



Animal &
Plant Health
Agency

Testing for TB in your herd

What this means to you

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Section 1: Why do we test?

Bovine TB

Bovine TB is a chronic, infectious disease of bovine animals (cattle, buffalo and bison) that mainly affects the respiratory system. It is caused by the bacterium *Mycobacterium bovis* (*M. bovis*), which can also infect and cause TB in badgers, deer, goats, pigs and many other mammals, including people.

Scotland has been officially Tuberculosis Free (OTF) since 2009. This means that Scotland has maintained a low and stable incidence of TB and the continued maintenance of this status is a key priority and forms much of our policy for TB.

The OTF status has significant economic benefits for the Scottish cattle industry:

- fewer and more targeted risk based TB tests (some herds are exempt from testing)
- potentially greater export opportunities
- reduced risk of TB infecting our wildlife

However, if the number of TB breakdowns in any year exceeds the trigger level set by the EU Directive 64/432/EEC then loss of OTF status may follow. Surveillance must be effective so that any infection is detected at an early stage and eliminated before any spread occurs.

Bovine TB can spread to uninfected cattle in a number of ways, including contact with:

- an infected domestic animal (usually cattle) brought onto a farm
- contaminated equipment, feedstuffs, slurry etc

The risk to people from bovine TB

While people can be infected with bovine TB (*M. bovis*), most cases of TB in humans in Great Britain arise from infection with the human tubercle bacillus (*M. tuberculosis*). This bacillus is closely related to *M. bovis* but it is transmitted through close contact with infected people rather than cattle. The risk of people contracting bovine TB from cattle in Great Britain is currently considered very low, but a few cases have been recorded in recent years. However the risk is increased where unpasteurised milk or milk products are consumed.

See the Health Protection Agency leaflet for further information http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1259151943662

Testing cattle for bovine TB

Testing programmes are in place for:

- surveillance
- where there is suspicion of infection
- breakdown management

These testing programmes determine the TB status of the herd and facilitate trade, both domestic and international. Testing is carried out to:

- identify cattle infected with bovine TB and prevent bovine TB spreading to other cattle or other animals
- make sure that cattle do not suffer because of TB
- protect public health

Anyone who keeps cattle is required by law to have their cattle tested for bovine TB if their herd is eligible for testing as part of a surveillance programme. Cattle are tested at an interval that is appropriate to both the incidence of TB infection in the area where your herd is and the risk that your herd presents; which is related to your type of enterprise.

Effective surveillance is essential in order to ensure early identification of TB infection. This is necessary so that all steps can be taken to reduce the spread of disease and therefore maintain the country's OTF (Officially TB Free) status.

Surveillance is not reliant on testing alone. There are also requirements for:

- reporting of suspicious clinical cases
- reporting of suspicious lesions at routine inspection in the slaughterhouse and at private post mortem examinations

Reports will result in investigation, restrictions where necessary and additional testing.

Once infection has been identified in a herd, testing is then increased, in order to identify other infected animals within the herd and to return the herd to TB free status as quickly

and effectively as possible. This will reduce the opportunity for further spread of the disease both within and around a herd.

Additional testing is carried out where there is suspicion of infection, either in an individual animal or a herd due to:

- a report from the slaughterhouse of lesions that are suspected to be due to infection with *M. bovis*
- an animal that has been identified as moving from a farm on which TB is present
- infection in another herd which may have spread to animals in your herd, either due to location or management

A report from the slaughterhouse

Sometimes lesions suggestive of TB are found in animals at routine slaughter inspection. If such lesions are found, your herd will be placed under movement restrictions pending further investigation and your local APHA office will discuss your testing requirements with you.

Inconclusive reactors

Inconclusive reactors may be an early indication that you have infection in your herd. They will be restricted and subjected to further tests. Your local APHA office will send you a letter explaining the restrictions and testing necessary for your particular situation.

Pre- and post-movement testing

All cattle over 42 days old from parishes that are subject to one or two yearly testing intervals must be pre-movement tested within 60 days before they enter any Scottish herd, and must also be post-movement tested between 60 and 120 days of their arrival in a Scottish herd.

Cattle over 42 days old moving from parishes that are subject to three or four yearly testing in England must be pre-movement tested, unless they have resided in a low incidence area for the duration of their lives.

Cattle imported from Northern Ireland must also be post-movement tested between 60 and 120 days of their arrival in a Scottish herd.

This is to reduce the risk of spreading TB from one herd to another.

Post import testing

Cattle imported from non OTF countries including the Republic of Ireland must also be post-import tested between 60 and 120 days of their arrival in a Scottish herd.

Refusal to test

As a cattle owner, you will be advised by letter when your herd, or a specific animal, must be tested and are obliged to arrange a bovine TB test before the end of the specified testing period. Your herd will be placed on movement restrictions (TB2) immediately if it is overdue for testing. The restrictions prevent movements of cattle on or off your premises and will remain in force until your testing has been completed and there is no evidence of TB.

The TB status of your herd

Officially TB Free (OTF) status

Herds giving negative results at routine surveillance testing are classed as Officially TB Free (OTF).

When Officially TB free status is lost

Your herd's Officially TB Free Status will be lost if:

- at least one animal has failed the TB skin test (is a reactor animal)
- at least one animal has had 2 inconclusive skin test results consecutively
- the slaughterhouse, knacker's yard or hunt kennel that you sent cattle to reports carcass lesions typical of TB
- at least one animal has had an inconclusive skin test result and your herd had a Tb breakdown classed as high risk at any time in the last 3 years
- your TB test is overdue
- one of your live animals shows possible signs of TB and tests positive to a skin test, or is slaughtered before testing and lesions typical of TB are found in the carcass

In all cases, your herd will be placed under movement restrictions (TB2) and further testing undertaken.

When your herd's TB breakdown is classed as high risk

Your herd's TB free status will be lost, and your herd classed as high risk, when either:

- Lesions typical of TB are found at the post mortem examination of tuberculin skin or gamma-interferon blood test reactors or IRs, or
- *M. bovis* is cultured in tissue samples from any animal in the herd

Your herd will be placed under movement restrictions (TB2) and further testing will take place.

Enforcement of TB policy

Any non-compliance with the conditions of notices, pre-movement testing, licences or TB testing requirements, is a breach of the legislation and appropriate enforcement action will be considered:

- your local authority will follow its enforcement policy and take action as appropriate. This ranges from verbal advice and written warnings to prosecution.

Offences are covered under the Animal Health Act 1981 and penalties include the following:

- compulsory TB testing at the expense of the owner
 - written warning
 - fine not exceeding £5,000
 - custodial sentence
- SGRPID enforce cross compliance legislation where failure to comply with the TB legislation may also be considered an intentional breach of cross compliance. This could result in a reduction in payment on a number of schemes, including the Single Farm Payment Scheme (SFPS) for your farm.

Section 2: How do we test?

The Single Intradermal Comparative Cervical Tuberculin (SICCT) test, commonly known as the tuberculin skin test, is the primary bovine TB test used throughout Europe.

Since 2006 the Gamma Interferon test has been used in GB alongside the skin test in certain circumstances to help identify animals at an earlier stage of infection.

The tuberculin skin test

The tuberculin skin test is the internationally accepted standard for detection of infection with *M. bovis*, and is considered the best test currently available.

It is designed to test the animal's immune response and involves injecting a small amount of tuberculin (a harmless protein extract of *M. bovis*) into the skin of the animal. In most cattle infected with *M. bovis*, this will cause the animal's immune system to react to the tuberculin and result in a localised allergic reaction (swelling) of the skin a few days after the injection.

Cattle are sometimes infected with other types of mycobacteria which may cause the animal to react to the test. In order to distinguish between animals infected with *M. bovis* and those infected by other mycobacteria, each animal is also injected with an extract from the organism that can cause TB in birds (avian TB) at the same time.

The test is read 72 hours after the injections have been carried out. The size and nature of the reaction to both types of tuberculin ('avian' and 'bovine') are compared to determine whether the test result is considered positive, negative or inconclusive.

The person carrying out your test will be an inspector trained by APHA to carry out the tuberculin skin test. This will either be your own veterinary surgeon, an APHA Veterinary Inspector or an APHA Animal Health Officer.

Preparation for the test

APHA will send you a test notification letter giving details of the test that is required. You are required by law to provide appropriate facilities and assistance to enable an inspector to carry out the test.

A properly planned test, using well-designed and constructed handling facilities, will avoid unnecessary stress for you and your cattle, save time and, most importantly, be safer for all involved.

If you have any questions about the test, please contact your local APHA office or veterinary surgeon, for advice.

Which animals to test

The letter APHA will send you about your test will specify which animals need testing.

Identification

Ensure your cattle are correctly identified. This is a legal requirement but will also make it easier and quicker to identify individuals and record skin measurements or blood samples against the correct animal. You must also ensure that all eligible animals have been presented for testing.

Gathering

To avoid delays, your cattle should be gathered in readiness for the test. If it is not possible to test all your eligible cattle on a single day, you must notify the tester in advance and be able to keep them in the same, separate groups until all cattle have been tested.

Records

You may be asked to provide your herd register/cattle movement records and veterinary medicines records, so please have these available for inspection.

Veterinary treatment and other tasks

Whilst you have the cattle gathered you may wish to undertake other management tasks. However these should not interfere with the test and routine veterinary medicines, such as wormers or vaccines, should only be given to animals once they have tested clear.

Previously tested animals

Animals that have recently moved onto your premises may have been skin tested in the previous 60 days. If you can provide evidence of this test you will need to notify the person undertaking the test and these animals will not be tested. If you are unable to provide evidence they will need to be tested at a date that is at least 60 days after the movement on to your herd.

Facilities

Handling facilities will be needed for both days of the test to allow safe movement of, access to and good restraint of the animal being tested. They must enable safe and well-lit access to read and record the animal's identification tag, to clip the test areas on the neck, to measure the skin thickness of the clipped areas and to inject the tuberculin.

- you will need to provide suitable handling facilities for the cattle to be tested, such as a crush and penning system, ideally linked by a securely constructed race

- the facilities should be in good working order and appropriate for the size and breed of cattle to be tested, for example specially adapted if handling Highland or Longhorn cattle. If you do not own a crush or penning system, you should arrange to borrow or hire one. To make sure you do not compromise the biosecurity of your herd, or anyone else's, all equipment should be cleansed and disinfected before and after use
- The Health and Safety Executive has produced an information sheet (Agriculture Information Sheet No 35) about suitable handling, restraint and housing of cattle at <http://www.hse.gov.uk/pubns/ais35.pdf>

Assistance

By providing sufficient and appropriately experienced help to move groups of cattle into and through the handling facilities, the test will go more quickly with less stress to your animals and less risk of injury to all involved. APHA staff will not routinely be able to help gather or move animals.

If you fail to present your cattle for testing safely and the inspector considers the facilities and assistance provided to be inadequate, the test will not proceed until the issues are resolved. This could mean your test becomes overdue and movement restrictions may be applied.

Procedures for the test

- the animal is identified (by its ear tag) and its identification recorded
- the hair is clipped to mark two injection sites in the middle of the side of the neck, one above the other
- the thickness of a fold of skin at both sites is measured with callipers and recorded in mm
- tuberculin is injected into the skin; avian tuberculin into the upper site, bovine tuberculin in the lower site
- after 72 hours the tester returns, checks the animal's identity, palpates the skin at the injection sites, measures any reactions and records the results.

If a veterinary inspector undertook the test, they will interpret the skin measurement readings and report the results immediately. Where the test is completed by an Animal Health Officer ('Lay tester'), the formal interpretation of the skin measurements and nature of the reaction will be by an APHA vet and they may not be able to give you the results of the test immediately.

It is necessary to record the use of the tuberculin in your medicines records. The tester will give you the details that you need, such as batch number and quantity, but it is your responsibility to ensure that this is added to your record book.

The Gamma Interferon blood test

In specific circumstances, the Gamma Interferon test is used in combination with the skin test to help ensure identification and early removal of TB-infected animals and reduce the risk of further spread of disease.

The comparative tuberculin skin test is recognised by the EU as the primary test for mass screening of cattle, but the gamma interferon test is useful when combined with the skin test as it compliments this test when used in herds with severe breakdowns or persistent TB problems, or in areas where TB incidence is low.

Gamma interferon tests can only be carried out by APHA and this will usually be an Animal Health Officer, who will take blood samples from your cattle.

Cattle testing positive to the gamma test will be classed as reactors and will be valued and slaughtered in the same way as skin test reactors.

Further information

Contact your [local APHA office](#) for further practical advice and guidance.

Since devolution, the responsibility and powers in regard to animal health legislation has meant that there may be significant differences in the policies regarding bovine TB in England, Wales and Scotland. GOV.UK and the Scottish Government and Welsh Government websites provide up to date detail on these policies.

If you farm on the border of England and Scotland, you should be aware that the location of your animals at the time of the test would influence which protocols are relevant to you.