

VLA's role in the *Salmonella* National Control Programme in laying hens in Great Britain

Christina Papadopoulou¹, Rob Davies², Joanna Lawes¹, David Welchman³, Bob Futter⁴, Sarah Evans¹

¹Centre for Epidemiology & Risk Analysis (CERA), Veterinary Laboratories Agency, Addlestone, Surrey, UK, KT15 3NB

²Food & Environmental Safety Department, Veterinary Laboratories Agency, Addlestone, Surrey, UK, KT15 3NB

³Veterinary Laboratories Agency, Itchen Abbas, Winchester, Hampshire, SO21 1BX

⁴Veterinary Laboratories Agency, Barton Hall, Garstang Road, Barton, Preston, Lancashire, PR3 5HE

Abstract

Regulation (EC) No 2160/2003 aims to reduce the occurrence of certain zoonotic infections, including *Salmonella*, at the primary production level, by establishing the baseline prevalence in the Community and setting a target for the reduction of this prevalence. In order to establish the baseline level and to set targets for *Salmonella* control in laying hens, a standardised prevalence survey was carried out in each Member State in 2004-2005. Subsequently each MS, including UK, was required to produce a National Control Programme (NCP) to achieve agreed prevalence reduction targets. The NCP in UK was implemented in 2008. In addition to NCP samples required to be collected by operators from flocks of egg-laying hens during the rearing and laying phase, official samples are also collected by the competent authority. In 2008 VLA, funded by Defra, offered voluntary enhanced sampling free of charge to operators of holdings with *S. Enteritidis* (SE)/*S. Typhimurium* (ST) infected flocks. The purpose of this sampling was to assist farmers to identify where infection was present on the infected holdings and control *Salmonella* infection.

EU *Salmonella* in laying hens survey – UK results

Units (holdings) sampled	<i>Salmonella</i> spp. (%)	<i>Salmonella</i> spp. (CI 95%)	SE &/or STM (%)	SE &/or STM (CI 95%)
454	11.9	9.9 - 14.7	7.9	6.2 - 10.1

UK targets for *Salmonella* control

Laying flocks of *Gallus gallus*:

A 3-year annual minimum reduction of SE/STM P₉₅≥10% from the baseline prevalence of 7.9% starting in 2008 (Reg. (EC) No. 1168/2006)

SE/STM P₉₅ = the percentage of flocks of adult laying hens of *Gallus gallus* positive for *S. Enteritidis* &/or *S. Typhimurium*

Main testing laboratories (VLA Preston & Lasswade)

- Receipt of NCP samples
- *Salmonella* culture
- Standardised culture method – ISO 6579 Annex D
- Laboratories accredited to ISO 17025
- Reporting of results

Salmonella reference laboratory (VLA Weybridge)

- Expert advice on *Salmonella* control
- Serotyping
- Phagotyping
- AMR testing
- Vaccine strain testing (SE & ST)
- Molecular epidemiology typing

CERA

- Epidemiological & veterinary expertise
- Rapid alerting system
- NCP database
- Standardised data collection
- Standardised data validation
- Ad-hoc data retrievals
- Data analysis
- Assessment of bias
- Defra & EU reports
- Project planning, project management & co-ordination

VLA *Salmonella* layers NCP team

-Defra consultancy (development & review of NCP)
-Participation in NCP *Salmonella* in Poultry Working Group

Poultry trained Veterinary Investigation Officers (VIOs)

- Veterinary expertise
- On farm investigations
- Advisory visits on zoonotic risk
- Expert advice on *Salmonella* control
- Competent authority NCP sampling (2008 only)
- Voluntary enhanced sampling (2008 only)

- ✓ Collection of data for epidemiological purposes
- ✓ Assess potential source of the infection
- ✓ Assess potential for spread off the premises
- ✓ Advice regarding the avoidance of human health risks
- ✓ Advice on the control of the infection, cleaning and disinfection (C&D), vector control and monitoring

Advice given by VLA VIOs at voluntary enhanced visits



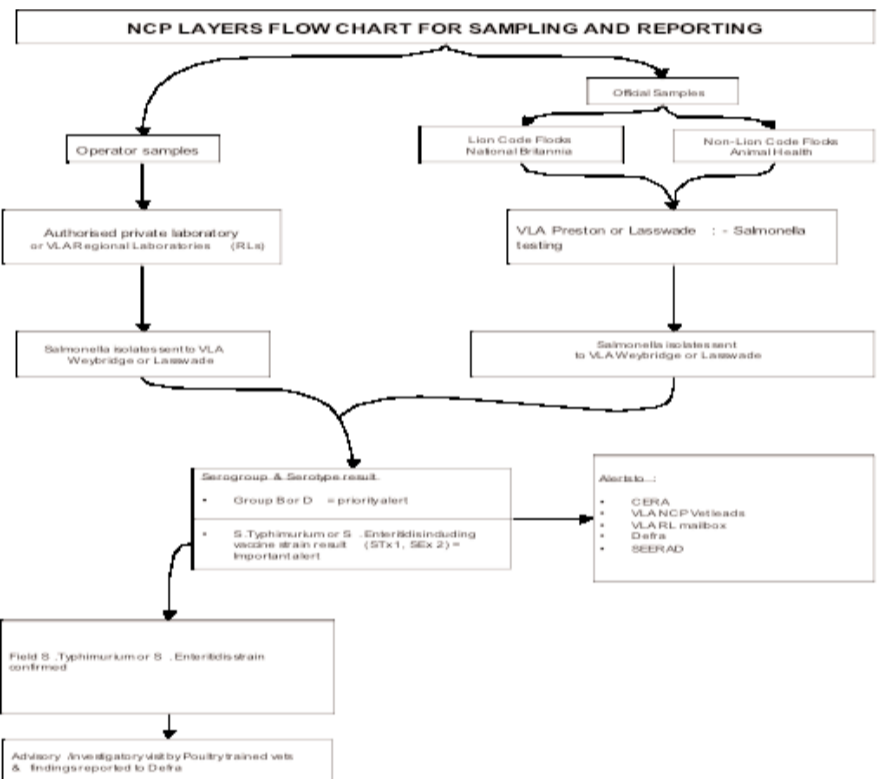
Salmonella control in laying farms DVD produced by VLA for farmers

Materials and Methods

- NCP operational since February 2008 (CSPO 2007)
- Monitoring on farm holdings
- Sampling by operators & competent authority officials
- *Salmonella* culture in authorised laboratories
- VLA receives all competent authority samples
- Enhanced detection method (MSRV culture medium)
- Controls for *S. Enteritidis* & *S. Typhimurium* infected flocks
- Voluntary enhanced sampling of flocks on SE/STM infected premises by VLA in 2008
- Voluntary enhanced samples: 10 faecal & 10 dust samples/flock

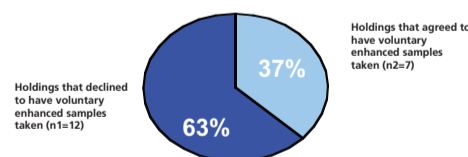
SE/STM controls from 2009

- Restrictions in place
- Fresh eggs from SE/STM infected flocks cannot go for human consumption
- Additional optional SE/STM confirmatory testing (eggs, oviducts+caeca birds, or faeces+dust) may be requested by the operator to exclude the possibility of false positive results
- Epidemiological investigation visits to premises with SE/STM infected chicken laying flocks

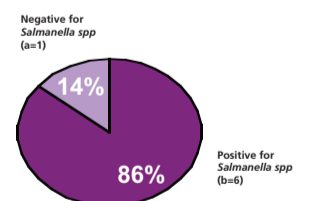


VLA's voluntary enhanced sampling in 2008

Uptake of voluntary enhanced sampling offered by VLA VIOs to SE/ST infected holdings (N=19)



Results from the holdings which had voluntary enhanced samples taken



- The uptake of voluntary enhanced sampling was quite low (37%, N=19)
- Samples collected from the majority of holdings (86%, n=7) were found to be positive for *Salmonella* spp.
- 2008 UK NCP data will be published annually
- Publication in future EFSA, Defra & VLA reports

References

- European Union Documents – European law (http://europa.eu/documents/eur-lex/index_en.htm, accessed 10.10.08)
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