

## Biosecurity during an FMD Outbreak

Biosecurity is about taking practical measures to reduce the risk of disease spread. During an outbreak of FMD, extra precautions are essential; however, good biosecurity is always advisable.

- Remember: infected animals may excrete virus prior to developing clinical signs.
- By the nature of the job, vets are at high risk of unwittingly spreading FMD between farms. It is essential to carry out sufficient biosecurity precautions to prevent this occurring.

### *Cleaning and disinfecting equipment:*

- Have the proper equipment, including a bucket, a brush, and disinfectant with you when you make farm calls.
- The disinfectant should be approved, effective against FMD virus, made up fresh at the farm upon arrival, and made up to the correct concentration (see <http://www.agriculture.gov.ie/footandmouth/> for a list of approved disinfectants).
- Cleaning should precede disinfection: remember, clumps of mud or dirt can prevent the disinfectant working.
- Pay particular attention to footwear, hands and fingernails, and equipment used on animals (e.g. stethoscope, thermometer).
- Surgical instruments used during the farm visit should be rinsed in water and immersed in disinfectant before leaving the premises.
- Disposable gloves should be worn when handling animals to avoid potential contamination of your hands.
- It is vital to repeat the cleaning and disinfection process when leaving the farm.

### *Vehicles:*

- Vehicles with farm mud on them can transport FMD virus long distances in a short time.
- Where possible, park your vehicle outside farms.
- If it is necessary to drive onto the farm, clean and disinfect the vehicle on entry and exit, particularly the tyres and wheel arches.

### *Clothing and footwear:*

- Clothing can become easily soiled during routine veterinary work, and proper cleaning and disinfection of clothing (e.g. waterproofs) can be time-consuming.
- Disposable paper suits should be worn over other clothing during farm visits. The paper suit can be left on site for the farmer to dispose of.
- Waterproof submersible footwear (e.g. Wellington boots) should be worn during farm visits.
- On arrival and departure, all mud and dirt must be cleaned from the boots, paying attention to dirt caught in the treads of the sole.
- Once cleaned, the footwear should then be properly disinfected.

## What to do if you suspect FMD

If a client reports a suspicion of FMD to you, you are required by law to report it immediately to the local DVO. Do not visit the farm yourself.

If you suspect FMD in animals while you are on a farm, you must report it immediately to the local DVO. Under no circumstances should you leave the farm until a Department of Agriculture veterinary inspector (VI) arrives and gives you further advice. While on the farm, do not allow people, animals, vehicles, carcasses or anything else associated with animals to leave until the VI advises further.

If FMD is confirmed on the farm, the VI will give you instructions regarding clothing and equipment. Do not visit other farms or livestock holdings for 3 days.

### **Further information**

Further information on FMD is available at [www.agriculture.gov.ie](http://www.agriculture.gov.ie).



## Introduction

Foot-and-mouth disease (FMD) is one of the most contagious diseases of animals, and an outbreak can have severe economic consequences. It affects cattle, sheep, pigs, goats and other cloven hoofed animals. It is caused by FMD virus, which is very infectious and can persist in the environment for some time. If an outbreak of FMD occurred in Ireland, other countries would not accept our animals or animal products until several months after the disease was eradicated, causing huge financial losses.

## Clinical signs and disease

FMD causes fluid-filled vesicles (blisters) to develop on the tongues, dental pads, noses and feet of affected animals. These can be very painful, and affected animals become lame, go off their food and salivate excessively. Animals develop a fever just before the vesicles appear. Ruptured vesicles frequently become secondarily infected with bacteria. The disease is severe in pigs and cattle but is milder in sheep.

Infected dairy cattle have a reduced milk yield, while young animals, particularly piglets and lambs, may die without showing obvious signs. Pregnant sheep may abort.

Most adult animals will recover from FMD after 10-14 days. Dairy cattle may never return to full milk yield.

The incubation period for FMD is 1-14 days.

### FMD in cattle:

- Excessive salivation and lip smacking
- Lameness
- Fever
- Loss of appetite
- Reduced milk yield
- Vesicles on tongue, dental pad, nose, between toes, at heels and at the coronary band



### FMD in sheep:

- Lameness
- Fever
- Abortions and deaths in young lambs
- Vesicles on the dental pad, tongue, between the toes and on the coronary band of the feet; these can be easily missed



### FMD in pigs:

- Severe lameness
- Fever
- Loss of appetite
- Pigs may huddle together
- Vesicles on the snout, in the mouth and on the feet, especially the coronary band; these may rupture and the horn may completely detach



## Transmission and spread

Infected animals excrete virus in vesicular fluid, saliva, milk, breath, urine and faeces. Virus can be excreted up to a day or two before the onset of clinical signs.

The disease is transmitted to other animals by three main routes:

1. Direct contact between an infected animal and a susceptible animal, for instance, animals touching nose to nose across a fence.
2. Indirect contact between animals, where a susceptible animal is exposed to virus from an infected animal. This could be a contaminated person or vehicle moving between farms, or

- equipment used on one farm after another, transporting the virus.
3. Airborne spread. Infected animals, particularly pigs, can exhale virus in their breath; animals on other farms downwind may become infected by this route. Cattle are more susceptible to airborne infection than pigs or sheep.

## Control measures

Control measures against FMD are designed to reduce direct and indirect spread of the disease.

### Movement ban:

The movement of cattle, sheep, pigs, goats and other susceptible species on or off farms is restricted following an outbreak. This is to prevent animals which are infected but are not yet showing signs of the disease from introducing it to other farms.

### Culling of infected animals:

When FMD is confirmed in a herd or flock, all susceptible animals on the farm are culled. This is to reduce the amount of virus excretion and to prevent further spread of disease.

### Culling of dangerous contact animals:

If a farm has been recently linked to a premises infected with FMD, disease control experts may decide that the risk of this farm also being infected is so high that a pre-emptive cull is justified. Since animals may excrete virus during the pre-clinical stage, it may be too dangerous to wait and see if disease develops.

### Other measures:

Many other disease control measures are used to stop an outbreak, including examining and testing animals on farms in a high risk area, tracing animals, people and equipment that have been on or near infected farms, and tracing and destruction of animal products from infected farms.

## Vaccination

Vaccines are available against FMD virus, but are unlikely to be used during an outbreak in Ireland for economic reasons. The decision on whether to vaccinate or not in the face of an outbreak is not straightforward, and will be influenced by several factors. Vaccinated animals, although protected against disease, can still become infected by the virus, and some may become long-term carriers. Vaccination helps stop FMD outbreaks by reducing the number of susceptible animals and by reducing the level of virus excretion in animals that become infected after vaccination. There are also certain trade rules dealing with FMD vaccination, including rules on post-outbreak surveillance. The decision to vaccinate would be taken by the Minister for Agriculture on the advice of the Chief Veterinary Officer.