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A Guide to the National Control Programme for Salmonella in laying flocks

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This guidance sets out the main sampling requirements of the *Salmonella* National Control Programme (NCP) in laying flocks in the UK and the controls which will apply when a layer flock is positive for *Salmonella*. It also explains the options and assistance which is available to operators of an affected flock. The guidance also applies in Devolved Administrations, where there is equivalent legislation.

This guidance should not be read in isolation: specific advice will be available from your veterinary surgeon and from government officials on the NCP and on how *Salmonella* infection can be controlled in laying flocks. Advice is available from the Veterinary Laboratories Agency (VLA) to all farmers on action shown to be effective in controlling the problem: rodent control, biosecurity, cleansing and disinfection. Advice is also available from Animal Health (AH).

What is the National Control Programme for Laying Flocks?

In brief, the National Control Programme (NCP) for *Salmonella* in laying flocks of domestic fowl is a three-year programme to reduce the prevalence of *Salmonellas* of public health significance in laying flocks across all EU Member States to a target agreed by the EU Commission and Member States.

The NCP was written in partnership with representatives from the poultry industry. It sets out the new statutory requirements for the monitoring and control of *Salmonella* contained in EU Regulations (EC) No 2160/2003 and (EC) No 1168/2006. These Regulations are intended to ensure that, for the protection of human health, coherent action to reduce *Salmonella* serotypes considered to be of particular human health significance (*Salmonella* Enteritidis and Typhimurium) is taken across the Community. This NCP is one of a series of NCPs being implemented in the poultry and pig sectors throughout the EU.

The NCP in laying flocks was implemented in the UK on the 1st February 2008. As part of the measures required to further reduce the risk to public health, the layer NCP requires that from 1st January 2009, eggs originating from flocks infected with *Salmonella* Enteritidis or *Salmonella* Typhimurium cannot be sent for human consumption unless they are treated in a manner that will guarantee the elimination of *Salmonella* (i.e. pasteurisation/heat treatment).

Part I – So what do I have to do?

Does the NCP apply to all laying flock holdings?

The requirements of the NCP apply to all operators who produce eggs on a commercial basis – with just two exceptions where:

- *all* production is for private domestic use (i.e. the eggs are not entering the market) *or*
- The holding has fewer than 350 hens and supplies direct to the consumer (i.e. farm gate sales) or via local retailers which only supply the final consumer.

Do I need to register?

Yes – unless you are already registered as below:

- All flocks on premises with more than 350 laying hens that are eligible for the NCP should already be registered with the Competent Authority under the Registration of Establishments (Laying Hens) (England) Regulations 2003 and the equivalent legislation in Wales, Scotland and Northern Ireland. The requirements for registration have not changed.
- All flocks of more than 50 chickens should be registered with the Great Britain Poultry Register and an equivalent register in Northern Ireland. This register details the locations and numbers of all poultry for the purposes of control of avian influenza and *Salmonella* control purposes.

How does the NCP define a flock?

The NCP defines a flock as a single group *or* multiple groups of hens which share the same production unit (i.e. using the same air-space or range area). Where housing systems are not typical, the situation is likely to be assessed on a case by case basis. Multiple groups of hens which have 'beak-to-beak' contact (inside or outside the house) are likely to be treated as a *single flock* for the same epidemiological reasons, which would mean all those hens and all their eggs would be subject to the same official controls in the event of a positive result.

Do I have to keep records of movements and of birds to fulfill the obligations of the NCP?

Yes, you will need to record the following:

- Number of flocks on the holding
- For each flock:
 - The identification of the flock (building/flock identity)
 - The type of flock – i.e. rearing or laying flock
 - The number of birds
 - The date (year and month) that the birds were placed in the house
 - The *Salmonella* testing dates and results

Do I have to keep records of testing and sampling?

Yes, if you have a laying flock for which testing is obligatory. Records must be kept for at least two years and be made available for inspection. When official samples are taken, the records will be checked. Under the NCP, all producers may be audited at any time, therefore there may also be checks made at other regular auditing visits and after any positive result in any of the houses. It would be convenient to keep the records in a book in tabular form or, of course, they may be included in any computerised system you use. You will need to record:

- Identity of holding
- identity of building, rearing/laying flock
- date of sampling
- type of sample (i.e., boot swab or pooled faeces)
- age and date of placement of flock (may be multiple dates if multi-age house)
- test result and name of laboratory.

Part II – What samples are required for Salmonella Testing?

What samples are required?

You will need to sample and test all eligible laying flocks during the rearing phase and also during the period of production of eggs.

Production Stage	Type of Sample
Chicks	<ol style="list-style-type: none">1. One chick delivery box liner (or hatcher tray liner taken at the hatchery) for every 500 chicks delivered. Up to maximum 10 for every batch of chicks delivered.2. Carcasses of all dead-on arrival chicks (maximum 60) from each hatchery delivery.
Pullet rearing	2 pairs of boot swabs (for floor rearing) or one large composite faeces sample (for cage rearing) 2 weeks before moving to layer unit/house.
During lay	2 pairs boot swabs (barn or free-range) or 2 x 150g composite faeces samples (cage) taken at: <ul style="list-style-type: none">• Between 22-26 weeks of age• Then every 15 weeks during production

Where can I obtain operator sampling equipment?

Your local Animal Health office will be able to provide the names of companies that can provide equipment. The laboratory to which you are going to send the samples will be able to advise you on suitable containers for samples. In most cases the laboratory or your vet will be able to supply sampling equipment

How do I sample using boot swabs?

Take two pairs of boot swabs from each flock (house or separate biosecure section of the house). The boot swabs must be moistened before sampling is carried out - clean tap water is suitable for this but some sampling kits will have pre-moistened boot swabs. Ensure there can be no contamination of swabs prior to use and that they cannot come into contact with disinfectant. Boot swabs should represent the whole area to which the birds have access. This will include all the separate pens, littered and slatted areas (when they are safe to walk on) and involves taking about 100 paces to cover an area of approximately 50% of the house. Take the swabs before replenishing bedding.

On completion of sampling in each sector carefully remove the boot swabs so as not to dislodge adherent material. The boot swabs can then be placed together in a suitable pot or sealable bag for dispatch to the laboratory.

Part II – What samples are required for Salmonella Testing?

What samples should I take in caged laying flocks?

Collect two samples, each of at least 150g of faeces from dropping belts, scrapers or deep pits depending on the type of house, ensuring that the overall pooled faeces samples represent each stack of cages. It is important to ensure that

- belts or scrapers are run on the day of sampling to collect fresh material before the samples are collected
- pooled faeces which have lodged on the scrapers or end of belts after they have been run is collected
- in step-cage systems where belts and scrapers have not been installed, faeces is collected from the deep pit.

Samples can be collected with the use of gloved hands, inverted bags, or spatulas.

Faeces from belts or scrapers from all rows and tiers of cages should be collected. If composite faeces are collected from droppings pits, then collect at least 60 pinches of fresh surface material from different areas around the house where it is safe to do so. In all circumstances be aware of any safety precautions that may be necessary when taking these samples.

Where should these samples be sent?

Samples must be sent to a laboratory which is approved to carry out the necessary tests under the National Control Programme. A list of approved laboratories in Great Britain is available from your local Animal Health Office or on the Defra website at:

<http://www.defra.gov.uk/animalh/diseases/control/lablist.pdf>

The samples should be dispatched to the laboratory on the day of collection (or within 24 hours of the sample being taken). Each sample from each flock should be labelled separately and should indicate the following:

- date the sample was taken,
- the identity of the flock sampled including
 - House name or number
 - Month the flock moved into the house (for multi-age flocks use the date when the first birds were placed in the house)
 - Year the flock has moved into the house (for multi-age flocks use the date when the first birds were placed in the house)
- age of the flock sampled
- the name and address of the holding
- the contact details of the person submitting the sample.

You should liaise with your laboratory on the details of dispatching the samples.

If I am unable to send the samples on the day of collection what do I do?

In exceptional circumstances, when samples cannot be sent within 24 hours of being taken, they must be kept at 4°C until they are sent to a laboratory. Samples must not be frozen. Samples **MUST** be submitted within 48 hours of being taken, otherwise they will not be suitable for testing and a repeat sample will have to be taken.

Part II – What samples are required for Salmonella Testing?

Will I receive the results of the tests for Salmonella?

Normally the laboratory will send the test results to the sender of the sample. If this is not the registered person, the laboratory must also forward a copy to the registered person. If a test proves positive for *Salmonella*, the person in charge of the laboratory must immediately report the result to the appropriate government official as required under the Zoonoses Order 1989. See Part III for further information on measures which will be taken in response to a positive sample.

Am I responsible for sampling and laboratory charges?

Owners are responsible for all expenses involved in the sampling and testing required under the NCP except in the case of some confirmatory official samples.

What are Official Control Samples?

Official control samples are those which are collected and tested under the control of an authorised government official. These are collected to provide official verification that the UK target for the control of *Salmonella* in laying flocks is being met and to confirm infection in a flock after a positive operator sample. In most instances official samples will require the taking of a dust sample as well as the faeces/bootswab samples.

When are Official Control samples collected?

The NCP requires that these samples will be collected on the following occasions:

1. Annually from one flock on all holdings with more than 1,000 birds (official control sample);
2. To confirm the presence of *Salmonella* Enteritidis or Typhimurium in a flock when an operator sample returns a positive (confirmatory sample);
3. In all other laying flocks on the holding where *Salmonella* Enteritidis or *Salmonella* Typhimurium is confirmed in one laying flock on the holding (this can also count as your annual official control sample);
4. When a new flock is placed in a house in which the last flock was found to be positive;
5. Fortnightly faecal samples from flocks when the official dust sample is positive, but the faeces sample is negative.

When the official sample is taken, this may replace the routine 15 week sample taken by the operator.

Who is responsible for the collection of official control samples?

All of these samples will be collected by Animal Health officials, Animal Health's EMI officials or by an independent official control body approved by Defra for the purpose (e.g. the Lion Code Assurance Scheme, in which annual official samples will be collected by National Britannia Certification Ltd).

Will I be charged for official control samples?

A charge will be made for the collection and testing of the annual official control sample. You will not be charged for the other official confirmatory sampling occasions listed in points 2,3,4 and 5 above, unless the test is carried out as the annual official control sample on the premises for the year.

Part III – What happens if Salmonella is suspected?

My flock has returned a positive operator sample – what happens next?

If a suspect non-vaccine strain *Salmonella* Enteritidis (SE) or *Salmonella* Typhimurium (ST) is detected in an operator sample you will be immediately informed. Arrangements will be made for the collection (without charge) of an official confirmatory sample by a government inspector and tested by the VLA. If this is negative then no further action will be taken.

If this official confirmatory sample is positive for non-vaccine strain SE or ST then eggs from the affected flock cannot be sold as Class A. The eggs will be placed under restriction immediately after you are notified of a positive result on the official confirmatory sample.

A government veterinarian may visit your holding to provide advice on *Salmonella* control. At a later date, official samples will be collected from all other flocks on your holding to confirm that the infection has not spread. A further official sample will be collected when a replacement flock is placed in a house in which the previous flock was infected with SE or ST. These samples will not be charged to you.

The steps are set out in further detail in annex I.

What happens if my flock returns a positive result from an official control sample?

If SE or ST is detected in an official control sample the measures explained above will be taken. However since this is an official sample it will not be necessary to collect a confirmatory sample and the controls on the eggs will be immediate.

What happens if only the dust is positive?

The official control sample requires the collection of dust as well as faeces. If only the dust sample is positive then fortnightly repeat faecal sampling will be carried out. This sampling will be carried out on up to four occasions and if all these samples return a negative result, the flock will be considered negative for *Salmonella*, official sampling will cease and the routine operator sampling every 15 weeks will continue as normal. Restrictions will not be placed on the eggs from the flock unless one of these boot swab/faecal samples is found to be positive for SE or ST.

Can I request further official samples to confirm the result when my flock is placed under restriction?

Yes – it will be possible to request one of the following voluntary additional tests to rule out an initial false positive result. The collection of these must be supervised by Animal Health and samples must be submitted to the VLA for testing:

- 5 pairs of bootswabs (free-range or barn flocks) or pooled faeces samples (cage flocks) and 2 dust samples, or
- 300 hens (carcasses) or
- 4,000 eggs

If this test is negative, restrictions on the eggs will be lifted and normal production can resume. However whilst the samples are being collected and tested all eggs from the flock will remain on restrictions and must either be kept on the holding or marked as Class B.

Part III – What happens if *Salmonella* is suspected?

It is the operator's responsibility to organise the date of the optional testing and book time with the VLA laboratory and the local Animal Health Divisional Office (AHDO) to ensure that an Animal Health representative is available to supervise the collection.

Further information on this additional testing can be obtained from your local AHDO or the EMI inspectors.

Is a charge made for these optional additional tests?

Yes – since these tests are voluntary they must be operated at full cost recovery. Please be aware that you will be charged for the time taken by a government official to oversee the collection of these samples as well as the cost of testing by the VLA. These additional tests require extensive laboratory work, especially in the case of the 4000 eggs and 300 carcasses and therefore it will take longer than the normal NCP sampling to get results. You will be notified immediately once a result is available.

What happens to the eggs from a positive flock?

If a flock is infected with SE or ST, the eggs from the affected flock cannot be sold as Class A. The restrictions on the eggs will remain throughout the lifespan of the flock. These eggs can be placed on the market but only if they are marked and sold as Class B. If the eggs are sent for disposal they will come under the provisions of the Animal By-Products Regulations 2005 and will be category 3.

What type of mark is required?

All restricted eggs must be marked to indicate that they are Class B eggs. The marking on-shell can be a simple coloured mark using a spray or food dye or the official Class B mark (a circle with the letter B inside). Egg Marketing Inspectors will regularly visit farms where there are *Salmonella* Enteritidis or Typhimurium positive flocks in order to audit the procedure and ensure compliance with the legislation.

What happens to the birds from a SE or ST – positive rearing flock?

No official action is taken with such flocks but in view of the difficulty in clearing infection from laying houses or sites producers should exercise extreme caution if considering placing pullets from positive rearing units.

What help is available?

Free advice and assistance will be available from the VLA (who may visit your holding) and from AH on measures which can be taken to control SE or ST on the site. Defra has also published guidance on the control of *Salmonella* on-farm, available at <http://defraweb/animalh/diseases/zoonoses/salmonella-cop.htm>.

You are also advised to contact your veterinary surgeon for help and advice.

Further information

Where can I get further information?

For further information about the requirements of the legislation, please see the Defra website <http://defraweb/animalh/diseases/zoonoses/ncp.htm>

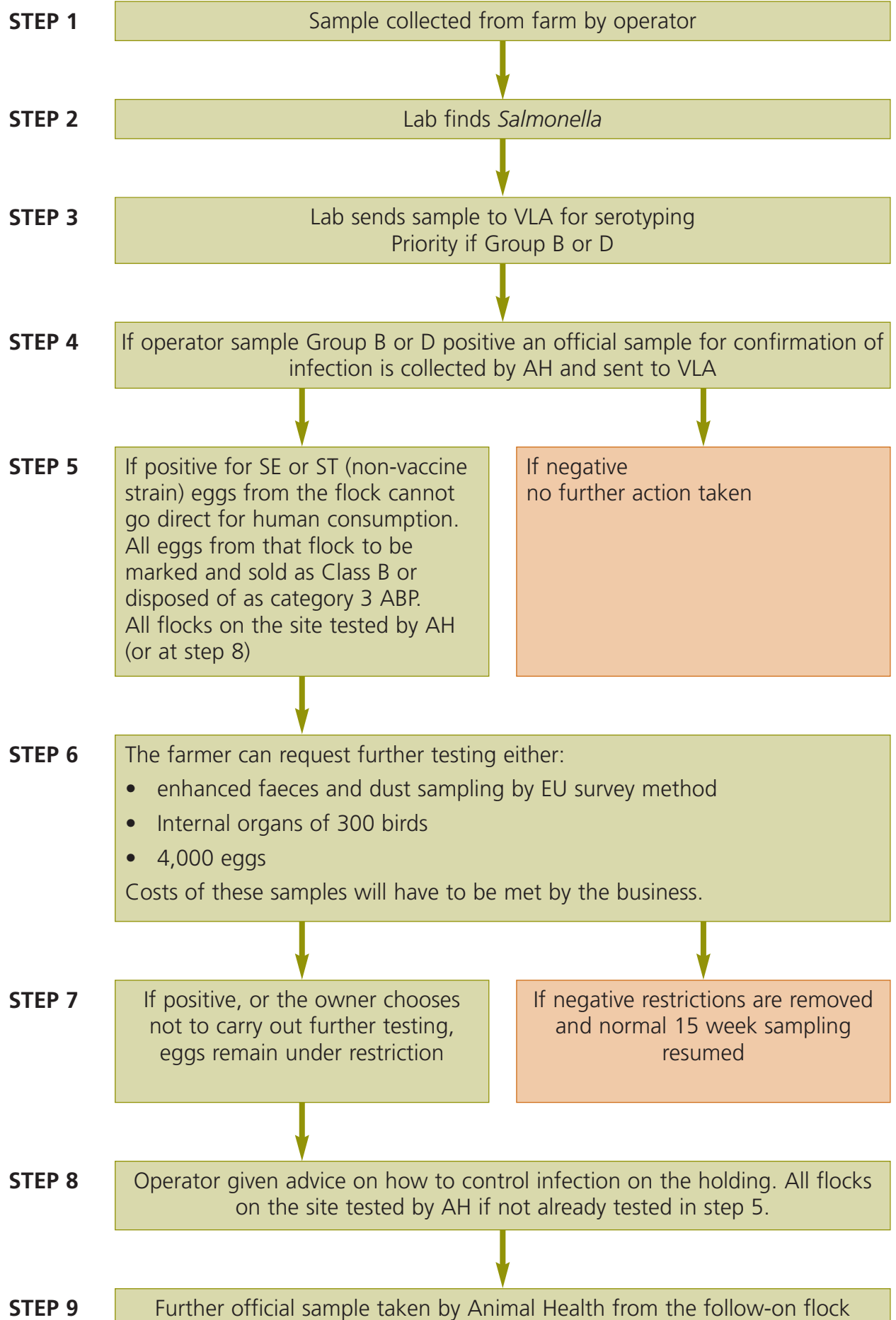
You can also contact the local Animal Health Office whose address and telephone number will be found at <http://www.defra.gov.uk/animalhealth/> or www.dardni.gov.uk

Copies of the relevant legislation can be purchased from HMSO. www.opsi.gov.uk

Further copies of this leaflet are available free of charge from: Defra Publications, Admail 6000, London SW1 A 2XX or by calling 08459 556000.

A Code of Practice for the Control and Prevention of *Salmonella* in Commercial Egg Laying Flocks is also available, free of charge, from Defra Publications.

Annex – Summary following isolation of Salmonella from operator samples



Notes

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