



# National Control Programmes for *Salmonella* in poultry in Great Britain

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## Agenda

- **Food safety & farm to fork approach**
- **Legal framework**
- ***Salmonella* in poultry EU surveys**
- **Targets for *Salmonella* control**
- ***Salmonella* National Control Programmes**

## **Food safety & farm to fork approach**

- Farm to fork policy
- Throughout food chain
- Primary production
- Later points in food chain

# Food Hygiene Legislation

## Zoonoses Directive

Directive 2003/99

Dir 2002/99/EC

Reg 852/2004  
Reg 853/2004  
Reg 854/2004  
Reg 882/2004  
Reg 2073/2005  
Reg 1441/2007

## Zoonoses Regulation

Reg 2160/2003  
Reg 1003/2005  
Reg 1168/2006  
Reg 1177/2006  
Reg 1237/2007

## **Zoonoses Directive**

- Directive 2003/99
- **Monitoring** of zoonoses & zoonotic agents (Brucellosis, Campylobacter, Echinococcus, Listeria, Salmonella, Trichinella, TB M. Bovis, VTEC O157, others)
- Monitoring of related antimicrobial resistance
- Epidemiological investigation of food-borne outbreaks
- Exchange of information related to zoonoses & zoonotic agents.

## Zoonoses Regulation

- Reg. (EC) No. 2160/2003
- Purpose: “to ensure that proper & effective measures are taken to detect & to control *Salmonella* & other specified food-borne zoonotic agents at ALL stages of production, processing & distribution, particularly at the level of primary production, including in feed, in order to reduce their prevalence, and the risk they pose to public health”

## EU *Salmonella* poultry surveys – UK results

<b><i>Salmonella</i> EU Surveys in UK</b>	<b>Layers (2004-2005)</b>	<b>Broilers (2005-2006)</b>	<b>Fattening turkeys (2006-2007)</b>	<b>Breeding turkeys (2006-2007)</b>
Units sampled	454	382	317	116
<i>Salmonella</i> spp. (%)	11.9	8.2	32.2	4.4
<i>Salmonella</i> spp. (CI 95%)	9.9 - 14.7	7.1 - 9.4	24.7 - 40.6	1.6 - 11.4
SE &/or STM (%)	7.9	0.2	4.6	0.5
SE &/or STM (CI 95%)	6.2 - 10.1	0.2 - 0.3	2.2 - 9	0.1 - 3.2

## UK targets for *Salmonella* control

- Breeding flocks of *Gallus gallus*:  
SOPHS  $P^* \leq 1\%$  by 31.12.09
- Laying flocks of *Gallus gallus*:  
annual minimum reduction of SE/STM  $P^a \geq 10\%$
- Meat production flocks of *Gallus gallus*:  
SE/STM  $P^{\wedge} = 1\%$  or less by 31.12.11
- Fattening turkeys
- Breeding turkeys

SOPHS  $P^*$  = maximum percentage of adult breeding flocks of *Gallus gallus* (of at least 250 birds) remaining positive for *S. Enteritidis*, *S. Typhimurium*, *S. Hadar*, *S. Infantis* or *S. Virchow*

SE/STM  $P^a$  = the percentage of flocks of adult laying hens of *Gallus gallus* positive for *S. Enteritidis* &/or *S. Typhimurium*

SE/STM  $P^{\wedge}$  = maximum percentage of meat chicken flocks remaining positive for *Salmonella* Enteritidis &/or *Salmonella* Typhimurium

## ***Salmonella* NCP – chicken breeders**

- **Operational since 2007**
- **Community target: up to 1% of adult breeding flocks of *Gallus gallus* positive for SOPHS**
- **Enhancements**
  - ➔ **Additional *Salmonella* serotypes**
  - ➔ **Sampling method**
  - ➔ **Analysis**

## **Additional *Salmonella* serotypes**

- **S. Hadar**
- **S. Infantis**
- **S. Virchow**

## Sampling

- All flocks with 250 or more birds
- *Gallus gallus*
- Statutory sampling on breeding flock holdings

## **Sampling by the operator**

- **Rearing phase**
  - ➔ **Day of arrival (chick box liners & DOAs)**
  - ➔ **4 wks old (2 boot swab pairs or composite faeces)**
  - ➔ **2 wks before moving to the laying phase or laying unit (2 boot swab pairs or composite faeces)**
- **Laying phase**
  - ➔ **At 2 wk intervals on the farm (5 boot swab pairs or composite faeces)**

## **Official sampling**

- **Near the beginning of lay**
- **In the middle of lay**
- **Towards the end of lay**

**5 pairs of boot swabs/flock on each occasion**

## ***Salmonella* examination**

- **Operator samples**
  - **Authorised laboratories**
- **Official samples**
  - ***Salmonella* reference laboratory (VLA)**
- **Enhanced detection method**
- **Modified Semi-Solid Rappaport Vassiliadis culture medium**
- **UK (CSPO 2007) & EU (Zoonoses Regulation (EC) No 1003/2005) legislation**

## **Confirmation of infection**

- **Flocks suspected of being infected with any SOPHS**
- **Confirmatory samples (5 pairs of boot swabs/flock)**
- **Confirmatory visits & sampling: government officials**
- **Samples sent for examination to VLA**

## **Action for SE/STM infected flocks**

- **Premises under official control**
- **No more eggs to hatchery**
- **Flock slaughtered**
- **Removal & destruction of eggs from hatchery**
- **Hatchery audit**
- **Epidemiological investigation**

## **Action for SH/SV/SI infected flocks**

- **Action plan by the operator**
- **Epidemiological investigation**

## ***Salmonella* layers NCP**

- **Operational since 01.02.2008**
- **Commission Regulation EC No 1168/2006**
- **Enhanced monitoring & controls for *Salmonella* in commercial layer flocks**
- **UK target: SE/STM prevalence reduction of adult laying flocks by 10% each year (starting in 2008)**
- **8% of layer holdings in UK: SE/STM infected (EU layer survey)**

# Sampling

- **Samples by the operator:**

**Day old samples (chick box liners or hatchery tray liners, & DOAs)**

**2 weeks before laying (2 pairs of boot swabs or composite faeces)**

**Every 15 weeks during production (2 pairs of boot swabs or composite faeces)**

- **Official samples:**

**1 flock/yr on holdings with > 1000 birds: 2 pair of boot swabs or composite faeces, plus dust**

## **Industry approved control plan**

- **Control plan submitted by BEIC (layer industry representative body)**
- **Approved as part of the NCP**
- **Official samples from laying flocks/members of the BEIC**
- **Collected by control programme auditors**

## ***Salmonella* examination**

- **Operator samples**  
**Authorised laboratories**
- **Official samples**  
***Salmonella* reference laboratory (VLA)**
- **Enhanced detection method**
- **Modified Semi-Solid Rappaport Vassiliadis culture medium**
- **UK (CSPO 2007) & EU (Zoonoses Regulation (EC) No 1168/2006) legislation**

## **Confirmation of infection**

- **Operator samples positive for SE/STM**
- **Confirmatory samples (repeat of 2 pairs of boot swabs or 2 composite faeces samples)**
- **If SE/STM confirmed, all flocks on the holding sampled by the competent authority**

## **Action for SE/STM infected flocks - 2008**

- **Operator required to C&D buildings & check C&D effectiveness**
- **Epidemiological investigations of flocks with confirmed SE/STM infection**
- **No restrictions on eggs from SE/STM (+) flocks**
- **Only if eggs from a flock linked to a foodborne Salmonellosis outbreaks in humans**

## **Action for SE/STM infected flocks – from 2009**

- **Restrictions in place**
- **Fresh eggs cannot go for human consumption**
- **Additional optional confirmatory testing (eggs or birds or faeces+dust) may be requested by the operator**
- ***Salmonella* Reference Lab (VLA)**

## Follow up action-continued

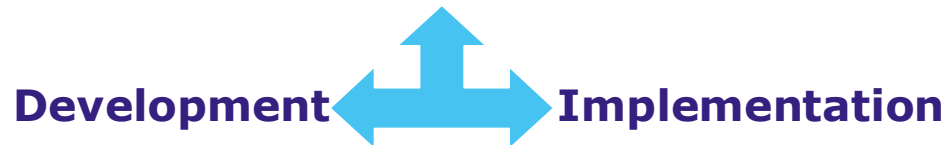
- **Egg restrictions also in place if eggs linked to *Salmonella* (any serovar) foodborne outbreaks in humans**
- **Epidemiological visits on premises with SE/STM infected chicken laying flocks**

## **Government/epidemiological investigations**

- **Advice on disease control**
- **Advice on prevention of zoonotic transmission**
- **Collect data for epidemiological purposes**
- **Potential source of the infection**
- **Potential for spread off the premises**
- **Advice regarding the avoidance of human health risks**
- **Advice on the control of the infection, C&D and monitoring**

## Summary

- Farm to fork approach
- Legal framework
- EU surveys & control targets (*Salmonella* in poultry)
- *Salmonella* NCPs (poultry)



# References

- European Union Documents – European law ([http://europa.eu/documents/eur-lex/index\\_en.htm](http://europa.eu/documents/eur-lex/index_en.htm), assessed 10.10.08)
- Report of the Task Force on Zoonoses Data Collection on the Analysis of the baseline study on the prevalence of *Salmonella* in holdings of laying hen flocks of *Gallus gallus*1 ([http://www.efsa.europa.eu/cs/BlobServer/Report/zoon\\_report\\_ej97\\_finlayinghens\\_en,0.pdf?ssbinary=true](http://www.efsa.europa.eu/cs/BlobServer/Report/zoon_report_ej97_finlayinghens_en,0.pdf?ssbinary=true), assessed 10.10.08)
- Report of the Task Force on Zoonoses Data Collection on the Analysis of the baseline survey on the prevalence of *Salmonella* in broiler flocks of *Gallus gallus*, in the EU, 2005-20061 ([http://www.efsa.europa.eu/cs/BlobServer/Report/zoon\\_report\\_ej98\\_finbroilers\\_en.pdf?sbinary=true](http://www.efsa.europa.eu/cs/BlobServer/Report/zoon_report_ej98_finbroilers_en.pdf?sbinary=true), assessed 10.10.08)
- Report of the Task Force on Zoonoses Data Collection on the Analysis of the baseline survey on the prevalence of *Salmonella* in turkey flocks, in the EU, 2006-20071 ([http://www.efsa.europa.eu/cs/BlobServer/Report/zoon\\_report\\_ej134\\_finturkeys\\_en.pdf?ssbinary=true](http://www.efsa.europa.eu/cs/BlobServer/Report/zoon_report_ej134_finturkeys_en.pdf?ssbinary=true), assessed 10.10.08)
- Consultation on the National Control Programme for Laying Flocks (<http://defraweb/animalh/diseases/zoonoses/pdf/consultation.pdf>, assessed 10.10.08)
- Consultation package on the implementation of the UK National Control Programme for Broilers (*Gallus gallus*) (<http://defraweb/corporate/consult/broilers-ncp/ncp-broilers-consultdoc.pdf>, assessed 10.10.08)