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Dealing with Bovine TB in your herd

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Contacts

Your problem is being dealt with at the following Animal Health Divisional Office (AHDO).

Phone:

Fax:

Out-of-hours emergency phone number:

The veterinary officer (VO) dealing with your case is:

VO's phone number and extension:

If your VO is not available, please speak to the duty VO on extension number:

Or phone the TB Desk on extension number:

For **movement licences**, ask for the TB Desk. Remember that the VO who started to deal with your case may not be available, but other veterinary or administrative staff will usually be available to help.

Information on badgers, and applications for licences to remove them, are not dealt with at your AHDO. In England, you should contact:

Wildlife Licensing Unit

Natural England

Email: wildlife@naturalengland.org.uk

Phone: 0845 601 4523 (local rate)

Fax: 0845 6013438 (local rate)

Website: www.naturalengland.org.uk/conservation/wildlife-management-licensing

(see section 15 on wildlife for contact information).

In Wales, you should contact the following.

Sian Laws
Welsh Assembly Government
e-mail: sian.laws@wales.gsi.gov.uk
Phone: 01970 610202
Fax: 01970 610222

Nigel Sharp
Welsh Assembly Government
email: nigel.sharp@wales.gsi.gov.uk
Phone: 01745 535512
Fax: 01745 584479

Kathleen Carroll
Welsh Assembly Government
e-mail: kathleen.carroll@wales.gsi.gov.uk
Phone: 01970 610214
Fax: 01970 610222

Rachel Hodson
Welsh Assembly Government
e-mail: rachel.hodson@wales.gsi.gov.uk
Phone: 01970 610202
Fax: 01970 610222

For information on badgers and licences in Scotland, you should contact the following.

The Licensing Officer
Scottish Natural Heritage
Phone: 01463 725000
E-mail: licensing@snh.gov.uk

For advice about **the Older Cattle Disposal Scheme (OCDS)**, you can phone the Rural Payments Agency helpline on 0118 968 7333 or visit the website at www.rpa.gov.uk/

Here are the contact details for the local Animal Health Divisional Offices.

England

Bury-St-Edmunds Divisional Office

Cambridgeshire, Norfolk and Suffolk

Tel: 01284 778150 Fax : 01284 705684

E-mail: AH.Bury-St-Edmunds@animalhealth.gsi.gov.uk

Carlisle Divisional Office

Cumbria

Tel: 01228 591999 Fax: 01228 591900

E-mail: AH.Carlisle@animalhealth.gsi.gov.uk

Chelmsford Divisional Office

Barking, Barnet, Bedfordshire, Camden, City of London, City of Westminster, Essex, Enfield, Hackney, Haringey, Havering, Hertfordshire, Islington, Newham, Redbridge, Tower Hamlets and Waltham Forest

Tel: 01245 358383 Fax: 01245 351162

E-mail: AH.Chelmsford@animalhealth.gsi.gov.uk

Exeter Divisional Office

Devon

Tel: 01392 266373 Fax: 01392 266375

E-mail: AH.Exeter@animalhealth.gsi.gov.uk

Gloucester Divisional Office

Avon, Gloucestershire and Wiltshire

Tel: 01452 627400 Fax: 01452 627483

E-mail: AH.Gloucester@animalhealth.gsi.gov.uk

Leeds Divisional Office

North Yorkshire, South Yorkshire and West Yorkshire

Tel: 0113 230 0100 Fax: 0113 261 0212

E-mail: AH.Leeds@animalhealth.gsi.gov.uk

Leicester Divisional Office

Leicestershire, Northamptonshire, Warwickshire, West Midlands and Rutland

Tel: 0116 278 7451 Fax: 0116 277 0153

E-mail: AH.Leicester@animalhealth.gsi.gov.uk

Lincoln Divisional Office

Humberside, Lincolnshire and Nottinghamshire

Tel: 01522 529951 Fax: 01522 560668

E-mail: AH.Lincoln@animalhealth.gsi.gov.uk

Newcastle Divisional Office

Cleveland, County Durham, Northumberland, Teesside, and Tyne and Wear

Tel: 0191 229 5400 Fax 0191 229 5413

E-mail: AH.Newcastle@animalhealth.gsi.gov.uk

Preston Divisional Office

Greater Manchester, Lancashire and Merseyside

Tel: 01772 861144 Fax: 01772 861798

E-mail: AH.Preston@animalhealth.gsi.gov.uk

Reading Divisional Office

Berkshire, Buckinghamshire, Hampshire, Isle of Wight and Oxfordshire

Tel: 0118 959 6695 Fax: 0118 939 2500

E-mail: AH.Reading@animalhealth.gsi.gov.uk

Reigate Divisional Office

Bexley, Brent, Bromley, Chelsea, Croydon, Ealing, East Sussex, Greenwich, Hammersmith and Fulham, Harrow, Hillingdon, Hounslow, Kensington and Chelsea, Kent, Kingston-upon-Thames, Lambeth, Lewisham, Merton, Richmond-upon-Thames, Southwark, Surrey, Sutton, Wandsworth and West Sussex

Tel: 01737 242242 Fax: 01737 241189

E-mail: AH.Reigate@animalhealth.gsi.gov.uk

Stafford Divisional Office

Cheshire, Derbyshire and Staffordshire

Tel: 01785 231900 Fax: 01785 231901

E-mail: AH.Stafford@animalhealth.gsi.gov.uk

Taunton Divisional Office

Dorset and Somerset

Tel: 01823 337922 Fax: 01823 338170

E-mail: AH.Taunton@animalhealth.gsi.gov.uk

Truro Divisional Office

Cornwall

Tel: 01872 265500 Fax: 01872 265555

E-mail: AH.Truro@animalhealth.gsi.gov.uk

Worcester Divisional Office

Hereford, Shropshire and Worcester

Tel: 01905 767111 Fax: 01905 764352

E-mail: AH.Worcester@animalhealth.gsi.gov.uk

Scotland

Ayr Divisional Office

Ayrshire, Dumfries and Galloway, South, East and North Inverclyde, and Renfrewshire

Tel: 01292 291350 Fax: 01292 291351

E-mail: AH.Ayr@animalhealth.gsi.gov.uk

Galashiels Divisional Office

City of Edinburgh, Falkirk, City of Glasgow, North and South Lanarkshire, East, Mid and West Lothian, and the Scottish Borders

Tel: 01896 758806 Fax: 01896 756803

E-mail: AH.Galashiels@animalhealth.gsi.gov.uk

Inverness Divisional Office

Highland Unitary Authority and the Western Isles

Tel: 01463 253098 Fax: 01463 711495

E-mail: AH.Inverness@animalhealth.gsi.gov.uk

Inverurie Divisional Office

City of Aberdeen, Aberdeenshire, and the Unitary Authorities of Moray, Orkney and Shetland

Tel: 01467 626300 Fax: 01467 626321

E-mail: AH.Inverurie@animalhealth.gsi.gov.uk

Perth Divisional Office

Angus, Argyll, Clackmannanshire, East Dunbartonshire, West Dunbartonshire, Dundee, Fife, Unitary Authorities of Perth and Kinross, and Stirling

Tel: 01738 602211 Fax: 01738 602240

E-mail: AH.Perth@animalhealth.gsi.gov.uk

Wales

Caernarfon Divisional Office

Aberconwy and Colwyn, Anglesey, Caernarfonshire and Meirionnyddshire, Denbighshire, Flintshire, Northern Powys and Wrexham

Tel: 01286 674144 Fax: 01286 674626

E-mail: AH.Caernarfon@animalhealth.gsi.gov.uk

Cardiff Divisional Office

Blaenau Gwent, Bridgend, Caerphilly, Cardiff, Vale of Glamorgan, Merthyr Tydfil, Monmouthshire, Newport, Rhondda-Cynon-Taff, Southern Powys (Brecon and Radnor), Neath and Port Talbot, Torfaen and Swansea

Tel: 02920 768500 Fax: 02920 768510

E-mail: AH.Cardiff@animalhealth.gsi.gov.uk

Carmarthen Divisional Office

Ceredigion, Carmarthenshire and Pembrokeshire

Tel: 01267 245400 Fax: 01267 245500

E-mail: AH.Carmarthen@animalhealth.gsi.gov.uk

1 Introduction

This booklet is designed to help you understand your bovine tuberculosis (bTB) restrictions and provide some general background information on the disease. Your herd has been put under restriction for one of the following reasons:

- at least one animal in your herd has failed the tuberculin skin test or any other diagnostic, test for bTB (see 'What is a reactor?' in section 3);
- an animal from your herd has been reported as having bTB after it was slaughtered;
- inconclusive reactors (see section 6) have been found in your herd and bTB was confirmed on your holding within the last three years;
- an animal from your herd has tested positive after being moved to another herd and it has not been possible to rule out the risk that the infection may have come from your herd.

Please note the following important points.

You must not move cattle either onto or off the premises without a movement licence issued by your Animal Health Divisional Office (AHDO). For more information, see 'Movement restrictions' (section 7) of this booklet.

You must report all movements to the British Cattle Movement Service to meet the requirements of the Cattle Identification Regulations.

You must ensure that milk from identified reactors does not enter the human food chain.

Until movement restrictions are lifted you must not sell unpasteurised milk to consumers or for use in the manufacturing of unpasteurised milk products (see section 13 on the risk to human health).

We hope that the information in this booklet will answer most of your questions. Please keep it where you can find it again. However, you may phone your local AHDO (see 'Contacts') if you have any concerns or questions, which are not covered here.

2 Tuberculosis

What is tuberculosis?

Bovine tuberculosis (bTB) is an infectious disease of cattle. It is caused by the bacterium *Mycobacterium bovis* (*M. bovis*), which can also infect and cause TB in badgers, deer, goats, pigs, llamas, dogs and cats, as well as many other mammals, including people. Nevertheless, the vast majority of cases of TB in humans in Great Britain arise from infection with the human tubercle bacillus (*Mycobacterium tuberculosis*), which is closely related to *M. bovis* but is transmitted through close contact with infected people rather than cattle. Both *M. bovis* and *M. tuberculosis* belong to a family of bacteria that cause, among other diseases, Jöhne's disease in cattle, deer, sheep and goats, avian TB in birds and leprosy in humans.

Where does it come from?

Bovine TB can spread to uninfected animals in a number of ways, including:

- through contact with an infected domestic animal (usually cattle) brought onto a farm;
- through contact with infected wild animals present on your farm; or
- through indirect methods such as contaminated equipment, feedstuffs, slurry etc.

Defra and its agencies, including Animal Health, and the Devolved Administrations, are constantly investigating the way bTB spreads. We need to know much more about why some farms have cattle with bTB while others in the same area do not. If your TB breakdown is confirmed, and in some instances where it is not confirmed, we will ask you to help complete an epidemiological questionnaire, the TB DRF. This form asks questions on management practices and other information about your farm, including identifying your neighbours. This information is to help us manage the TB breakdown in your herd, establish its origin and manage possible spread to other farms.

Further information

You can find more information on the history of bTB, and the policies to control the disease, on the following websites.

<http://www.defra.gov.uk/animalh/tb/index.htm>

<http://www.scotland.gov.uk/Topics/Agriculture/animal-welfare/Diseases/SpecificDisease/bTB/bTBintroduction>

<http://new.wales.gov.uk/topics/environmentcountryside/ahw/disease/bovinetb/?lang=en>

3 Reactor animals

How is bovine Tuberculosis (bTB) detected in live cattle?

The cornerstone of TB control in cattle is the accurate detection and removal of animals infected with *M. bovis* before they become infectious to other animals. Importantly, infected cattle can become infectious long before they exhibit any obvious clinical signs or lesions typical of TB detectable even with the most careful veterinary examination. Even if present, the clinical signs of TB in cattle are seldom typical. As a result, effective *ante mortem* diagnosis of bovine TB must rely on detecting **infection** with *M. bovis* rather than **disease**.

The two types of test currently approved in the European Union for the diagnosis of TB in live cattle are based on this principle. The intradermal tuberculin (**skin**) tests are the **primary** screening tests, whilst the **gamma-interferon assay** is only approved as an **ancillary** diagnostic tool.

What is a reactor?

A reactor is an animal that has failed a) the comparative intradermal tuberculin skin test (the variant of the tuberculin test used in the British Isles) or b) any other relevant test, including the gamma-interferon blood test (see section 12). In other words, these are cattle that give a test result consistent with their being affected with bTB.

In respect of a), this means that the animal has had an allergic reaction to the injection of a defined amount of *M. bovis* protein (called **tuberculin**) into the skin of the neck. This shows as a swelling (“lump”) on the side of the neck approximately 72 hours after the injection. The size of this swelling is compared with that of the swelling (if any) resulting from the injection of tuberculin from *Mycobacterium avium* side-by-side (hence the term ‘comparative’ test). *M. avium* is a bacterium related to *M. bovis*. It is also present in the cattle population and, although it does not cause TB in cattle, it can sensitise cattle against *M. bovis* tuberculin and give rise to a false positive result. If the swelling caused by the *M. bovis* tuberculin is larger than the swelling caused by the *M. avium* tuberculin by a defined amount, the test result is positive and the animal is deemed a **reactor**.

When one or more reactors are found in a herd, this is known as a TB ‘incident’ or a herd ‘breakdown’. Animal Health will aim to remove your reactor animals as quickly as possible to help control the disease and help your herd regain its TB free status.

Do all reactors have bTB?

The tuberculin test is used throughout the world to screen cattle and other animals for TB. This test detects an infected animal’s immune response against *M. bovis* (the bacterium that causes TB), which develops well before the infected animal begins to show signs of TB. The tuberculin test is the internationally accepted standard for detection of infection with *M. bovis* and is considered the best test currently available for detecting TB in live animals. Many countries

have eradicated bTB through the systematic application of the tuberculin test alone and the slaughter of all test reactors.

No screening test for animal diseases is perfect and the tuberculin test is no exception. On one hand, the comparative tuberculin test can be expected to detect approximately 80% of all the infected cattle in a herd at any one test. This is known as the test's **sensitivity**. On the other hand, reactions to the tuberculin test can sometimes be caused by exposure to other mycobacteria. In Great Britain, when the test is applied to cattle without TB there is a 1 in 1,000 chance that a non-infected animal will be wrongly classified as a reactor. This is known as the test's **false positive rate**. Because it is impossible to find out in living animals whether the reaction to the test is due to *M. bovis* or another mycobacterium, all reactors have to be regarded as infected and must be slaughtered according to national and European Union regulations in order to eliminate any risk of infection to other cattle.

The probability that an individual reactor is truly infected with *M. bovis* and thus likely to have TB (or develop the disease in the near future) is known as the **positive predictive value**. The key thing to remember here is that this value is **not a constant property** of the test because it depends not only on its sensitivity and false positive rate, but also on the proportion of truly infected animals in the herd at the time the reactor is found (which is seldom known). A test with good sensitivity and extremely low false positive rate, such as the tuberculin test, can still have a low predictive value if the proportion of infected cattle in the herd being screened is very low. This is an unavoidable problem for any test as eradication of a disease from a herd (or a whole region) is approached. The ease with which lesions of TB can be detected at slaughter is also an issue and this in turn depends upon the stage of infection, with lesions being harder to find in the early stages of TB (i.e. when most animals are detected).

What happens when a reactor is found?

Your herd will be placed under movement restrictions and we will value and slaughter the reactors. In some cases we may also remove non-reactor ('direct contact') animals (see section 4 for details on compensation). The rest of your herd will have to undergo a series of tuberculin tests until we are satisfied that the herd is free from bTB and restrictions can be lifted. In prescribed circumstances the tuberculin test may be supplemented with the gamma interferon test (see section 12).

What happens to reactor animals?

You must isolate them immediately from the rest of the herd until they are slaughtered. This will reduce the risk of them spreading TB in your herd. Unless you decide to arrange a private slaughter the animals will be valued and taken directly to slaughter (we will pay you compensation for all reactors and any other animals slaughtered to control bTB – see section 4 for further details on valuations and compensation). We will usually examine their carcasses to find out how advanced the infection was. Where necessary, we will also take tissue

samples. We will send these to one of our TB diagnostic laboratories, where they will try to isolate *M. bovis* from the tissue samples. *M. bovis* is one of the slowest growing bacteria and is not very easy to grow in the laboratory. Even if enough viable bacteria are present in the tissues of a reactor, it is likely to be at least six weeks from the date we send off the samples before we have any results.

Why complete a post-mortem examination?

By examining the carcass we may be able to quickly confirm whether your animal had bTB and, if so, whether it was in the early or advanced stages of the disease. If we confirm bTB in one or more of your reactors, we will review the tuberculin test results again, lowering the cut-off point for an animal to be declared a reactor. (This is known as 'severe interpretation') and may result in further animals being classed as reactors. The post-mortem findings also help us decide how much more testing is needed in your herd and in neighbouring herds, and whether we should trace any animals you may have bought or sold before the TB restrictions came into force.

Laboratory tests on tissue samples from reactor cattle to see if *M. bovis* can be cultured (grown in the laboratory) are carried out for two reasons. On the one hand, we may fail to find the typical lesions of TB at post-mortem examination of reactors. These lesions are visible signs of TB in the carcass of an infected animal, usually taking the form of many small abscesses in the lymph nodes of the head and chest, the lungs and/or other affected organs. In the absence of visible lesions, culturing marginally increases the likelihood of confirming if the animal had bTB. On the other hand, if bTB has already been confirmed by the presence of lesions at post-mortem, the culture is done anyway to identify the strain of *M. bovis* that caused your outbreak. This may help us identify the source of infection to your herd.

We will provide you and your veterinary surgeon with a written report on the results of the post-mortem examination. Similarly, if we send samples for culture, we will write to you as soon as we know the results.

If your tuberculin test revealed several reactors, we may not collect samples from every animal we slaughter, although all will have a post-mortem examination.

What happens if you don't find detectable evidence of bTB in the reactors?

Culture of *M. bovis* in the laboratory provides the definitive proof of infection. Disclosure of typical TB lesions does not, in itself, prove infection because such lesions can on rare occasions be caused by other mycobacteria. However, for practical purposes the presence of TB lesions in a reactor is considered sufficient to confirm infection with *M. bovis*. Laboratory culture and post mortem examination are very specific methods for the diagnosis of cattle infected with *M. bovis*. However, these two techniques are far less sensitive than the tuberculin test and they cannot be considered the "gold standards" when trying to establish the true infection status of a reactor.

We can only look in detail at a relatively small part of the carcass. We know where we are most likely to find evidence of bTB, so we concentrate on those areas. It could also mean that the parts we examined were uninfected, or that the changes were too small to be seen with the naked eye even though the animal was infected. If we don't find bTB at the post-mortem examination or in the laboratory, we will class the animal as an 'unconfirmed reactor'. We will still carry out more herd tests to make sure there is no infection left on your farm. **Please remember that because a post-mortem examination is not a perfect technique for identifying bTB, failure to find TB lesions or to culture *M. bovis* from samples does not mean the animal did not have bTB.**

What should I do with the milk from reactor cows until they are removed?

Milk from individual reactors to the tuberculin or other diagnostic tests (i.e. including severe interpretation reactors, three times inconclusive reactors and gamma interferon test reactors) **must not** be used for human consumption, whether heat treated or not. Milk from these animals must be withheld from the bulk tank and may be disposed of either by mixing it with slurry and spreading it on land or other appropriate manner. However, under the Waste Management (England and Wales) Regulations 2006, which came in force on 15 May 2006, anyone wishing to dispose of reactor milk by mixing it with slurry and spreading it on agricultural land, must first register for a waste management licence exemption under 'Exemption 47' (N.B no charge is made for this exemption). To register for such an exemption you will need to contact the Environment Agency (See contact details below). If you carry out this waste activity and do not register it as an exemption, you will need to have a full waste management licence, which is chargeable. This ban only applies to milk from reactors, i.e. milk from other 'clear test' and inconclusive animals in a reactor herd can continue to be sold if pasteurisation is undertaken. If you are unsure which these animals are please contact your local AHDO.

Milk from a herd that has lost Officially TB-Free status must be heat treated (pasteurised) before being sold for human consumption and the herd owner or person in charge should contact their milk buyer to ensure that this is the case.

Also, we strongly advise against feeding reactor cow's milk to calves or livestock, or indeed to any other species, for example, pets and pigs, particularly when a reactor has suffered from long-lasting mastitis that is hard to treat i.e. this may, on occasion, be caused by TB of the udder.

For further information and guidance on disposal of milk from reactor cows, please contact the Environment Agency on their Helpline Tel: 0845 613 3113 or visit their website at: www.environment-agency.gov.uk

For more information on the risk to human health, please see section 13 or contact the Food Standards Agency (FSA), tel: 020 7276 8448, or visit: www.foodstandards.gov.uk/enforcement/foodlaw/dhi

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

The tuberculin test assesses the TB status of the herd on the day it is carried out. Cattle in your herd may be at risk of infection and become infected after the test is completed, for instance through cattle moving into your herd, contact with other cattle across farm boundaries, or direct or indirect contact with infected wildlife. Although the tuberculin test, if correctly performed, is the best test currently available, it may occasionally miss an infected animal, which may show evidence of disease later when it is slaughtered. The same can happen with the gamma interferon test. This may in some cases be a temporary failure to react to the diagnostic tests for TB because of a nutritional, post calving or other type of stress, because of concurrent infections, or as a result of administration of immunodepressing drugs. Another recognised cause of infected cattle failing to react to the skin and gamma interferon tests is the collapse of the cell-mediated immune response in cases of severe, generalised TB (a phenomenon known as 'anergy').

4 Compensation

What about compensation?

The arrangements for compensation differ in Great Britain, as follows:

ENGLAND

Compensation procedures are set out in the Cattle Compensation (England) Order 2006. Compensation (for TB and 3 other cattle diseases) is determined primarily through table valuations, based on average market prices for the 47 pre-determined cattle categories shown below.

In circumstances where sales data for a particular category in any particular month or months is inadequate, compensation will either be determined using a previously ascertained market average or (if this is not possible) through individual valuation.

i. Compensation by table valuation categories

Unless you have chosen to slaughter the animals privately, (in which case no compensation will be paid), compensation will be payable at the level of the market average price for the bovine category into which that animal falls at the relevant date – see table below. Animal Health Divisional Offices (AHDOs) have access to details of current tables and compensation amounts payable for each affected animal. Updated tables will also be posted on Defra's website every month.

Relevant date for determining compensation - The Secretary of State shall determine the bovine category into which a bovine animal of the genus *Bos* falls at the relevant date and, for the purposes of that determination, the date of birth of that animal shall be as shown on its cattle passport and the age of the animal shall be calculated accordingly. In respect of affected animals or suspected animals slaughtered for bTB, relevant date means—

- a) the date on which a positive or inconclusive skin test for that animal is read;
- b) where the skin test is negative, or no skin test has been carried out, the date on which a clinical sample is taken from that animal for the purposes of any other relevant test; or
- c) where no other relevant test has been carried out, but the animal has been slaughtered because it has been exposed to infection as a result of contact with, or close proximity to, an affected or suspected animal, the same date as the relevant date for that affected or suspected animal.

Table of non-pedigree Bovine Categories

<u>Male</u>		<u>Female</u>	
Beef sector			
Age Up to 3 months Over 3 months up to 6 months Over 6 months up to 9 months Over 9 months up to 12 months Over 12 month up to 16 months Over 16 months up to 20 months 20 months and over Breeding bulls 20 months and over	Compensation due £	Age Up to 3 months Over 3 months up to 6 months Over 6 months up to 9 months Over 9 months up to 12 months Over 12 months up to 16 months Over 16 months up to 20 months 20 months and over Calved	Compensation due £
Dairy sector			
Age Up to 3 months Over 3 months up to 6 months Over 6 months up to 12 months Over 12 months up to 16 months Over 16 months up to 20 months 20 months and over	Compensation due £	Age Up to 3 months Over 3 months up to 6 months Over 6 months up to 12 months Over 12 months up to 16 months Over 16 months up to 20 months 20 months and over Calved	Compensation due £

Table of Pedigree Bovine Categories

<u>Male</u>		<u>Female</u>	
Beef sector			
Age 6 months up to 12 months Over 12 months up to 24 months Bull 24 months and over	Compensation due £	Age 6 months up to 12 months Over 12 months up to 24 months 24 months and over (not calved) Calved under 36 months Calved 36 months and over	Compensation due £
Dairy sector			
Age Up to 2 months Over 2 months up to 12 months Over 12 months up to 24 months Bull 24 months and over	Compensation due £	Age Up to 2 months Over 2 months up to 10 months Over 10 months up to 18 months 18 months and over (not calved) Calved under 36 months Calved 36 months and over	Compensation due £

ii. Compensation by individual valuation

As noted above, on rare occasions it will be necessary to use individual on-farm valuations to determine compensation – the Individual Ascertainment of Value (England) Order 2005 sets out the processes that will be followed in these situations. Individual valuations will be carried out by a valuer appointed jointly by the Secretary of State and the owner of the animal or, failing such appointment, by a valuer nominated by the President of the Royal Institution of Chartered Surveyors (RICS) and appointed by the Secretary of State. Either way, we will arrange and pay for the valuation. We will ask you to sign a form confirming that you agree to the appointment of the valuer before the valuation starts. RICS will tell you in writing whom they have proposed. The valuation appointment will then be arranged by the AHDO as before. **Valuations arising from any of the methods above are final and binding on all parties.**

If individual valuation is employed you can provide information, to the valuer, at the time of valuation (for example, information about the milk, or the pedigree certificate issued by the recognised breeders organisation), but you must not try to directly influence the valuation.

GENERAL

For either table or individual valuations, compensation is only payable in relation to those affected animals, which are identified by means of ear tags and a passport i.e. animals which comply with the requirements of the Cattle Identification Regulation Order 1998. You must make sure that these identification documents and the tagging requirements for the animals that are to be valued are in order. Animal Health staff and/or valuers have been instructed that if these documents are not available or are irregular, the presumption is that the market value of the animals will be zero, as they may not be traded on the open market.

For either table or individual valuations we will be present to identify the animals and fill in the necessary paperwork.

Do I have to arrange for the animal(s) to be slaughtered?

Only if you are choosing to have it/them slaughtered privately. Otherwise, either after notice has been served, or after the animals have been valued, we will arrange and pay for removal to the slaughterhouse. If you decide to have the animals slaughtered privately, we will give you forms, to be completed by you, which **must** go with the animals to the slaughterhouse (see section 10 for a full list of the forms). Whether a private slaughter or not, please check that the ear-tag numbers on the documents match the numbers on the animals' official ear tags. Please remember, where appropriate, to fill in and sign all these documents. If you are still not sure which forms you need to fill in and send, your VO and/or local AHDO will be able to help.

TB reactors are only eligible for the Older Cattle Disposal Scheme (OCDS) if they were born on or before the **31 July 1996**, and you would receive the same compensation rate as for other OCDS animals. The OCDS abattoir passes the compensation for reactors we remove to us and not to you. If you enter a reactor into the OCDS without involving us, compensation would go straight to you.

If you choose to have the animals slaughtered privately, **we will not pay any compensation, whether or not TB is confirmed in the animals** (although you may receive a salvage payment from the slaughterhouse). **You will still need to tell us where and when the animal(s) are to be slaughtered and send the appropriate forms to the slaughterhouse.** If TB lesions are found, the carcass may be either partially or totally condemned – this would affect the level of salvage payment you receive. For more information, see section 14.

Even if we are arranging the slaughter, you are still responsible for the welfare of the animals until they leave the farm. Please note that under the Animal Health Act 1981, section 32, you will not receive compensation for reactors, inconclusive reactors or direct contacts that die on the farm before slaughter, regardless of the cause of death. You should make sure that your cattle are of an acceptable state of cleanliness for hygienic slaughter (see section 11 for more information).

What about the other animals in my herd?

Usually, we will only compulsorily slaughter animals, which have reacted to the tuberculin, or other diagnostic, test (see section 3). However, if bTB is confirmed, we will examine the tuberculin test results again using a more severe interpretation (see section 12 on testing for more information) and, in some cases, will apply the ancillary gamma-interferon test (see section 12). Severe interpretation may lead to animals that had been classed as 'inconclusive reactors' (see section 6) being classed as reactors. It may also be necessary to slaughter other animals in the same group which have been in close contact with cattle that have had bovine TB confirmed – these animals are known as direct contacts (DCs). DCs (if slaughtered by the State) will be compensated in the same way as for reactor animals.

WALES AND SCOTLAND

The compensation procedures described below continue to apply in Scotland and Wales in relation to bovine TB.

Unless you have chosen to slaughter the animals privately, the animals will be valued before they are slaughtered. You will receive 100% of the current market value of your animals.

In some circumstances you may agree a value with us based on available market information. However, if you cannot agree a value in this way, we will suggest an appropriate independent professional valuer to carry out the valuation. If you are content with the proposed valuer, we will arrange and pay for the valuation. We will ask you to sign a form confirming that you agree to the joint appointment of

the valuer **before** the valuation starts. Unlike the rest of Great Britain, Scottish legislation also allows for two valuers to be appointed, one chosen by you and one appointed by us.

If you are not able to agree a value with us or to the appointment of a valuer to act jointly, we will ask the President of the Royal Institution of Chartered Surveyors (RICS) (or the Institute of Auctioneers and Appraisers in Scotland (IAAS)) to independently nominate a valuer. RICS (or IAAS) will tell you in writing whom they have proposed. The valuation appointment will then be arranged by the AHDO. **Valuations arising from any of the methods above are final.**

You can provide information at the time of valuation (for example, information about the milk, or the pedigree of the animals), but you must not try to directly influence the valuation.

You must make sure that the identification requirements (that is, passports and ear tags) for the animals that are to be valued are in order. Where the required proof of identification for a particular animal cannot be or is not produced by the owner, the initial presumption will be that the animal has no market value, although that may be displaced by evidence produced to the contrary. As a result, you may not receive compensation for those animals unless proof of identification is provided.

We will be at the valuation to identify the animals and fill in the necessary paperwork.

5 Disinfection

What about disinfection?

Under certain conditions *Mycobacterium bovis* (*M. bovis*) can survive in the environment for a long time, so you will have to thoroughly clean and disinfect all places (other than fields) where you have kept reactor cattle. You must also clean and disinfect all equipment and tools that may have become contaminated. If this is done correctly, the bacteria will be killed and the risk of spreading disease to other cattle in your herd reduced. You should use a disinfectant which Defra, the Scottish Government Rural Directorate or the Welsh Assembly Government has approved for use against bTB. AHDO staff can provide you with a list of disinfectants approved for use against bTB. The labels on the disinfectants explain the appropriate dilution rate that will kill *M. bovis*. It is particularly important to clean and disinfect any fittings or equipment that may have come into contact with sputum, faeces or milk from TB reactors.

Disinfection is an important disease control measure - we will give you a notice (BT5) detailing what should be done on your farm and by when it should be done on your farm. By law, you must carry out the disinfection set out in a BT5 notice, although you can employ contractors to do the work. We will give you an extra copy of the BT5 to fill in, sign and return to the AHDO when the prescribed cleaning and disinfection has been completed.

Cleaning and disinfection usually only takes place on the premises (buildings) occupied by the reactors, identified by the case VO. Linked holdings (i.e. different premises managed by the same person or company) will not need to be cleaned and disinfected unless they have recently held the reactor cattle.

Manure, slurry or other animal waste can only be removed from TB-restricted premises, or linked holdings, under licence. However, you can use slurry or manure on your own land while TB restrictions are in force, although you should consider the risk of spreading disease to other stock or wildlife. If you need to move cattle manure, slurry or other cattle waste from your premises, or if you are not sure about the best way of spreading potentially contaminated slurry on your land, please contact your AHDO.

More information on approved disinfectants can be found on Defra's website at http://www.defra.gov.uk/animalh/diseases/control/testing_disinfectants.htm

6 Inconclusive reactors

What is an inconclusive reactor?

An inconclusive reactor (IR) (sometimes called a 'doubtful') is an animal which has given readings to the tuberculin skin test between the clear (pass) and reactor (fail) ranges (see section 3). Some cattle infected with *M. bovis* may give an inconclusive test result if:

- they were infected shortly before the test was done; or
- their immune system was temporarily lowered (stress, pregnancy, calving and infections can all lower the immune system).

Because there is some uncertainty as to the disease status of IRs, they are usually re-tested.

Sometimes, the presence of other diseases, or exposure to bacteria similar to *M. bovis*, can cause a positive test reaction - even if there is no bTB infection. Experience has shown that most inconclusive reactions in areas where bTB is not common are not specific and that the animals pass the first or second re-test.

What happens to an inconclusive reactor?

If one of your animals has been classed as an IR, you must immediately isolate it from the rest of the herd to reduce the risk of spreading TB to other cattle. We will give you a notice confirming you have an IR and giving instructions on what you must do.

What happens next mainly depends on whether reactors have been found in the same herd. If the herd has IRs only and has had a confirmed TB breakdown in the last three years, or if the herd has IRs and reactors, we put the whole herd under movement restrictions. In other cases we put only the (isolated) IRs under restriction. We will re-test the IRs after 60 days, either on their own or, where reactors have also been found, with the rest of the herd (*but see also section 12 about gamma interferon testing criteria). **In all cases, even when they are to be tested with the rest of the herd, you should isolate IRs.** (For more information on what happens when a reactor is found, see section 3.)

If an IR in a 1 or 2 yearly tested herd fails to resolve after the first 60-day skin retest (i.e. two-times IR), it will be immediately blood tested with the gamma interferon (Bovigam) assay. If the animal tests negative to this blood test, a final skin retest will take place 60 days after the previous skin test. (For more information on gamma interferon testing see section 12.)

There are three possible outcomes when an IR is re-tested.

- If it passes, it can rejoin the herd.
- If it fails, we will class it as a reactor and remove it. Consequently since 1 January 2006, the milk from the animal is prohibited from being used for human consumption (see section 13 for more information).
- If it remains an IR, we repeat the test after a further 60 days*. If the result is inconclusive for a third time, we will class the animal as a reactor and slaughter it. Consequently since 1 January 2006, the milk from the animal is prohibited from being used for human consumption (see section 13 for more information).

Are inconclusive reactors ever slaughtered?

Yes. If your herd is currently suffering a confirmed TB breakdown, we may slaughter IRs as direct contacts (DCs) or if we class them as reactors under severe interpretation reading of the test results. As noted above, if an animal continues to give readings in the inconclusive range on three consecutive tests, we will slaughter it as a reactor. In all cases, other than if you opt for private slaughter, we will provide compensation for animals we require to be slaughtered (see section 4 for more details on compensation).

If an IR is not eligible for compulsory slaughter, but you don't want to wait for the animal to be tested again, you can have it privately slaughtered (at your own expense). You must tell the AHDO, as we will have to issue a licence for allowing the IR to travel to the slaughterhouse of your choice. We will also arrange for the IR to be examined in the slaughterhouse for any evidence of bTB and may also take tissue samples for culture. You should give us at least three working days' notice if you plan to arrange private slaughter of an IR. **We will not pay compensation for any privately slaughtered IRs.**

If you opt to have an IR slaughtered rather than wait for the outcome of it's next test then this could lead to additional testing and/or prolonging the restrictions on your herd. You are advised that you should discuss the consequences with your case VO/AHDO.

If an IR dies on farm or has to be put down for welfare reasons, you will also need to tell your AHDO. You will not receive compensation for IRs that die on your farm before slaughter.

If an IR dies on farm (or is privately slaughtered) and post-mortem examination indicates that the animal was infected, we will apply TB movement restrictions and test the rest of the herd. If signs of bTB are not found at post-mortem examination of the IR, movement restrictions will not be automatically applied, although we may need to test the whole herd 60 days after the IR is removed. If this test is clear, and *M. bovis* cannot be isolated from tissues of the slaughtered IR, the herd will go back to its normal testing pattern.

7 Movement restrictions

What animals are under restrictions?

If your herd is under movement restrictions, you can only move cattle onto or off your premises under a licence issued by your AHDO. We will give you a restriction notice (TB2) to confirm this. This notice will also set out which premises are affected by the movement restrictions. The restrictions will usually only apply to cattle (although in some cases we may consider imposing restrictions on other animals on your farm). **This information refers only to movement restrictions applied because of a bTB outbreak.** (See sections 8 and 9 for more information on moving stock, and section 12 for pre-movement testing.)

How long do the movement restrictions last?

- If bTB could not be confirmed in any of the reactors, or when restrictions were put in place because your TB test was overdue; until **the herd has had one clear test.**
- If bTB has been confirmed: until **the herd has had two consecutive tests with negative results (“clear” tests).**
- If your herd was placed under restrictions because lesions of bTB were discovered in an animal sent for routine slaughter: until **we have received negative culture results from samples sent to the laboratory and/or the whole herd is tested with negative results or where the culture results are positive the herd has had two consecutive clear tests.**

Please note for slaughterhouse cases and cases where no visible lesions could be found at post mortem that we normally have the final results from the laboratory before deciding if a case is confirmed or not, even if some tuberculin testing has been carried out with negative results. This may affect when we can lift the restrictions.

If your animals were tested by your local veterinary inspector with negative results, we may not be able to lift restrictions until we have received and checked the test chart in the AHDO.

Herds with inconclusive reactors but no reactors (“IR-only” herds)

If the herd in question has not had a confirmed TB breakdown in the 3 years before the identification of the IR(s), the IRs must be isolated and will be skin tested again after 60 days. Restrictions will be lifted if all IRs test negative at this follow-up skin test. If any IR(s) fail to resolve at a second follow-up skin test (or fail a gamma-interferon test where applicable), they will be classed as reactors and slaughtered.

If the herd has had a confirmed breakdown in the previous 3 years, the whole herd will be placed under movement restrictions. Additionally, the IRs must be isolated from the rest of the herd pending their retest after 60 days.

In both instances, IRs will usually be tested by AH officers. Equally, all herds with unresolved IRs are prevented from exporting cattle until all such animals have been retested with a negative result, whether the whole herd or just the IRs have been restricted.

Welfare issues

Animal Health Veterinary Officers are well practiced at managing TB breakdowns to minimise welfare problems, including by splitting off groups for clear testing in isolation. However, it is possible that animal welfare issues may arise, for example overstocked premises, lack of food, suckler calves without mothers etc and it is important that these issues are dealt with appropriately.

Who do I contact about welfare issues?

If you identify a possible welfare problem due to your herd being under movement restriction, you should notify Animal Health as soon as possible. They will provide advice and can discuss possible changes to the restriction, as well as breakdown management and may offer advice on other organisations that can assist or advise.

Who is responsible for treating cattle that become ill?

If your animals suffer unnecessarily or become ill while under movement restriction, as the farmer you have a responsibility to protect the welfare of your stock and to avoid suffering and treat disease, seeking professional help where necessary.

If your herd is under restriction due to an overdue tuberculin test, it is your responsibility to arrange testing of your stock and avoid welfare issues.

What about Approved Finishing Units (AFUs)?

Moving animals to AFUs (see section 9) is one way of alleviating welfare problems such as overcrowding. A movement licence is required from the AHDO to do this.

Are there any other ways to alleviate problems?

Whilst under herd restrictions, you can move cattle to slaughter or special slaughter sales for restricted stock under licence by contacting your AHDO.

Animal Health can offer advice and discuss further options with you.

8 Movements onto restricted premises

When can cattle be brought onto the premises?

If you are affected by TB movement restrictions and want to buy cattle, you must first consider whether it is possible to keep the introduced animals in fields or buildings that are not covered by the restriction notice. If this is not practical, Divisional Veterinary Managers (DVMs) may licence the movement of cattle under restrictions. The DVMs will issue the licence depending on the outcome of an individual disease risk assessment of the herd. A risk assessment will need to be carried out for every request for a licence. This assessment will look at the risks of spreading TB to both the cattle in your existing herd and to the new cattle being moved on. Conditions will apply to any licensed movements. **You will not be allowed to move cattle from herds with an unknown TB status (that is, with TB tests overdue).**

How can I apply for a licence to move cattle onto the premises?

You can ask for a licence by phoning the AHDO. So that the risk assessment can be carried out, when you phone you will need to provide:

- your name, address and contact number;
- the County Parish Holding (CPH) number of your herd (that is, the herd of destination);
- the number and type of cattle you propose to move under licence;
- the official identification numbers of the animals to be moved on (if you know); and
- the CPH number of the herd (or herds) the cattle are coming from (if you know).

The risk assessment may take up to five working days once all the information is available. **As a general rule, AHDOs need five working days' notice to issue a movement licence either onto or off the premises.**

9 Movements off restricted premises

Remember, AHDOs need five working days' notice to issue a movement licence either onto or off the premises.

When can animals that have not tested positive at the tuberculin, or other diagnostic test be moved from premises under TB movement restrictions?

To control the risk of spreading bTB by moving cattle that do not have clear test results, you are not allowed to move cattle off premises that are under TB movement restrictions (TB2), except under licence. We will issue a licence only if cattle are being **moved straight to a place of slaughter** with the following exceptions (in England and Wales only – the Scottish Government has not approved these exceptions).

- 1 To slaughter through an approved TB collection centre or dedicated slaughter market.
- 2 To an approved finishing (fattening) unit.
- 3 To other premises under your control which have been approved by your AHDO (for example, summer grazing or winter housing).
- 4 In certain circumstances to other premises restricted under a TB2.

Here are some more details.

Direct to slaughter

These may take place under a general licence or a specific licence. In both cases, you must make sure that the cattle sent to the abattoir meet the standards set by the requirements for animals to be clean to slaughter for human consumption (see section 11).

General licence (TB24c)

If tests show that some of your cattle are reactors (or IRs within three years of a confirmed bTB incident), your AHDO will **usually** issue a general licence. This will authorise you to move animals that have negative test results direct to slaughter. This licence does not have to go with the animals or be sent to the slaughterhouse. Reactors, IRs, DCs and any untested cattle aged eight weeks or more are not covered by the general licence and must have a specific licence. If the DVM does not consider it to be safe to issue a general licence, the licence may not be granted or it may be withdrawn.

Specific licence (TB24)

For all other movements direct to slaughter, you will need a specific licence. Certain conditions may apply to the licence, which will be shown on the back of the licence. The original movement licence must stay with the cattle while they are being moved.

To slaughter through an approved TB collection centre or dedicated slaughter market

We can licence the movement of **cattle with negative test results** from TB2 premises to approved collection centres and dedicated TB slaughter markets in England and Wales. We use an amended type of movement licence when licensing movements of restricted cattle to slaughter markets and collection centres.

To an approved finishing unit

Surplus cattle from restricted herds that have tested negative can be sent to approved finishing units under licence for rearing and fattening before being sent to slaughter. These finishing units need to be approved by the DVM beforehand and will be placed under TB2 movement restrictions.

To other approved premises under your control

Very rarely a licence may be granted to move cattle to specified premises under your control (for example, for summer grazing or winter housing, or for welfare reasons). You will be able to move cattle only if you keep to the conditions on the back of the licence. One of the conditions is that after the restricted cattle arrive at the premises, they must not come into contact with any other cattle unless a VO has given written authority for that to happen. These premises will usually be inspected by AHDO staff before approval and will be put under TB2 movement restrictions.

To other herds under TB2 restrictions

In certain circumstances (depending on the assessment of disease risk), the DVM can authorise cattle to be moved under a licence from a herd under TB2 restrictions to another herd under TB2 restrictions. Under the licence, the owner or person in charge of the herd of origin must make sure that the document stays with the animals throughout the journey.

When can reactors, inconclusive reactors (IRs) and direct contacts (DCs) be moved off restricted premises?

Reactors, IRs and DCs will only be allowed to move to slaughter, and licences will only be issued for movement **direct** to a slaughterhouse. In exceptional circumstances, IRs waiting to be tested again may be moved under licence to grazing or other housing facilities for welfare reasons.

What happens to reactors, IRs, DCs and casualty animals slaughtered or dying on farm?

If an animal dies, or has to be slaughtered on your farm for welfare reasons (for example, illness or injury), please tell us as soon as possible. You do not need a movement licence for the carcase but you must tell us before you move the carcase as we may want to have a post-mortem done. This is especially important if the casualty animals are reactors or DCs waiting to be slaughtered or IRs waiting to be tested again. **You should never wait to contact us before arranging to have an animal slaughtered if the delay would put the animal's**

welfare at risk. Any carcasses of reactors, DCs or IRs sent to a slaughterhouse to be processed for food products should have a notice issued by the AHDO (see section 10). **You cannot claim compensation for reactors, IRs and DCs that die on your farm before they are due to be slaughtered.**

In an emergency, there is always a VO on duty to discuss the problem, even at evenings and weekends.

10 Forms and licences which come with cattle moved from restricted premises

Marking of test reactors, DCs and IRs for slaughter

Reactors and any other cattle slaughtered to control bTB will be marked before being transported to the slaughterhouse. One of our staff will normally do this at the valuation visit.

What documents should come with reactors and other cattle you are going to slaughter?

The table on the next page shows which documents must go with animals travelling from restricted premises to a slaughterhouse. Your AHDO will fill in paperwork specific for reactors, DCs and IRs. You must make sure that the animals travel to slaughter with their official identification documents (passport or certificate of Cattle Tracing System registration), OCDS17C (only for animals born on or before **31 July 1996**), and the movement licence the AHDO issued to you. You must give all these documents to the haulier collecting the animals.

What forms should come with other cattle travelling to slaughter while my herd is still under TB restrictions?

While your herd is under restrictions, you can send to slaughter any animals that are not reactors, DCs or IRs. You must make your own arrangements for their haulage and slaughter. There are no special marking requirements for those animals. If you need a **specific** movement licence, you must apply for it beforehand and it must stay with the animals while they are transported. If you were issued with a **general** movement licence, you do not need to apply for a movement licence every time you take cattle to slaughter and the licence does not need to stay with the animals (See section 9 for more details).

We are not responsible for any losses or inconvenience you may suffer if you fail to provide all the necessary paperwork for animals going to slaughter.

Forms and licenses which come with cattle moved from restricted premises

Needed to come with the animal	Reactors	DCs	IRs	Cattle not tested	Cattle and calves under eight weeks with negative test results	On-farm slaughter
Movement licence	✓	✓	✓	✓	✓	
Notice of proposal to slaughter	✓	✓	✓			✓
Model declarations for carcasses which replace Schedules 18 and 19 – Food Chain Information Form (TB104).	✓	✓	✓			✓
OCDS17C (for animals born on or before 31 July 1996)	✓	✓	✓	✓		
Markings	✓	✓	✓ (except those privately slaughtered)			✓

- **Official identification documents** – that is, cattle passport or certificate of Cattle Tracing System (CTS) registration, as appropriate, along with the Cattle Identification Document (CID) (Cattle Control Document (CCD) in Scotland) or Cattle Birth Record Document (CBRD), as necessary.
- **Movement licence** issued by your AHDO (**TB24** or **TB24B**). Herd owners who are granted a general licence (**TB24C**) do not need to send a copy to the slaughterhouse, and a copy of the TB24C does not need to travel with the animals.
- **Notice of proposal to slaughter** is issued by your AHDO. It warns the Meat Hygiene Service (MHS) that animals to be slaughtered under the TB Orders are due to arrive.
- From 1 January 2006, new EU hygiene legislation replaced the Fresh Meat (Hygiene and Inspection) Regulations 1995 (FMRs) and the rules relating to emergency slaughter on farm became more restrictive. Model declarations providing food chain information (**TB104**) on the slaughtered animal are given to the herd owner to read, complete and sign, before the animals go to slaughter. The form then must

accompany the animal to the abattoir. **These replace the model declarations at Schedules 18 and 19** of the FMRs.

- **OCDS17C** form filed in and signed by the owner or keeper of any cattle born on or before **31 July 1996**.

11 Requirement that cattle are clean enough to be slaughtered

While your herd is under TB restrictions, you are responsible for making sure that all cattle sent to an abattoir are of an acceptable cleanliness for hygienic slaughter. This applies to all animals including those born on or before **31 July 1996**. If the animals are not acceptably clean, there will be delays in removing reactors or DCs from farms. There may also be a delay in receiving compensation and delays in future tests, which could increase the time your herd remains under restrictions.

You can find advice on the different aspects of clean livestock in the following publications.

Guidance booklets:

- Clean Beef Cattle for Slaughter, A guide for producers FSA/0951/1104
- Clean Beef Cattle for Slaughter, A guide for producers (Welsh version) FSA/0958/0105
- Red Meat Safety and Clean Livestock Booklet FSA/0595/0602
- Red Meat Safety and Clean Livestock Booklet (Welsh version) FSA/0953/1104
- Clean Sheep for Slaughter – A Guide for Producers is under preparation

Leaflet

- Clean livestock – Categorisation of Cattle Cleanliness FSA/0954/1204

FSA Clean Livestock Policy website:

<http://www.food.gov.uk/foodindustry/farmingfood/cleancattleandmeatsafety/>

To order copies of any of these publications produced by the Food Standards Agency, contact:

Telephone: 0845 606 0667

Minicom: 0845 606 0678

Fax: 020 8867 3225

Email: foodstandards@ecgroup.uk.com

12 Testing

What testing will the herd need?

If/once bTB has been confirmed in your herd it must have **two** consecutive negative tuberculin tests before movement restrictions can be lifted. These tests (which will cover all animals in the herd) are carried out every 60 days, calculated from the date the last reactor left your herd or from the date any reactors or IRs were satisfactorily isolated from the rest of the herd. To ensure your herd is cleared of infection as quickly as possible we usually apply a more severe interpretation (when reading test results) than we use for routine tests.

If after examining reactor carcasses or culture we cannot confirm that your herd has bTB, you will only need **one** negative test of all your cattle. We apply the standard interpretation (used for all routine tests) when reading this test.

You are responsible for gathering the cattle and providing safe handling facilities. You are also responsible for the health and safety of the people on your farm, as well as the welfare of the animals (see section 7 on welfare issues).

What animals need to be tested?

In general, once we have found reactors we test all the cattle on your farm. Very occasionally we may agree not to test certain groups of animals (for example, housed barley beef bulls). You should discuss this with us before your test is carried out.

Testing after movement restrictions have been lifted

Before your herd can go back to its normal TB testing frequency, we will arrange two further tuberculin tests. The purpose of these is to identify any infected animals that i) may have been missed in previous tests carried out when the herd was under restrictions, or ii) have been caused by re-infection.

These tests cover all cattle over six weeks of age. The first one is due six months after the TB restrictions have been lifted and if the test is negative, a second test will be due 12 months later. If the second test is negative, your herd will return to the normal TB testing frequency for the parish (i.e. one, two, three or four years).

Once your whole herd has tested clear and restrictions have been lifted, the negative TB test is valid as a pre-movement test for 60 days. Pre-movement testing is a cattle control measure to help reduce the risk of spreading TB through cattle movements. More information on pre-movement testing can be found on Defra's website at

<http://www.defra.gov.uk/animalh/tb/premovement/index.htm>

or in the booklet '*TB in cattle - Reducing the Risk, Pre- and Post- Movement testing in Great Britain*' at

<http://www.defra.gov.uk/animalh/tb/publications/index.htm>

What is the gamma interferon blood test?

The gamma-interferon test is a laboratory based blood test developed in Australia, in the late 1980s, for the diagnosis of bovine TB. Gamma interferon is an immunological hormone that is produced after the stimulation of blood cells with antigens such as bovine tuberculin.

The gamma interferon test has marginally better sensitivity i.e. ability to identify infected cattle than the skin test, appears to detect infected animals earlier than the skin test and can be repeated as often as necessary without the need to wait 60 days between tests. In addition, a specificity trial carried out by the Veterinary Laboratories Agency confirmed the findings of previous studies by concluding that the test has a specificity of 95-97%. This means it has a high rate of accuracy in correctly identifying non-infected animals as negative. Most importantly, the tuberculin and gamma-interferon tests appear to identify slightly different sub-populations of infected animals, which means that maximum sensitivity is achieved when they are used together.

When is the gamma-interferon blood test applied?

As a part of ongoing efforts to improve the bTB testing regime in cattle, from October 2006 Animal Health have extended the deployment in the field of the gamma-interferon test. The gamma-interferon test is not replacing the tuberculin skin test, which continues to be the primary screening test for bTB. However, Animal Health will, as a matter of course, apply the gamma interferon test (alongside the skin test) to improve the chances of detecting infected cattle (and thus speed up the resolution of TB incidents) in the following prescribed circumstances:

- On tuberculin test-negative animals in all confirmed new TB incidents in 3 or 4 year testing parishes;
- On tuberculin test-negative animals in severe TB incidents, to inform decisions around whole or partial herd slaughter;
- On tuberculin test-negative animals in herds with persistent, confirmed infection that fail to resolve through repeated short-interval tuberculin tests and have taken basic herd biosecurity precautions; and
- On inconclusive reactors that fail to resolve at their first tuberculin retest in herds in 1 and 2 yearly testing parishes.

Additionally, Animal Health may sometimes decide to use the blood test to reduce the probability of a false positive result:

- In chronic, unconfirmed TB incidents in 2, 3 or 4-yearly testing areas, where non-specific cross reactions to tuberculin are suspected; and
- For re-testing of tuberculin test reactors with abnormal skin responses or where inference with the skin test is otherwise suspected.

You will be contacted by Animal Health when your herd meets the criteria for gamma-interferon testing.

Results from gamma interferon testing alone cannot be used to lift movement restrictions.

Who will carry out and pay for the gamma interferon tests?

Where use of the gamma interferon test is prescribed by Animal Health, blood samples will be taken Animal Health officials and submitted to a laboratory of the Veterinary Laboratories Agency. Testing costs will be met by the Government.

All private testing for bTB, except for pre-movement testing, must receive prior authorisation from a Divisional Veterinary Manager. Private gamma interferon testing of skin test reactors, IRs or other cattle subject to TB restrictions will not be authorised. This policy will be kept under review as more experience is gained from the wider deployment of the test.

Are there legal powers in place to allow compulsory slaughter (following a positive gamma interferon test) and will farmers be compensated for all gamma-interferon test reactors?

Yes, the Tuberculosis Orders provide for compulsory slaughter of animals failing any diagnostic test for bTB. The arrangements for compensation for any gamma-interferon test reactor will be no different to those when only the tuberculin test is used (see section 4 about compensation). The only difference is that, in England, the 'relevant date' for valuation of a gamma-interferon test reactor is that on which the animal had the blood sample taken.

13 The risk to humans

What is the risk to human health from cattle infected with *M. bovis*?

Bovine TB is a 'zoonosis', this is an infectious disease of animals that can be transmitted to people. However, the risk of people contracting TB from cattle in Great Britain is considered very low nowadays. There are three possible ways in which people can be infected by *M. bovis* from cattle:

- By drinking raw milk from cows with 'disseminated TB' (that is, where TB has spread to sites outside the lungs) or with lesions of TB in the udder.
- By being frequently near animals that have TB lesions in the lungs or near carcasses from infected cattle.
- By cuts or abrasions in the skin infected with *M. bovis*.

Bovine TB has been monitored in many developed countries over several decades. In all this time, transmission of *M. bovis* to humans through the consumption of meat has not been documented. Meat is very unlikely to be a vehicle of infection for people, as muscle tissue is not a target for *M. bovis* and the bacterium does not multiply in meat. Cattle with evidence of generalised TB (and any part of a carcass with visible TB lesions) are removed from the food chain during routine meat inspection. Normal cooking would destroy any TB organisms that might be present in the meat of a cattle carcass considered fit for human consumption.

The risk of people contracting TB from cattle is considered very low because:

- Cattle herds are regularly tested for TB and reactors are often detected before they have fully developed the most infectious stages of the disease.
- Most milk and milk products in England and Wales are pasteurised. Pasteurisation removes the risk of contracting TB from milk of infected cows. Small amounts of unpasteurised milk and dairy products are still legally sold in England and Wales, but only from herds that are officially TB-free).
- Since 1 January 2006 milk from reactor animals, whether pasteurised or not, has been prohibited from entering the food chain.
- The Meat Hygiene Service routinely inspects all cattle carcasses entering the food chain and prevents visibly affected 'parts of the carcass and offal' from entering the food chain.
- Children at increased risk of developing severe disease and/or exposure to TB infection are vaccinated against TB (the 'BCG vaccine' protects against bovine TB as well as human TB).
- The Divisional Veterinary Manager (DVM) reports every confirmed incident of TB in cattle, deer and other domesticated animals to the local health authorities.

Although the risk to the general public is very small, we are not complacent. Until movement restrictions are lifted you cannot sell unpasteurised milk directly to consumers or for use in the manufacturing of unpasteurised milk products and all milk from reactor animals must not go in the bulk tank and should be disposed of by mixing it with slurry and spreading it on land or other appropriate manner. This only applies to milk from reactors, i.e. milk from other 'clear test' and inconclusive animals in a reactor herd can continue to be sold if pasteurisation is undertaken. If you are unsure which these animals are please contact your local AHDO. In Scotland, all milk sold for people to use must be pasteurised unless the milk producer is using it or it is being consumed on the producer's property (including by calves). If you are a dairy farmer and are in doubt as to the impact of TB restrictions on your herd, you should contact an environmental health officer of your local authority. (See section 3 for more information on disposal of milk from reactor animals). In any case, we will advise the Chief Environmental Health Officer (CEHO) of the relevant local authority and the Dairy Hygiene Inspectorate about all dairy herds placed under TB restrictions (for whatever reason). The CEHO may wish to check with you that all the milk sold from your farm is being pasteurised while your herd remains under TB restrictions. The DHI will perform random inspections as part of their dairy hygiene programme. We also tell the CEHO and DHI when TB restrictions have been lifted from your herd.

Some groups of people such as cattle farmers, farm workers, veterinarians and abattoir workers have a slightly higher risk of contracting TB from infected cattle by virtue of their occupation. For that reason, we also tell the local medical authorities if we confirm bTB in your herd. In some areas the medical authorities will arrange for you and your family to have a TB check-up, depending on the extent and location of bTB lesions found in your cattle. If you have any worries about your family's health, you should explain the circumstances to your doctor.

What if I am a registered retailer of unpasteurised cow's milk or if I use unpasteurised milk as part of an on-farm bed-and-breakfast business?

You cannot sell unpasteurised milk, either direct to a customer or to a manufacturer of unpasteurised milk products (such as cream, yoghurt and cheese), until we lift TB restrictions and your herd regains its officially TB-free status.

Our legislation requires all unpasteurised milk intended for the public or for making unpasteurised milk products must come from an officially TB-free herd. When movement restrictions are imposed, the herd's officially TB-free status is lost and milk must be pasteurised before it can be used for human consumption. From 1 January 2006, milk from individual reactor animals within a herd must be withheld from the bulk tank and may not be used for human consumption in any circumstances. We will ask environmental health authorities to ensure that all milk sold from your farm is pasteurised. For more information about the 2006 food hygiene legislation, please visit the Food Standard Agency's website at <http://www.food.gov.uk/foodindustry/regulation/europeleg/eufoodhygieneleg/>

What if I am a registered producer of unpasteurised dairy products?

Once a TB breakdown has been identified, the Chief Environmental Health Officer of the local authority will assess the risks and decide what can be done with unpasteurised dairy products produced before the reactors were identified. The Food Standards Agency (FSA) has produced guidance to Food Authorities on officially TB-free status and Dairy Hygiene Legislation. For more information, please contact the Food Standard Agency Food Incident Branch (020 7276 8448), in Wales contact the Food Standards Agency Wales (029 20 678902) or visit:

<http://www.food.gov.uk/foodindustry/regulation/europeleg/eufoodhygieneleg/>

Should we drink raw milk from the bulk tank?

As stated above, drinking raw milk from cows with bTB is one of the ways in which people can catch TB from cattle. To safeguard your own health and that of your family, it is strongly recommended that you do not consume unpasteurised milk while there is bTB in your herd. If you want to drink milk produced on your own farm, we strongly advise you to boil all the milk or use a small-scale domestic pasteurisation unit to reduce the risk. See section 3 for more information on milk from reactors.

14 What happens to the meat from reactors?

TB lesions (visible signs of TB in an infected carcass, usually taking the form of many small abscesses in the lungs or other affected organs) in the meat of infected animals are very rare and are seen only in advanced cases. Separate analyses carried out by the Food Standards Agency and the Food Safety Authority of Ireland have shown that the risk, if any, from eating meat that comes from animals with TB is very low.

All animals entering the food chain are inspected by a veterinarian before they are slaughtered. Before they can be stamped as fit to eat, officials of the Meat Hygiene Service (under veterinary supervision) will carry out a post-mortem health inspection. TB reactors, IRs and DCs are clearly identified and slaughtered separately from other cattle. They are given a more detailed inspection, and diagnostic samples are usually collected.

If an animal is healthy before it is slaughtered, and no TB lesions are identified in post-mortem inspections, the carcass is considered fit to enter the food chain regardless of whether it came from a TB reactor, IR or DC. There are no barriers to trade in this meat within Great Britain or the European Union.

If TB lesions are found in one organ or one part of the carcass of reactors, IRs or DCs, that organ or that part of the carcass is removed and condemned. If the rest of the carcass is free from TB lesions, it is considered fit to enter the food chain. In all other cases (that is, if more than one organ or more than one part of the carcass has lesions), the whole carcass and all the offal is condemned and destroyed.

If bTB is suspected during routine meat inspections of cattle that have not been slaughtered as reactors, IRs or DCs, Meat Hygiene Service inspectors decide whether to condemn the carcass on a case-by-case basis.

From 7 November 2005 all cattle over thirty months of age were allowed back into the food chain. The only exception to this is cattle born on or before **31 July 1996**, which must enter the OCDS.

In the unlikely event that small numbers of *M. bovis* bacteria are present in meat that has undergone veterinary inspection, normal cooking of meat or meat product will kill those organisms.

15 Wildlife

Do badgers give TB to cattle?

The Independent Scientific Group on Cattle TB (ISG), which oversaw the Randomised Badger Culling Trial, published its final report on 18th June 2007. This completes nearly ten years work by the ISG. The report is available at <http://www.defra.gov.uk/animalh/tb/isg/index.htm>

The report shows that badgers and cattle both have a role in maintaining bovine TB in cattle and can transmit the disease to each other. There remains much debate around the transmission of the disease between the two species. In parts of the country badgers may carry the infection at a relatively high level, but in other parts badgers may not have bTB at all. In Scotland there is no evidence that badgers or other wildlife are a reservoir for bTB.

Can I remove badgers from my land?

Badgers and their setts are protected, so it is against the law to kill or harm badgers or to interfere with their setts without a licence. Licences may be granted to kill or take badgers or interfere with their setts in certain circumstances (for example, if badgers are causing serious damage to land, crops, poultry or property). At present any TB related applications in England would be placed on hold by Natural England while Ministers are deciding on a way forward. However, there may be exceptions, for example, Natural England will still process applications to euthanase captive badgers testing positive to bTB. (See 'Contacts' for details of how to apply for a licence.)

Can anything else carry bovine TB?

Any mammal is potentially susceptible to infection with *M. bovis* and can, therefore, develop 'bovine' TB. However, such cases are so rare in most species that they are not considered important in perpetuating the disease in cattle. Research is being carried out to investigate bTB in other wildlife. Birds can carry the avian form of TB. Avian TB can cause a reaction to the cattle tuberculin test. The tuberculin test used in Great Britain is a comparative test in that we inject both avian and bovine tuberculin into the skin of cattle. This reduces probability of false positives (spurious test results) arising from infection with the organism that causes avian TB or from exposure to other mycobacteria. There are a few other sources of false positives, such as environmental contamination with other Mycobacteria.

Where can I get more information on licences?

In England you can contact the Natural England Wildlife Management and Licensing Service. Natural England provides advice on many wildlife issues. The first point of contact for wildlife management advice is the Wildlife Licensing Unit. Staff in the unit will help you or put you in touch with a specialist wildlife adviser.

Wildlife Licensing Unit
Natural England
Burghill Road
Westbury-on-Trym
Bristol
BS10 6NJ
Phone: 0845 6014523 (local rate)
Fax: 0845 6013438 (local rate)
E-mail: wildlife@naturalengland.org.uk
Website: www.naturalengland.org.uk/conservation/wildlife-management-licensing

In Wales you can contact the Welsh Assembly Government in Cardiff:

Environment - Conservation and Management Division
Department for Rural Affairs & Heritage
Welsh Assembly Government
Cathays Park
Cardiff
CF10 3NQ
Phone: 02920821523

In Scotland you can contact Scottish National Heritage:

Licensing Officer
Scottish Natural Heritage
Great Glen House
Leachkin Road
Inverness
IV3 8NW
Phone: 01463 725000
E-mail: licensing@snh.gov.uk

16 What advice on good husbandry is available?

Maintaining good husbandry practices is crucial in reducing the risk of your herd catching bovine TB. Updated advice on husbandry best practice has been produced by the Bovine TB Husbandry Working Group – this is a partnership of key farming, veterinary and wildlife groups, working with Defra and the Welsh Assembly Government. The advice includes some common sense, precautionary measures that farmers can take to help reduce the risk of TB transmission between cattle and between cattle and badgers.

The Working Group examined existing advice and research, and from this highlighted a list of measures based on their usefulness, practicality and cost. The resulting guidance recognises that all farms are different and points out to farmers, the importance of discussing and working with their vets to determine which measures are best suited to their particular circumstances.

The advice is available in the form of two leaflets which are available from Animal Health offices and at:

<http://www.defra.gov.uk/animalh/tb/abouttb/protect.htm>

17 Milk quota

The guidance is for reference only. It does not replace the relevant quota literature and is not legally binding on us. We strongly advise you to consult the relevant scheme rules or to contact the Rural Payments Agency (RPA) for the latest information on milk quotas.

What if I am over my quota?

If you are over your quota because of a movement restriction on your herd, the RPA may be able to give you some extra quota temporarily. You can ask for an application form (MQ/16) from the RPA at any time during the quota year but it will not be issued until after the end of the quota year it relates to. The form comes with explanatory notes but the RPA helpline can also help you fill it in. You must return forms to the RPA by 30 April after the end of the quota year for which you are claiming temporary quota.

The RPA cannot confirm the amount of temporary quota it can give you before July following the quota year to which applications relate. As a result, we strongly advise you to do everything you can during the quota year to cover your overproduction.

You will not qualify for any temporary quota if:

- you leased out any quota between the start of the movement restriction and the end of the quota year;
- you sold unused quota between the start of the movement restriction and the end of the quota year; or
- you bought cows or in-calf heifers between the start of the movement restriction and the end of the quota year;

unless you can provide satisfactory evidence that you already had a contract to do so.

You must also prove that:

- you have gone over your quota; and
- you have kept cows in excess of 20% of the number of animals in your herd on the first day of the movement restriction.

Eligible animals are heifers which, after the 20% replacement rate has been reached, calve for the first time during the restriction period in the quota year to which your application relates.

The maximum daily allowance for the period of the restriction is 16 litres for each eligible animal.

There is no guarantee that your excess production will be covered. As a result, we advise you to consider buying or leasing extra quota to avoid the possibility of paying a penalty (levy) on your overproduction at the end of the quota year.

You can get more information from:

The Rural Payments Agency
Milk Quotas
PO Box 277
Exeter
EX5 1WB.
Helpline: 01392 266466
Website: www.rpa.gov.uk/