

A WHO Global Salm-Surv Retrospective Study Examining *Salmonella* Serotypes in South America, 2000: Dominance of *Salmonella* Serotype Enteritidis.

South America *Salmonella* Working Group

World Health Organization

Centers for Diseases Control, USA

Danish Veterinary Institute, Denmark

Institute Pasteur , France

Venezuela

- Instituto Nacional de Higiene “Rafael Rangel”

Colombia

- Instituto Nacional de Salud
- Inst. de Vig. de Medicamentos y Alimentos (INVIMA)
- Instituto Colombiano Agropecuario (ICA)

Peru

- Inst. Nac. de Salud – Centro Nac. Lab. Salud Publica. Div de Bacteriología – Lab Enteropatogenos
- Inst. Nac. de Salud -Centro Nac. de Alimentación y Nutrición

Bolivia

- Instituto Nacional de Lab. de Salud (INLASA)
- Lab. de Investigación y Diagnóstico Veterinario (LIDIVET)

Chile

- Instituto de Salud Pública de Chile
- Servicio Agrícola Ganadero

Brasil

- Inst.Oswaldo Cruz - Centro de Referencia Nac. de Colera y Enteroinfecciones Bacterianas (FIOCRUZ – RJ)

Paraguay

- Laboratorio Central de Salud Pública

Uruguay

- Centro Nacional de *Salmonella*, Inst. de Higiene
- Min.de Ganaderia, Agricultura y Pesca (DILAVE)

Argentina

- Inst. Nac. de Enfermedades Infecciosas (INEI) - ANLIS “Dr.Carlos G. Malbran”
- Inst. Nac. de Producción de Biológicos (INPB)- ANLIS “Dr. C G. Malbran”
- Instituto Nacional de Alimentos (INAL)
- Servicio Nac. de Sanidad Animal (SENASA)



BACKGROUND

WHO Global Salm-Surv was created:

- ✓ To strengthen national and regional laboratory capacity.
- ✓ To foster collaboration between microbiologists and epidemiologists working in human health, veterinary, and food-related disciplines
- ✓ To exchange information and communicate *Salmonella* surveillance data

Key components:

- ✓ External Quality Assurance System coordinated by DVI and Institute Pasteur
- ✓ Regional training courses and reference testing.
- ✓ Country databank, electronic discussion group and Web Site

Organizers

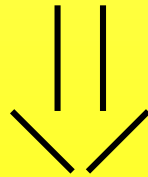
WHO, CDC, DVI and Pasteur Institute

Participants

Countries' *Salmonella* Reference Laboratories

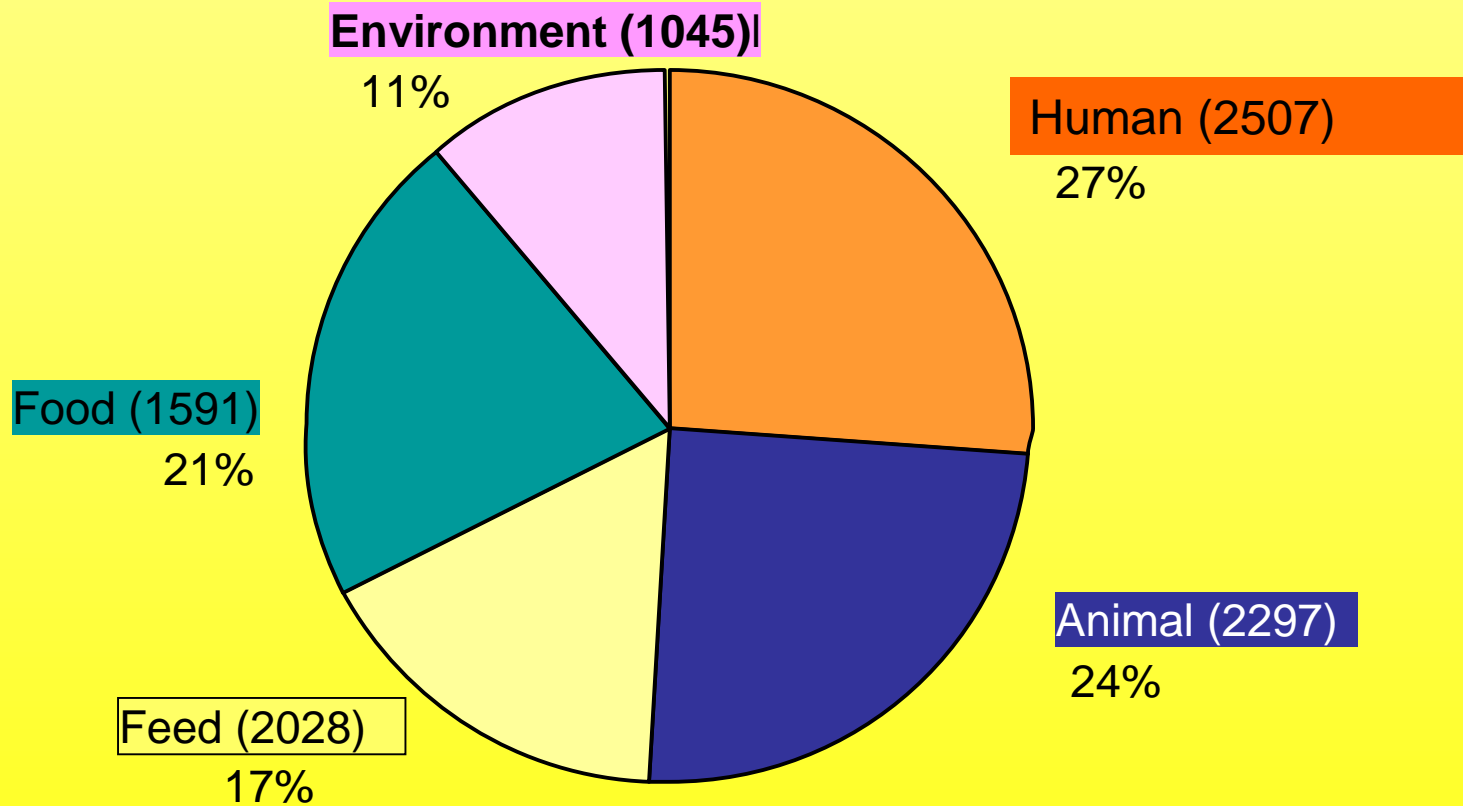
MATERIAL AND METHODS

- The member laboratories received isolates for serotyping from the countries' lab network.
- *Salmonella* O and H antisera available in each country were used.
- Representatives from national *Salmonella* reference labs attended a Level-2 GSS training course in September 2001
- *Salmonella* surveillance data were reported in country forms designed by the participants of the South America Working Group



A retrospective study of the distribution and rank of *Salmonella* serotypes during 2000 was done.

Source of *Salmonella* strains

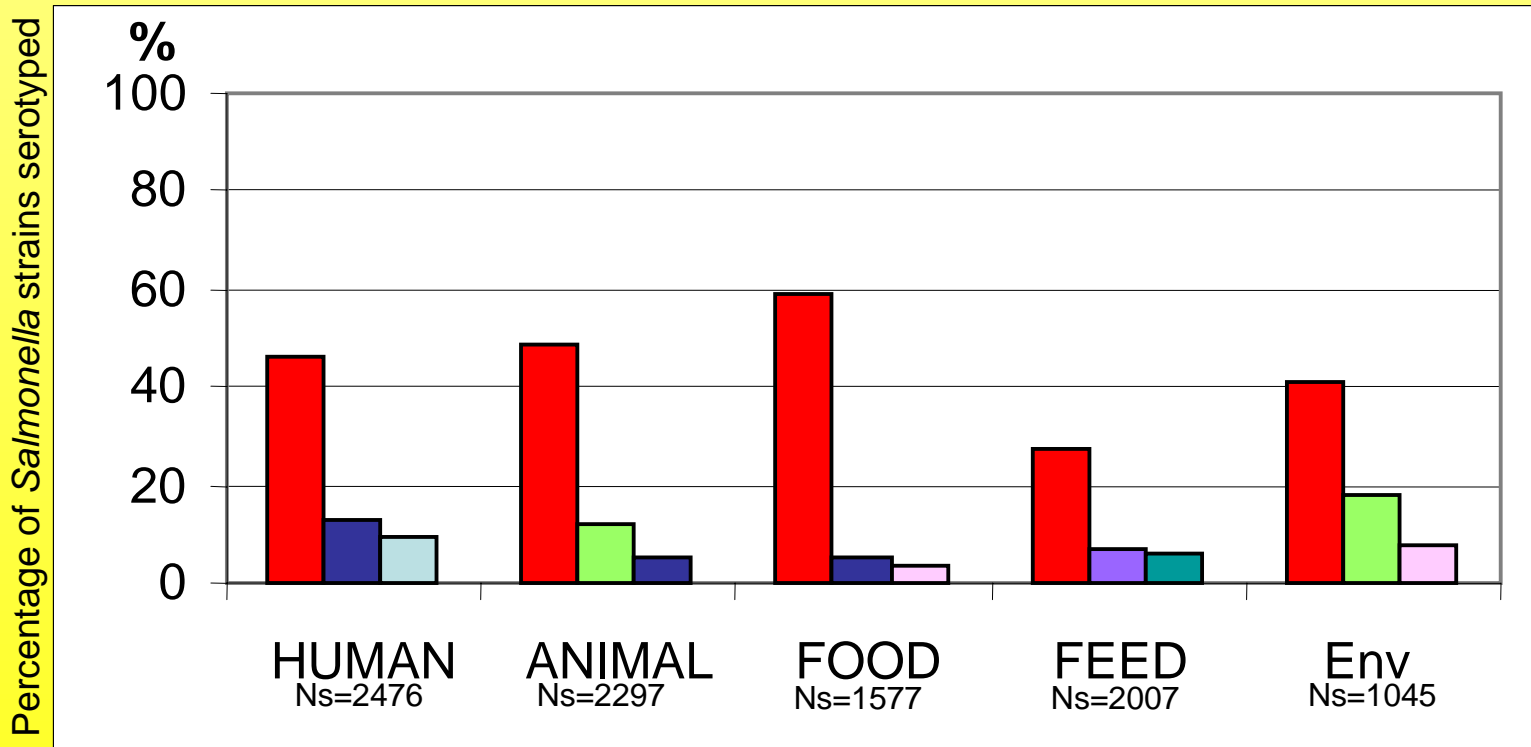


() total number of *Salmonella* received

N (total) = 9468 (100%)

Ns (serotyped) = 9402 (99%)

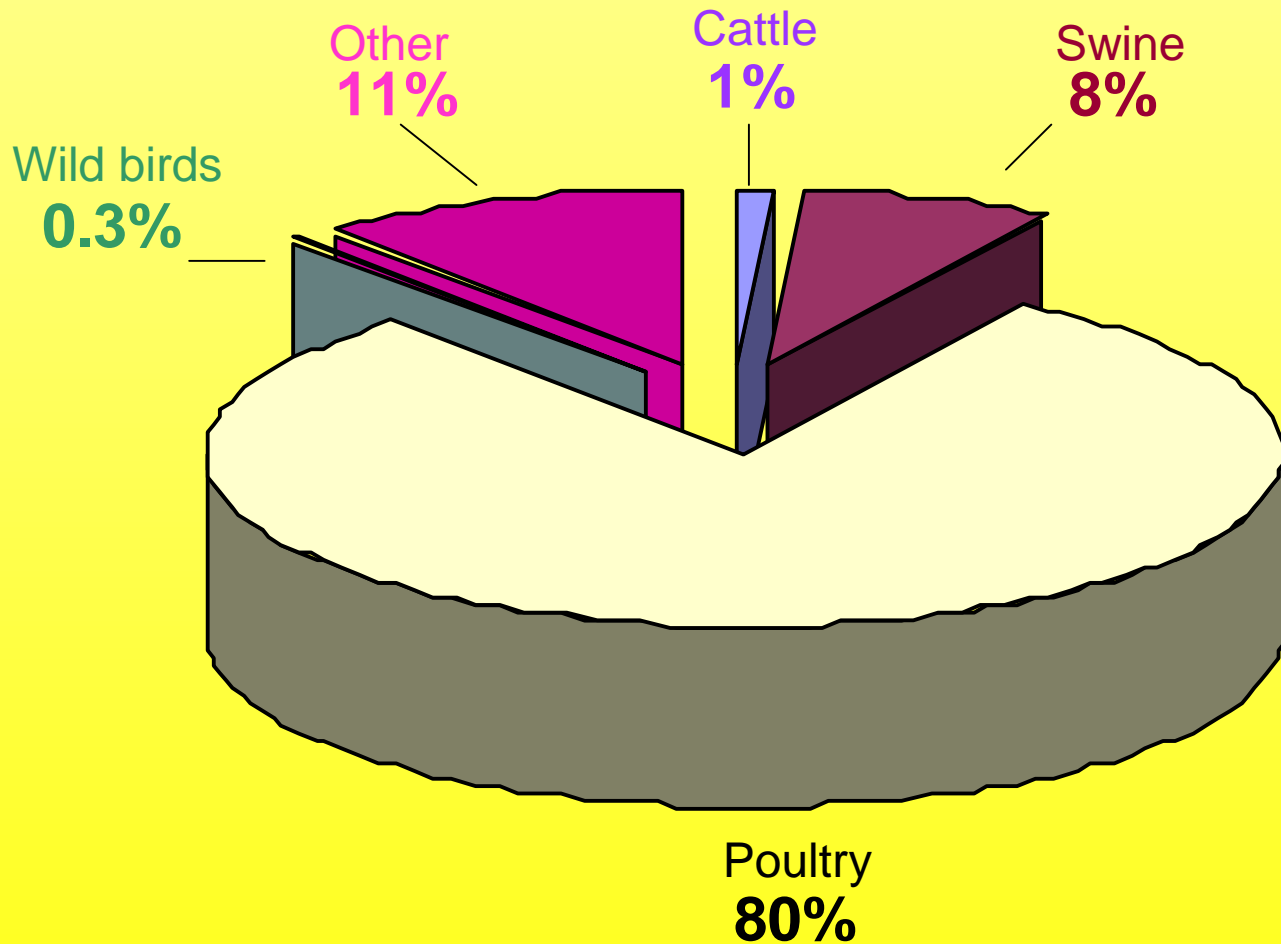
The most frequent *Salmonella* serovars by source of strains



Ns= number of *Salmonella* strains serotyped



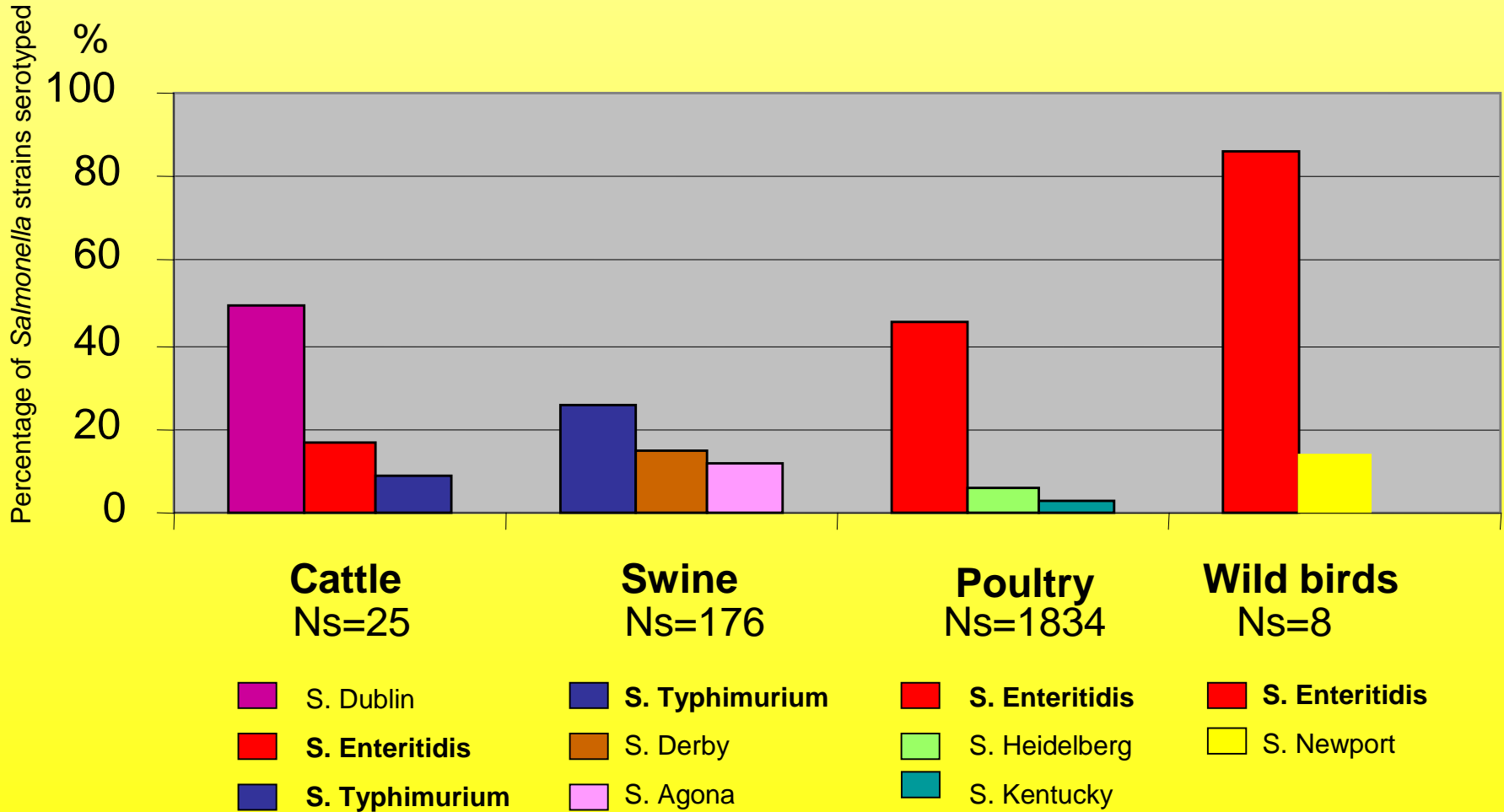
Source of *Salmonella* strains isolated from animals



N (total) = 2297 (100%)

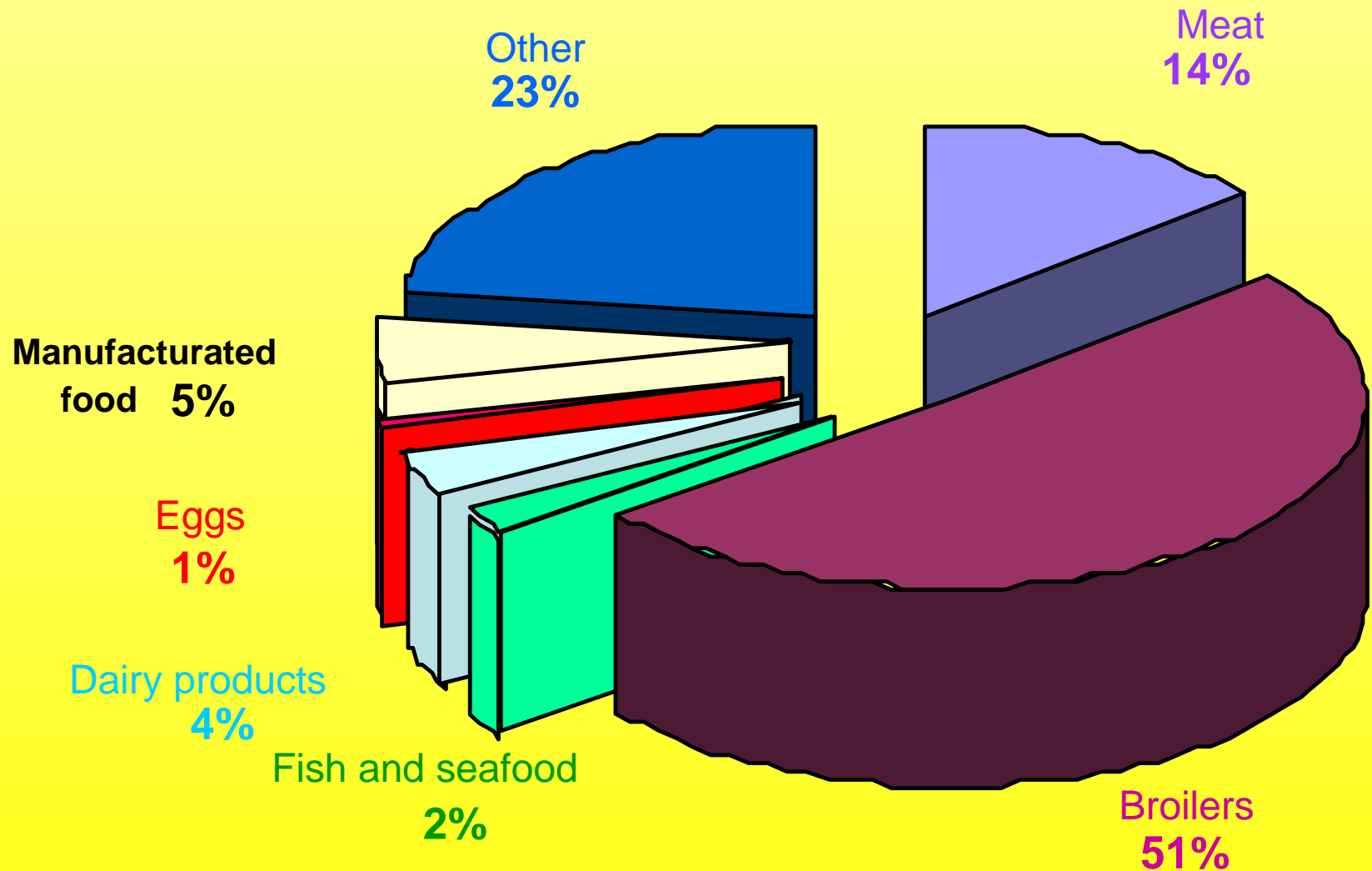
Ns (serotyped) = 2297 (100%)

The most frequent *Salmonella* serovars, by type of animal



Ns= number of *Salmonella* strains serotyped

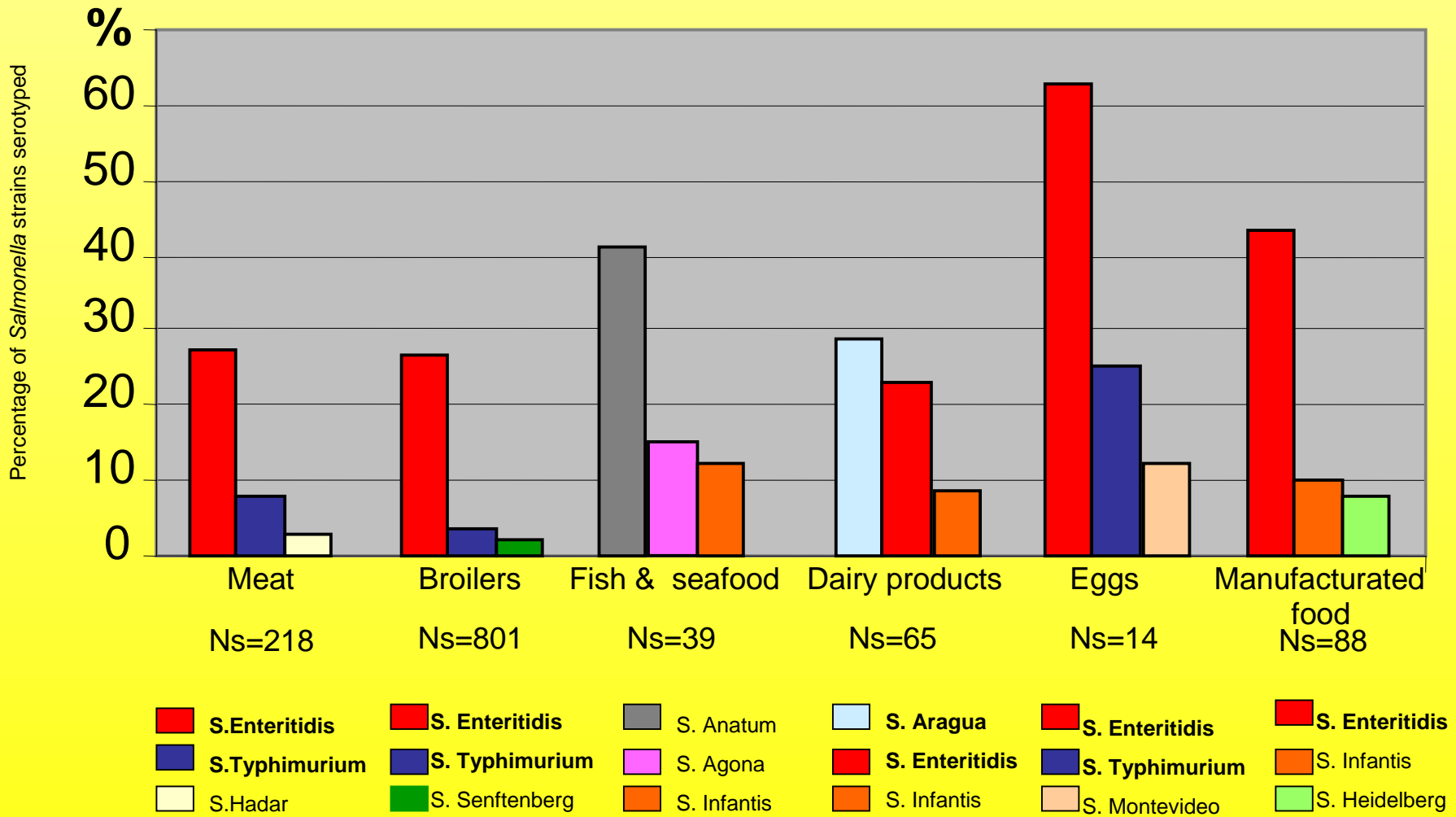
Source of *Salmonella* strains isolated from food



N (total) = 1591 (100%)

Ns (serotyped) = 1577 (98.9%)

The most frequent *Salmonella* serovars by type of food



Ns= number of *Salmonella* strains serotyped

CONCLUSIONS

- Most frequent serotype from all sources: *Salmonella* Enteritidis
- Baseline information for a surveillance program is provided.
- Regional differences in isolation rates will be explored.

FUTURE CHALLENGE

- Joint activities of laboratory and epidemiology

- Continuity of the Program for:
 - Strengthening the national networks
 - Obtaining reliable data through the Quality Control System
 - Technology transfer and constant training
 - Supplying strategic reagents

Acknowledgement

Argentina

*Maria Ines Caffer

* Susana Bruno

*María del Carmen Alcaide

* Daniela Rocchi

Bolivia

*Esther Damiani and Carmen Revollo Yelma

*Jose Antonio Loayza Bravo

Brasil

*Dalia dos Prazeres Rodrigues

* Eliane Moura Falavina dos Reis

Colombia

*Nélida Muñoz Pérez

*Graciela Díaz Figueroa

*Rocío Paredes Narvaez

Chile

*Monica Insunza and Alda Fernández Ricci

*Amelia Morales Hernandez

Paraguay

*Mercedes Alvarez

Peru

*Marina Isabel Arias Bustamante

*Ana Maria Barrientos Tejada

Uruguay

*Gabriela Algorta

*Ricardo Mendez

Venezuela

*Carmen Isaura Ugarte

*Nurys Salgado

*Damarys Sánchez.

WHO: Peter Braam
CDC: Fred Angulo and Beth Imhoff

Danish Veterinary Institute, Denmark: Henrik Wegener
Institute Pasteur, France: Marc Jouan