

BOVINE TUBERCULOSIS

Introduction

The purpose of this guide is to describe Bovine Tuberculosis in deer and how to deal with suspect infected carcasses.

This guide links to the Deer Legislation and Carcass Inspection guides.

Legislation

Bovine TB (bTB) is a notifiable¹ disease as named in the Animal Health Act 1981 or any Order made under that Act.

Under the Tuberculosis (Deer) Order 1989 (as amended) suspicion of TB in any deer (or carcass) whether farmed, park or wild, must be notified to the Duty Vet at your local Animal Health Office³ The Tuberculosis [Deer] Notice of Intended Slaughter and Compensation Order 1989 is relevant only to farmed deer.

Description²

bTB affects domestic livestock, mainly cattle, which are its natural host, as well as wild mammals such as badgers and deer and very occasionally, humans. It is caused by *Mycobacterium bovis*, one of a closely related group of bacteria that includes *M. tuberculosis* (the primary agent of TB in humans). Both of these are part of a larger family of bacteria many of which are harmless; others are responsible for diseases such as human leprosy, Johne's disease in ruminants and avian TB (tuberculosis of birds).

There is still some uncertainty surrounding bTB and the way it is transmitted. Bovine TB is spread primarily through the exchange of respiratory secretions between infected and uninfected animals. This transmission usually only happens when animals are in close contact with each other. Thus, animal density plays a major factor in the transmission of *M. bovis*, including temporarily increased densities that may occur around supplementary feeding areas. Bacteria may also be released directly onto feedstuffs



enlarged retropharyngeal gland (incised for clarity), this abscess is of the "hard, cheesy" type

through coughing etc., the infection is then ingested orally. Infection can persist in the soil for some time but does not spread over long distances through the air.

bTB in deer

A Defra quantitative risk assessment published in December 2008 indicates that deer do not currently pose a significant bTB risk to cattle. The risk of cattle infection from wild deer is only likely to be significant if the prevalence of bTB infection in deer is high. Deer are likely to pose less of a bTB risk to cattle than badgers throughout most of South West England and Wales.

A survey published at the same time, of wild deer density and bTB prevalence in the south west of England, showed that although levels of bTB in deer are often very low (less than 1 per cent), there was one localised cluster of high deer density where bTB prevalence exceeded 15%. In the areas surveyed,

fallow deer were the species most likely to be infected, but this may not be the case elsewhere. A second survey, carried out in Wales and published in the same year, reported a 3.1% level of bTB in fallow deer. The samples for both surveys were taken, to exacting standards, by local rangers and stalkers working with the Deer Initiative and Defra.

The indication is that, under current conditions, the majority of infected wild deer populations (in Southwest England and Wales) are most likely to be acting as spill-over hosts of *M. bovis*, reflecting the presence of bTB in an area rather than acting as a reservoir of the disease for cattle. They are more likely to pass bTB on to other deer, rather than posing a significant risk to livestock, but any infected animal of any species might shed infection and again, the risk is increased when deer are present at very high densities. Any measures which help avoid this could be beneficial. Deer stalkers and managers should take the disease risk into account when establishing management programmes.

The final report of the Bovine TB Advisory Group published in April 2009 states that:

“Improved surveillance of bovine TB in other wildlife species (including deer and wild boar) is required. Wild deer are not considered a significant widespread risk to cattle at present but this should be monitored.”

Symptoms

Bovine TB is a chronic disease and it can take years to become infectious and/or develop clinical signs following infection.

Live deer often show no outward signs of infection but animals with advanced disease may appear emaciated, have diarrhoea or may just be quiet and unwell.

Internally, TB abscesses may be very variable, from small, hard and “gritty” to large and fluid. Commonly the lymph nodes, particularly the mesenteric, sub-maxillary and retro-pharyngeal nodes are affected. In advanced cases many different lymph nodes can be affected and there may be abscesses or visible lesions such as adhesions, particularly inside the chest and on the lungs. Enlarged lymph nodes and abscesses can also be indicative of a number of other diseases, but the possibility of bTB should always be considered. Lymph nodes should not normally be incised to check

for infection. It is not of great concern if a node is cut accidentally; however, sensible personal disinfection and hygiene procedures should be followed.

Reporting

If you suspect bTB in deer you should isolate the carcass and notify the Duty Vet at your local Animal Health Office, who will provide guidance and may arrange for collection of the appropriate tissue samples for bacteriological culture at the Veterinary Laboratories Agency (VLA). Contact details can be found in the Further Info section below³ or in the telephone directory under Defra. Samples (usually individual lymph nodes) must be absolutely free of contamination, placed in a sterile sealed container and may be refrigerated, but not frozen, before being sent. Results may take up to 12 weeks to be reported.

Meat hygiene

Initially, isolate suspect carcasses from others to prevent contact. Provided it is otherwise healthy and in good condition and there is no other reason to retain it, a carcass from which samples have been removed can then go into the food chain as normal. If the carcass is delivered to an AGHE the details of any abnormalities must be provided with the carcass, as required by the Wild Game Meat Regulations - <http://www.food.gov.uk/foodindustry/meat/wildgameguidance>

Bio-security

If you find a suspect carcass continue processing/ taking samples with care. Wear protective clothing that you can wash immediately, have appropriate disinfectant to hand and wear rubber gloves. If sensible precautions are taken when handling a suspect carcass the risk of transmission is very small.

Further Info

¹ Notifiable diseases - <http://www.defra.gov.uk/animalh/diseases/notifiable/>

² About bTB - <http://www.defra.gov.uk/animalh/tb/abouttb/index.htm>

³ Local Animal Health Office (<http://www.defra.gov.uk/animalhealth/about-us/contact-us/search>)