

Lighting huge bonfires is a primitive and misguided way to manage Foot and Mouth, doomed to failure in the longer term. Governments across Europe are likely to be forced to vaccinate against Foot and Mouth whether they like it or not, although there would be huge technical difficulties, not least that some vaccinated animals can carry Foot and Mouth picornavirus without any signs. (Comment by Dr Patrick Dixon in 2001 - author of The Genetic Revolution. 4.5m hits in 12 months across this site).

The problem is that even if the current Foot and Mouth epidemic dies out in three months, we cannot take the risk of another scrap of poorly cooked pork from an animal with Foot and Mouth thrown into a shed of hoofed animals, whether carelessly imported or deliberately spread as an act of economic terrorism.

Foot and Mouth - prevention is almost impossible

One thing is absolutely clear from the Foot and Mouth epidemic: never has it appeared so easy for a single human being to bring a nation to its knees. Foot and Mouth is a new low-tech weapon of mass destruction, available at zero cost, capable of mass production, and able to be transported without detection in a container the size of a fountain pen. Foot and Mouth is an ideal low-level terrorist weapon, creating economic catastrophe, ruining international image and lowering morale but without killing people.

Foot and Mouth - an effective extension of biological warfare research

Foot and Mouth therefore becomes more than an occupational hazard of farming. Foot and Mouth needs to be seen in a new light altogether. The continuing military intervention in Iraq crisis is due to fears that the regime might cook up some terrible biotech biological weapons to damage Britain or other nations. But who needs a biological warfare laboratory when you have live Foot and Mouth virus in your hands, and a hundred million vulnerable sheep, pigs and cattle in the UK alone?

Protection against Foot and Mouth is therefore a matter of national security against terrorist attack as well as an economic and practical necessity - and that is likely to mean vaccination. Just consider the impact if Iraq were to send a single person to the UK with a small supply of meat from a dead animal with Foot and Mouth disease. A small amount of meat thrown into a few areas around the country where pigs in particular are grazing would be enough to create a biological firestorm which would be extremely damaging to the UK economy and consumer

huge resources to deal with.

The world has changed dramatically from the cosy days of the last big Foot and Mouth epidemic in the 1960s, rendering "kill and burn" policies totally useless. Foot and mouth is spreading worldwide. The virus is highly infectious. Foot and Mouth disease jumps between animals up to 160 miles apart as was seen a few years ago when a case in France jumped the Channel to infect an animal on the Isle of Wight (UK). Foot and Mouth is found in every region of the world except North America and parts of Australasia.

As we have seen, a single infected animal can create an international crisis from the US to Germany, Holland, Ireland, Portugal, France, India and China to Russia, Southern Africa and Argentina. Rapid spread of Foot and Mouth is inevitable for the following reasons.

Why Foot and Mouth is now more difficult to control

First, farms are now so huge, and depleted of humans, that it is impossible to detect new cases of Foot and Mouth on a daily basis. The problem is acute in flocks of sheep roaming freely over hundreds of square miles, hiding tell-tale Foot and Mouth sores, blisters and other lesions under their coats. The signs of Foot and Mouth in pigs may be more obvious but each pig produces huge clouds of virus particles. 3,000 times as much Foot and Mouth virus is released into the air as from a sheep. With free range pigs it is also harder to monitor new Foot and Mouth infections than in closed pens.

Secondly, the market for live animals is now so regionalised that few are slaughtered near home, and tens of thousands are ferried across Europe every day, often beyond as far as the Middle East

Thirdly, globalisation of trade in meat products is measured in millions of tons a year. Tracing the source of every gram of flesh is all but impossible after an outbreak of Foot and Mouth.

Fourthly, global travel by humans can also carry the Foot and Mouth virus, in the food they carry (declared or not), and on the clothes they wear.

Emergency Foot and Mouth Vaccination in Turkey

Britain holds emergency Foot and Mouth vaccine for immediate use on over 500,000 animals, while Europe as a whole stocks enough for 30 million. In August last year the EU sent 1.5 million doses to Turkey to help stamp out an epidemic. That's exactly what we should do here.

Some argue that Foot and Mouth vaccination is too expensive, that there is a risk of starting a fresh epidemic, virus mutations mean vaccines don't always work, and that it would take longer to give the UK a clean bill of health - up to a year. However the benefit outweighs the cost, as in Turkey. The risk of causing a fresh outbreak of Foot and Mouth is minimal with correct production methods, modern vaccines give wider immunity and it is far better to deal with the Foot and Mouth problem properly than to be forever lighting huge fires. In the meantime, urgent research is needed to develop next-generation Foot and Mouth vaccines that eliminate the possibility of some animals remaining carriers.

UPDATE: since this was written, the EU has produced a draft directive that future outbreaks will be contained by vaccination programmes. Despite this, the UK was still committed in January 2003 to slaughter as a primary control mechanism.

Useful links on Foot and Mouth:

- [Foot and Mouth latest news](#) - including latest on vaccination / prevention.
- [MAFF \(UK\) Foot and Mouth Page](#) .
- [Pighealth.com - Foot and Mouth in the UK](#) .
- [BBC News Report - Foot and Mouth in the UK](#) .