



Canadian Food  
Inspection Agency

Agence canadienne  
d'inspection des aliments

## Canadian Food Inspection Agency



### **Our vision:**

To excel as a science-based regulator, trusted and respected by Canadians and the international community.

### **Our mission:**

Dedicated to safeguarding food, animals and plants, which enhances the health and well-being of Canada's people, environment and economy.

# ***Federal Programs : Salmonella in Poultry***

***Dr. Teresa N. Cereno***

***National Salmonella Enteritidis Control Symposium***

***Vancouver, BC***

***December 1, 2010***

**Canada**

# Presentation Outline

- Current program
- Results of testing/monitoring
- Limitations, gaps and challenges
  - A. Hatchery program
  - B. Egg program
  - C. Meat program
  - D. Feed Program



# Hatchery program



Courtesy: Petersime



# Hatchery program

## Current program

- Legislative authority –Health of Animals Regulations and Hatchery Regulations under the Health of Animals Act
- Section 79 of the Regulations
  - Covers Pullorum (*Salmonella Pullorum*) and Fowl Typhoid (*Salmonella Gallinarum*) which are foreign animal diseases
    - Both diseases are federally reportable and have been eradicated from Canada
    - Blood testing of primary breeder birds
    - Approved hatchery supply flock policy (AHSF) in force in the province where flock is located

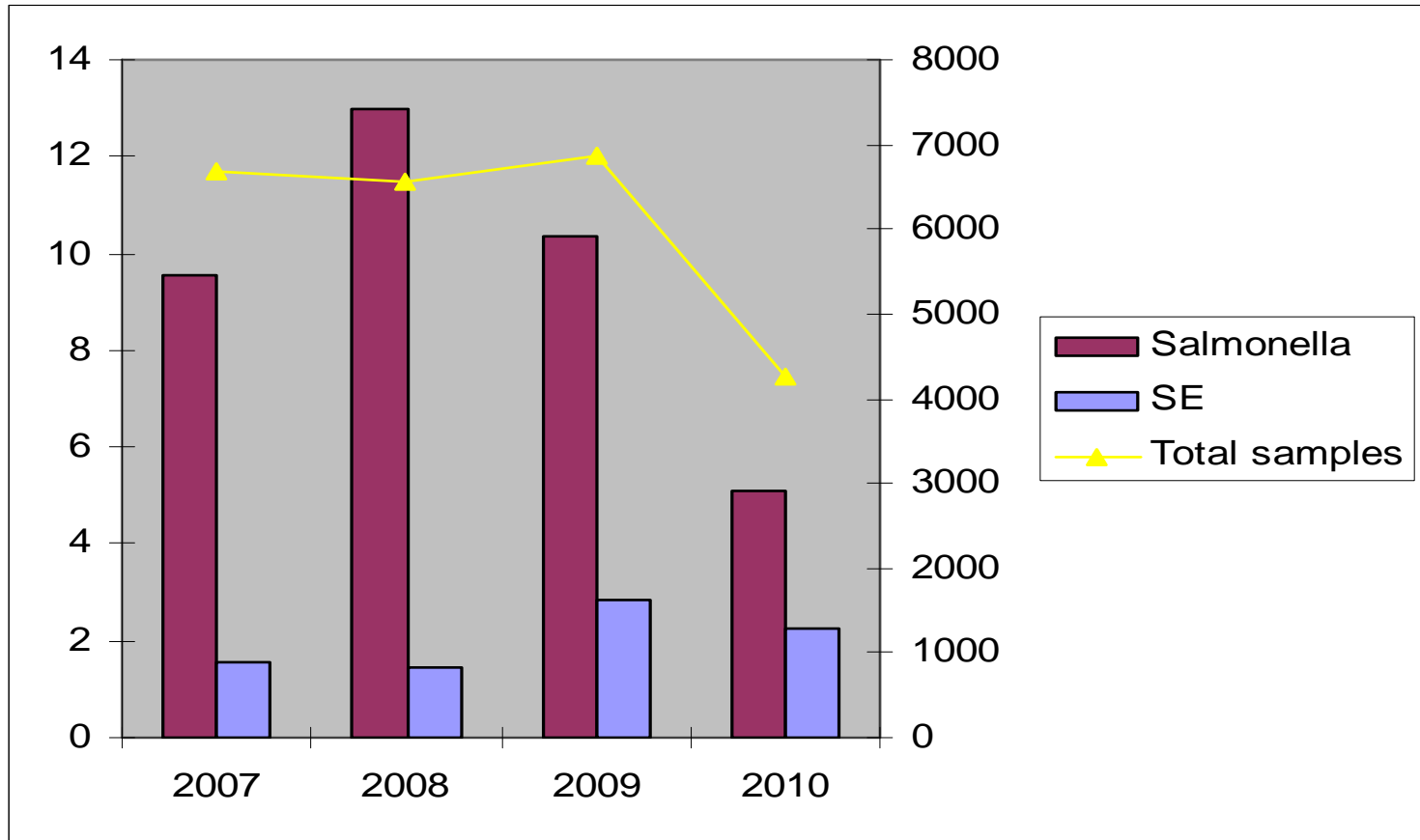
# Hatchery program

## Current program

- There are 99 health monitored hatcheries
  - Inspected 2-4 x a year depending on classification
  - 15 HACCP-recognized
  - 3 vaccine hatcheries
  - 3 research hatcheries
- Submits fluff samples every six weeks for salmonella monitoring
- SE response policy
  - Re-sampling
  - Hatchery environmental testing
  - Etc.

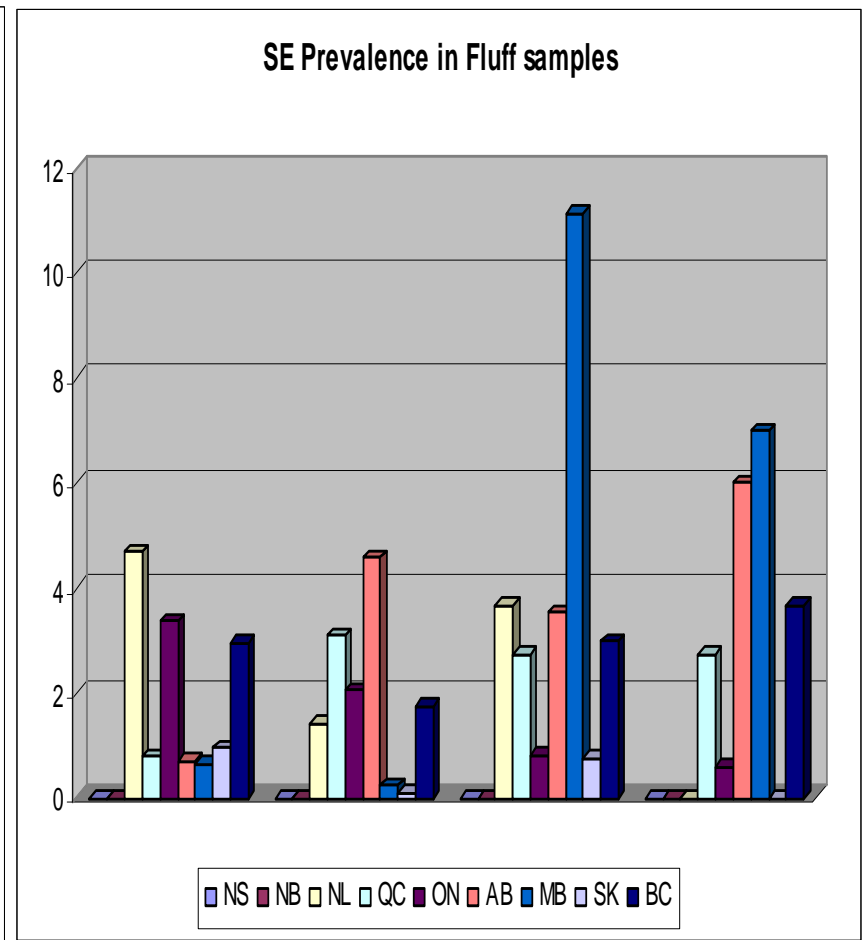
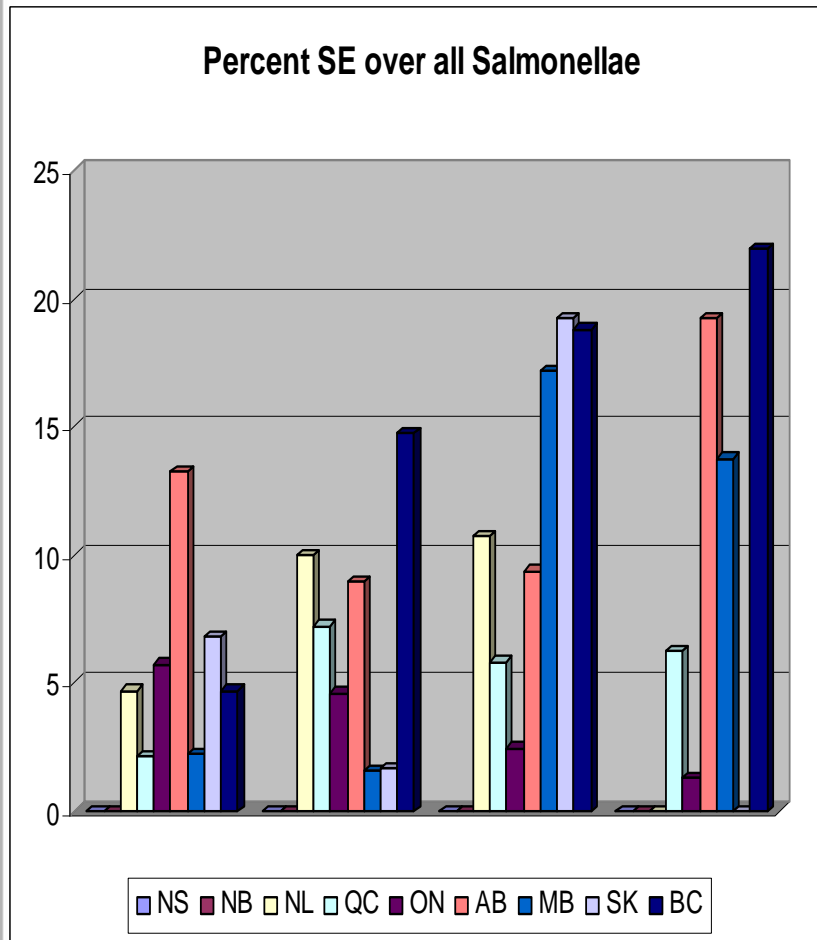
# Hatchery program

## Results of testing/monitoring



# Hatchery program

## Results of testing/monitoring



# Hatchery program

## Limitations, gaps and challenges

- Hatchery Regulations – need a re-write
  - Modernize to firmly address domestic and international standards
    - Import and export requirements
  - Amalgamate regulations
  - Outcome-based regulations
  - Strengthen AHSF – for breeders only; testing on farm level
  - Creation of an authorized salmonella laboratory network
  - Address *Salmonella* Enteritidis and Notifiable Avian Influenza
  - Other emerging zoonotics
- Update hatchery inspection Manual of Procedures



# Hatchery program

## Limitations, gaps, and challenges

- The biggest challenge - slow process of updating a Regulation
- The biggest gap – coverage of commercial layer, broiler, and turkey flocks
- There is a need to have a well-defined communications protocol between the human health and poultry sectors in federal, provincial, and industry levels when a human illness due to zoonotic disease is reported

# Egg Program



Courtesy: Rondeel eggs



# Egg Program

## Current program

- Egg Regulations and Processed Egg Regulations under the Canada Agricultural Products Act
- All grading stations are federally registered
  - Total of 255
  - 45% are small – grading less than 50 boxes (15 dozen/box) per week
  - Regular sanitation and product inspection by the CFIA
    - Frequency is based on history of compliance and volume throughput
- Environmental sampling conducted by the CFIA 2x a year in all grading stations and 4x a year in all breaking stations

# Egg Program

## Current program

- Clean cracked eggs are moved to federally registered processed egg station for breaking and pasteurization
- Since 1995 – 5 provinces permit sale of cracked eggs within the province
  - Packed in federal grading stations
  - Sold to wholesalers, bakeries, and corner grocery stores
- Imports only from USA grading establishments that are environmentally tested 2x a year and demonstrates freedom from Salmonella



# Egg Program

## Results of testing/monitoring

- All shipments of table eggs from the USA are sampled for SE
  - No positive results in 2009-2010
  - SE has been detected in the past
  - If found, the USDA is notified and the supplier is removed from the list of eligible grading station
- Environmental sampling in 2009-2010
  - 3.5% positive for Salmonella spp.
  - 0.2% positive for SE

# Egg Program

## Limitations, gaps, and challenges

- Industry and not federal regulations/program
  - Most eggs originate from industry-regulated egg producer
  - Environmental testing at least once during the life cycle
- Ungraded eggs are sold at farm gate by producers
  - Have not been washed/sanitized
  - If washed/sanitized – conditions are not monitored
  - No quality inspection
- Proliferation of urban farming



# Meat Program – Abattoir



Courtesy: johnsmeatco.ie



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# Meat Program - Abattoir

## Current program

- Meat Inspection Regulations under the Meat Inspection Act
- Modernized Poultry Inspection Program (MPIP)
  - Highly based on the USDA-FSIS program
- Salmonella is monitored from fresh carcasses post-chill tank (industry)
  - One representative carcass per day for 51 consecutive kill days per year
- Current maximum tolerance level - 12 Salmonella positive specimens





# Meat Program - Abattoir

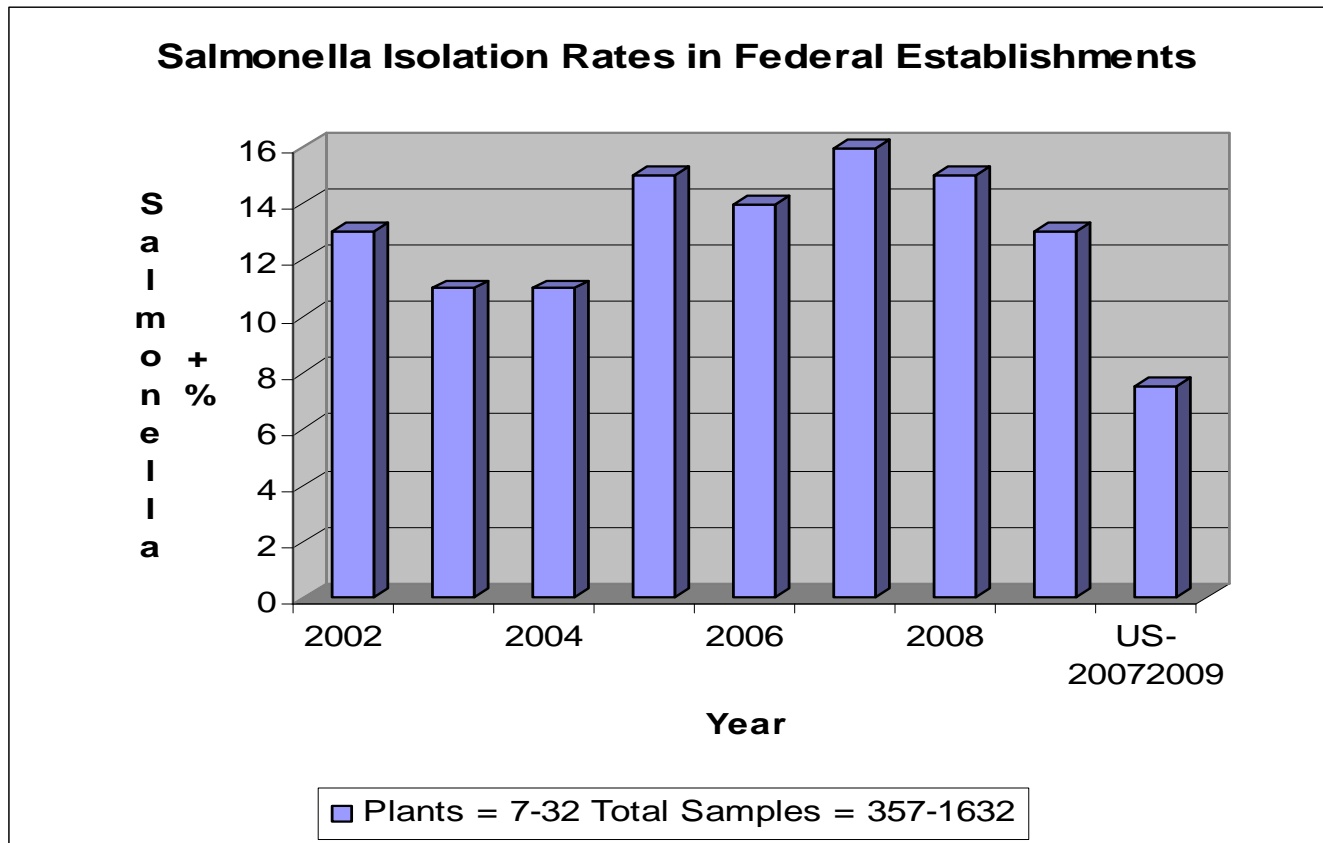
## Current program

- New (2010) USDA performance standard – 5 Salmonella positive specimens
- Establishment category:

	<b>Old Program</b>	<b>New Program</b>
Category 1	6 or less/51	2 or less/51
Category 2	7-12/51	3-5/51
Category 3	12 or more/51	5 or more/51

# Meat Program – Abattoir

## Results of testing/monitoring



Source: CFIA, J. Thatcher, August 2010



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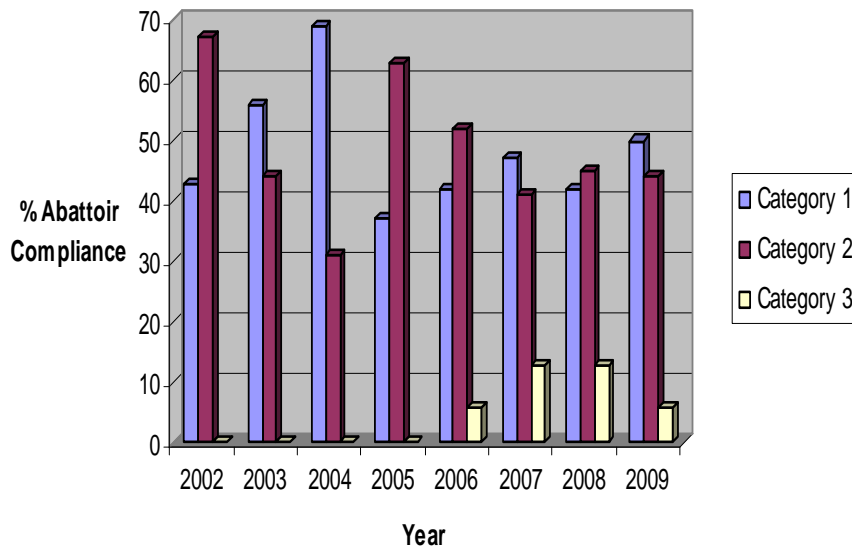
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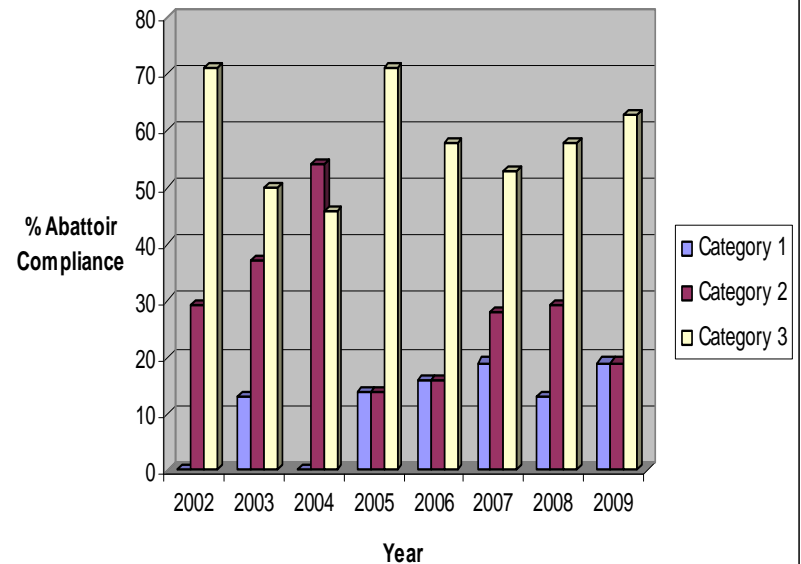
# Meat Program – Abattoir

## Results of testing/monitoring

**Current USDA Salmonella Standard**



**New USDA Salmonella Standard**



Source: CFIA, J. Thatcher, August 2010

# Meat Program – Abattoir

## Limitations, gaps, and challenges

- Salmonella isolates are not serotyped from the Federal testing program – no data on SE level
  - If Plants are serotyping, data are confidential
- No specific initiative detached from the USDA-FSIS program
- Federal Plants are aware of the new USDA standard

# Meat Program – Ready-to-Eat



Courtesy: laaloosh.com



Courtesy: Piller's



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# Meat Program – Ready-to-eat (RTE)

## Current program

- Meat Inspection Regulations under the Meat Inspection Act
- Ready-to-eat (RTE) is defined as domestic and imported poultry and other meats including fermented and cured products
- Each establishment is sampled 6x (2010)
  - Line swab with product (5 sample units equal to 1250 g) sampling
  - Samples analyzed for *E. coli* count, *S. aureus* count, *Salmonella spp.*, and *Listeria monocytogenes*

# Meat Program – Ready-to-Eat

## Results of testing/monitoring

- Tests for domestic and imported RTE meat
- 2008 – 1/85 samples unsatisfactory (positive for *Salmonella spp.*)
- 2009 – 133 samples all satisfactory
- 2010 – 74 samples all satisfactory
- SE has not been detected in RTE products tested by the CFIA since 2008

# Feed Program





# Feed Program

## Salmonella Monitoring

- Feed can be a route of exposure for *Salmonella* in the Feed/Food chain
- Control of *Salmonella* in feed manufacturing facilities is very important.
- Because of the impact of *Salmonella* on human and animal health, the CFIA has a livestock feeds monitoring program for domestic and imported feeds.

# Feed Program

## Salmonella Monitoring

- Approximately 14 % of all feeds sampled since 1989 tested positive for *Salmonella*.
- Some feeds are targeted preferentially under this program so this level does not represent a feed industry average.
- This program is used for compliance verification rather than end product monitoring so the number of samples collected by the CFIA each year is relatively low.
- Serotypes of *Salmonella* species that commonly cause infection in humans and animals are not commonly found in feed.

# Feed Program

## Salmonella Monitoring

- When a feed sample tests positive, the facility must prepare a corrective action plan to address the contaminated feed and how to prevent future contamination.
- Recurring *Salmonella* contamination or detection of a *Salmonella* serotype of concern may result in placement of the feed/facility on a more intensive, targeted sampling program.

# Acknowledgment

- Thanks to all my Hatchery Program colleagues who provided the data for the fluff test results
- Thanks to the following CFIA colleagues for their inputs into this presentation:
  - Dr. Surinder Saini
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  - Dr. Gary Thiessen
  - Mr. Neil Vary

# THANK YOU

**“...If you are going to solve a big problem today, you need to do it with much more horizontal collaboration.”**

Rick Klausner

The World is Flat by Thomas Friedman



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