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| **TB IN YOUR HERD** |  |
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Introduction

This booklet is intended to answer some of the questions we are most frequently asked by herd keepers during a TB breakdown.

If you have any other questions or require more specific or detailed advice, please contact your local DAERA Direct Office on 0300 200 7840.

What other support is available to me?

Rural Support offer a range of support services to farmers who are experiencing difficulties and require advice, support, or someone to talk to. They can be contacted via 0800 138 1678 or by email (info@ruralsupport.org.uk). Further information is also available on their website (ruralsupport.org.uk).

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**Section 1- Background information**

What causes TB in cattle?

Bovine tuberculosis (TB) is an infectious disease of cattle. It is caused primarily by a bacterium called *Mycobacterium bovis (M. bovis*). *M. bovis* can also infect and cause disease in many other species most notably badgers, deer, cats, dogs, pigs and camelids (llamas and alpacas).

Can TB in cattle spread to humans?

Bovine TB is a zoonotic disease. This means that it can be transmitted from animals to humans.

Northern Ireland has a comprehensive TB eradication programme in place for cattle. This together with other public health controls (milk pasteurisation and meat inspection) means cases of M. bovis in humans are now uncommon.

Why do we test cattle for TB if the risk to humans is low?

An effective TB programme is needed for 3 main reasons:

* To protect public health – If cattle were not tested the disease incidence would increase dramatically and this would increase the risk to human health.
* To protect trade – The NI agri-food sector is highly dependent on exports to other countries. Without a comprehensive TB eradication plan in place our meat and dairy products would not be accepted by our key export markets.
* To protect animal health – in countries without an effective TB control programme in cattle, clinical disease is commonly seen and is a major cause of lost productivity.

What are the symptoms of TB in cattle?

Most infected cattle show no clinical signs and appear perfectly healthy.

There are 2 main reasons for this:

* The disease usually progresses very slowly, and many animals are slaughtered for beef or detected at a TB test, long before symptoms develop.
* Some animals may develop a “latent” infection which may never progress to cause clinical disease.

In cases where the disease does become very advanced, the most common signs are chronic weight loss, coughing and laboured breathing. TB can also occasionally cause a chronic form of mastitis which does not respond to treatment.

* Legislation requires that all reactor animals undergo a clinical examination by the testing veterinary surgeon to check for any clinical signs.

How do cattle become infected?

To become infected, cattle must be exposed to a source of *M. bovis*. There are several ways this can occur:

* **Direct Spread between cattle**.

As TB is mainly a respiratory disease, bacteria can be passed out of the infected animal’s body in its breath or in discharges from the nose or mouth. Other cattle can then become infected by breathing in these bacteria.

TB may also be found elsewhere in the animal, such as in the gut or udder. In such cases, bacteria can also be shed in dung and milk. Other cattle may then become infected by drinking infected milk or ingesting contaminated feed.

* **Indirect Spread**

As the bacteria can survive for long time periods outside the host, TB can also be spread via contaminated objects. For example – contaminated wellies, vehicles, and farm machinery / cattle trailers.

The bacteria can also survive in slurry and farmyard manure and there is also a risk of spread through this source.

* **From wildlife**

Infected wildlife, particularly badgers (and possibly deer in some areas), can also transmit the disease to cattle.

Exposure may occur at pasture or when wildlife has access to winter housing or feed. As with cattle to cattle spread, transmission of the disease from wildlife to cattle can occur through direct nose to nose contact or through contamination of the environment with respiratory excretions, urine, and faeces.

Disease can also spread in the other direction – from cattle to wildlife.

**Section 2: Diagnosing Bovine TB**

How can TB be detected in live animals?

TB is a difficult disease to detect and no single diagnostic test for it is perfect.

In Northern Ireland, live animal surveillance is undertaken using:

* **The TB skin test** – herds and animals are tested using the Comparative Intradermal Tuberculin test. This means animals are injected with 2 different types of tuberculin (avian and bovine) and the results at the two sites are compared.

**NOTE**- When the test is being used to certify animals for export the avian response is ignored and the test is interpreted based on just the response to bovine tuberculin. This means that occasionally an animal which has not been classified as a reactor or inconclusive may still not be eligible for direct export.

* **Clinical examination of animals**.

If any animal shows signs that are suspected to be due to TB then legally this must be reported to DAERA.

* **Interferon Gamma (IFN-g) testing**

This is generally referred to as ‘the TB blood test’ and is used as a supplementary test to the skin test.

How do I prepare for a TB test? What do I need to know?

* All cattle should be properly tagged for the test and handling facilities must be fit for purpose.
* As herd keeper you or someone acting on their behalf must be present during the test. Adequate help must be provided to collect, pen, and secure the animals for identification and testing.
* Herd records must be up to date (birth, deaths, and movements). All births and deaths should be notified to DAERA before the test starts.
* **All animals 6 weeks of age and over must be presented for skin testing.**
* In the case of the blood test, you will be advised which cattle need to be blood tested.
* If, in exceptional circumstances, you need to postpone the test you must advise the testing vet immediately.
* In some circumstances medication can interfere with the test. Once the test starts, no routine medication should be given. This includes dosing and vaccinations.
* However, if an animal is sick or lame and its welfare is likely to be compromised unless medication is administered, please consult with your veterinary practitioner, and follow their advice. If medication is given you should advise the local DAERA office as soon as possible as well as the vet conducting the test.
* Any herd treatments (for example dosing or vaccination) should be carried out after the test has been completed on the day the test is read.
* Veterinary Medicine Records should be made available to the testing vet so that they can enter or provide details of the tuberculin used to carry out the test.
* If you have any difficulty getting your test arranged please get in touch with your testing vet and DAERA as soon as possible and before the test becomes overdue.

How is the TB skin test carried out?

The TB skin test is the common name for the Comparative Intradermal Tuberculin test.

 It works by detecting the animal’s immune response against the disease and is regarded as the single best indicator of infection with *M. bovis* in live animals. In Northern Ireland, all herds are skin tested annually, as a minimum requirement, but some are tested more frequently if they are considered at increased risk.

On Day 1 of the test, two sites are clipped on the neck of the animal. The skin thicknesses at both sites are measured and recorded.

One type of tuberculin is injected under the outer layer of the skin of the neck at each of the two sites. One tuberculin is made from killed *M. bovis* (bovine tuberculin) and the other from killed *Mycobacterium avium (*avian tuberculin*),* the bacterium that causes TB in birds.

Avian TB does not cause disease in cattle but at the skin test it can cross react with bovine tuberculin if cattle have been exposed to it, so the avian tuberculin is injected as a control.

On Day 4 of the test, the skin reactions to the two types of tuberculin are measured and compared.

How are the skin test results interpreted?

Routine skin tests (e.g. annual herd tests) are interpreted under “standard interpretation”.

This means:

* When the bovine site reaction exceeds the avian site reaction by more than 4 mm, the animal is a reactor under standard interpretation. When the test is being read all reactors will have a DNA tag applied.
* If the bovine site reaction measures 1-4 mm more than the avian site reaction, the animal is an inconclusive (“doubtful”) under standard interpretation.
* If the bovine reaction is no larger than the avian reaction the test result is negative.

Where infection is confirmed in a herd, more stringent interpretation criteria are used. This is often referred to as “severe” interpretation.

The DAERA Patch Vet who is managing a breakdown will assess the level of risk and may also decide to apply a stricter interpretation or to remove additional skin test negative high-risk animals as ‘Negative in Contacts’ (NICs).

Do all infected animals test positive on the skin test?

Unfortunately not. The ability of a test to correctly identify an infected animal is referred to as the test “sensitivity”. The higher the sensitivity of the test, the lower the chance it will miss infected animals.

Numerous studies have attempted to quantify the sensitivity of the skin test:

* Studies in GB have suggested that test sensitivity is between 51% and 100% with an average figure of approximately 80% at standard interpretation.
* A study carried out in NI in 2019 estimated the sensitivity of the skin test at standard interpretation to be approximately 88%.

**Therefore, as a rule of thumb it is likely that approximately 20% of TB-infected cattle may test clear on any one skin test using standard interpretation**.

Using severe interpretation significantly increases the sensitivity of the skin test and therefore reduces the chance of infected animals escaping detection.

Repeating the skin test also reduces the risk of leaving infected animals undetected in the herd.

Do all skin test “reactors” have TB? Could my reactor be a false positive?

The ability of a test to correctly identify an animal that is free from infection as negative is referred to as the specificity. The higher the specificity, the lower the probability of “false positives”.

The skin test has an excellent test specificity of 99.98% under standard interpretation. This means that it is **very** rare that a non-infected animal will be wrongly classified as diseased. The absence of visible “lesions” at post-mortem **does not** mean that an animal was not infected. (See later)

What about the ‘TB Blood Test’? What are the pros and cons?

* The interferon gamma (IFN-g) test is a blood test which has been approved since 2002 in the EU. It is most often used in conjunction with the TB Skin Test to improve the chances of detecting infected animals in herds where TB has already been confirmed.
* Animals which have been exposed to *M. bovis* will often respond to the IFN-g test before they will respond to the TB skin test. This means it can be useful in detecting infected animals at an earlier stage of the disease. The IFN -g test may also identify some TB infected animals which do not respond to the skin test.
* Currently, uptake of the IFNG test is voluntary although it is compulsory for farmers to give up any IFN-g test positives that are detected, even when they are skin test negative.
* The IFN-g test has a higher sensitivity than the skin test. This means it has less false negatives and will miss less TB infected animals. For this reason it can often be more useful in clearing a herd of infection than just using the skin test alone.
* Unfortunately, it has a lower specificity, and therefore more “false positives” compared to the skin test. We estimate that approximately 3-4% of animals tested will be false positives. This means 3 or 4 out of every 100 negative animals are likely to test positive. In Northern Ireland due to the lower specificity, IFN-g testing is mainly used in particular high risk breakdown situations.
* This test is not suitable for use in calves under 6 months of age as the results in young calves may be unreliable.
* There are some logistical limitations as samples must be received at the lab within tight time limits.

Why do we still use the TB Skin test? Are there other options?

The “skin test” is widely used throughout the world. It works by detecting the animal’s immune response against the disease and is still regarded as the “single best indicator of infection with *M. bovis* in live animals”. Although some improvements have been made over the years (for example using better tuberculins), the skin test we use in NI has remained largely unchanged for decades. This test is still the cornerstone of our TB programme.

In order to maintain trade, countries can only use tests that are approved by the EU and WOAH (World Organisation for Animal Health (WOAH). Currently only the skin test and the IFNG blood test are approved for use in EU Approved TB Eradication Programmes and are suitable for use in NI. DAERA will continue to monitor the science and in the future other tests may gain approval and be considered for use.

The IFNG blood test has too low a specificity for widespread use on uninfected herds as it would generate an unacceptable (and unaffordable) number of false positives in these herds. It is however very useful in helping to clear infection from infected herds.

How can TB infection be diagnosed or confirmed after slaughter? What are “lesions”?

Over time TB infection results in the development of granulomas known as “lesions” in the carcase. If lesions grow large enough to be seen with the naked eye they are called “visible” lesions.

TB lesions are typically seen in the lymph nodes of the head and chest and in the lungs, but they may also occur in the gut and at other sites.

Every bovine animal slaughtered in Northern Ireland for human consumption undergoes routine meat inspection to check the carcase and organs for signs of disease, including bovine TB.

Reactor animals undergo a more detailed post-mortem examination to search for TB-like lesions. Your Patch Vet will be able to tell you if your reactor/s had any visible lesions or you can also get postmortem information via NIFAIS on Line (NoL).

At the post-mortem examination, samples may be taken and sent to the Agri-Food Biosciences Institute (AFBI) at Stormont. Staff at the laboratory will examine the samples under the microscope, which is called a ‘histology test’.

They may also try to grow the bacteria to see if it contains *M. bovis* which is called the ‘bacteriology’ or ‘culture’ test.

Histology results usually take about two weeks to be completed and it usually takes at least eight weeks for DAERA to receive culture results, since *M. bovis* grows very slowly in laboratory conditions. Information on laboratory results is available from the Patch Vet dealing with your breakdown.

What is an LRS?

Sometimes animals that are **not** TB reactors will show ‘TB-like lesions’ at routine meat inspection. Such animals are termed ‘Lesioned at Routine Slaughter’ or ‘LRS’. Samples from LRS animals are always sent to the lab for further investigation.

LRS animals will trigger a herd restriction and if disease cannot be ruled out by the lab, a TB Breakdown.

Why was TB infection found in an animal that I sent to slaughter when my last herd test was clear?

There are 3 possible reasons for this:

* The animal may have become infected **afte**r the last test.
* The animal may have been infected at the time of the last test, but the infection was too early to be detected by the skin test.
* The animal may have been a false negative as not all infected animals will test positive. (See Section on skin test sensitivity)

How likely are my reactors to have “visible lesions” detected at slaughter?

Recent figures show that approximately half of all reactors are visibly lesioned. The remainder are NVL (i.e they showed No visible lesions).

If an animal has “no visible lesions” how can it have TB?

**If no lesions are found at post-mortem examination, this does not mean that the animal was not infected with TB. The skin test has a very low level of false positives.**

There are several reasons why so many reactors have no lesions reported:

* Not all TB lesions can be seen due to their location or very small size.

A TB lesion in an animal may be smaller than the size of your thumbnail or may be in a site where it can be very difficult to detect.

* Infected animals are often detected by the test before visible lesions have developed.
* The post-mortem is carried out “on the line” at the abattoir so there is only a very limited time frame for carrying out the examination. Meat inspection is carried out mainly for public health reasons and is not designed to be a forensic postmortem.

**Section 3: Herd statuses and testing requirements**

Why has my herd lost its OTF (TB free) status?

When TB is either suspected or confirmed in a herd it loses its Officially Tuberculosis free (OTF) status.

There are several reasons why a herd might lose its OTF (TB free) status, the most common of which are:

* Reactor /s at the TB Skin
* One or more animals having two consecutive inconclusive skin test results.
* Lesions detected at routine slaughter.

When any of these occur, the herd will become a TB breakdown herd.

A herd will also lose its OTF status if herd testing becomes overdue.

What does OTS herd status mean?

OTS (Officially Tuberculosis Free Suspended) status means that the TB status of your herd is uncertain. This can be either because TB is suspected but has not been definitively confirmed, or that herd testing is not up to date.

If you have only had 1 reactor which has not confirmed with disease at postmortem or lab testing, your herd status will generally be OTS.

What are the testing requirements for OTS (unconfirmed) breakdowns?

The minimum testing requirement for derestriction of OTS breakdowns is one clear herd test. This herd test is known as an RH1 (stands for “Restricted Herd Test 1”).

Note: if a positive TB result was first discovered at an individual animal test or at slaughter, rather than at a herd test, an initial RHT herd test may also be required (see RHT section on next page).

What does OTW herd status mean?

OTW (Officially Tuberculosis Withdrawn) means that your herd is being treated as a confirmed TB breakdown.

If any of the following apply your herd will automatically be made an OTW breakdown:

* More than 1 skin test reactor even if no postmortem or lab confirmation
* At least one reactor or LRS with positive postmortem or lab test results
* More than 5 unconfirmed LRS animals.
* Any animal with a positive bacteriology (culture) result

What are the testing requirements for OTW (confirmed) breakdowns?

The minimum testing requirement for derestriction of OTS breakdowns is two consecutive clear herd tests. These tests are known as RH1 (Restricted Herd Test 1) and RH2 (Restricted Herd Test 2). These herd tests will usually be carried out a minimum of 60 days apart.

In OTW breakdown herds RH tests are routinely interpreted using severe interpretation. This is to reduce the chance of infected animals being left behind in the herd and to make sure your herd becomes free of infection as soon as possible.

After my herd is derestricted, what TB testing regime will apply to my herd?

After your herd is derestricted, it will not go back immediately to annual testing. Instead it will be subject to “check testing” as follows:

* After OTS (unconfirmed) breakdowns:

One CHT (Check Herd test) will be set with a due date of 6 months after derestriction.

* After OTW (confirmed) breakdowns:

Two Check Herd Tests (CH1 and CH2) will be set for your herd – The first one (CH1) will be set with a due date of 6 months after movement restrictions are lifted, and the second one (CH2) will be set with a due date of 6 months after completion of the CH1.

The purpose of Check Herd testing is to check that no infection has been left behind and to make sure that any original cause of infection has not resulted in the infection of more animals in your herd.

What is an RHT / stabilising herd test and why is it important?

Most infected animals are identified at herd tests, but when a breakdown begins with a LRS or an animal testing positive at an individual animal test, the status of the rest of the herd is unknown if the herd has not recently completed a full herd test.

For this reason an immediate stabilising test (RHT) may be set if the herd has not recently been tested. The purpose of an RHT is to:

* establish the extent of infection in the rest of the herd,
* remove infected animals as early as possible, and
* prevent further spread of infection to healthy animals.

Occasionally, an RHT may be a part test, carried out on the highest risk groups in a herd. Herd-keepers are advised to complete an RHT at the earliest opportunity to establish the disease status of the herd. Failure to promptly complete an RHT may delay detection of further affected animals and prolong the breakdown.

RHTs are extremely valuable surveillance tests for the Department and affected herd-keepers. In 2023, approximately 30% of RHT tests revealed at least one reactor. This shows the importance of RHT tests in picking up infected animals as soon as possible, therefore reducing further spread of disease within the herd.

What animals need to be tested during a TB breakdown?

As for any other herd test, calves less than 6 weeks old are usually exempt from testing, even if they are not homebred.

Very occasionally there may be a need to test calves less than 6 weeks of age. If this is the case, you will be informed accordingly. The vet carrying out your TB test should not test calves under 42 days on day 1 of the test unless the local DAERA office has advised that they should be tested.

For blood testing you will be advised which groups of animals are to be tested and calves < 6 months are not eligible for testing.

**Section 4: TB Movement Restrictions**

Why does my herd have to be restricted during a TB breakdown?

Movement restrictions are necessary to reduce the risk of the disease spreading via cattle movements. Remember non-reactor cattle may already be incubating the disease and may pose a risk to other herds. Movement restrictions are also required by legislation.

Once a herd becomes a TB breakdown, movement restrictions are applied, preventing the movement of live cattle out of the herd except for direct slaughter. This means movement to markets or other herds is forbidden. In some cases, movement of animals into the herd may also be restricted.

Restriction notices will be issued to you giving details of the movement restrictions that have been imposed on your herd. These will detail what movements are and are not allowed.

Movements that are blocked by movement restrictions can only take place if a movement licence is approved in advance.

Can I move cattle directly to an abattoir during a breakdown?

Yes - You can take animals, that are not individually restricted, directly to an abattoir in Northern Ireland provided your herd test is not 37 or more days overdue. These movements do not require a licence and can be done via paper or electronic MC2.

Why do some of my animals have an individual TB status against them?

The most common reasons why an animal might have an individual TB status include the following:

* Animal is a reactor or inconclusive.
* Animal has missed a test.
* Animal has been traced from another breakdown herd and needs a tracing test (CTT) to check for spread of disease from the breakdown herd.

If an animal has a TB status on NIFAIS online (NoL) or on your herd list print out, it is individually restricted and may not move (even to slaughter) without a movement licence. These licences are known as MC2L licences. Some MC2LS can be obtained via NIFAIS online (NoL). Licences can also be requested from your local Divisional Veterinary Office (DVO). Please contact your local DVO if you have any queries.

Can I buy in animals during a TB Breakdown?

In most cases animals may be moved into breakdown herds as normal but in certain circumstances moves onto the farm will be restricted:

* Moves in will be automatically restricted if your herd test is 37 or more days overdue.
* If your herd has been classified as a ‘Severe TB Breakdown’, a BT25c notice will be issued, to prevent the movement of cattle into the herd. This is to prevent healthy cattle being purchased into a very high-risk situation where they are very likely to become infected. It is an offence to move animals into your herd in breach of a BT25c notice unless advance permission has been given by DAERA. If animals are moved in in breach of this notice and are subsequently removed by DAERA as reactors or NICs, compensation payments may be withheld subject to investigation.

What happens if I don’t test on time?

Testing on time reduces the risk of further spread within your herd and helps to get your herd derestricted as soon as possible.

If any herd test is not completed by 37 days after the due date, restrictions will be imposed to prevent **all** movements to or from your herd until the overdue test is completed. This includes movements into the herd (if not already blocked) and moves directly to slaughter.

Overdue testing can also result in financial penalties as it may be a breach of Cross Compliance Verifiable Standards.

If there are exceptional circumstances, can I request a movement licence to allow me to buy in cattle?

If your herd is restricted from purchasing and there are very exceptional circumstances meaning you need to buy in stock, you should contact your local DVO for advice. They may decide to grant a movement licence to allow the move. For example, permission may be requested if you need to replace your breeding bull.

In most circumstances, we will only consider allowing moves if you can demonstrate the risk of infection spreading to the newly purchased animals is minimal and you have put in place reasonable measures to limit the spread of infection. This would include having completed all the required cleansing and disinfection.

What happens if I don’t have enough feed or housing because I can’t sell cattle?

DAERA understand that movement restrictions may cause difficulties such as the need for extra housing and feed for stock that you would normally have sold, for example, stores or heifers. However, DAERA is not empowered to pay compensation for any consequential losses which you may suffer because you have to hold onto extra animals or change the way you manage your herd. It may be worth checking if these losses are covered under your farm insurance policy.

If there are any approved Alternative Control Herd (ACH) currently available and willing to purchase cattle from you, you can request a movement licence from your local DVO.

Alternatively, in very exceptional circumstances, DAERA may also consider issuing a licence to allow a move to another OTW herd which is not an approved ACH under licence. This requires the approval of the local Divisional Veterinary Officer (DVO). Such moves will only normally be approved into OTW herds and only after an on-farm visit to assess the situation and a detailed risk assessment has been completed. Requests for movement licences will not normally be considered if herd testing is not up to date.

For further information on these options, please contact your local DAERA Divisional Veterinary Office.

**Section 5: Valuation and Removal**

What happens to reactor animals?

Reactor animals will be valued and slaughtered. You **must** isolate them from the rest of the herd until they are slaughtered. This will reduce the risk of them spreading TB on your farm. When reactors are slaughtered, they undergo a detailed post-mortem examination to determine if their meat is fit for human consumption. Visible lesions may or may not be detected. (See Section 2)

What about compensation?

A DAERA Livestock Valuation Officer (LVO) will contact you to make an appointment to come to the farm and determine the market value of each animal concerned. DAERA currently compensates herd keepers at 100% of market value of the animal/s.

**More Detailed information regarding valuation, seeking an independent valuation, the appeals process and DAERA’s right to slaughter can be found in the ‘Guidelines for Owners and Herd keepers on the Process of Valuation of animals to be slaughtered owing to Tuberculosis or Brucellosis’ booklet. This is sent to all herd keepers at the start of a new TB breakdown and is also available on the DAERA website.**

Can I send reactors to slaughter reactors myself?

You may refuse DAERA compensation and take reactor animals to any abattoir in NI willing to slaughter them. In such cases, you must obtain a movement licence (MC2L) from the local DVO office and arrange for transport to the abattoir at your own expense. Any payment in this case is a matter between the abattoir and the herd keeper. Abattoirs will generally kill these animals “at owner’s risk”. This means that you may lose out on all or part of the carcase value depending on the post-mortem results. DAERA will not be liable for these losses. For this reason, herd-keepers rarely choose this option, as this is avoided if DAERA compensation is accepted.

What if a reactor dies before it is removed by DAERA?

If a reactor animal dies prior to removal, no compensation is payable. This is the case even if the animal has already been valued.

What about reactor animals that can’t travel to the abattoir – will I get compensation?

As per the TB Control Order (NI) 1999 (as amended) DAERA can **only** pay TB compensation for animals which were slaughtered or “caused to be slaughtered” by a DAERA vet.

**This means that for animals not removed by DAERA, compensation can only be paid if a DAERA vet had instructed their removal by an agreed alternative means for disease control reasons.**

NOTE: You may request an ex-gratia payment if you consider there was a significant delay in valuation or the removal of the animal, however a payment is not guaranteed.

What about reactor animals that need to be destroyed on my farm?

If a reactor animal is not fit to travel for slaughter or is deemed automatically ineligible for human consumption (for example due to its TSE status), then euthanasia will be carried out on farm. Please note that DAERA staff will usually only euthanize TB reactor animals if a post-mortem examination is deemed necessary, or if the animal is potentially dangerous and requires deployment of the humane slaughter team. If DAERA are not going to destroy the animal, it will generally be carried out by your own private vet (PVP) with the prior approval of a DAERA vet.

Will I get compensation for animals destroyed by DAERA staff?

Compensation will be paid for animals destroyed by DAERA for disease control reasons. At euthanasia, the Department vet/member of the DAERA humane slaughter team will check the identity and description of the animal, including checking the DNA tag.

Will I get compensation for animals destroyed by my own vet (PVP)?

**Compensation will only be paid if a DAERA vet has instructed its removal in this manner for disease control purposes, a suitable veterinary certificate has been provided (see below) and the carcase has been properly disposed of.**

Will DAERA pay euthanasia and disposal costs for on farm slaughter of reactors?

The carcase must also be disposed of through the fallen stock scheme. As the keeper, you are usually responsible for any costs incurred for euthanasia and disposal of the carcase. However, where the animal is euthanised on-farm for TB disease control reasons you may make a claim for re-imbursement of reasonable costs**.**

 **To make a claim you must submit the invoice/receipt for fallen stock collection, the invoice/receipt for the PVP euthanasia, and the PVP certification to your local Divisional Veterinary Office as detailed below.** When the carcase is going to an approved rendering plant fallen stock there is no need to submit a death registration.

What details are required on the vet’s certificate?

If the following information must be included on a certificate from the PVP if animal is to be eligible for compensation payment:

* **Name of herd keeper**
* **Location, date, and time of euthanasia**
* **The animal’s description,**
* **Full tag numbers (both DAERA tag and DNA tag)**
* **Details of the reason for on-farm destruction,**
* **A declaration that the animal would have had a reasonable chance of recovery if given time and/or treatment and**
* **Method of euthanasia (e.g. shooting or lethal injection).**

What if a reactor requires emergency slaughter?

Whilst reactor animals remain in your care you remain responsible for their welfare.

 In the case of an emergency welfare situation (e.g. the animal has a suspected broken leg), you must seek urgent veterinary attention for the animal from your usual veterinary practice.

If the PVP is of the opinion that the animal requires urgent euthanasia, the welfare of the animal is the primary consideration, and this must not be delayed.

**If an animal is destroyed as an emergency welfare case (for example if it has a broken leg), this is considered a consequential loss unrelated to its TB status and it will be ineligible for compensation.**

Some abattoirs may accept animals that have suffered an accident as “on-farm slaughters” for human consumption. You should consult with the abattoir to ensure that they are willing to accept the carcase prior to having an animal slaughtered on farm for human consumption as not all abattoirs will accept them.

What about heavily pregnant reactor animals?

Legislation states that animals which are in the last 10% of expected gestation or are freshly calved less than 7 days are not fit for transport. It is your responsibility to highlight any animals that may fall into this category.

Most of these animals remain on farm until at least 7 days after calving when they will be removed as normal. DAERA do however reserve the right to destroy the animal(s) on farm sooner (or direct the herd keeper to request their PVP to do so) if this is deemed necessary for disease control reasons.

Once the reactor animal has calved, staff at the local DAERA Direct Office should be informed.

What about calves of reactors?

Calves born to reactor animals are not considered to be at significantly increased risk of TB infection, especially if removed promptly from the dam. Such calves will usually remain on farm, unless the Patch Vet deems there are other disease reasons that necessitate its removal.

Why must I isolate reactors? What happens if I don’t isolate them?

Positive and inconclusive animals may pose a risk to the breakdown herd, to neighbouring cattle, and to local wildlife. The purpose of isolation is to minimise this risk. Details on how animals should be isolated are on the BT95 letter sent to you at the start of a new breakdown.

Farm visits to ensure that proper isolation procedures are followed may be carried out by Animal Health and Welfare Inspectors (AHWIs) at the discretion of the Patch vet. Prior notification is not given to the herd-keeper that such a visit is to take place.

If you fail to isolate properly, the Patch Vet may consider the date of removal of the reactor as the date of removal by the haulier which will delay clearance of the herd. You may also face prosecution for any breach of a notice to isolate reactor and inconclusive animals and compensation may be withheld. Failure to isolate can also result in financial penalties as it may be a breach of Cross Compliance Verifiable Standards.

What happens to the meat from reactors and inconclusive reactors?

As for any animals going for slaughter, you will be required to fill in a Food Chain Information (FCI) form for all animals collected by the haulier.

Meat inspectors will inspect the carcase at the slaughterhouse. It is rare for any problem related to bovine TB to be seen in the meat. If TB like lesions are found in more than one location in the carcass, the carcass will not be passed as suitable for human consumption. Otherwise, the meat inspectors will remove the visually affected parts of the carcase and the rest of the carcase will normally be passed as fit for human consumption, unless another problem is found which makes it unfit.

What if a reactor is still within a medicine withdrawal period?

If a reactor / NIC is still within a medicine withdrawal period, please contact your local DVO and let them know. The Patch vet will decide if slaughter can be delayed without compromising disease control. Remember a Food Chain Information (FCI) form must be filled in for all reactors. Further information is available in the leaflet “Avoid Good Carcases being binned” which you should have received a copy of.

What about Negative In Contact (NIC) animals?

If any animal has been classified by DAERA as a “negative in contact” animal these are subject to compulsory removal. All procedures for isolation, valuation and removal are exactly the same as for reactor animals.

**Section 6: Herd derestriction**

Is herd testing the only requirement for derestriction?

No there are several requirements for derestriction. For example, any required Cleansing and disinfection must have been carried out before the herd is eligible for derestriction, and any queries regarding missing or non-presented animals at tests must be resolved.

What about cleansing and disinfection?

**All breakdown herds must satisfactorily complete all required cleansing and disinfection before they are eligible to be derestricted.**

*M. bovis* can survive in the environment so you will have to thoroughly clean and disinfect all places (other than fields) where you have kept reactor cattle and all equipment and tools you have used with them. This should kill the bacterium and help prevent the disease spreading to the other cattle in your herd. You should use an approved disinfectant that has been tested for use against TB.

At the start of the breakdown you will receive a notice, BT33, telling you what cleansing and disinfection you should do. This will depend on your own farm’s circumstances. A list of approved disinfectants showing the appropriate dilution rate that will kill TB is also provided.

By law, you must carry out the cleansing and disinfection set out in a BT33 notice, but you can employ contractors to do the work if you want to. You should contact the DVO as soon as possible after you have finished the required cleansing and disinfection so it can be inspected. Restrictions cannot be removed from your herd until this process is completed.

After derestriction how soon can I go back to annual testing?

After derestriction your next herd test will be set with a due date of 6 months in the future.

If the breakdown was unconfirmed (OTS) then 1 test (a CHT) is required 5-6 months after the clear RH1 test, to check that no infection remains and to make sure that any original cause of infection has not resulted in the infection of more animals in your herd.

If the breakdown herd had an OTW status, then two clear tests at 6 month intervals (CH1 and CH2) are required before a herd can return to annual testing.

When restrictions are removed from a herd, can animals be moved freely immediately?

Yes - as soon as restrictions have been removed in writing. When a herd has undergone a series of tests and has fulfilled all other requirements including cleansing and disinfection, a notice is sent to the herd keeper advising him that restrictions are withdrawn from the herd (notice BT26).

Similarly, any individual animal(s) under restriction may also move freely once the restriction has been removed from that animal(s) and the herd-keeper has received written confirmation that restrictions have been withdrawn.

**Section 7: Breakdown investigation and disease prevention**

What disease investigations will DAERA carry out?

At the start of the breakdown the Patch Vet will look in detail at movements in and out of your heed to see if they can establish where infection might have come from and spread to. This process is called tracing. Based on their findings they may also place restrictions on other herds or individual animals and set further testing.

The Animal Health and Welfare Inspector (AHWI) for your area will also contact you to arrange a visit to your farm. This visit will include looking at mapping and assessing biosecurity. They will also ask you about your cattle purchasing, grazing and management procedures, animal groupings and any potential wildlife sources on your farm. This information will be used by the Patch Vet to inform their decision making and testing requirements for other neighbouring herds.

Samples from each confirmed OTW breakdown are sent for culture and genetic strain typing. Strain typing results take several months to come back but can also provide the Patch vet with useful information on the likely source of the infection.

The Patch Vet or AHWI may contact you at various stages during the breakdown if they require further information. You may also contact the local office if you want to speak to them.

What can I do to reduce the risk of further infection in my cattle?

It is possible to reduce your risk of disease by implementing common sense biosecurity measures. Please consult our TB biosecurity leaflet, a copy of which can be obtained from your local DAERA Direct Office, or on our website.

Good biosecurity can also be discussed with the AHWI during the mapping visit and the Patch Vet or your own private veterinary practitioner (PVP).

Here is a brief overview of some measures that can be helpful:

* If you must purchase cattle, try to do so directly from a known source and avoid cattle that may have been frequently moved. Take particular care about the origin of breeding cattle, as these animals may be the core of your herd for some time. If possible, isolate after purchase and ask your veterinary surgeon to carry out a tuberculin test on the animal(s). (Your veterinary surgeon will need to obtain permission from DAERA to perform this test; and you will be responsible for paying the fee).
* Bought-in beef store cattle for finishing should be kept separately from your breeding stock.
* Minimise contact with badgers, fence off badger setts and latrines to prevent access by cattle. Avoid grazing fields which contain badger setts, if possible. Raise troughs and drinkers to prevent badgers getting access; prevent badger access to farm buildings, feed and feedstores (including silage pits).
* Try to maintain good boundaries that prevent contact with neighbouring cattle, or don’t graze cattle in adjacent fields.
* Avoid sharing equipment, vehicles, etc. with other farmers.
* Do not use slurry or manure from other herds on your land.

 **Remember good biosecurity will also reduce the risk to your herd from other diseases, not just TB.**

**Section 8: TB in dairy herds**

Can I carry on selling milk during a TB breakdown?

Although the risk is small, we do not ignore it. Your milk purchasers will be informed about your herd and the medical authorities may also be informed. If you have any worries about your or your family’s health, you should explain the circumstances to your doctor.

Milk from any positive reactor may not be used for human consumption. The milk from such animals must be withheld from the bulk tank and disposed of in the farm slurry system. If you wish to spread this milk directly onto land you must apply for a waste licence exemption from the NIEA. Milk from the rest of your herd, including milk from inconclusive reactors can continue to be sold, provided it is pasteurised.

What if I sell unpasteurised milk?

You will not be allowed to continue to sell your own unpasteurised milk or unpasteurised milk products (such as cream, yoghurt, cheese and so on) for human consumption, even if bovine TB is only suspected, until your herd is shown to be free of TB.

Can we drink raw milk from the bulk tank?

DAERA recommends that you should not drink unpasteurised raw milk. You will not know if you have bovine TB in your herd unless signs are found at routine slaughter, or at a TB herd test. The safest option is to purchase pasteurised milk for your own use.

Can I feed reactor milk to calves?

It is illegal, under domestic legislation in Northern Ireland to feed milk from reactor cows to calves unless it has first been sterilised (pasteurised).