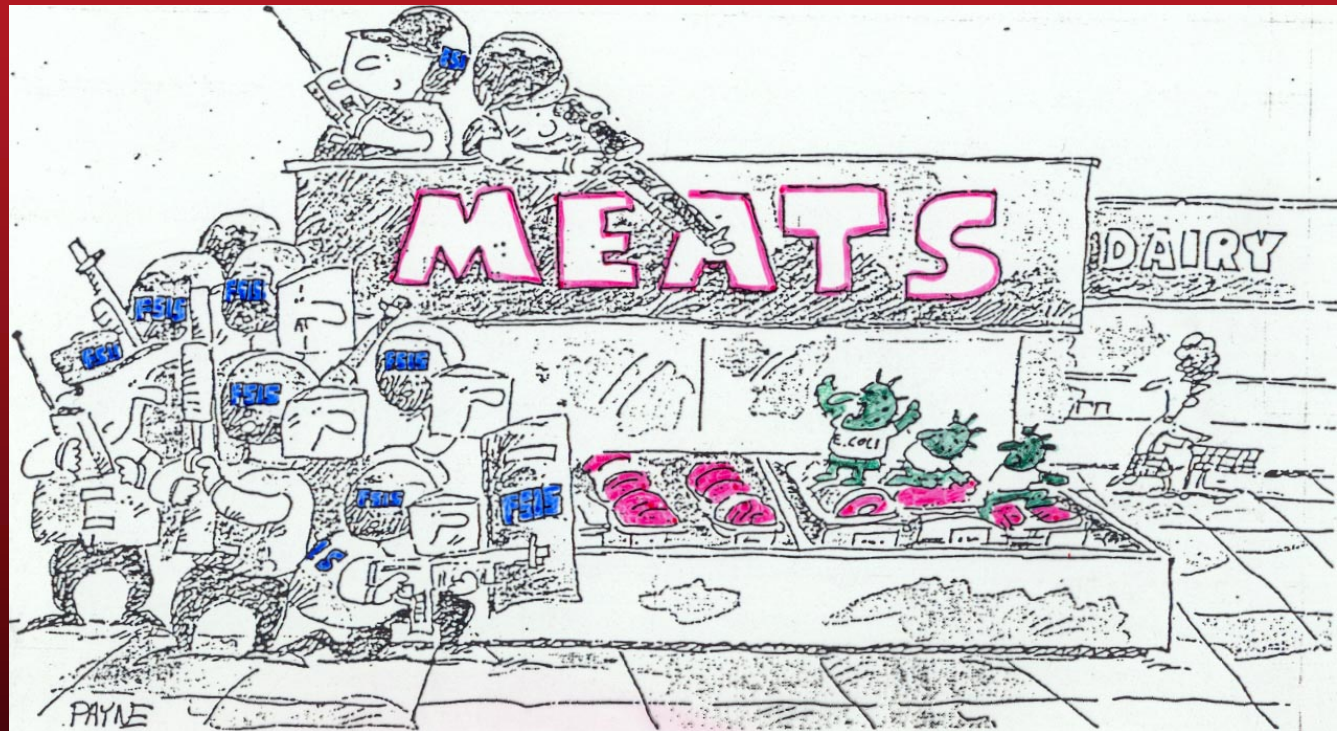
2008 AAMP Convention  
Cincinnati, Ohio

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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

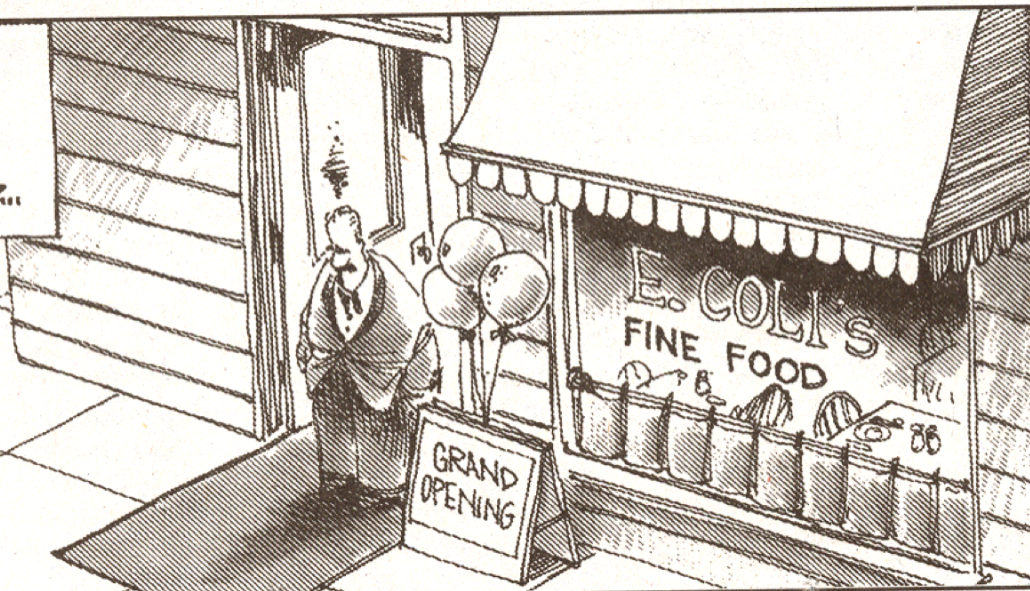
- Hide (shud)
- Stomach contents
- Workers hands
- Equipment
- Air & water



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# 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?"



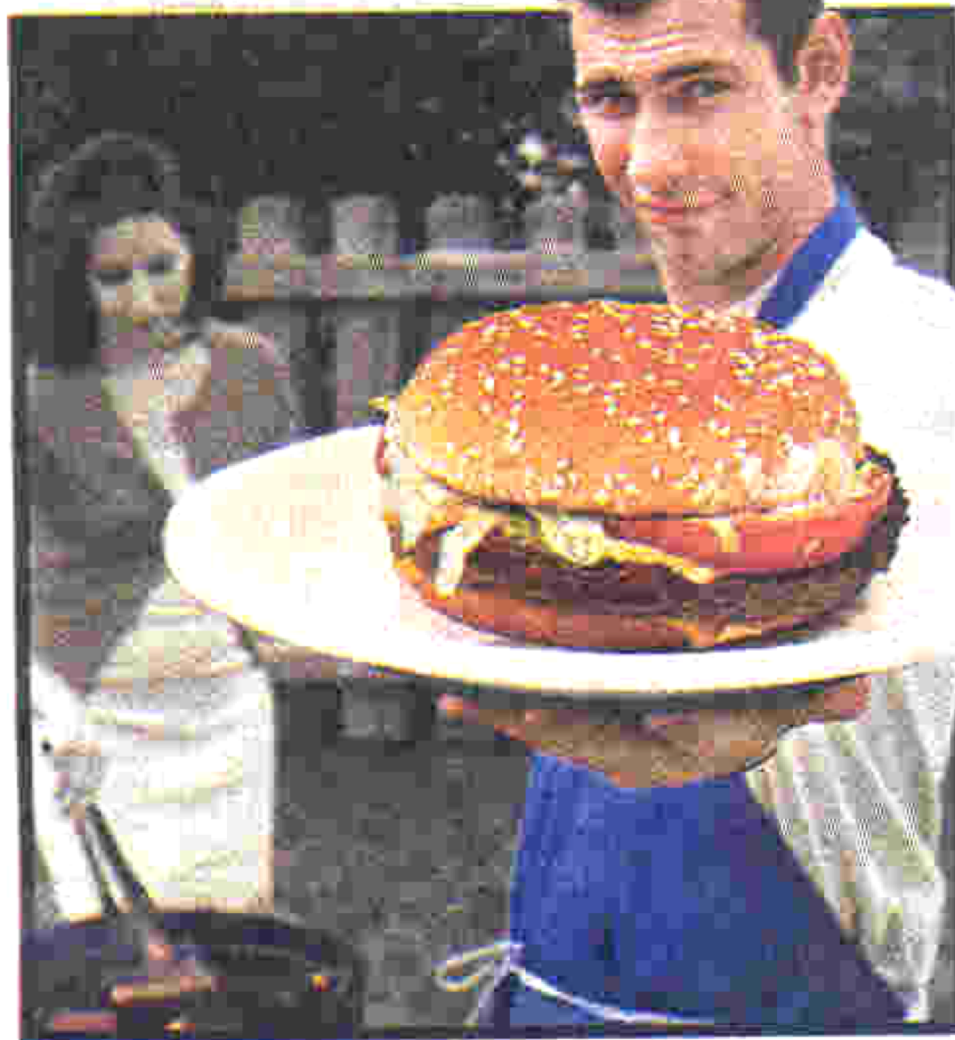
# E. COLI VEGETABLES



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chef *before* eating  
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