

## Introduction

The purpose of this guide is to describe Foot and Mouth disease (FMD) in deer, the restrictions that are put in place during an outbreak and the appropriate bio-security measures that should be followed. This guide links to Deer Legislation and Carcass Inspection guides.

## Description and Legislation

FMD is highly infectious viral disease which can be carried in soil/water or become airborne. It affects all cloven hoofed animals including deer. FMD is a notifiable disease in the UK, the legislative procedures for dealing with an outbreak are found in the Foot and Mouth Disease (England/Wales) Orders 2006. For the purposes of the Orders, deer are "susceptible animals" and, since one of the main means of controlling the disease is to prevent the movement of live animals, carcasses and by-products during an outbreak, restrictions may be placed on the culling of deer and the movement of carcasses and by-products.

## FMD in deer

All deer are susceptible to FMD. In Roe and Muntjac the disease may be severe and sometimes fatal. There has not been a confirmed case of FMD in wild deer in the UK and deer are not thought to have been important in its transmission in the outbreaks in this country in the last 50 years. Deer have, however, been shown to catch FMD in experimental situations in the past, these experiments are the source of the photographs in this guide.

## Symptoms

In deer, symptoms may be apparent only for a period of 2-20 days. Deer may not show many of the outward signs of disease such as lameness or salivation (dribbling) which are seen in domestic livestock. Deer may be encountered that are

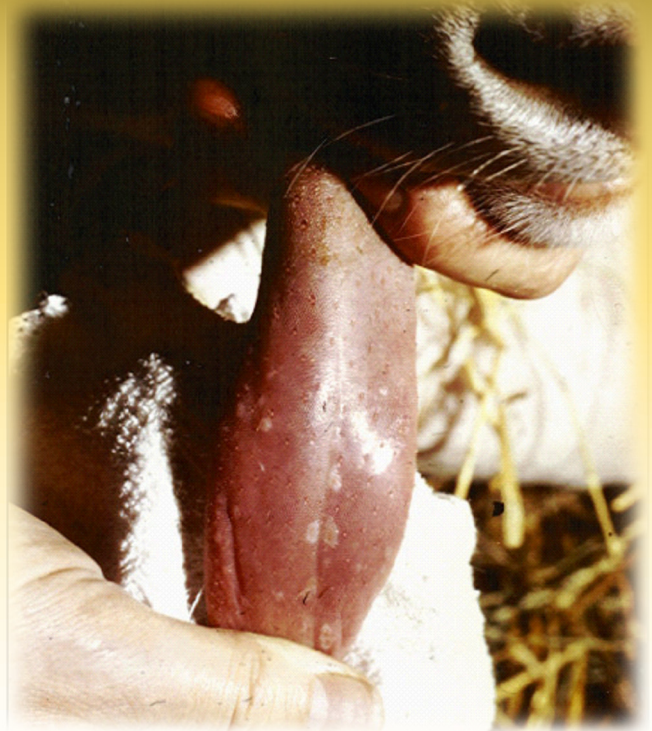


Fig 1. Fallow deer - Small un-ruptured vesicles on tongue

obviously lethargic and unwell, or may simply be found dead. Roe and Muntjac especially may be disinclined to move when approached closely. Close examination of a carcass is necessary to see clinical signs, the most common being small vesicles (blisters or raised or discoloured areas of skin) or ulcers (sores) in the following places:

- ◆ Mouth - tongue, gums, upper dental pad, inside lips
- ◆ Feet - skin between hooves, boundary of skin and hooves especially between and behind hooves and the bulb of the heel. Both front and rear hooves should be inspected. The single most common sign is the presence of red ulcers or blisters at the junction of the horn and skin around the heels.

The photographs below show experimentally induced symptoms in four species of deer, other species will be similar:



Fig 2. Fallow deer - un-ruptured vesicle between hooves



Fig 3. Fallow deer - Healing lesions affecting the bulbs of the heel



Fig 4. Roe deer - Ruptured vesicles above dental pad and below incisors



Fig 5. Roe deer - Un-ruptured inter-digital vesicle



Fig 6. Roe deer - Healing lesion with under run of hoof



Fig 7. Muntjac deer - Extensive vesication of tongue



Fig 8. Sika deer - Un-ruptured vesicles on lateral surface of tongue

Fig 9. Sika deer - Ulcerated area on buccal mucosa

# *During an outbreak*

## *Restrictions*

The restrictions resulting from a FMD outbreak are based on zones drawn around outbreaks. If FMD is confirmed at a site a “protection zone”(usually 3km radius) and a “surveillance zone”(usually 10km radius) will be placed around the site. The rest of England, Wales and Scotland will usually become a “restricted area”. At this stage the simplest initial assumption is that all deer stalking should stop, as should all movements of live deer, carcasses and by products (including trophies), either locally or for export. The extent of restrictions will be reported widely on Defra, Deer Initiative and other websites, in the press and sometimes by telephone.

## *Reporting*

If you suspect FMD in deer you should report your details, the species and location of the deer to the duty vet at your local Animal Health Office, contact details can be found at <http://www.defra.gov.uk/animalhealth/about-us/contact-us/search>. They will advise on subsequent action. Unless advised otherwise, suspect carcasses should not be moved from where they fell. If they have been moved they should be isolated, if possible in a secure area, away from other carcasses, or any live, susceptible animals.

## *Bio-security*

Go to [http://www.defra.gov.uk/animalh/diseases/pdf/biosecurity\\_guidance.pdf](http://www.defra.gov.uk/animalh/diseases/pdf/biosecurity_guidance.pdf) for advice on FMD bio-security.

Take note of the movement restrictions prevailing at the time and in general do not make unnecessary visits to livestock areas. FMD approved disinfectants are available at all agricultural stores and should be used as appropriate.

It is extremely rare for FMD to affect people but when handling carcasses maintain protective measures such as gloves, disinfection of equipment, hand washing and so on. These measures will also help to prevent the spread of the disease. Vehicles and footwear need to be kept clean and if necessary disinfected, be prepared to use wheel and boot washes.

## *Further Info*

Advice on Foot and mouth Disease -<http://www.defra.gov.uk/animalh/diseases/fmd/default.htm>

The Deer Initiative - <http://www.thedeerinitiative.co.uk>

Foot and Mouth Disease(England) Order 2006 - <http://www.opsi.gov.uk/si/si2006/20060182.htm>

Foot and Mouth Disease (Wales) Order 2006 - <http://www.opsi.gov.uk/legislation/wales/wsi2006/20060179e.htm>

Local Animal Health Offices - <http://www.defra.gov.uk/animalhealth/about-us/contact-us/search>