

# Bovine TB in deer and other UK wildlife

***Mycobacterium bovis* (*M. bovis*) causes tuberculosis in cattle. In the UK badgers are the primary wildlife host implicated in transmitting infection to cattle, but the bacterium can also infect other mammal species. This sheet summarises what we know about TB in these other wildlife species and the likely risk to cattle.**

## TB in Wild Deer

Deer are a wildlife host for TB in several other countries including the USA and Spain [1]. TB has been found in 5 of the 6 deer species found in the UK (Roe deer, Red deer, Fallow deer, Sika deer and Muntjac deer) [2].

- A large survey of wildlife in South – West England found TB in 1 – 5% of deer examined [3].
- Examination of infected deer carcasses suggests that several species (Roe, Red and Fallow, little data exists for other species) can excrete *M. bovis* [4].
- Deer infected with *M. bovis* may appear in poor condition, but in many cases they will have no obvious signs of disease [1].
- Genotypes of *M. bovis* in deer are generally similar to those in local cattle and badgers – consistent with some degree of spread between species [3].
- TB is a notifiable disease and deer stalkers should submit carcasses with suspicious lesions to APHA (10 – 20 infected deer are found in GB each year [5]).



Fallow deer



Roe deer



Red deer



Muntjac deer

## Is there a disease risk to cattle from deer?

Given the information above there is definitely the potential for deer to be involved in the transmission of TB to cattle, where they are infected. However, the exact risk from deer is unclear as there is little data on levels of *M. bovis* excretion, local deer abundance and contact with cattle. Several studies have used available data to estimate the disease risk to cattle from deer and compared this to the risk from badgers [2,6] producing the following results:

### The risk from deer is much lower than the risk from badgers

However, in some localised hotspots the risk from deer could be significant, particularly where deer are at very high densities, or where many are infected.

### The risk is likely to be highest from Fallow deer

Fallow deer may develop advanced disease, they can occur in large groups and will forage in pasture fields used by cattle. Red deer can also occur in large herds and use pasture, so may have a similarly high risk in some cases.

## TB in Wild boar

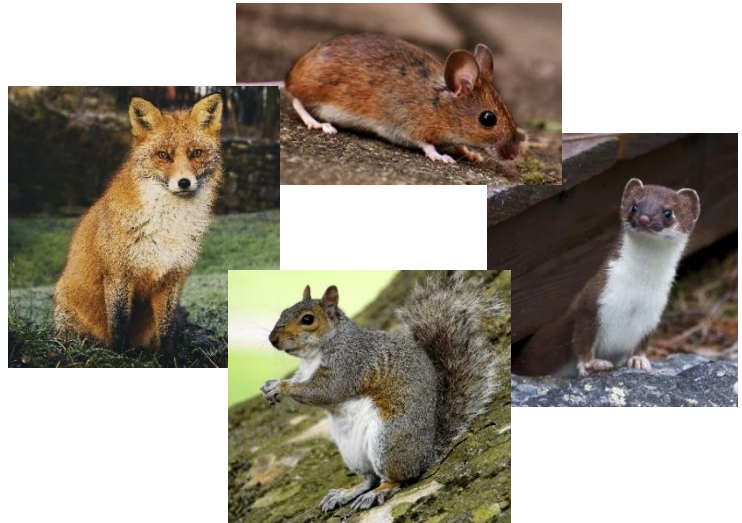
Feral wild boar populations occur in several locations including Kent/East Sussex, Dorset and Gloucestershire. Wild boar are a host for TB in other countries including Spain and Portugal. TB has been found in wild boar in the forest of Dean<sup>[6]</sup>, and the evidence from other countries indicates that boar can excrete and transmit *M. bovis*. Boar generally prefer woodland habitats and are currently not widespread, so any risk to cattle in the UK is likely to be very localised.



## TB in other wildlife species

As well as deer and boar, surveys of wildlife in South – West England and Wales have found very low levels of TB in the following species <sup>[2,3]</sup>.

- Fox
- Polecat /Ferret
- Mink
- Stoat
- Brown Rat
- Wood / Yellow necked mouse
- Common shrew
- Field vole
- Grey squirrel



Detailed analyses of carcasses collected in the UK suggests that these species are unlikely to excrete *M. bovis* <sup>[3]</sup>. Many of these species also occur at very low densities or have limited interaction with cattle or environments used by cattle. **Any risk posed to cattle is likely to be very low and much lower than the risk from badgers.** Recent research published from France has raised the possibility that foxes may be able to excrete *M. bovis* <sup>[8]</sup>. As this study was very small in scale (only six foxes were tested) and based in another country, it is unclear how relevant this is to the situation in the UK.

**Badgers are the main wildlife host for TB in the UK and a source of infection to cattle. Deer and boar may be a potential risk to cattle in certain hotspot areas. All other species probably represent a very low risk.**

## Where can I find out more information?

For more information on other TB topics visit [www.tbhub.co.uk](http://www.tbhub.co.uk). This sheet was produced as a part of a Knowledge exchange project funded by NERC. For more info and to download the full list of fact sheets or visit [www.tbknowledgeexchange.co.uk](http://www.tbknowledgeexchange.co.uk).

## Studies referenced

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