

Salmonella Enteritidis Control Programs

Nancy deWith, DVM MSc
Veterinary Epidemiologist
BC Ministry of Agriculture

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- How the report came about
- Description of the report
- Report contents
- Report highlights

Outline

***Salmonella* Enteritidis Control Programs in the Canadian Poultry Industry**

Prepared by:

Ian Keery

Prepared for:

**Surveillance and Epidemiology Advisory Committee
September 2010**

- Western Canadian SE meetings
 - Calgary in 2008
 - Abbotsford in 2010
- CCVO ask the SEAC to investigate the issue of SE in poultry
 - Increasing concern in all jurisdictions
 - Apparent association between human cases and poultry products

Report Origins

- SEAC suggested:
 - ID current programs Canada + international
 - Strategies for control be directed to poultry industry as a whole, including imports
 - National meeting to identify issues around SE, and possible mitigation strategies
 - National poultry expert group be formed
- Report is the outcome of #1
- Meeting answers #3

Report Origins

- Authored by Ian Keery
 - Veterinary student at WCVM
 - Background in agro-ecology
- Report focus on the poultry industry
 - Government programs
 - Industry initiatives

Description of the Report

- Report contents
 - Introduction – background on SE
 - National Protocols – table egg, meat, processor and government
 - Provincial Protocols
 - International Programs – Australia, EU, Denmark, Finland, Sweden, UK, USA

Report Contents

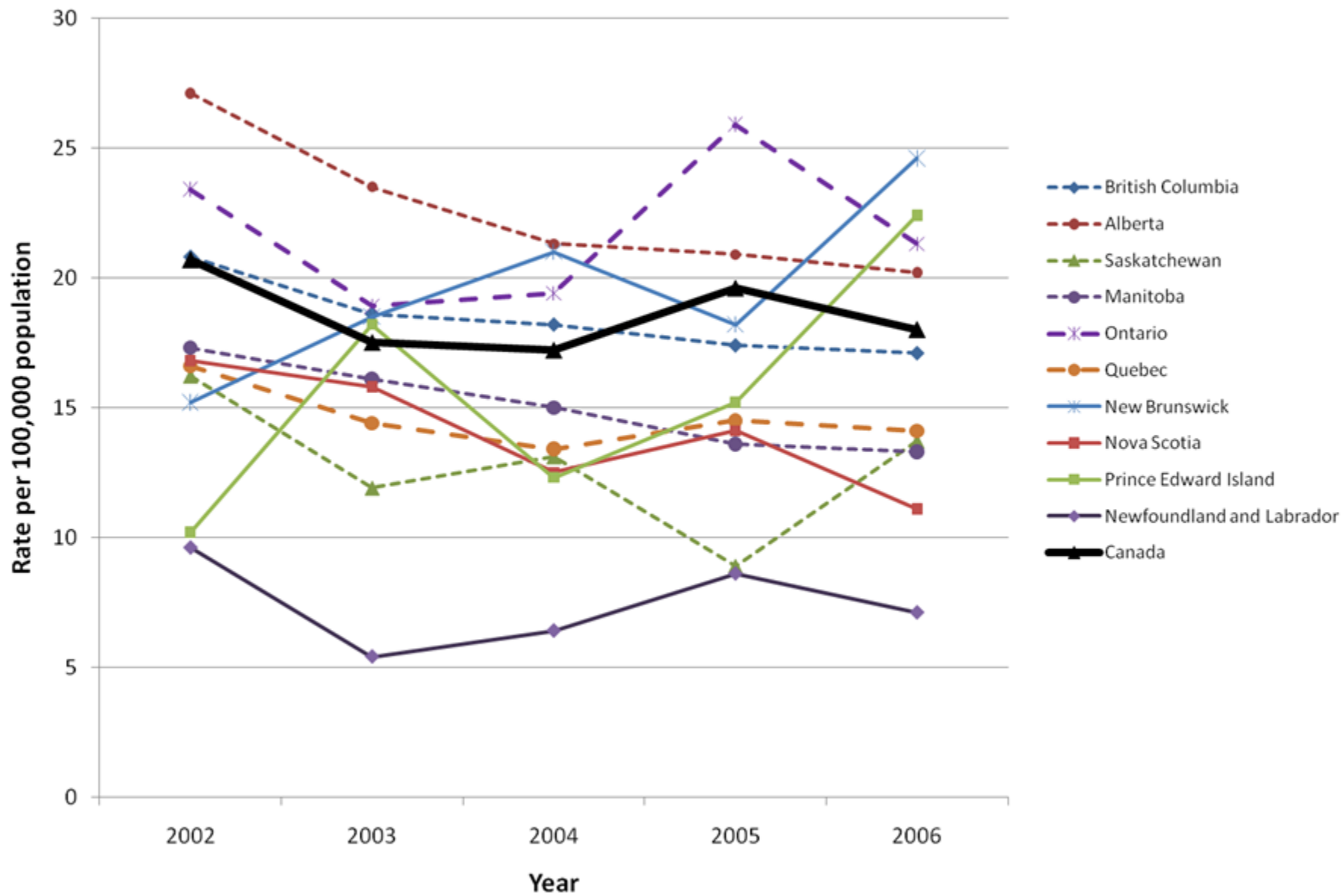
- Provinces & Territories
 - Unique
 - Distinctive populations
 - Different poultry production levels
 - Individual programs wrt biosecurity, SE testing & response
 - Individual legislation wrt SE
 - Varying human salmonellosis rates

Report Highlights

Table 6. Summary of Provincial Programs

| | Programs | Unique Features | Legislation |
|------|---|--|--|
| BC | <ul style="list-style-type: none"> - Safe, Safer, Safest™ - CHEQ™ - SC-SC™, SC-SCP, SE program - BC Poultry Biosecurity Program | <ul style="list-style-type: none"> - Mandatory industry led biosecurity program for all poultry producers | <ul style="list-style-type: none"> - No specific reference to SE in poultry |
| AB | <ul style="list-style-type: none"> - Safe, Safer, Safest™ - CHEQ™ - SC-SC™, SC-SCP, SE program - Emergency response plan | <ul style="list-style-type: none"> - Emergency response plan for all poultry producers in case of a disease outbreak - Follow up protocols to SE positive broiler breeding flocks | <ul style="list-style-type: none"> - SE in poultry is reportable |
| SK | <ul style="list-style-type: none"> - Safe, Safer, Safest™ - CHEQ™ - SC-SC™, SC-SCP, SE program | <ul style="list-style-type: none"> - None | <ul style="list-style-type: none"> - No specific reference to SE in poultry |
| MB | <ul style="list-style-type: none"> - Safe, Safer, Safest™ - CHEQ™ - SC-SC™, SC-SCP, SE program | <ul style="list-style-type: none"> - Manitoba Egg Farmers have egg quality program | <ul style="list-style-type: none"> - SE in poultry is a reportable disease |
| ON | <ul style="list-style-type: none"> - Safe, Safer, Safest™ - CHEQ™ - SC-SC™, SC-SCP, SE program - OHSFP | <ul style="list-style-type: none"> - EFO require vaccination of replacement pullets going to farms previously positive for SE and all SE positive pullet flocks to be slaughtered - Voluntary supply flock testing program with follow up protocols including treatment and depopulation | <ul style="list-style-type: none"> - No specific reference to SE in poultry |
| QB | <ul style="list-style-type: none"> - Safe, Safer, Safest™ - CHEQ™ - SC-SC™, SC-SCP, SE program - COSPOC | <ul style="list-style-type: none"> - More frequent testing of table egg layer and pullet flocks than EFC - Voluntary compensation program for table egg pullet and breeder flocks - Required implementation of enhanced biosecurity protocols after +SE test | <ul style="list-style-type: none"> - Regulations re: SE control and testing protocols in table egg operations |
| ATL | <ul style="list-style-type: none"> - Safe, Safer, Safest™ - SC-SC™, SC-SCP, SE program | <ul style="list-style-type: none"> - None | <ul style="list-style-type: none"> - No specific reference to SE in poultry |
| TERR | <ul style="list-style-type: none"> - SC-SC™, SE program | <ul style="list-style-type: none"> - Only one registered egg producer (NWT) and no registered broiler producers | <ul style="list-style-type: none"> - No specific reference to SE in poultry |

Rate of *Salmonella* isolations per 100,000 population 2002-2006

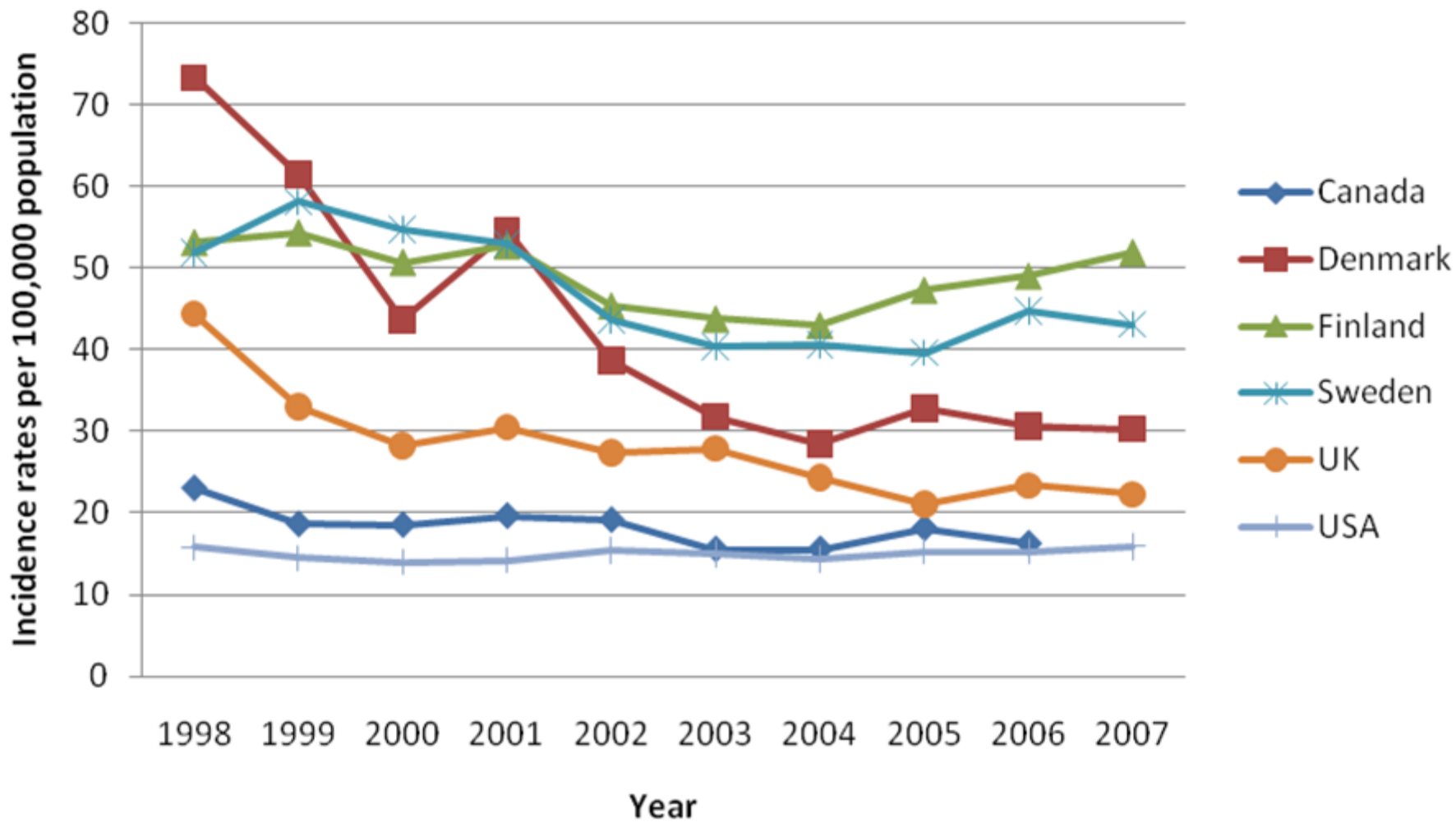




25.7%

Report Highlights

Rate of Salmonella Isolations per 100,000 Population from 1998 to 2007 in European and North American Countries





Australia

- SE is reportable
- Federal gov't biosecurity program
- Chicken meat ind. biosecurity program
- Table egg quality assurance program
 - Biosecurity
 - Food safety
 - Animal welfare
 - Environmental sustainability

Report Highlights – Australia

- State SE programs (NSW and Victoria)
 - Began 1996
 - Different levels – SE free or SE monitored
 - Table egg and broiler breeder
 - Voluntary – high participation rates
 - Costs borne by producers

Report Highlights – Australia



No SE in
poultry

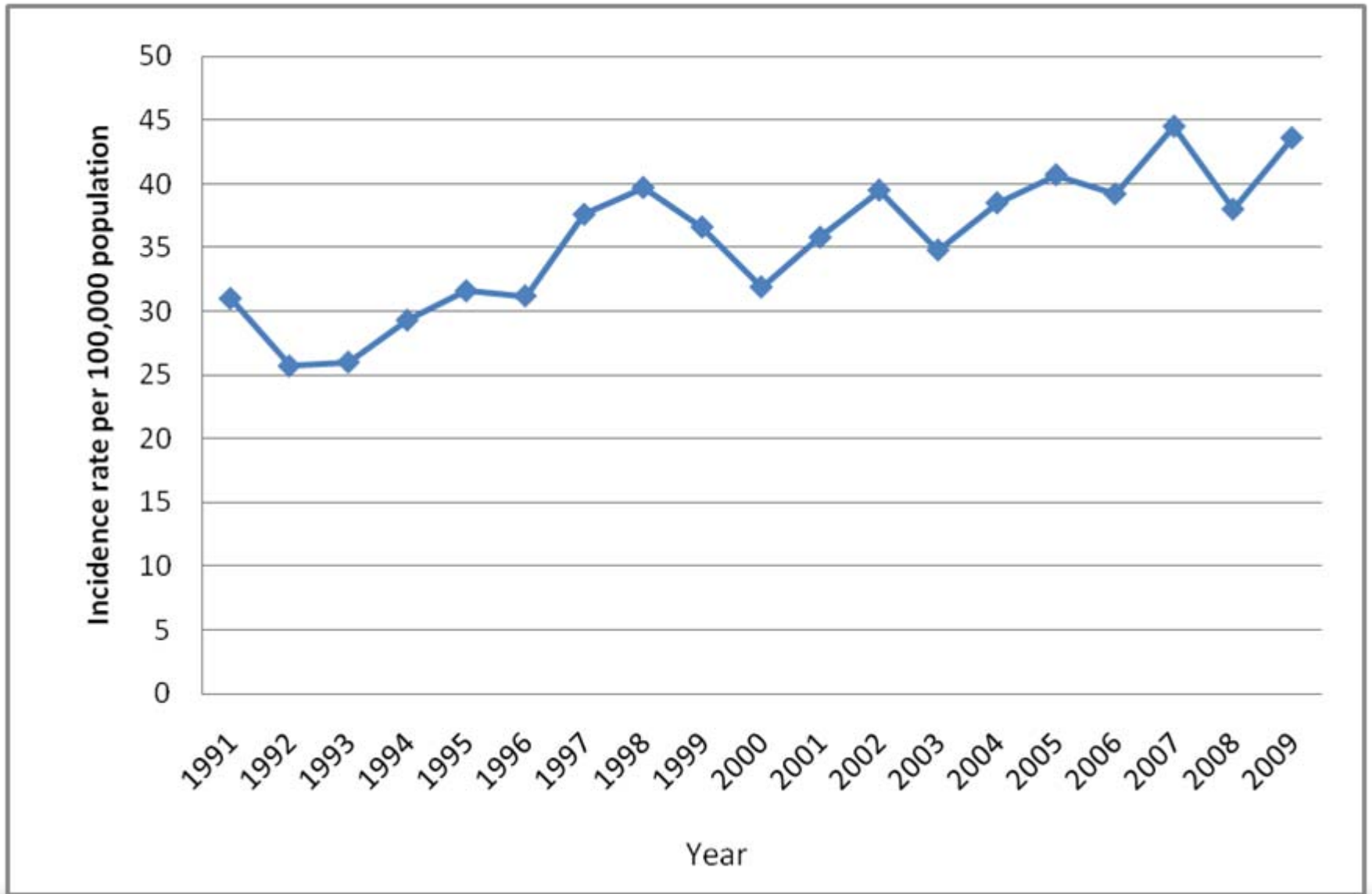
Report Highlights – Australia



Reason:

**To compete in
international markets**

Figure 5. Human salmonellosis rates per 100,000 population in Australia from 1991 to 2009 (NNDSS, 2010)



4.2%



92%
travel

Report Highlights – Australia



United Kingdom

Industry programs (voluntary)

- Table eggs
 - British Lion Quality
 - Breeder to layer pullet to egg packers
 - 85% participation
 - Includes traceability
- Chicken meat (broiler)
 - Assured Food Standards (Red Tractor Brand)
 - Extensive program (animal welfare, traceability, staff, biosecurity, slaughter, transport, vermin control)
 - 95% participation

Report Highlights – UK

European Union

- EU Regulations 2160/2003 and 1168/2006
- Regulations set out enhanced monitoring and controls for *Salmonella* in livestock and laying hens
- By February 2008 all Member States will be required to have a NCP

Report Highlights – UK

Government Program

- Original program in 1989
 - Breeding flocks
 - Table eggs
- National Control Programme (2007)
 - *Salmonella* of public health significance (SE, ST)
 - Based on acceptable levels (1%)
 - Breeder flocks
 - Table eggs (10% reduction from previous year, and starting with 8% prevalence)
 - Broilers
 - Turkeys

Report Highlights – UK

- Program consists of testing, with consequences
 - Breeder flocks – destroyed
 - Table eggs – eggs heat treated
 - Broilers – special slaughter
 - Turkey – special slaughter
- Producers pay for program

Report Highlights – UK

Impact Assessment (2007)

To determine the cost of the NCP in **LAYERS**

Cost ~ £7.2 million/year x 4 years
(\$16.38 million)

- Eggs for heat treatment and flocks destroyed

Societal savings ~ £15.4 million/year x 4 years
(\$35.05 million)

- Lost working hours and loss of life
- Assume 20% cases of human salmonellosis due to eggs

Report Highlights – UK

52.5

%

2007

39.7

%

2008

Report Highlights – UK

Figure 11. Laboratory reports of Salmonella in people in the United Kingdom from 1983 to 2008; taken from DEFRA, 2010b

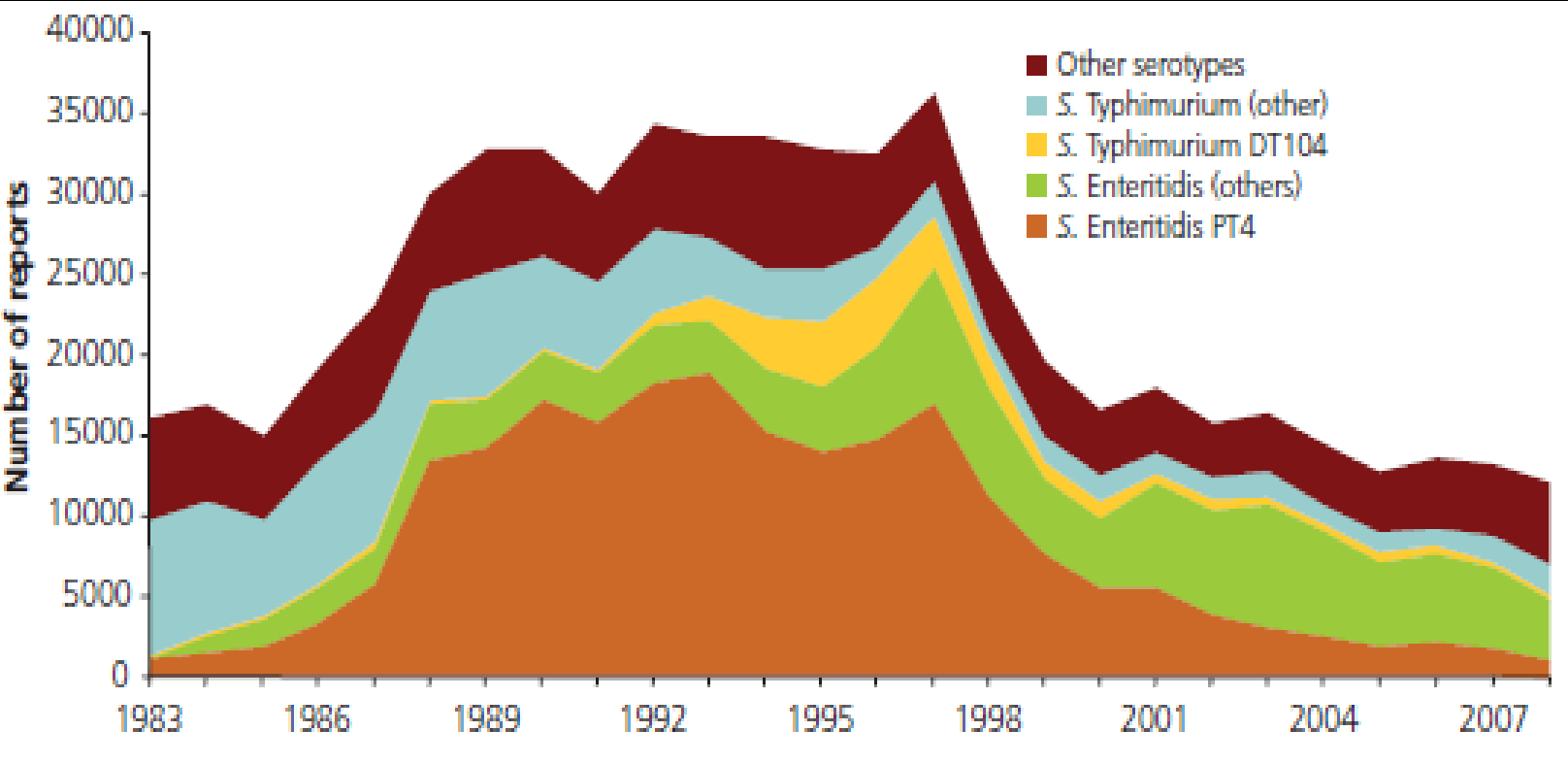
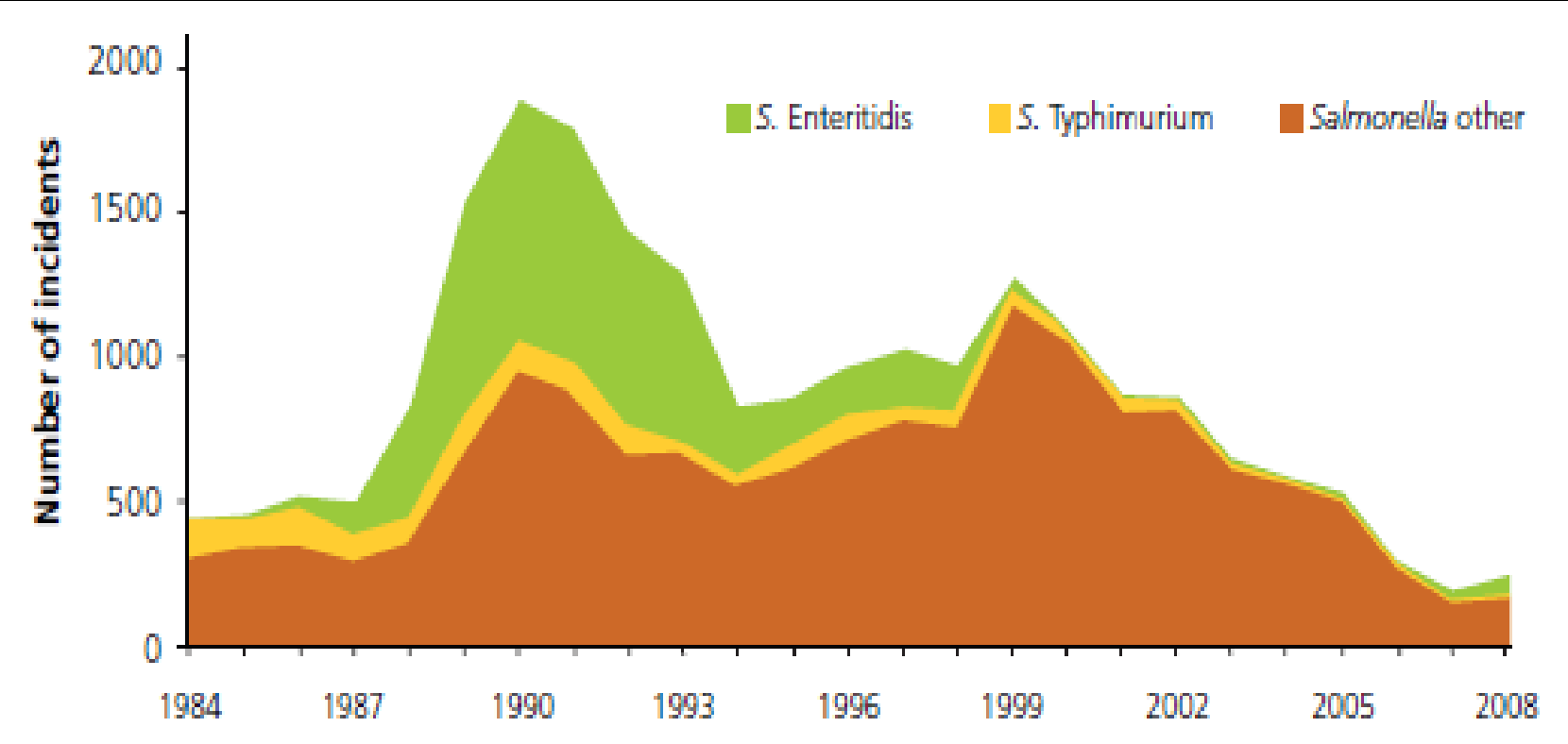


Figure 12. Salmonella in domestic chickens in Great Britain (England, Scotland and Wales) between 1984 and 2008; taken from DEFRA, 2010b



“Salmonellosis rates in humans do not necessarily match the intensity of the SE control programs in chickens that are in place in different countries. North American nations have consistently had low salmonellosis rates, but do not have all-encompassing SE control programs in the poultry industry; while European nations with some of the most extensive SE control programs, such as Sweden and Finland, continue to have high human salmonellosis rates.”

- Reportable (animal and human)
 - Report out by serovars
- Surveillance (animal and human)
 - Baseline and change in time
- Human
 - Travel vs. domestically acquired
- Cost-benefit analysis

Final Thoughts

To access Ian's report:

<http://www.agf.gov.bc.ca/lhmr/index.htm>

and select "Publications and Reports"

Or e-mail me:

Nancy.deWith@gov.bc.ca