Anthrax – Q&A

Q. How long can anthrax spores survive in the soil?

A. Anthrax spores can persist in soil for many years. Any disturbance of the soil including such events as heavy rainfall or flooding may allow spores to be exposed and ingested by grazing animals. Anthrax can also occur when contaminated feeding stuffs or fertilisers are imported and used on livestock premises. The latter is now exceedingly rare.

Q. Can Anthrax be imported with feed or fertiliser?

A. Yes. However, modern import controls make this extremely unlikely. In the past some feeding stuffs became contaminated by being transported in the holds of ships that had previously held bones, hides and skins from parts of the world where anthrax is more common.

It has also been imported into the UK in meat and bone meal. Historically, meat and bone meal was included in livestock feed but this has now been banned due to BSE. Any spores on hides and skins would be washed off during the tanning process at the tannery and dispersed down stream. Certain pastures became contaminated, especially flood plains, and on occasions animals grazing there would succumb to the disease and die suddenly. However, anthrax is now a rare disease which does not affect large numbers of livestock. The last confirmed case in GB livestock occurred in 2002.

Q. If there is no evidence of anthrax following the taking of environmental samples, how can we tell how livestock contracted the disease?

A. It is not always possible to prove conclusively the exact source of infection. However, a thorough investigation of the outbreak, together with a knowledge of the biology of anthrax and experience gained from previous outbreaks, permits the source of infection to be localised to a particular area of the farm.

Q. How can we prevent other livestock on the farm from contracting the disease?

A. The risk of exposure cannot be completely eliminated but it can be managed and significantly reduced. A key mechanism for achieving this will be the way in which the land associated with the highest risk of exposure is used.

Q. Could anthrax spores have affected other mammals and could disease be spread in this way?

A. All warm blooded animals are reportedly susceptible although certain species are much more resistant than others. Experience with anthrax outbreaks in the UK and

world-wide have shown that generally this is not a significant way by which infection is spread.

Q. Are other livestock on the farm at risk?

A. Yes. All livestock that may have had access to the same source of infection are at risk. The farmer will be advised to monitor cattle on the farm for symptoms of further infection.

Q. What about vaccination?

A. There is no commercial vaccine available in the UK for animals at risk of contracting anthrax. Under limited circumstances a restricted use vaccine could be used to minimise losses. Use of vaccine has to be applied for and approved by the Veterinary Medicines Directorate. Farmers have to bear the cost of vaccination.

Q. Are neighbouring farms at risk?

A. It depends on the circumstances but the risk to other farms is usually considered to be negligible.

Q. How are carcasses destroyed?

A.The carcasses are burnt on site in accordance with the Anthrax Order 1991. The resulting ash is incinerated.

Q. What is the role for farmers when checking for anthrax?

A. Farmers are obliged to report any sudden and unexpected deaths in their livestock to the local Divisional Veterinary Manager (DVM) by contacting their Local Veterinary Inspector (LVI). This is usually their private veterinary surgeon.

Q. How are the tests for anthrax carried out?

A. Blood smears and in some cases tissue smears are taken and examined by the Local Veterinary Inspector (LVI) in the first instance. Where anthrax cannot be ruled out diagnostic material is sent to the Veterinary Laboratories Agency (VLA) at Weybridge.

Q. Is compensation available for animals that have been confirmed to have died from anthrax?

A. No

Q. What is the risk to the public from an outbreak?

A. Public health concerns are carefully considered and implications assessed. The risk to users of the public rights of way and their pets following the lifting of restrictions is considered minimal. As illness in humans is usually caused by direct contact with diseased animals, it is unlikely that any persons using the public rights of way would be exposed to the infection. The possibility of infection through inhalation or ingestion of the spores is even more remote. Dogs should always be under control and not allowed to roam when using public footpaths crossing farmland.

Q. Is there a public health risk from the burning or incineration process?

A. No

Q. What causes anthrax?

Anthrax is a bacterial infection caused by the organism Bacillus anthracis and occurs worldwide. Grazing animals are particularly at risk. It is a zoonotic disease i.e. it can be transmitted from animals to humans. The bacterium can exist as spores which are capable of surviving in the environment, e.g. in soil for many years.

Q. What is anthrax in humans?

A. In humans there are three main forms of anthrax:

- cutaneous
- intestinal
- inhalational

Cutaneous anthrax results in a characteristic skin lesion and can be treated with antimicrobials. Infection usually requires direct contact and damage to the skin.

Intestinal anthrax is contracted by the ingestion of contaminated food and results in a severe disease which can be fatal.

Inhalational anthrax is very rare and results from the inhalation of spores such as in certain industrial processes. The last case of inhalational anthrax in England and Wales was in 1974.

Q. How is anthrax caught by humans?

A. Anthrax is now uncommon in humans. The disease used to be called 'wool-sorters disease' and is an occupational hazard for some workers, including abattoir workers and tanners, who process hides, hair, bone and bone products. There is a vaccine available for those at risk of occupational exposure to anthrax and it is not normally recommended for the general public.

The disease can be contracted by contact with anthrax spores, either by skin contact (cutaneous anthrax), ingestion (intestinal anthrax) and inhalation (inhalational anthrax). It is extremely unusual for anthrax to be transmitted from person to person.

Q. Is monitoring for anthrax carried out?

A. Up to 6,000 local veterinary inspectors (LVIs) have for many years carried out anthrax monitoring.

Q. Is it a notifiable disease?

A. Yes. All cases are initially analysed, usually at the veterinary surgery, and where disease cannot be ruled out samples are sent to the Veterinary Laboratories Agency.