

Detailed guide: Laying hens and flocks: poultry testing for salmonella

Updated: Sampling instructions and confirmatory testing details updated. References to DARD changed to DAERA.

Testing is part of the national control programme (NCP) for salmonella. The NCP aims to control salmonella in poultry flocks across the EU.

Who must take samples and test

You must take samples if you produce eggs on a commercial basis.

You'll be prosecuted or fined if you do not get your egg-laying hens tested as described in this guide. A fine can range from £100 to £4,500.

Your flock does not need testing if one of the following apply:

- all production is for private domestic use (the eggs are not entering the market)
- the premises has fewer than 350 hens and supplies the consumer direct (such as through farm-gate sales or local retailers)
- your flock is under official salmonella restrictions – if this is the case the flock is not part of the NCP

You must send samples for testing to a UK approved laboratory. Choose from:

- [laboratories approved by the Department for the Environment and Rural Affairs \(Defra\) under the Salmonella NCP](#) if you're in England, Scotland and Wales
- laboratories approved by the [Department of Agriculture, Environment and Rural Affairs \(DAERA\)](#) if you're in Northern Ireland

Work out how many flocks you must test

A flock is a group of birds that shares the same air space, for example a chicken house or range area.

If you need help working out how many flocks you have, you can ask for advice from:

- the [Animal and Plant Health Agency \(APHA\)](#) if you're in England, Scotland or Wales
- [DAERA](#) if you're in Northern Ireland

You need to decide how many flocks you keep, so you collect all the samples you must take. If your birds form one flock, they'll all be treated as belonging to a positive flock if sampling gives a positive result. Your

decision about whether you have one or more flocks could affect how official disease controls affect your business for certain salmonella results.

Register your flocks before you get them tested

You must register each premises where you keep your flocks on:

- [APHA's Great Britain \(GB\) Poultry Register](#) if you're in England, Scotland or Wales
- [the Northern Ireland Poultry Register](#) if you farm in Northern Ireland

When you must not sample

Avoid taking samples during or shortly after giving antimicrobials (antibiotics) that affect salmonella. APHA or DAERA could declare your flock positive for salmonella if either of the following apply:

- inspectors see from the flock medicine book that you've given antibiotics
- the laboratory suspects that there may be disinfectant or antibiotics affecting your samples

Contact one of the following for guidance on when to test after giving antibiotics:

- the vet who prescribed them
- [APHA](#) if you farm in England, Scotland or Wales
- [DAERA](#) if you farm in Northern Ireland

Check your laboratory can test samples within 96 hours

Do not collect samples unless your approved laboratory can start testing them within 96 hours (4 days) of you taking the samples. Make sure it can test your samples within 96 hours of taking them if you post them. You may have problems if it receives them on a Thursday, Friday or public holiday.

You'll need to collect more samples if they're delayed in the post, or the laboratory cannot start testing within 96 hours.

Pay for samples and tests

You need to buy your own sampling equipment. Contact one of the following to find out where you can buy the equipment you need:

- your vet
- the approved laboratory you plan to use
- [APHA](#)
- [DAERA](#)

You'll also have to pay laboratory charges for:

- your own samples

- [annual APHA or DAERA samples \(known as routine official control samples\)](#)

Take samples from your rearing flock

You must take samples at all of the following times:

- on the day the chicks arrive from a hatchery
- 2 weeks before you move them to the laying unit

Samples to send on the day of arrival

You must send the following for laboratory testing on the day of arrival:

- the liners from boxes used to deliver the chicks – one box for every 500 chicks from each delivery (up to 10 boxes)
- any chicks that are dead on arrival or that you cull within 24 hours of arrival (up to 60 carcasses from each hatchery)

Samples to send from pullets

You must take samples from the pullets (young hens, also called rearing hens) 2 weeks before you move them to the laying unit. You can choose either of these types of samples:

- [2 pairs of boot swabs](#) for floor-reared birds
- [150 grams \(g\) of a composite faeces sample](#) for cage-reared birds (composite means the faeces are from many birds in the flock)

Samples to send from adult egg-laying hens

You must sample your adult breeding flocks at least every 15 weeks during the laying period. This is known as operator sampling. An official sample can replace an operator sample.

You'll need to take different kinds of samples in different ways depending on your situation.

You must start to take samples from adult egg-laying hens in the layer unit or house when they're between 22 and 26 weeks old.

You must use one of these types of samples:

- [2 pairs of boot swabs](#) (from barn or free-range flocks)
- [2 composite faeces samples](#) of 150g each from caged flocks

Prepare to take boot swab samples from pullets and adult flocks

Take samples in the existing bedding – do not put new bedding down.

Gather all the equipment you'll need before you go into the laying house to prevent contamination. Take care to avoid contamination if you keep other animals (especially pigs or cattle) on your premises.

To prevent disinfectant or sanitiser affecting your sample, you:

- should not use hand sanitiser on your plastic gloves
- should put on your plastic overboots after you've walked through disinfectant

If you wear plastic overboots when you walk through disinfectant, you should put on another pair afterwards to protect the boot swabs from the disinfectant.

How to take boot swab samples from pullets and adult flocks

You must use boot swabs (fabric overshoes) to collect samples from barn or free-range pullets and hens.

See [Pay for samples and tests](#) to find out how to get the equipment you need.

You should use:

- disposable plastic overboots
- 2 pairs of boot swabs
- tap water or bottled still water for moistening boot swabs – do not use sparkling water or water treated with antibacterial agents or acids
- disposable plastic gloves
- sealable bags or sample pots
- packaging for sending your sample bags or pots to the laboratory

Follow these instructions.

1. Take 2 pairs of boot swabs from each flock.
2. Moisten the boot swabs with water before you take samples – the water must be sterile and not contain any antibiotics (antimicrobials) or sanitisers.
3. Divide the house into 2 equal parts for sampling, and use one pair of boot swabs in each part.
4. Take at least 100 steps with each pair of boot swabs, walking round the entire house.
5. Drag your feet on the floor to pick up as much material as possible.
6. If the house is divided into several pens, spend more time in the larger pens and less in the smaller pens.
7. When you've finished sampling, take the boot swabs off and turn them inside out carefully so that the faeces you've collected stay on them.
8. Put the boot swabs in a sample pot or sealable bag to send to the laboratory.

How to take samples from caged birds

You must collect faeces samples from caged birds. You should gather all the equipment you're going to need before you go into the laying house, to prevent contamination before, during and after sampling.

A suitable location to collect samples would be the scrapers at the discharge ends of each of the droppings belts. Make sure belts or scrapers are run on the day of sampling so you collect fresh material. You should do this before you take the samples. Where there is no scraper on the end of the belt that accumulates faeces, you should use large fabric swabs to swab the discharge ends of belts after they are run. You should collect faeces from belts or scrapers from all rows and tiers of cages.

If there are no belts, you must collect samples using gloved hands, inverted bags, or spatulas from cages or from across the whole area of the droppings pit. If you collect composite faeces from droppings pits, then collect at least 20 pinches of fresh surface material from each row of manure. Make sure the material you collect is representative of the whole house.

See [Pay for samples and tests](#) to find out how to get the equipment you need.

You should use:

- 3 large fabric swabs for cage houses with belts (that catch the droppings) that do not have scrapers (for scraping faeces off) and for those cage houses that do not have belts
- disposable plastic gloves
- sealable bags or sample pots for faeces
- packaging for sending your sample bags or pots to the laboratory

Prepare to take samples

You should gather all the equipment you're going to need before you go into the laying house, to prevent contamination before, during and after sampling.

Run the droppings belts or scrapers on the day of sampling to make sure you collect fresh material.

Take samples from belts or scrapers

You should collect pooled faeces from places such as the scrapers at the discharge ends of each of the droppings belts. Use any of the following:

- your gloved hands
- inverted bags
- spatulas

Collect faeces from the belts or scrapers on every row and tier of the cages so the samples are representative.

If there's not a scraper on the end of the belt that gathers faeces, use a large fabric swab. Rub this over the discharge ends of the belts after you've run them to collect fresh faeces. This exposes new areas of belting at the discharge end so that you can take more representative faeces samples.

Take samples from caged flocks in houses without belts

Collect 2 samples, each of at least 150g of faeces from the droppings pits.

Make sure the overall pooled faeces samples represent each stack of cages. You must collect faeces from throughout the pit. You can collect samples using disposable plastic gloves, inverted bags, or spatulas. If you collect composite faeces from droppings pits, then collect at least 20 pinches of fresh surface material from each row of manure. Make sure the material you collect is representative of the whole house.

You must collect one sample from pullets and 2 samples from adult birds. Each sample must weigh 150g. Place the samples in a pot or sealable bag to send to the laboratory. If each sample weighs less than 150g, the laboratory will not carry out the testing and you'll have to send more samples.

How to label samples

You must label each sample. On each label, you must include:

- the date you took the sample
- your registration number, your County Parish Holding (CPH) number, or DAERA flock number
- the identification of the flock – house name or number and the month and year you moved the flock into that house
- the name and address of the flock's premises
- the age of the flock
- the number of birds in the flock
- the contact details of the person sending the sample

Send samples to a laboratory

You should send your samples on the day you collect them. Refrigerate your samples at 2 to 8°C if you cannot send them on that same day. You must not freeze samples.

Make sure the laboratory can start testing your samples within 96 hours of sampling. You'll need to send more samples if your samples are delayed, or the laboratory cannot meet the testing deadline.

You must send your samples to laboratories approved by either:

- [DAERA](#) if you're in Northern Ireland
- [Defra](#) if you're in England, Scotland and Wales

Tell APHA or DAERA before moving birds to the laying unit

You need to contact APHA or [DAERA](#) at least 2 weeks before you move birds to the laying unit and give the dates when:

- you'll be moving the flock to the laying unit
- you think the flock is likely to stop laying

To tell APHA, contact:

Customer Service Centre: One Health Worcester

Email: csconehealthgeneral@apha.gsi.gov.uk

Telephone: 03000 200 301

Fax: 01905 768 649

Worcestershire County Hall

Spetchley Road

Worcester

WR5 2NP

Official sampling at your premises

Officials will take samples once a year if you keep more than 1,000 birds on your premises. In Northern Ireland, officials from DAERA take samples. In England, Scotland and Wales, official samples may be taken by an:

- APHA official
- authorised vet
- Independent Control Body (ICB) auditor (if your flock is in the Lion Code scheme)

You'll be charged for these visits. An official sample can replace an operator sample. [See official sampling fees for England, Scotland and Wales](#). Contact [DAERA](#) for details of fees in Northern Ireland.

Officials from APHA or DAERA may also take samples in these situations:

- one of your flocks gets a positive result for salmonella
- they're investigating a food-borne outbreak that might be linked to a specific poultry farm and suspect a salmonella infection on your premises
- in cases where the competent authority (APHA or DAERA) considers it appropriate

You will not have to pay for an official control sample in these cases.

Get your test results

The laboratory usually sends the results to:

- the person who sent the sample
- the person the sampled flock is registered to
- APHA or DAERA if the sample tests positive for salmonella

If your samples test positive for salmonella

Use this section to understand the actions and restrictions that could apply to your flocks and premises.

APHA or DAERA will assess positive tests for non-vaccine strain *Salmonella enteritidis* or *Salmonella typhimurium* (including monophasic *Salmonella typhimurium*). Contact [APHA](#) or [DAERA](#) if you have evidence suggesting contamination of the original sample.

If APHA or DAERA suspects the original result is a false positive, they'll collect official confirmatory samples to confirm the presence of:

- *Salmonella enteritidis*
- *Salmonella typhimurium* (including monophasic *Salmonella typhimurium*)

APHA or DAERA will also take 5 carcasses and store their organs when they collect confirmatory samples. These may be used to test for the presence of antibiotics if the confirmatory test is negative.

You must not sell your eggs from that flock as Class A. The flock will be put under a legal restriction which will prohibit the sale of their eggs as Class A eggs. If official confirmatory sampling on your flock does not confirm the initial positive result, then you can sell the flock's eggs as Class A.

If you wish to sell your eggs as Class B, you must mark them in one of the following 2 ways:

- with the official Class B mark (a circle with the letter B inside)
- use a spray or food dye to leave an easily visible coloured mark at least 5 millimetres (mm) in diameter

Egg marketing inspectors will visit your premises to check you're complying with the restrictions.

Options if your samples test positive for a regulated salmonella

You can ask for more tests, [at your own cost](#) if you think a positive test result is false. This test must be done within 4 weeks of the APHA laboratory reporting the positive sample. You must contact either of the following for more information about this type of retesting or to get these tests arranged:

- [DAERA](#)
- APHA's Customer Service Centre: One Health Worcester

Email: csconehealthgeneral@apha.gsi.gov.uk

Telephone: 03000 200 301

Fax: 01905 768 649

Worcestershire County Hall

Spetchley Road

Worcester

WR5 2NP

APHA or DAERA will arrange for an official to supervise the collection of any one of the following samples for testing:

- 300 hen carcasses
- 4,000 eggs
- 2 dust samples and 5 boot swab samples from barn and free-range birds
- 2 dust samples and 5 pooled faeces samples from caged birds

You can only get restrictions lifted, and sell eggs from the flock as Class A eggs if the samples test negative.

Official samples from other flocks on your premises

Once APHA or DAERA identifies at least one flock as positive, their officials will take samples from every other flock on your premises.

Officials will also visit and sample when a new flock is placed in the house where the last flock had a positive test result. They'll take this official control sample when the birds are between 22 and 26 weeks old.

A government vet will also visit your premises to give advice on salmonella control. In Northern Ireland contact [DAERA](#) or your private vet for advice.

You will not have to pay for:

- official sampling of other flocks on your premises
- testing the new flock following its move to the house which officials identified as positive

Positive results from a rearing flock

If a sample from your rearing flock tests positive for a regulated salmonella, officials may visit your farm to confirm the result and offer advice.

Get advice on controlling other salmonella infections

You should get advice on how to control the infection from one of these sources if your flock tests positive for other types of salmonella:

- your vet
- [APHA](#) if you live in England, Scotland or Wales
- [DAERA](#) if you live in Northern Ireland

Keep records

You must keep all your records for at least 2 years. Officials may check them at any time.

Keep test records

You must record all of the following each time you take samples:

- date and time you took the sample
- identification of the flock sampled – the house name or number and the month and year the flock moved into the house
- type of sample, such as boot swabs or pooled faeces
- age of the flock sampled – there may be more than one age if the sample is from a multi-age house
- laboratory that tested the sample
- test result

Keep movement records

You need to record any movement of birds to or from your holding. For each movement record the:

- date of movement
- number of birds
- age of the birds
- identification of the flock if you're moving an entire flock – but only if you keep more than one flock on your holding
- identity of the building or group of buildings into or from which you're moving the birds
- address that the birds moved from (including the building name or number)
- address that the birds moved to (including the building name or number)

Food chain information (FCI) documents for abattoirs

You must declare the:

- most recent NCP test result
- date of sampling

You must do this in the FCI documents you send to the abattoir for your flock.

If you plan to market meat from your birds as fresh meat, you must declare if this flock had an earlier positive NCP test result. You must do this even if the most recent NCP test was negative. You must declare all previous NCP salmonella positive results.

The FCI is a legal requirement. Birds may not be slaughtered for human

consumption without this information. If the birds are culled on farm and disposed of as animal by-products, you do not need to provide FCI.

Get advice

If you need more advice, [contact APHA](#) or [DAERA](#).

You can also read the [code of practice for prevention of salmonella in laying flocks](#) (PDF, 171KB, 51 pages)

, which provides best practice for preventing salmonella.