



FOOT-AND-MOUTH DISEASE FREQUENTLY ASKED QUESTIONS

©FAO/Roberto Faidutti



What is FMD?

Foot-and-mouth disease is a devastating animal disease affecting all cloven-hoofed animals, both domestic and wild species. The viruses that cause FMD are among of the most infectious agents known to veterinary or human medicine, which is why it strikes deep fear into livestock farmers, especially in countries that are free from the disease.

©FAO/Marzio Marzot



Where is it found?

Though foot-and-mouth disease had been largely controlled in developed nations, in 2001, an outbreak in the United Kingdom spread to the Netherlands, with smaller outbreaks in France and Ireland, before being brought under control by widespread culling. The experience left its mark on the psyche of many of the farmers that lived through the tragedy: the UK alone suffered economic losses of more than \$US 12 billion, and some 6.5 million sheep, cattle and pigs were slaughtered to halt the disease's spread.

Foot-and-mouth disease has been eradicated from North America, some Pacific nations and Western Europe. The disease is endemic across a large swath of Eurasia, the Middle East, Africa and a few countries in South America. Its debilitating effects on animal production, animal welfare, and trade in animals and animal products is immense and difficult to quantify.

What happens to animals?

FMD affects cattle, buffaloes, pigs, sheep, goats and various wildlife species. Foot-and-mouth disease does not affect humans.

Animals affected by foot-and-mouth disease develop liquid-filled blisters on their feet, tongue, in and around the mouth, nose or snout, and on the teats. The blisters may rupture, leaving raw, tender skin exposed. Pain and discomfort from the lesions lead to depression, loss of appetite, weight loss, and lameness, with animals unwilling to move or even to rise to their feet. Animals produce little or no milk. Owners may sell or cull animals to avoid the cost of maintaining animals that have little production value. Older animals will suffer clinical signs for weeks before generally recovering. But younger animals – calves, lambs piglets – may die from foot-and-mouth disease due to sudden heart failure. In some regions, repeated infection leads to “chronic FMD” with permanent loss of health and productivity.

How is FMD virus transmitted?

Cattle, sheep and goats are especially vulnerable to infection transmitted by aerosols (moisture in exhalation), which is the main means of infection for animals in close contact. In rare cases, FMD infection has appeared to “jump” distances over the sea, but usually this only occurs if many sick animals housed together create an “infected plume”. The most common way the virus is spread is by animal movements that bring healthy animals into contact with animals infected with FMD. All secretions of sick animals are extremely infectious.

FMD virus strains:
A, O, C, SAT1, SAT2, SAT 3, Asia 1
Each has distinct subtypes

People can also transport the virus via their hands, clothing and the bottoms of their shoes. The virus can last for extended periods of time un-

Is there a human health risk?

FOR FURTHER INFORMATION

The European Commission for the control of Foot-and-Mouth disease (EuFMD) official Web site:

www.fao.org/ag/eufmd.html

Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases (EMPRES):

www.fao.org/ag/empres.html

Good Emergency Management Practice, a guide to preparing for animal health emergencies:

www.fao.org/docrep/014/ba0137e/ba0137e00.pdf

The Progressive Control Pathway for FMD Control (PCP-FMD):

www.fao.org/ag/againfo/commissions/en/eufmd/pcp.html

What can be done to control FMD?



©FAO/Kai Wiedenhofer

What is FAO doing to achieve global control of FMD?



www.fmdconference2012.com

der cool conditions, and in manure, therefore vehicles or marketplaces (where sick animals were kept) can maintain the virus. It can also survive in bone marrow and animal products that continue to enter the food production system. This is a particular risk for pigs, since they are often raised in the open and scavenge for food or feed on swill.

There is no health risk to humans from FMD; regardless, meat, dairy and animal products destined for human consumption should come only from healthy animal sources.

However, the damage done to people's livelihoods and food security must not be underestimated, especially in the world's poorest communities. Since the animals don't necessarily die, the losses from foot-and-mouth disease in terms of daily income and sustenance go largely ignored.

In India, direct annual losses due to foot-and-mouth disease are estimated at nearly \$US 4.5 billion, in terms of animal deaths, measures to stamp out the disease and lost international trade in animals and animal products. The indirect losses – the harvests that don't leave the farm for market because transport animals are sick, the crops that aren't planted or seeds not sowed because animals can't pull the ploughs, the cost of feeding animals that produce little or no milk and continue to lose weight – are much greater.

There is no treatment for FMD. Families often sell their sick animals at reduced prices, thereby adding to the risk of disease spread. People can literally no longer feed their families when they lose that one means of income.

Vaccination is an important tool used in controlling foot-and-mouth disease in many parts of the world. Yet it is a constant drain on resources, since effective vaccination requires a high proportion of animals to be vaccinated two or more times per year. The highly infectious nature of FMD means that gaps in coverage emerge as disease outbreaks.

Vaccines for FMD need to be targeted against the strain(s) in circulation, therefore FAO supports international programmes and laboratories to guide countries on vaccine selection.

Vaccines are important to reduce disease, but to eliminate the virus, additional measures are essential to prevent virus transmission. These have added costs and require greater capacity to manage animal movements, including: strong surveillance mechanisms to detect infections; the ability to trace the origins and movements of infected animals; the capacity to implement quarantines; and either an emergency vaccination plan or the humane slaughter of infected herds, with proper disposal of animal carcasses by incineration or burial.

The FAO and the World Organisation for Animal Health are working together for global control of FMD. In partnership with the FAO-based European Commission for the Control of Foot-and-Mouth Disease (EuFMD), FAO has developed the Progressive Control Pathway for Foot-and-Mouth Disease control (PCP-FMD), which can help guide endemic countries through a series of steps that will lead to successful control of the disease.

At the global level, the FAO/OIE Crisis Management Centre for Animal Health (CMC-AH) is a rapid response unit available to deploy assistance on the ground and guide affected countries in policymaking in the event of an animal disease emergency.