

FOOD SAFETY AND COMMODITY SPECIFICATIONS DIVISION

Microbiological Data Review



Annual Industry Meeting
October 24, 2017

Agenda

- ▶ FY2017 Microbiological Review
- ▶ AMS-UMN Research Project
- ▶ Supplement 211 & 212 Vendor Performance Handouts
- ▶ Animal Handling & Welfare Review



FY2017 - Microbiological Review

- ▶ Cooked Diced Chicken
- ▶ Egg Products
- ▶ Boneless Beef
- ▶ Finished Product (Ground Beef)



FY2017 – Cooked Diced Chicken: Microbial Summary

- ▶ 570 Lots Produced by 1 Contractor
 - ▶ Coliforms, Generic *E. coli*, *S. aureus*
 - ▶ No Critical Limits Exceeded
 - ▶ SPC
 - ▶ Four (4) Critical Limits Exceeded
 - ▶ *Salmonella* & *L. monocytogenes*
 - ▶ No Positive Results
 - ▶ 9,800,000 lbs. Purchased



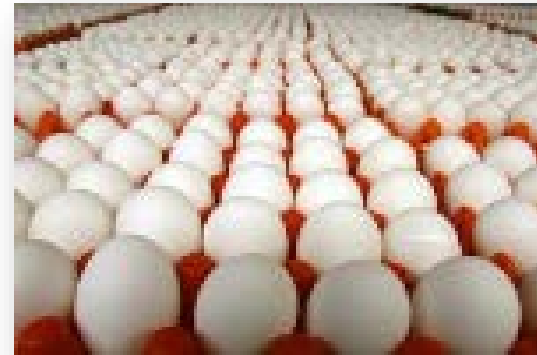
FY2017 – Unpasteurized Liquid Whole Eggs: Microbial Summary

- ▶ 401 Lots Produced by 5 Contractors
 - ▶ SPC
 - ▶ 63 Critical Limits Exceeded
 - ▶ Coliforms
 - ▶ 16 Critical Limits Exceeded
 - ▶ Generic *E. coli*
 - ▶ 14 Critical Limits Exceeded
 - ▶ 10,176,000 lbs. Purchased



FY2017 – All Purpose Egg Mix: Microbial Summary

- ▶ 73 Lots Produced by 1 Contractor
 - ▶ SPC, Coliforms
 - ▶ No Limits Exceeded
 - ▶ *Salmonella*
 - ▶ No Positive Results
 - ▶ 540,000 lbs. Purchased



FY2017 – Frozen Pasteurized Whole Eggs: Microbial Summary

- ▶ 387 Lots Produced by 6 Contractors
 - ▶ SPC
 - ▶ 9 Critical Limits Exceeded
 - ▶ Coliforms
 - ▶ No Critical Limits Exceeded
 - ▶ *Salmonella*
 - ▶ No Positive Result
- ▶ 9,051,360 lbs. Purchased

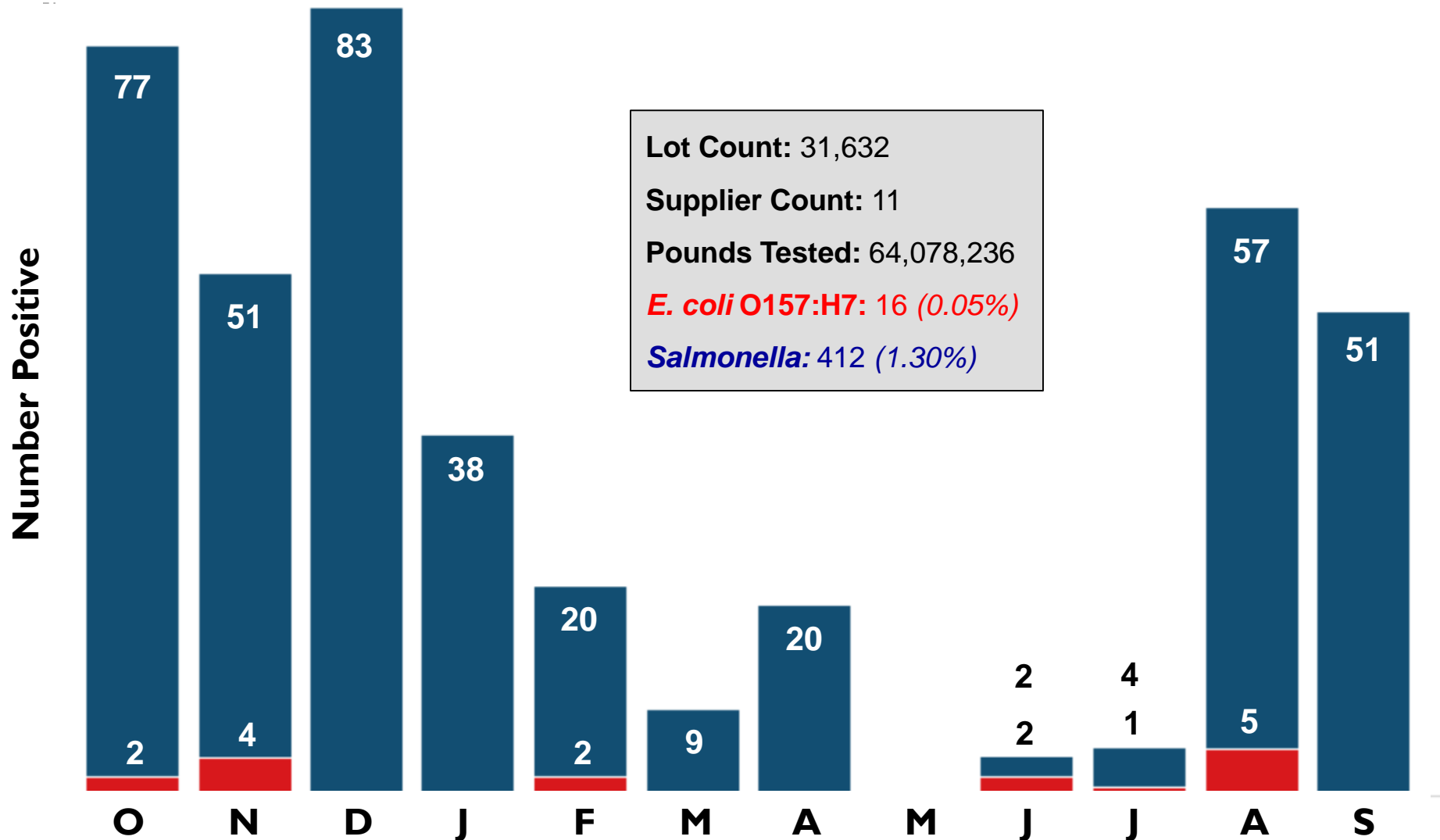


FY2017 – Boneless Beef: Indicator Organism Summary

- ▶ **67,418 Lots Produced by 13 Suppliers**
 - ▶ **SPC**
 - ▶ 45 Critical Limits Exceeded
 - ▶ **Coliforms**
 - ▶ 48 Critical Limits Exceeded
 - ▶ **Generic *E. coli***
 - ▶ 33 Critical Limits Exceeded
 - ▶ **135,685,554 lbs. Produced**



FY2017 – Boneless Beef: Pathogen Prevalence by Month

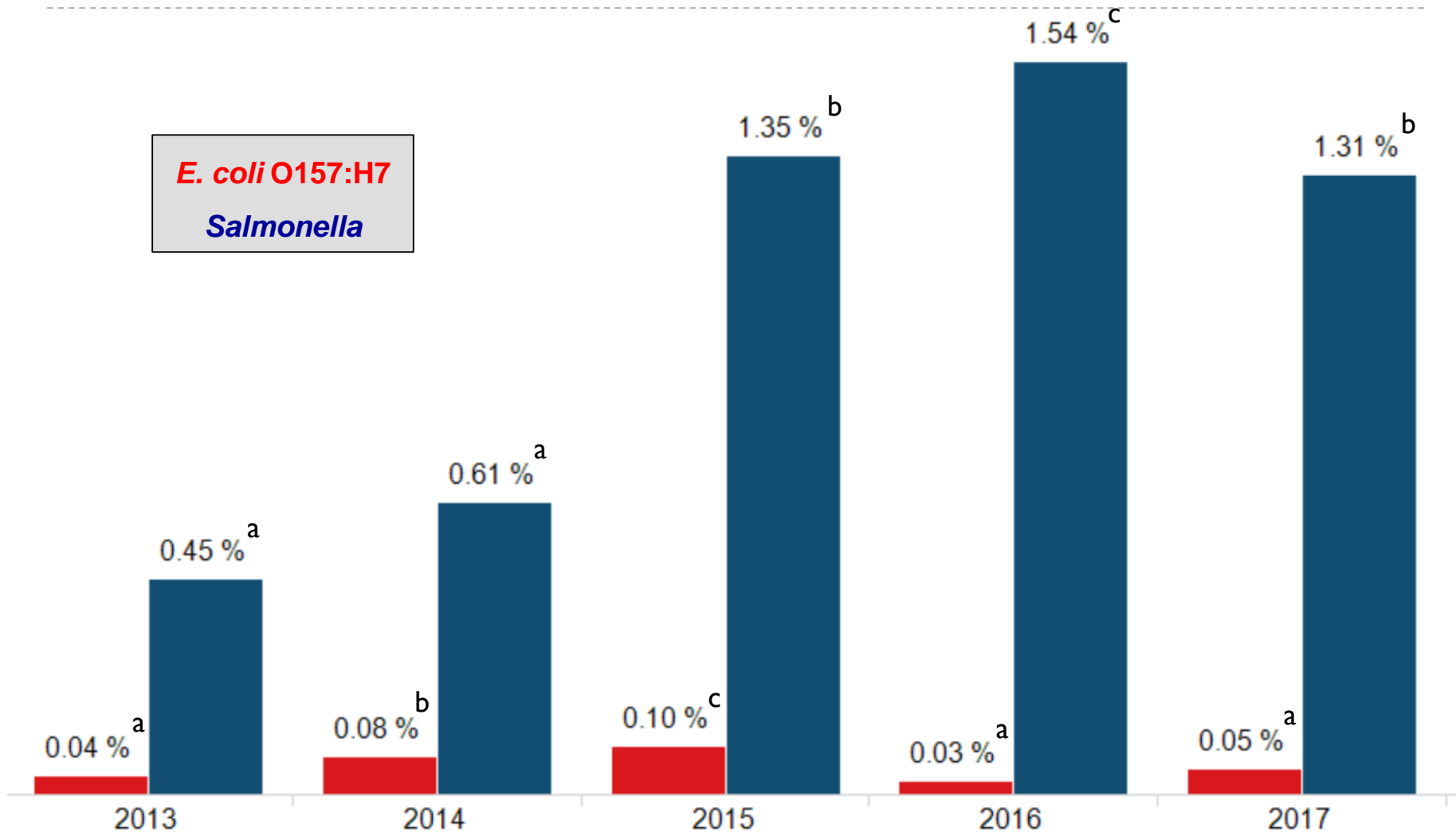


FY2017 – Boneless Beef: Non-O157 STEC Summary

- ▶ **3,367 Lots Produced by 10 Contractors**
 - ▶ **O45, O111 & O145**
 - ▶ No Positive Results
 - ▶ **O26**
 - ▶ 2 Positive Results
 - ▶ **O103, O121**
 - ▶ 1 Positive Results
 - ▶ **6,825,466 lbs. Produced**



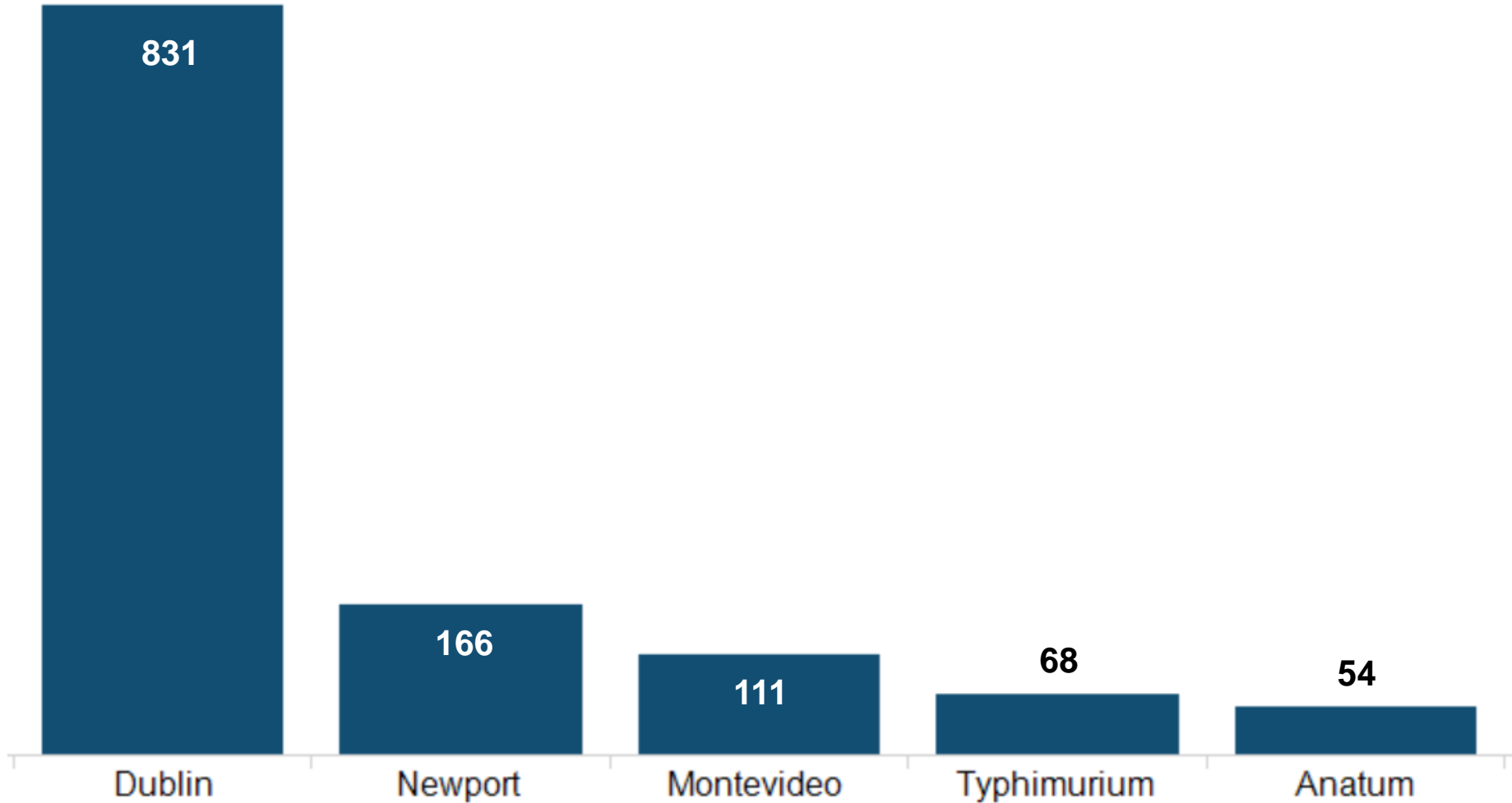
Boneless Beef: Comparison of Pathogen Prevalence (% Positive) by Fiscal Year



^{a-c}Values with different superscripts within the same column color are significantly different (P<0.05).



FY2013 to 2017 – Boneless Beef: Top 5 *Salmonella* Serotypes

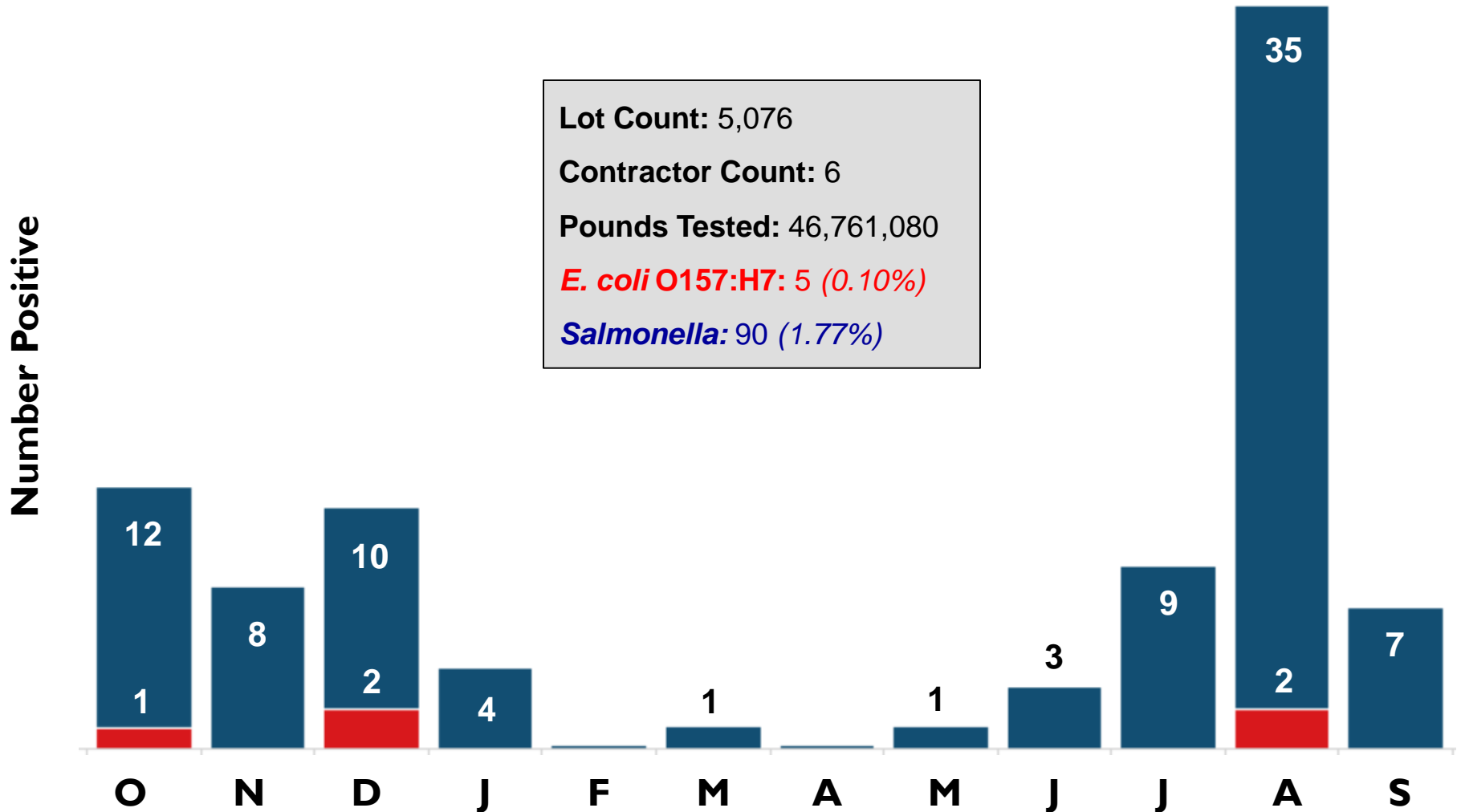


FY2017 – Finished Product: Indicator Organism Summary

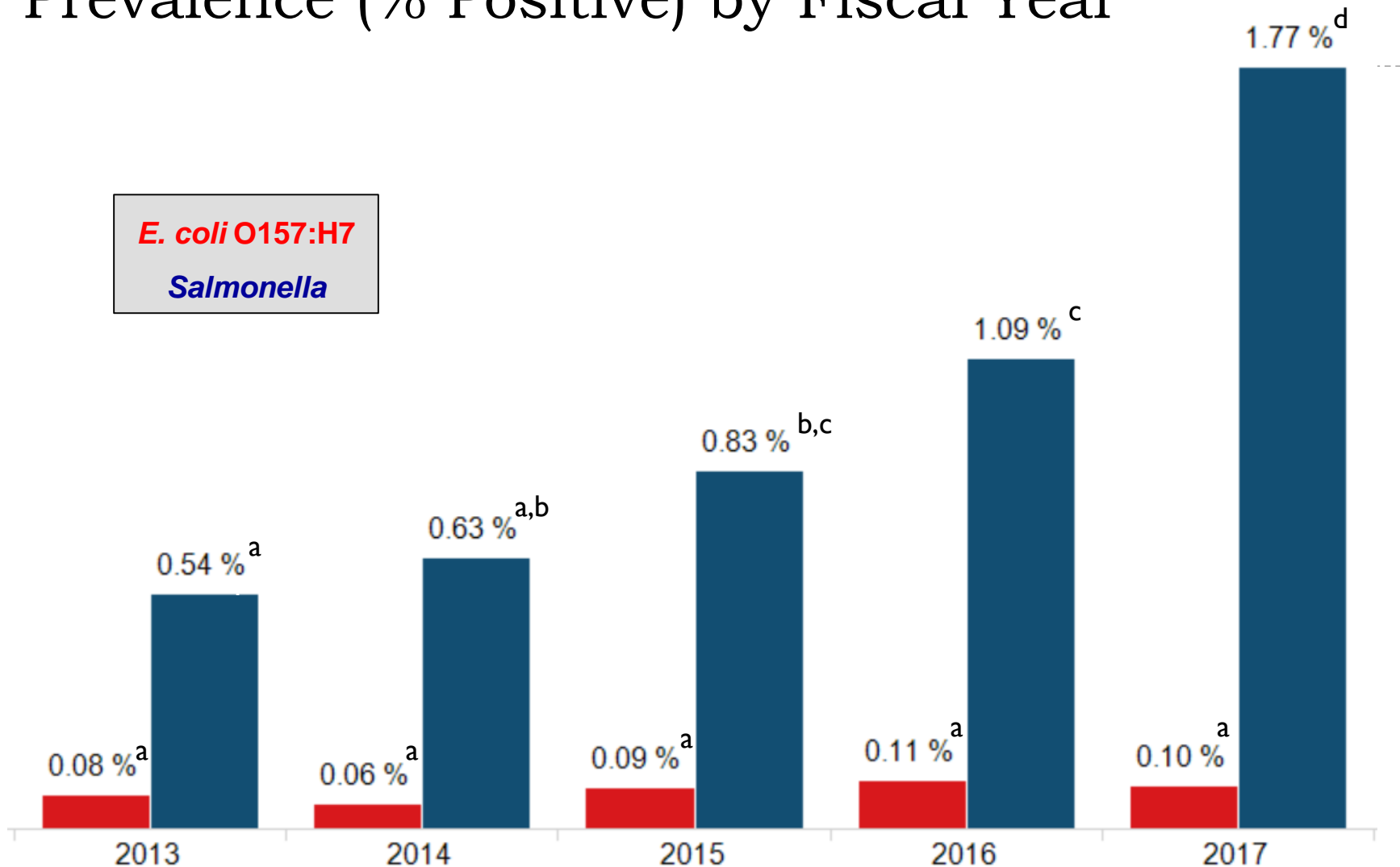
- ▶ 13,224 Sublots Produced by 9 Contractors
 - ▶ SPC
 - ▶ 7 Critical Limits Exceeded
 - ▶ Coliforms
 - ▶ 13 Critical Limits Exceeded
 - ▶ Generic *E. coli*
 - ▶ 5 Critical Limits Exceeded
 - ▶ 120,370,354 lbs. Produced



FY2017 – Finished Product: Pathogen Prevalence by Month



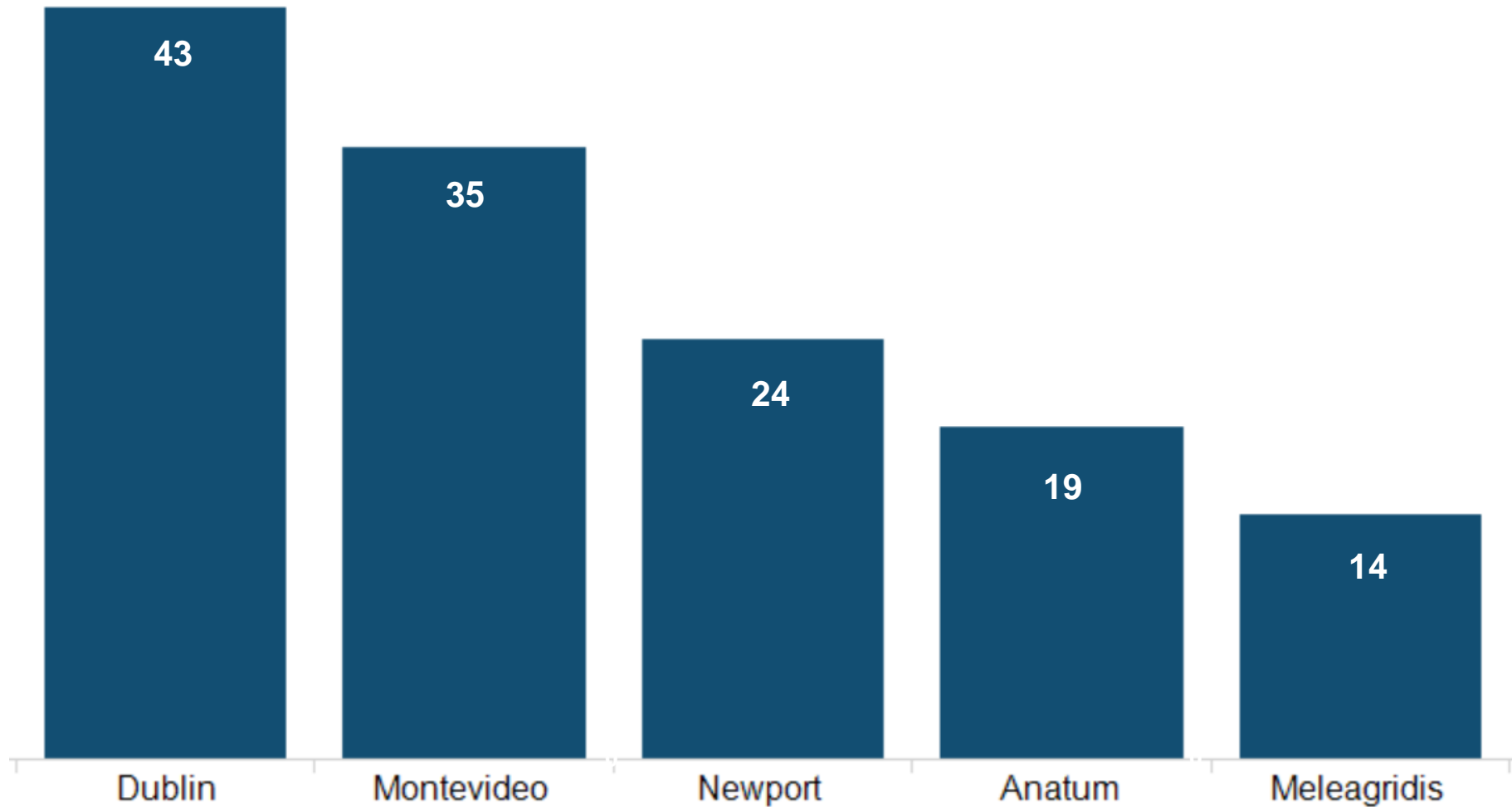
Finished Product: Comparison of Pathogen Prevalence (% Positive) by Fiscal Year



^{a-d} Values with different superscripts within the same column color are significantly different ($P < 0.05$).



FY2013 to 2017 – Finished Product: Top 5 *Salmonella* Serotypes



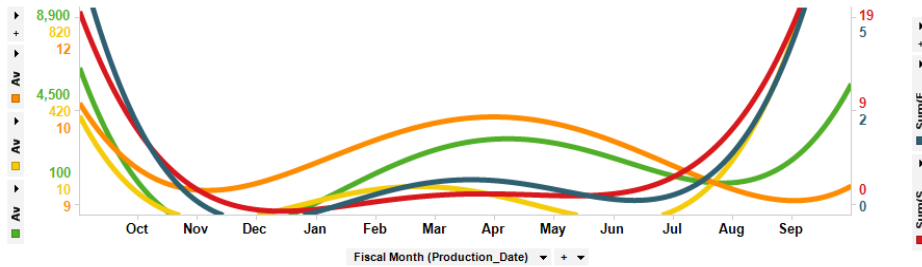


AMS-UMN Research Project

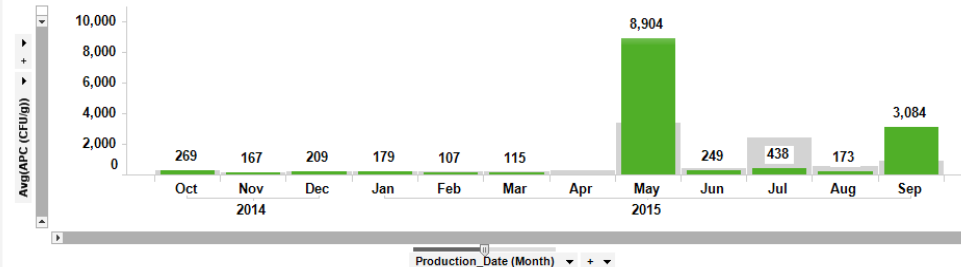
- ▶ Analysis of Microbiological Testing Data for Boneless Beef and Ground Beef Commodities Associated with Federal Nutrition Assistance Programs
- ▶ Scott Vial – PhD Candidate, School of Public Health
- ▶ Robust and Collaborative Analysis
- ▶ Blinded Data Set – 10/2013 to 7/2017
- ▶ Trends, Relationships and Modeling Components

Supplement 211 & 212 Vendor Performance Handouts

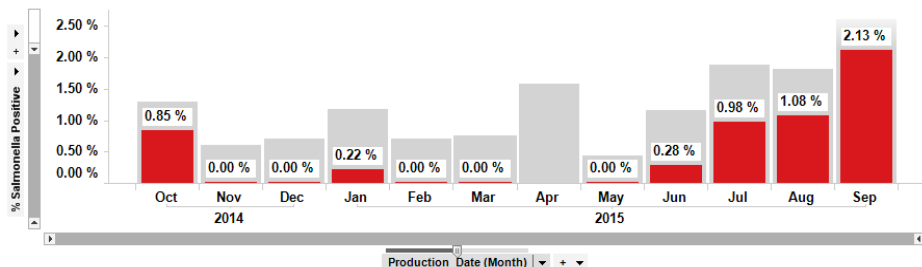
AMS Boneless Beef: Microbiological Trend Analysis



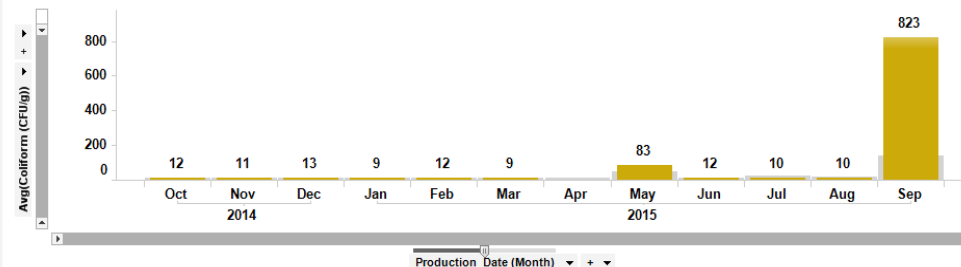
AMS Boneless Beef: APC (CFU/gram)



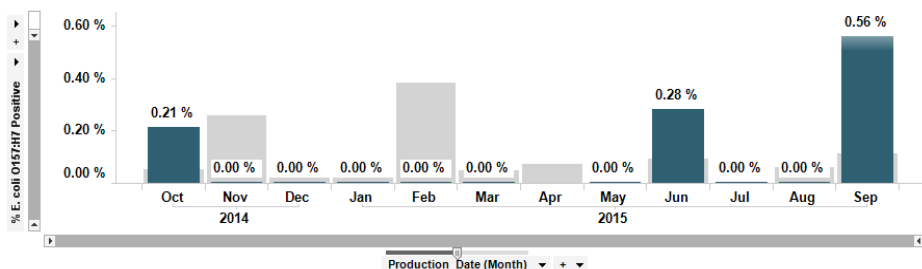
AMS Boneless Beef: % Salmonella Positive



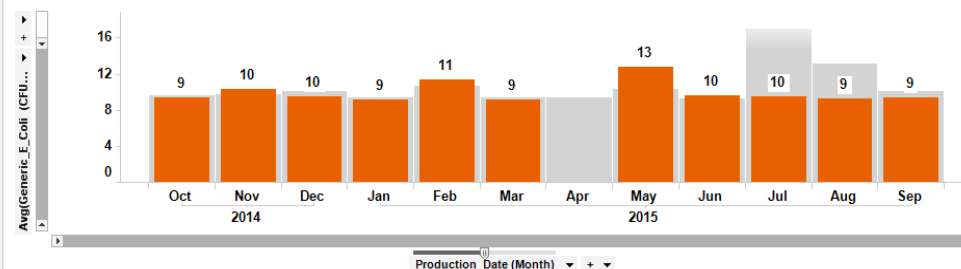
AMS Boneless Beef: Coliform (CFU/g)



AMS Boneless Beef: % E. coli O157:H7 Positive



AMS Boneless Beef: Gen. E. coli (CFU/g)



FY2017 – Animal Handling & Welfare Review

- ▶ **86 Audits Conducted by QAD**
 - ▶ 13% Increase from FY16
 - ▶ 2 For-Cause Audits Conducted
 - ▶ 38 Establishments
 - ▶ 3 Species
 - ▶ 7,760 Head
- ▶ **Results**
 - ▶ 2 Missed Stuns Observed (Beef)
 - ▶ No Sensible Animal on Rail Observed



<http://www.ams.usda.gov/resources/ahw>

Thank you....

Questions & Discussion



Agricultural Marketing Service
Livestock, Poultry and Seed Program
Food Safety and Commodity Specifications Division