A Guide to the National Control Programme for *Salmonella* in broiler flocks

2014
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**Introduction**

This guidance sets out the main sampling requirements of the *Salmonella* National Control Programme (NCP) in broiler flocks in the UK and the measures which will be taken when a flock is found to be positive for *Salmonella*.

This guidance should not be read in isolation: specific advice on the NCP will be available from your veterinarian and government officials. Advice on action shown to be effective in controlling *Salmonella* (rodent control, biosecurity, cleansing and disinfection etc), is available from the Animal Health and Veterinary Laboratories Agency (AHVLA) and the Department of Agriculture and Rural Develop (DARD) to all farmers.

**What is the National Control Programme for Broiler Flocks?**

In brief, the National Control Programme (NCP) for *Salmonella* in broiler flocks of domestic fowl is a programme to reduce/control the prevalence of *Salmonella* in broiler flocks across the European Union (EU) to a target agreed by all Member States and the EU Commission. It officially commenced in 2009.

The NCP was written in partnership with representatives from the poultry industry. It sets out the statutory requirements for the monitoring and control of *Salmonella* contained in EU Regulations (EC) No. 2160/2003 and Regulation (EU) No. 200/2012\(^1\). These Regulations are intended to ensure that, for the protection of human health, coherent action to reduce *Salmonella* serovars considered to be of particular human health significance (*Salmonella* Enteritidis, *Salmonella* Typhimurium and monophasic Typhimurium strains) is taken across the Community at the farm level and throughout the food chain. The broiler NCP is one of a series of NCPs currently implemented in the poultry sector throughout the EU.

The NCP for broilers, like the NCPs for breeding chickens, laying hens and turkeys, sets out the monitoring and controls producers must follow to reduce and/or control the annual UK prevalence of *Salmonella* Enteritidis (SE), *Salmonella* Typhimurium (ST) and the monophasic *Salmonella* Typhimurium strains (mST) to 1% or less. The NCP requires specific control measures following the detection of these serotypes in order to protect human health, aimed at preventing persistence of infection on farm. Controls are also intended to enable Food Business Operators to comply with the microbiological criteria for *Salmonella* absence in fresh poultry meat (as required by the Microbiological Criteria Regulation (EC) No. 2073/2005).

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\(^1\) Regulation (EU) No. 200/2012 repealed the original Regulation (EC) No. 646/2007
Part I – What do I have to do?

Does the NCP apply to all broiler flock holdings?

The requirements of the NCP apply to all operators with just two exceptions:

- Holdings with **capacity of less than 2000 chickens present at any one time**, where the operator supplies small quantities direct to the consumer (i.e. farm gate sales) or via **local** retailers which only supply the final consumer (essentially householders).
- Where all production is for **private domestic use only** (i.e. the meat is not being sold on the market).

Do I need to register for the NCP?

Yes – unless you are already registered under the AHVLA Poultry Register or the equivalent register in Northern Ireland. These registers detail the locations and numbers of all poultry flocks with 50 or more birds for the purposes of control of avian influenza and *Salmonella*. If you are not registered with the AHVLA Poultry Register, then you will be required to register. Further information is available from your local AHVLA Office/ DARD Divisional Veterinary Office. Registration forms and guidance on registration are available at:

[https://www.gov.uk/poultry-farms-general-regulations](https://www.gov.uk/poultry-farms-general-regulations)


How does the NCP define a flock?

The NCP defines a flock as a single group or multiple groups of chickens which share the same biosecure 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 chickens which have ‘beak-to-beak’ contact (inside or outside the house) may be treated as a single flock unless factors such as the size of groups and the degree of possible contact suggest that sampling of individual groups would be appropriate.

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2 **Local**: current Food Standards Agency guidance defines local as the supply of food of animal origin within the supplying establishment’s own county plus the greater of either the neighbouring county or counties or 50 km/30 miles from the boundary of the supplying establishment’s county.
Do I have to keep records of movements of birds?

Yes, you will need to record the following for each flock when birds are moved on to or off a holding:

- the date of the movement;
- whether the movement was on to or off the holding;
- the number of birds moved;
- the age of the birds moved;
- in the case of the movement of an entire flock, the identification of that flock, where there is more than one flock on the holding;
- the identity of the building or group of buildings in to or from which the birds were moved;
- the address of the holding that they came from or the slaughter house/holding they were sent to

These records should be kept for two years and be ready to be made available for inspection on request by a government authorised official.

Do I have to keep records of sampling and test results?

Yes - records must be kept for at least two years and be made available for inspection. Under the NCP, all producers may be audited at any time. It may be convenient to keep the records in a book in tabular form or they may be included on any computerised system you use. You will need to record:

- The date on which the sample was taken;
- The identification of the flock. The flock should be identified by the house name/number, month and year the flock was moved into the house;
- The age of the flock sampled;
- The Government approved laboratory to which the sample was sent and the result of each test when it is received from the testing laboratory.
- The date of intended slaughter.

When will these records be checked?

These records will be checked during routine auditing visits. Producers may be audited at any time. Records will be checked after any positive result for Salmonella Enteritidis or Typhimurium (including monophasic variants) in any of the houses and during the collection of an official control sample. Medicine and movement records should be made available for checking and the premises biosecurity standards will also be assessed by the government official.
Part II – What samples are required for \textit{Salmonella} testing?

<table>
<thead>
<tr>
<th>Sampling</th>
<th>Type of sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator sampling</td>
<td>• FOR ALL FLOCKS: 2 pairs of boot swabs \textbf{TIMING}: within the period of 3 weeks before slaughter of any birds from the flock.</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td>Official control sampling</td>
<td>• 2 pairs of boot swabs from one flock of broilers on 10% of holdings with more than 5,000 birds \textbf{TIMING}: when flock is found positive for SE, ST or mST. From all flocks on a holding after SE or ST has been found in a previous flock cycle.</td>
</tr>
<tr>
<td></td>
<td>• From all flocks on the site where flocks are of unknown \textit{Salmonella} status.</td>
</tr>
</tbody>
</table>

Subject to authorization by AHVLA/DARD, one pair of boot swabs may be replaced by a 100 gram dust sample or large moistened fabric swabs (of a combined surface area of at least 900 cm\(^2\)) used to sample dust from dusty surfaces throughout the house, but avoiding feed dust. For small houses with less than 100 birds, where the use of boot swabs is not practical, faecal samples may be taken using the large hand-held fabric swabs.

All eligible holdings are required to undertake operator sampling within a maximum period of three weeks before the birds are slaughtered. If thinning occurs, this test result must be available for the first batch of birds going to the slaughterhouse. If the period between the date on which the sample was taken and the completion of depopulation of the flock exceeds 3 weeks, then a second NCP operator sample must be taken. All birds must arrive at the slaughterhouse with the \textit{Salmonella} NCP test result and the date the sample was taken recorded in the Food Chain Information (FCI) documents accompanying the batch to slaughter. Therefore, the operator test must be scheduled with sufficient time before depopulation for the sample to be tested and a test result returned (7 days before the expected date of slaughter/first thin is recommended).

For birds kept beyond 81 days of age or registered in organic broiler production schemes\(^3\), the requirement for the 3 week testing window prior to slaughter may not apply. In this case, the Competent Authority may authorise sampling up to 6 weeks before the birds are slaughtered. Please contact your local AHVLA or DARD office if you would like to apply for this derogation.

\(^3\) Produced according to Commission Regulation (EC) No 889/2008
Samples should not be taken during the administration of an antibiotic treatment that has activity against *Salmonella*. Consult the prescribing veterinary surgeon or AHVLA/DARD if in any doubt as to the procedures to follow when medication is involved. If samples are found to be contaminated with antimicrobials active against *Salmonella* the results are considered invalid and the flock may be considered positive due to the lack of a valid negative result.

**Is there any flexibility under the NCP for holdings with good *Salmonella* control?**

Yes - you can apply for a derogation not to sample all flocks on a holding as long as certain criteria are met. Each case would be assessed on a case by case basis to ensure the protection of public health. The application for consideration for a derogation should be made to your local AHVLA or DARD Office.

**Where can I obtain operator sampling equipment?**

Your local AHVLA/DARD office or any approved laboratory (see below) will be able to provide advice on where to obtain sampling equipment. In most cases the laboratory or your vet will be able to supply sampling equipment. Ideally all sampling equipment should be sterile to ensure there is no contamination of the material that could result in a false positive *Salmonella* result for the flock.

**How do I sample using boot swabs?**

**Equipment List**

- Disposable plastic over-boots,
- Disposable plastic gloves,
- Sealable bags or sample pots,
- 2 pairs of boot swabs (fabric overshoes, commercial boot swabs, fabric bandage that covers the whole of the sole of the foot or mop caps),
- Clean municipal water is suitable, but if there is any doubt as to its quality, use a new (previously unopened) bottle of drinking water without gas,
- Packing materials.

Prior to entering the house, ensure that all necessary equipment (gloves, overshoes, boot swabs, containers etc.) is assembled so as to prevent cross-contamination before, during or after sampling.

Take special care to avoid contamination of sampling materials on farms with other animal species, particularly pigs and cattle, as the general environment can become contaminated by *Salmonella* from these animals.
Take **two pairs of boot swabs** from each flock (house or separate biosecure section of the house). Ensure there can be no contamination of swabs prior to use and that they cannot come into contact with disinfectant; plastic over-boots should be put on after walking through disinfectant boot-dips, not before. If using plastic over-boots to go through foot dips then put on a second pair over these before putting on the boot swabs. If further testing of swabs, which have been in contact with disinfectant, is carried out, a positive result for antimicrobial residues/ disinfectant residues will invalidate the sample and may lead to the flock being considered positive. For the same reason - gloves used during sampling should not be treated with hand sanitiser.

The swabs should represent the whole area to which the birds have access. Divide the sampling area into two equal sectors for sampling – sampling with each pair of boot swabs must cover **50%** of the house. If the house is internally subdivided into several pens, ensure all pens are represented in the sampling in a proportionate way. Walk with one pair of boot swabs in each sector of the house. Take a minimum of **100 shuffling steps** per pair of boot swabs, ensuring that all parts of the sector are sampled, but **NOT including any outdoor areas in the case of free-range birds.** In free-range housing it is also best to avoid sampling the area just inside doors and pop holes, since external contamination may be carried into the house on the feet of birds or people. The sampling should be done before replenishing bedding.

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

If you chose the option to replace a pair of boot swabs with a dust sample, the dust will need to be collected from multiple sites around the house, either through wiping multiple surfaces throughout the house with one or more large moistened fabric swabs comprising a total area of 900cm$^2$, coating the swabs on both sides with plenty of dust or by collection of at least 100grams of dust from visibly dust-contaminated surfaces.

**Where should samples be sent?**

Samples must be sent to a UK laboratory which is approved to carry out the necessary tests for *Salmonella* under the National Control Programme.

A list of approved laboratories in England and Wales is available from your local AHVLA Office and on the Defra website at:

http://www.defra.gov.uk/animal-diseases/controls/approved-laboratories/

A list of approved laboratories in Scotland is available from your local AHVLA Office and on the Scottish Government website at
http://www.scotland.gov.uk/Topics/farmingrural/Agriculture/animal-welfare/Diseases/disease/salmonella/labs

In Northern Ireland these can be found on the DARD website at


The samples should be sent to the laboratory on the day of collection, preferably using 1st class mail or a courier service. Each sample from each flock should be labelled separately and the sample label and/or accompanying submission form 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,
  - Year the flock has moved into the house.
- age of the flock sampled,
- the name and address of the holding,
- the holding CPH number\(^4\) or DARD flock number
- the contact details of the person submitting the sample.

The address of the holding as well as the holding CPH number (if available) or DARD flock number must be made available to the laboratory for the purposes of reporting positive results. You should liaise with the 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 refrigerated until they are sent to a laboratory. Samples must not be frozen. The sample testing process **MUST** be started with 4 days of the sample being taken, so you must ensure that samples are received by the testing laboratory in sufficient time, otherwise they will not be suitable for testing and a repeat sample will have to be taken.

**Will I receive the results of the tests for Salmonella?**

Normally the laboratory will send the test results to the sender of the sample and/or the registered person/ poultry company. 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/ Zoonoses Order

\(^4\) County/Parish/Holding number issued by Defra to agricultural premises
Am I responsible for sampling and laboratory charges?

Operators are responsible for all expenses involved in the sampling and testing required under the NCP except in the case of some official control 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 broiler flocks is being met or to confirm whether or not infection is present in other flocks on the site.

When are Official Control samples collected?

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

1. Annually from 10% of holdings with more than 5,000 birds.
2. From the follow-on flock placed in the house in which a previous flock was detected positive for SE, ST or mST.
3. From all flocks on a holding after SE or ST has been found in the previous flock cycle
4. Flocks with unknown health status (for example where there is no evidence of operator sampling on the premises or where a *Salmonella* test result has not been included in the Food Chain Information (FCI) documents).

Who is responsible for the collection of official control samples?

All of these samples will be collected under the control of the Competent Authority. It is expected that in most circumstances they will be collected by government officials from AHVLA or DARD.

Will I be charged for official control samples?

A charge will be made for the collection and testing of the official control sampling in points 1, 3 and 4 above. (It is possible that charges may also be made for the other official sampling occasions listed above).
Part III: What happens if *Salmonella* is detected?

My flock has returned a positive operator sample – what action must I take and what happens next?

It is a requirement that you declare the *Salmonella* test result, negative or positive, in the Food Chain Information (FCI) documents accompanying the batch to slaughter. This is a requirement of the legislation and the birds may not be slaughtered if this information is not provided.

Additionally, the *Salmonella* results from your broiler flock(s) can help you to plan effective farm management and hygiene (biosecurity measures) to prevent disease transmission on to your farm and between flocks. So if your NCP sample result was positive for any *Salmonella* serovar, it is advisable to speak to your private veterinary surgeon for advice.

What happens next if the result is positive for *Salmonella* Enteritidis or *Salmonella* Typhimurium?

If *Salmonella* Enteritidis (SE), *Salmonella* Typhimurium (ST) or monophasic *Salmonella* Typhimurium (mST) is detected in an operator or official sample you should be immediately informed by the testing laboratory. The steps required to be taken following a positive result are set out in the annex.

Following cleansing and disinfection and repopulation of the affected house(s), official samples will be collected by the Competent Authority from the next crop(s) placed in the affected house(s) and from all other flocks present on site at the time of the official visit. A government veterinarian will also visit your holding to provide advice on *Salmonella* control.

If any of the flock samples taken during this official sampling visit are positive for SE/ST/mST, a restriction notice will be served on the holding under the Zoonoses Order requiring supervised cleansing and disinfection of all affected houses after depopulation. Official post cleansing and disinfection samples will then be taken from the affected sheds to check the efficacy of the process.

If any of the official samples taken from the empty house(s) post cleansing and disinfection return a positive result for SE, ST or mST, it will only be possible to move any flock already

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6 Official procedures following a positive result may differ in Northern Ireland so please contact your local DARD Divisional Veterinary Office for information.
placed in the house off the holding under license to a slaughterhouse that has been
informed of the flock’s status and advised to make arrangements to avoid cross-
contamination. A further official sample will be collected from all flocks in the next crop
and restrictions will remain in place if positive flocks are detected. Additional official action
to mitigate the risk of disease transmission may also be required – this may be prohibition
of re-stocking until a negative post cleansing and disinfection swabbing result is obtained
or other necessary measures to prevent transmission of infection.

What happens to the meat from a positive flock?

At the present time poultry meat from a positive flock can be sold for human consumption.
However, the Hygiene Legislation requires producers to inform processors of the results of
any *Salmonella* testing as Food Chain Information. For any flock that has tested positive
for *Salmonella*, processors are required to take steps to control the hazard, implement
enhanced hygiene measures and minimize any risk of cross contamination to birds from
negative flocks.

What assistance is available?

Free advice and assistance on measures which can be taken to control SE, ST or mST on
the site will be available from the Animal Health and Veterinary Laboratories Agency
(AHVLA) or DARD Divisional Veterinary Office. Defra has also published guidance on the
control of *Salmonella* on-farm which is available on Defra-web:


You are also advised to contact your private veterinary surgeon for advice

Where can I get further information?

For further information about the requirements of the legislation and contact details for
your local AHVLA office or DARD Divisional Veterinary Office please see the following
websites:

www.dardni.gov.uk

https://www.gov.uk/government/policies/protecting-animal-health-and-preventing-disease-
including-in-trade/supporting-pages/controlling-animal-disease

http://www.defra.gov.uk/ahvla-en/

A Code of Practice for the prevention and control of *Salmonella* in chickens reared for meat on farm and a Code of Practice for the prevention of rodent infestation in poultry flocks are also available.

**Annex – Summary**

Step 1  
Operator or official positive sample (*Salmonella* Enteritidis or *Salmonella* Typhimurium)

Step 2  
Operator to perform C & D

Step 3  
Official sample of all flocks in next crop and all other flocks present on site

Step 4  
**Positive Result**  
Restriction notice served and C & D under supervision  
**Negative Result**  
No action required

Step 5  
Post C and D sampling of the affected sheds  
**Negative result**  
No further action and restriction removed

Step 6  
**Positive post C & D sampling result**  
Flock(s) in affected houses moved off under licence  
Restrictions remain in place and operator carries out C & D under supervision
Step 7

Post C and D sampling of the affected sheds
Restocking allowed only after negative C & D swab results on case by case basis

Step 8

Official sample of all flocks in next crop and all other flocks present on site

Step 9

Positive Result
Further disease control action decided on case by case basis

Negative Result
No action required