SALMONELLA INTERVENTION STRATEGIES IN THE POULTRY INDUSTRY: A COMPARISON OF THE UNITED STATES AND THE EUROPEAN UNION

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Agency: USDA Food Safety & Inspection Service
Additional Site: iMOVES&FB Padova, Italy
Dates: February - July 2026

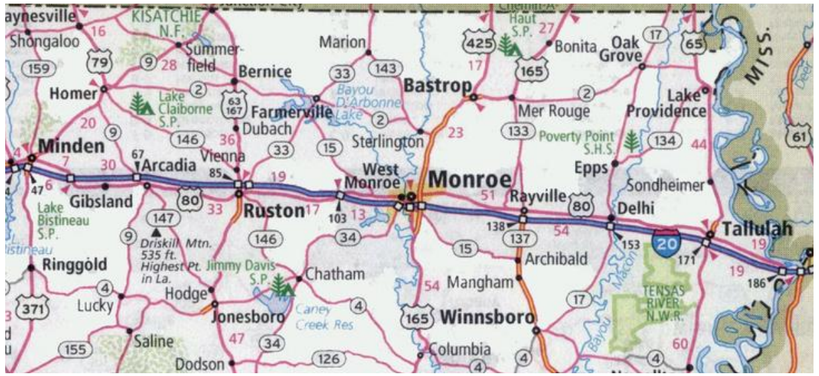
ABOUT ME

- Originally From the Texas Hill Country
- Currently Live in Northeast Louisiana
- BS in Animal Science with a minor in Leadership Studies
- MPH Candidate
- Public Health Interest: Food Safety and Biosecurity
- Consumer Safety Inspector, USDA Food Safety and Inspection Service



AGENCY AND ADDITIONAL SITE

USDA Food Safety and Inspection Service





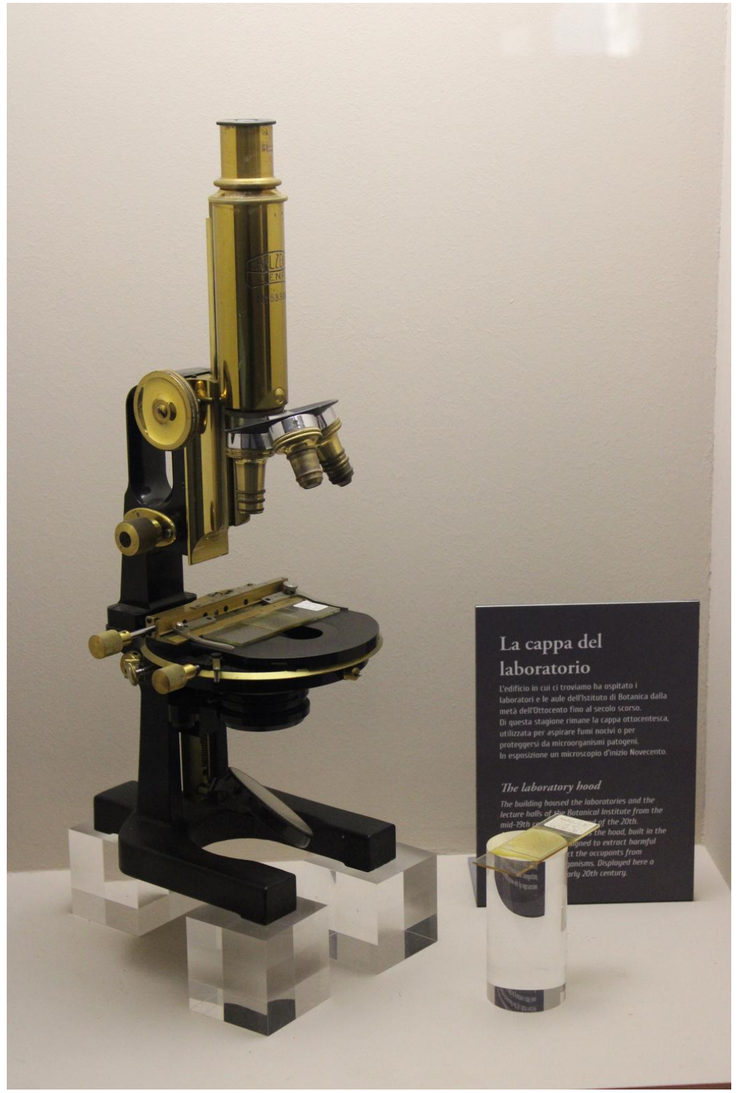
40TH FRONTIER FIELD TRIP







BACKGROUND: *SALMONELLA*

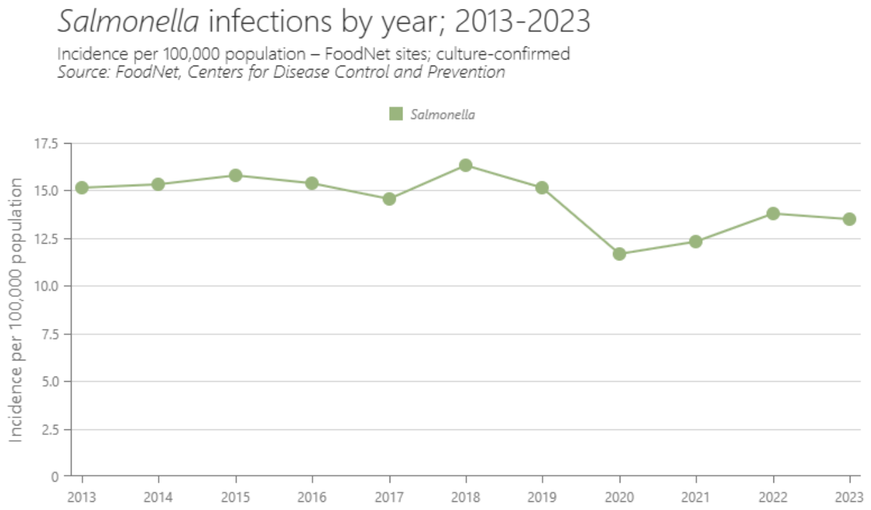


SALMONELLA IN THE POULTRY INDUSTRY

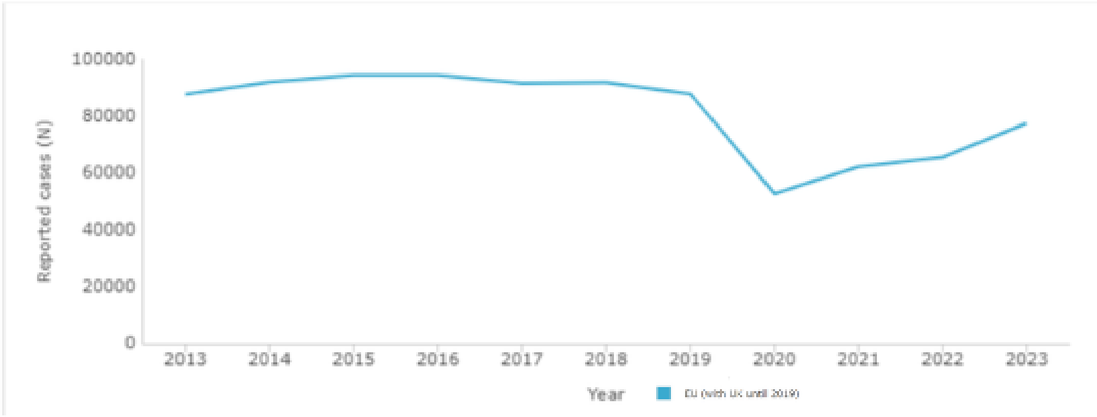




SALMONELLA'S PUBLIC HEALTH IMPACT



United States *Salmonella* Infections (2013-2023)



European Union *Salmonella* Infections (2013-2023)

APPLIED PRACTICAL EXPERIENCE

Overview

- Research *Salmonella* and poultry policies
- Attend the iMOVES&FB Program
- Compare the United States and European Union Food Safety Policies

Scope

- Explore the USDA *Salmonella* Performance Standards
- Experience Italian culture firsthand and evaluate their poultry industry
- Analyze the similarities and differences in the US and the EU Food Safety and *Salmonella* policies

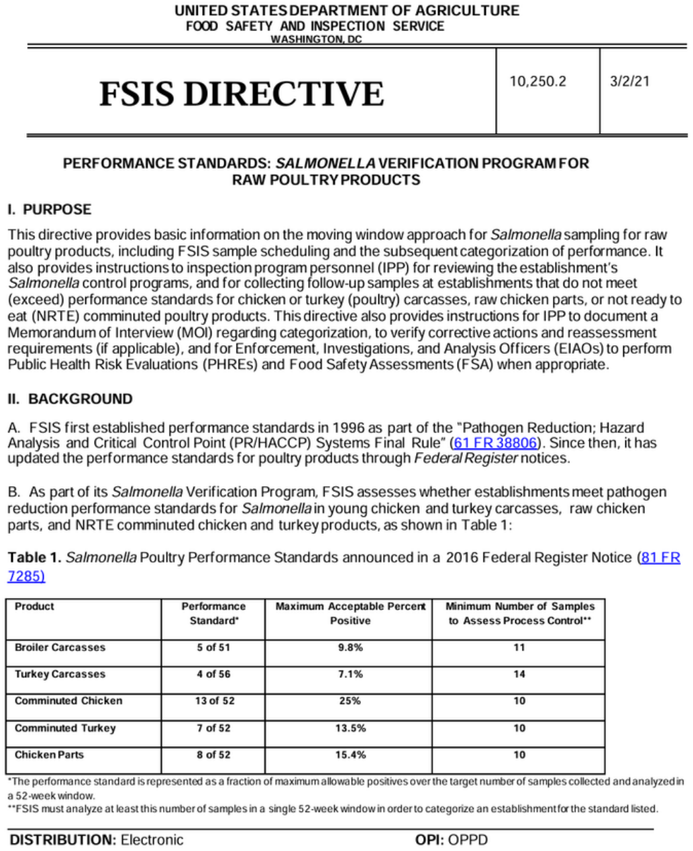
OBJECTIVES

Objective 1	Grow in resourcefulness regarding the information, including publications, available within the USDA-FSIS enterprise.
Objective 2	Refine public presentation skills.
Objective 3	Grow in international and global awareness.
Objective 4	Improve writing skills.
Objective 5	Aquire new skills in the area of infographics.

PRODUCT 1 : USDA *SALMONELLA* PERFORMANCE STANDARDS ORAL PRESENTATION

Product	Performance Standard*	Maximum Acceptable Percent Positive	Minimum Number of Samples to Assess Process Control**
Broiler Carcasses	5 of 51	9.8%	11
Turkey Carcasses	4 of 56	7.1%	14
Comminuted Chicken	13 of 52	25%	10
Comminuted Turkey	7 of 52	13.5%	10
Chicken Parts	8 of 52	15.4%	10

*The performance standard is represented as a fraction of maximum allowable positives over the target number of samples collected and analyzed in a 52-week window.
**FSIS must analyze at least this number of samples in a single 52-week window in order to categorize an establishment for the standard listed.



UNITED STATES DEPARTMENT OF AGRICULTURE
FOOD SAFETY AND INSPECTION SERVICE
WASHINGTON, DC

FSIS DIRECTIVE | 10,250.2 | 3/2/21

PERFORMANCE STANDARDS: *SALMONELLA* VERIFICATION PROGRAM FOR RAW POULTRY PRODUCTS

I. PURPOSE

This directive provides basic information on the moving window approach for *Salmonella* sampling for raw poultry products, including FSIS sample scheduling and the subsequent categorization of performance. It also provides instructions to inspection program personnel (IPP) for reviewing the establishment's *Salmonella* control programs, and for collecting follow-up samples at establishments that do not meet (exceed) performance standards for chicken or turkey (poultry) carcasses, raw chicken parts, or not ready to eat (NRTE) comminuted poultry products. This directive also provides instructions for IPP to document a Memorandum of Interview (MOI) regarding categorization, to verify corrective actions and reassessment requirements (if applicable), and for Enforcement, Investigations, and Analysis Officers (EIAOs) to perform Public Health Risk Evaluations (PHREs) and Food Safety Assessments (FSA) when appropriate.

II. BACKGROUND

A. FSIS first established performance standards in 1996 as part of the "Pathogen Reduction; Hazard Analysis and Critical Control Point (PR/HACCP) Systems Final Rule" (61 FR 38806). Since then, it has updated the performance standards for poultry products through *Federal Register* notices.

B. As part of its *Salmonella* Verification Program, FSIS assesses whether establishments meet pathogen reduction performance standards for *Salmonella* in young chicken and turkey carcasses, raw chicken parts, and NRTE comminuted chicken and turkey products, as shown in Table 1:

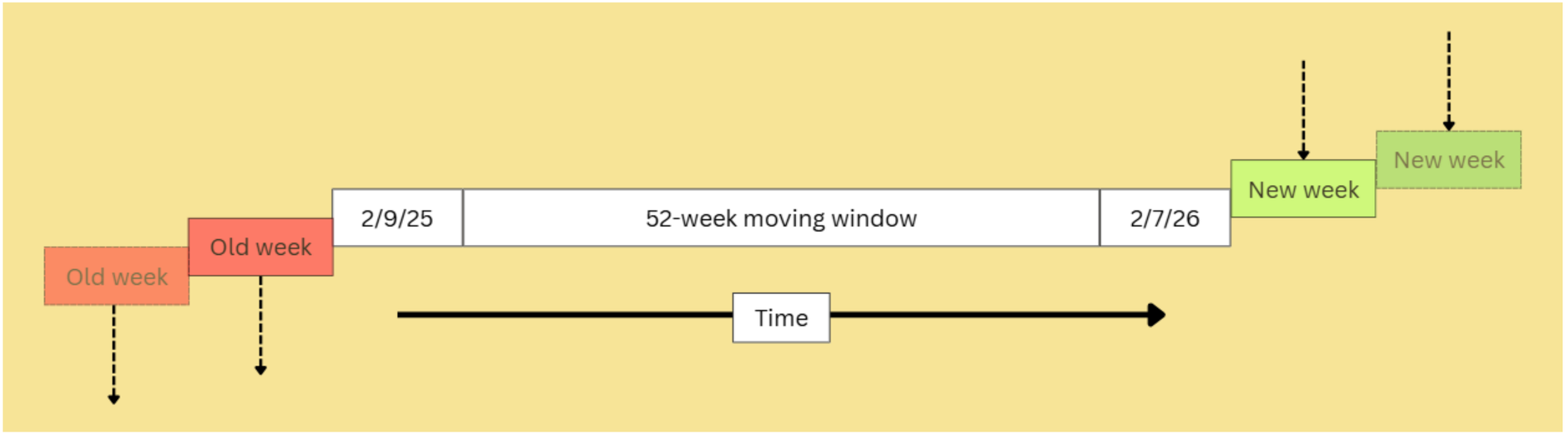
Table 1. *Salmonella* Poultry Performance Standards announced in a 2016 Federal Register Notice (81 FR 7285)

Product	Performance Standard*	Maximum Acceptable Percent Positive	Minimum Number of Samples to Assess Process Control**
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**FSIS must analyze at least this number of samples in a single 52-week window in order to categorize an establishment for the standard listed.

DISTRIBUTION: Electronic **OPI:** OPPD

52-WEEK MOVING WINDOW



SALMONELLA PERFORMANCE STANDARDS

Category 1

Consistent Process Control

Total positive samples below the standard AND total percent positive is less than 50%

Category 2

Variable Process Control

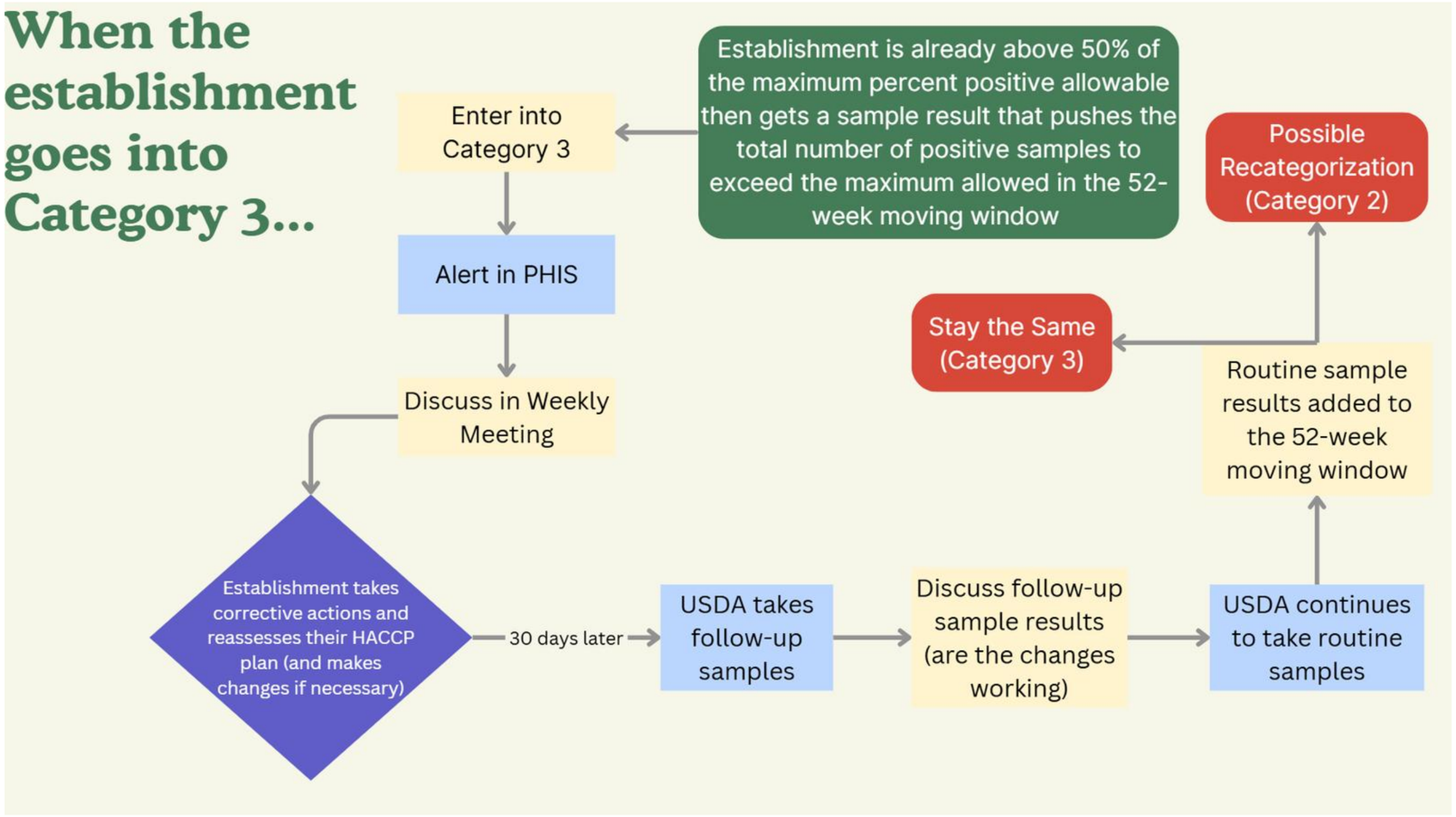
Total positive samples is below the standard BUT total percent positive is greater than 50%

Category 3

Highly Variable Process Control

Total positive samples is above the standard AND total percent positive is greater than 50%

FLOW CHART FROM PRODUCT1



COMPETENCIES ACHIEVED IN PRODUCT1



Foundational Competency #12



Foundational Competency #15



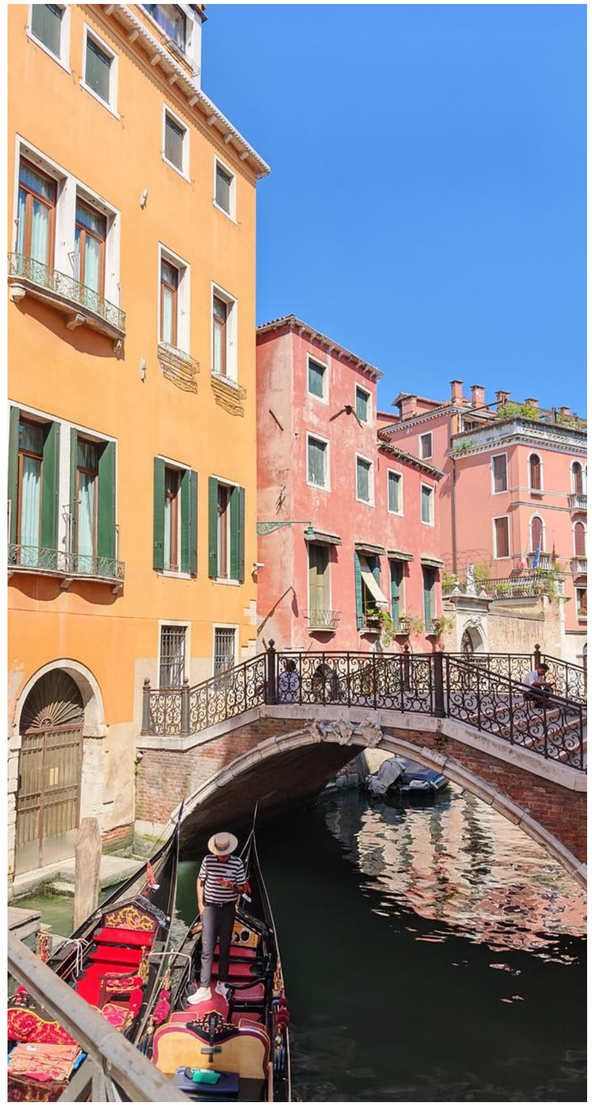
Foundational Competency #18

iMOVES&FB




MERCATO ITTICO CHIOGGIA


M/P NONNO GILDO CI3109 REGINA SNC DI ravagnan M. e Rigo S
& C Via Nicolò Zeno 60 30015 Chioggia
CODICE PRODUTTORE 3128
097 SOGLIOLE (Solea) SOL
Partita: ITA2458 23062026 1
Data cattura 23/06/2026 Peso da riscontrare alla vendita
Pescato : Mar Mediterraneo Alto Adriatico Zona FAO: n. 37.2.1 - IT - Reti da traino prodotto conservato con acqua, ghiaccio e sale
Cassetta Polistirolo PS06 Raccolta Plastica Velina Plastica LPDE04 Raccolta Plastica
Conservare da 0 C° a + 4 C°
ITA2458230620261

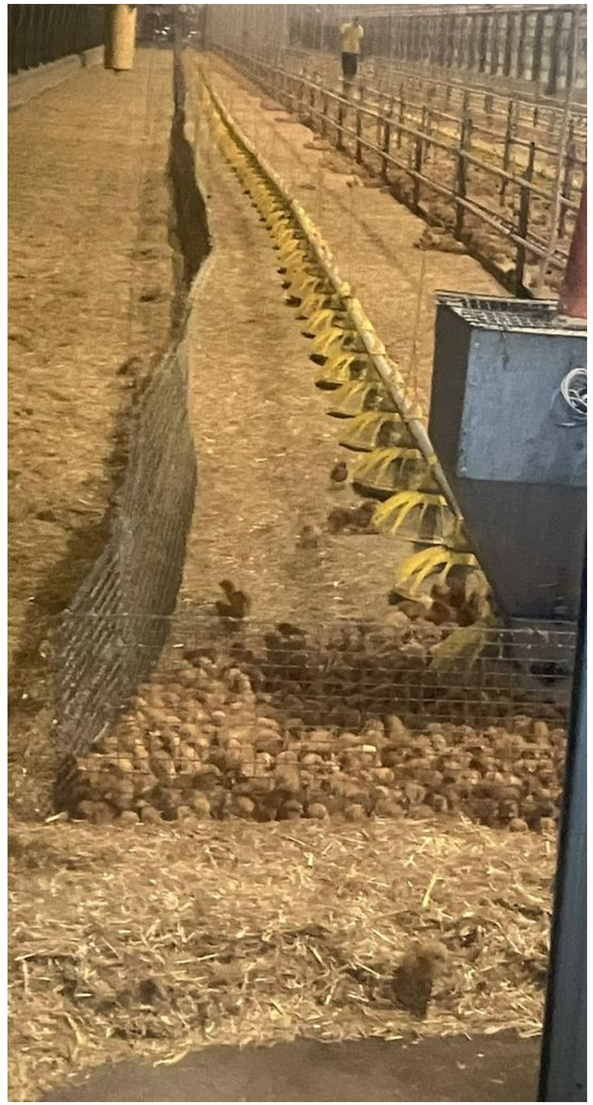


iMOVES&FB

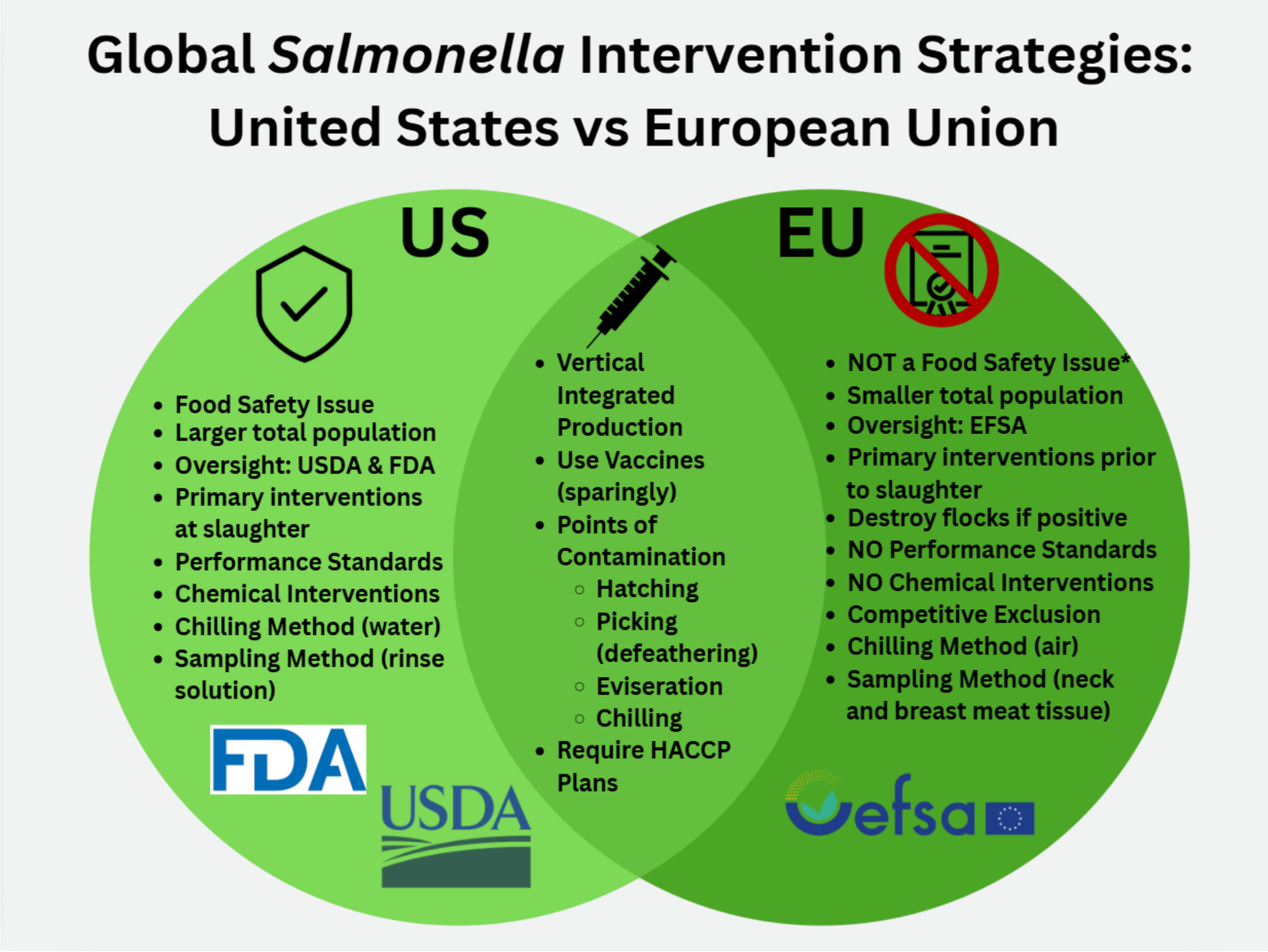








PRODUCT 2: US-EU POULTRY AND *SALMONELLA* FACT SHEET



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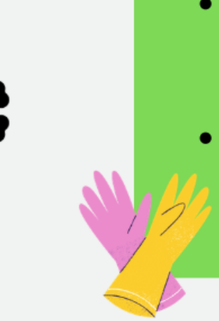
Major Differences

Interventions Implemented:

EU: Before Slaughter:
- Competitive Exclusion
- Destroying Positive Flocks

After Slaughter:
- US: Chemical Interventions
- Chilling Method (US: water vs EU: air)





*Food Safety Issue?

- US: Performance Standards to monitor process control
- EU: Seen as a sanitation indicator



Public Health Impact

Similar top 5 target serotypes (used for vaccine manufacturing)

United States		European Union	
• Enteritidis • Typhimurium • 1,4[5],12:i:-	• Heidleberg • Infantis	• Enteritidis • Typhimurium • Hadar	• Virchow • Infantis
1.35 million cases/year	Cost: $17 billion/year	91,000 cases/year	Cost: €3 billion/year

COMPETENCIES ACHIEVED IN PRODUCT2



Foundational
Competency #5



Foundational
Competency #8



Foundational
Competency #15

GROWTH AS A SCHOLAR

- United States and European Union food safety polices
- Global awareness in *Salmonella* interventions
- Gain new skills in infographics
- Stregthen written and oral communication



DISCUSSION

Limitations

- Imbalance of information (e.g. specific *Salmonella* standards or thresholds for finished European Union products)

Future Directions

- Products can be adjusted for a more knowledgeable audience; multiple dispersal options
- More research to ensure *Salmonella* policies are efficient and effective

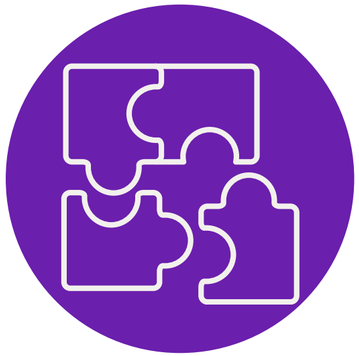
COMPETENCIES ACHIEVED OVERALL



Foundational
Competency #5

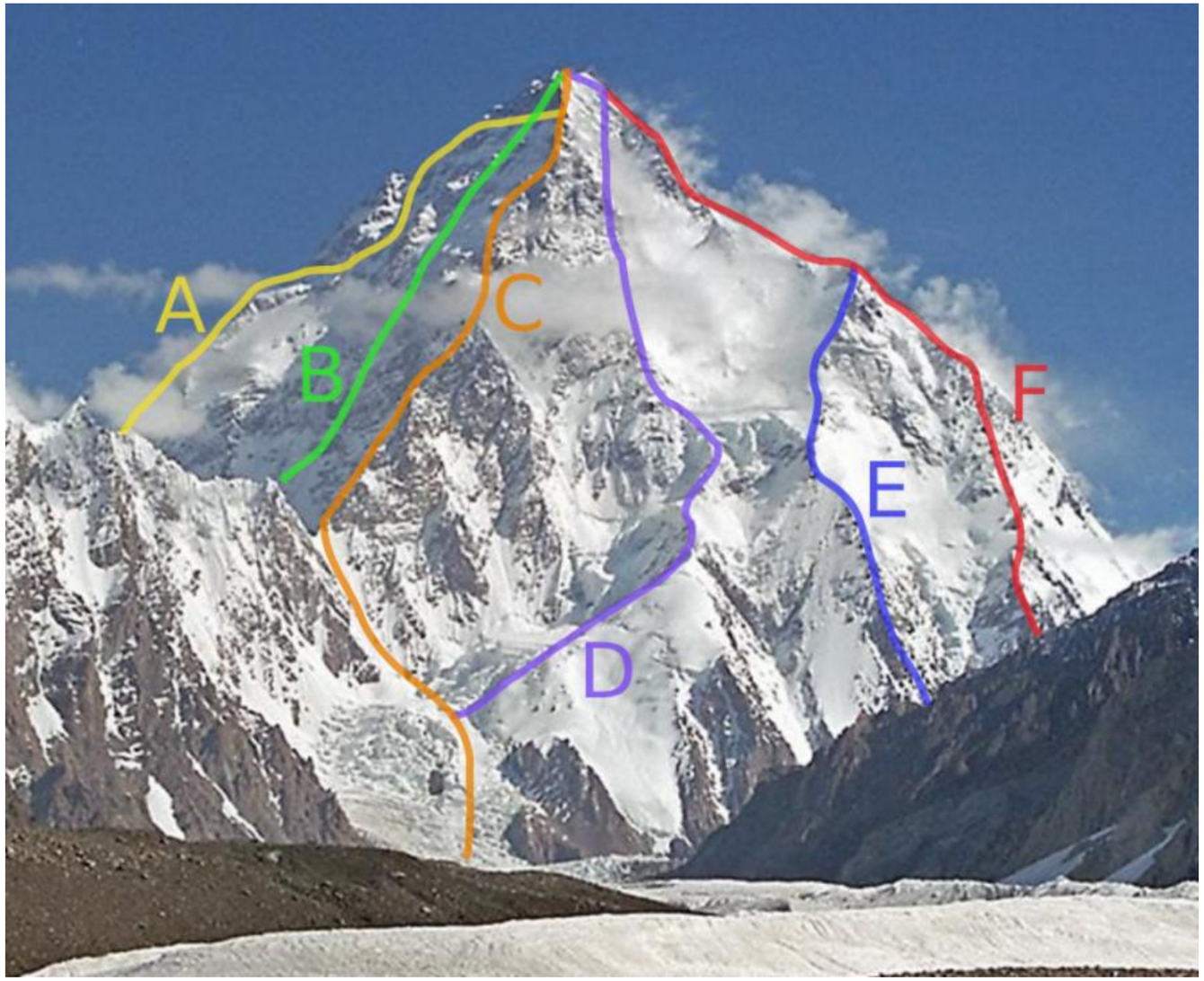


Foundational
Competency #8



FSB
Competency #4

KEY TAKEAWAYS



ACKNOWLEDGEMENTS

FSIS Staff:

Dr. Christopher Gorencel: District Veterinary Medical Officer

Dr. Tasha Thomas: Frontline Supervisor

FSIS Continuing Education Program

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Dr. Abbey Nutsch: Committee Member

Dr. Margaret Kincaid: Committee Member

Dr. T. G. Nagaraja: Committee Member Proxy

Dr. Ellyn Mulcahy: MPH Program Director

Plern Kongsamut: MPH Program Staff

University of Padova Staff:

Dr. Marco Patruno: Director of iMOVES&FB Program



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QUESTIONS & FURTHER DISCUSSION